



# Otay Village 9

## Sectional Planning Area Plan and Tentative Map

### Final Environmental Impact Report

SCH #2010061090 CVEIR #10-04, May 2014

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Acronyms

#### **Environmental Impact Report**

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# Acronyms

303(d) list	2006 CWA Section 303(d) List of Water Quality Limited Segments
AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers
ADT	Average Daily Trip
AFY	Acre Feet Per Year
ALUCP	Airport Land Use Compatibility Plan
AMSL	Above Mean Sea Level
APE	Area of Potential Effect
AQIP	Air Quality Improvement Plan
ATCM	Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
BAU	Business as Usual
BMPs	Best Management Practices
BNSF	Burlington Northern Santa Fe
BRT	Bus Rapid Transit
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California EPA
CalGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CHHSLs	California Human Health Screening Levels
CHRIS-SCIC	California Historical Resources Information System South Coastal Information Center
CIP	Capital Improvement Project
City	City of Chula Vista
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
CPF	Community Purpose Facility
CPTED	Crime Prevention through Environmental Design
CRHR	California Register of Historic Resources
CUP	Conditional Use Permit
CVESD	Chula Vista Elementary School District
CVFD	Chula Vista Fire Department

CVMC	Chula Vista Municipal Code
CVPD	Chula Vista Police Department
CWA	Clean Water Act
°F	Degrees Fahrenheit
dB or dBA	Decibels
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DEH	San Diego County Department of Environmental Health
DTSC	Department of Toxic Substances Control
du/ac	Dwelling Units Per Acre
EDU	Equivalent Dwelling Unit
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Acts
EUC	Eastern Urban Center
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FRA	Federal Railroad Administration
FSMP	Fire Station Master Plan
FTA	Federal Transit Administration
GBS	Green Building Standards
GDP	General Development Plan
GDPA	General Development Plan Amendment
GHG	Greenhouse Gas
GMO	Growth Management Ordinance
GMOC	Growth Management Oversight Commission
gpd	Gallons Per Day
gpm	Gallons Per Minute
GPU	General Plan Update
HCS	Highway Capacity Software
HRA	Health Risk Assessment
HVAC	Heating, Ventilation, and Air Conditioning
I-	Interstate
ICAO	International Civil Aviation Organization
ICLEI	International Council of Environmental Initiatives
IID	Imperial Irrigation District
ILV	Intersection Lane Volume Analysis
IMP	Integrated Management Practices
in/sec	Inches Per Second
KVPs	Key View Points
kWh	Kilowatt-Hours
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy and Environmental Design
Leq	Equivalent Energy Level

LID	Low Impact Development
LOS	Level of Service
$\mu\text{g}/\text{m}^3$	Micrograms Per Cubic Meter
Metro system	City of San Diego Metropolitan Wastewater Department Sewerage System
mgd	Million Gallons Per Day
MLD	Most Likely Descendent
MMRP	Mitigation Monitoring and Reporting Program
MMT $\text{CO}_2\text{e}$	Million Metric Tons Carbon Dioxide Equivalent
MOU	Memorandum of Understanding
mpg	Miles Per Gallon
mph	Miles Per Hour
MRZ-2	Regionally Significant Aggregate Resource Area
MSCP	Multiple Species Conservation Program
MT $\text{CO}_2\text{e}$	Metric Tons Carbon Dioxide Equivalent
MUTCD	Manual on Uniform Traffic Control Devices
MWD	Metropolitan Water District
$\text{N}_2\text{O}$	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NHPA	National Historic Preservation Act
NO	Nitric Oxide
$\text{NO}_2$	Nitrogen Dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
$\text{NO}_x$	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSLU	Noise Sensitive Land Uses
OHP	California Office of Historic Preservation
OLC	Otay Land Company
OWD	Otay Water District
Pb	Lead
P-C	Planned Community
PFDIF	Public Facilities Development Impact Fee
PFFP	Public Facilities Finance Plan
$\text{PM}_{10}$	Course particulate matter with an aerodynamic diameter of 10 microns
$\text{PM}_{2.5}$	Fine particulate matter with an aerodynamic diameter of 2.5 microns
ppb	Parts Per Billion
pph	Persons Per Household
ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
QCB	Quino Checkerspot butterfly
RAQS	Regional Air Quality Strategy
RCNM	Roadway Construction Noise Model
RCP	Regional Comprehensive Plan
RCRA	Resources Conservation and Recovery Act
RHNA	Regional Housing Needs Assessment



RMP	Resource Management Plan
RTIP	Regional Transportation Improvement Program
RTP	Regional Technology Park
RWQCB	Regional Water Quality Control Board
SAMP	Subarea Master Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SD&AE	San Diego and Arizona Eastern
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas & Electric
SDIV	San Diego and Imperial Valley
SDNHM	San Diego Natural History Museum
SEIR	Supplement Environmental Impact Report
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMBRP	Site Mitigation and Brownfields Reuse Program
SO <sub>2</sub>	Sulfur Dioxide
SPA	Sectional Planning Area
SR	State Route
STIP	Statewide Transportation Improvement Program
SUHSD	Sweetwater Union High School District
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TDIF	Transportation Development Impact Fee
TDM	Transportation Demand Management
TM	Tentative Map
TNM	Traffic Noise Model
UBC	Uniform Building Code
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
UWMP	Urban Watershed Management Plans
VOC	Volatile Organic Compounds
WCP	Water Conservation Plan
WSAV	Water Supply Assessment and Verification Report



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May 2014

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## Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM FOR THE  
OTAY RANCH VILLAGE 9 SECTIONAL PLANNING AREA PLAN  
AND TENTATIVE MAP FINAL ENVIRONMENTAL IMPACT REPORT .....MMRP-1

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- Appendix A: Notice of Preparation, Comment Letters and Scoping Meeting Materials
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- Appendix G: Geotechnical Report
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- Appendix H2: Project Specific Greenhouse Gas Calculations
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- Appendix I2: Drainage Study
- Appendix J: Phase I Environmental Site Assessment
- Appendix K1: Water Supply Assessment Verification
- Appendix K2: Overview of Water Service
- Appendix L: Overview of Sewer Service
- Appendix M1: Off-Site Biological Resources Summary
- Appendix M2: Off-Site Cultural Resources Summary

# Final EIR for the Village 9 Sectional Planning Area Plan and Tentative Map

The City of Chula Vista, as the Lead Agency under the California Environmental Quality Act (CEQA), has prepared this Final Environmental Impact Report (Final EIR) for the proposed Village 9 Sectional Planning Area (SPA) Plan and Tentative Map Project, located within the Otay Ranch subregion of the City of Chula Vista. As described in Sections 15089 and 15132 of the CEQA Guidelines, the lead agency must prepare a Final EIR before approving a project. Pursuant to CEQA Guidelines Section 15132, a Final EIR shall consist of:

- a) The Draft EIR or a revision of the draft.
- b) Comments and recommendations received on the Draft EIR either verbatim or in summary.
- c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
- d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- e) Any other information added by the Lead Agency.

Pursuant to these guidelines, this Final EIR (State Clearinghouse No. 2010061090) includes in the following order: an Errata, a list of persons, organizations, and agencies that provided comments on the Draft EIR; responses to comments received on the Draft EIR; the Draft EIR showing revisions made to the document subsequent to public review. In addition, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared and is bound separately but is a component of the Final EIR. The MMRP provides the mitigation program required to be adopted by the City pursuant to Public Resources Code Section 2108.6, which will ensure that if the project is approved and developed, all recommended mitigation measures will be implemented to reduce or avoid significant environmental effects.

## ERRATA

After completion and circulation of the Draft EIR, several typographical errors were identified and/or clarifications to the EIR text were necessary. Minor typographical errors were corrected in the text. Clarifications are identified below. All of the corrections have been reviewed, and none of them effect the impact analysis conclusions. The clarifications are summarized below. Modified text is indicated in underline and strikeout format as follows:

~~Old Text~~

Revised Text

Specifically, these changes to the EIR are limited to the following sections:

**Executive Summary** – The sentence under subheading 1.6, Project Alternatives, has been revised to correct a typographical error to be consistent with the designated number of dwelling units under subheading 1.6.2 and 1.6.3 as well as in Chapter 10, Alternatives. The sentence under subheading 1.6, Project Alternatives, on page 1-7 has been revised as follows:

Section 15126.6 of the CEQA Guidelines requires the discussion of “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project” and the evaluation of the comparative merits of the alternatives. The alternatives discussion is intended to “focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project,” even if these alternatives would impede to some degree the attainment of the project objectives. The EIR addresses the No Project (No Build) Alternative and two reduced project alternatives: Reduced Project Alternative #1 – ~~2,691~~ 2,799 Dwelling Units, and Reduced Project Alternative #2 – ~~1,967~~ 1,803 Dwelling Units. Alternatives to the project are evaluated in full in Chapter 10 of this document.

In Table 1-3, under 5.3 Transportation/Traffic, the project contribution has been revised to be consistent with the conclusion stated in Section 5.3 Transportation/Traffic.

**Project Description** – The Recorded Easement Agreement under the Discretionary Actions subheading was revised to clarify that an updated, rather than a new, Recorded Easement Agreement is required.

**Aesthetics** – Viewpoint #5 in Figure 5.2-1 has been revised to show the correct location of this viewpoint.

**Transportation/Traffic** – Mitigation measures 5.3-2 through 5.3-16 have been revised to clarify how improvements would be implemented.

**Biological Resources** – Mitigation measure 5.6-3 has been revised to reflect a change to a time period to conduct coastal California gnatcatcher, coastal cactus wren, and least Bell’s vireo surveys prior to initial ground disturbance. Mitigation measure 5.6-4 has been revised to reflect a change to a ten-day time period to conduct burrowing owl surveys prior to initial ground disturbance.

**Public Services** – Mitigation measure 5.9.5-6 has been updated to clarify dedication of parkland.

**Chapter 6, Cumulative Impacts** – The last sentence under subheading 6.2.3.A, Traffic and Level of Service Standards and Congestion Management, has been revised to be consistent with the conclusion stated in Section 5.3 Transportation/Traffic.

## Comments Received on the Draft EIR and Responses

The Draft EIR was circulated for public review on January 17, 2014 through March 3, 2014, in accordance with the 45-day comment period required under Section 15105(a) of the CEQA Guidelines. A total of nine comment letters were received on the Draft EIR from agencies, organizations, individuals as shown in the list below. This Final EIR incorporates the Draft EIR, changes and additions to the Draft EIR based on comments received during the public review period, as well as minor revisions to further clarify information presented. Collectively, the revisions do not constitute significant changes to the project or environmental setting, no new significant environmental effects have been identified for the project, and the severity of identified environmental impacts would not increase. Changes to the text of the



Draft EIR are shown in ~~strikeout~~ text where deletions have been made and in underline text where new text has been added.

A list of the individuals, agencies and organizations commenting on the Draft EIR is provided below:

Letter A	State of California, Governor’s Office of Planning and Research (State Clearinghouse) .....	RTC-5
Letter B	U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW).....	RTC-7
Letter C	California Department of Transportation (Caltrans) .....	RTC-9
Letter D	Native American Heritage Commission (NAHC).....	RTC-13
Letter E	City of San Diego.....	RTC-17
Letter F	San Diego Association of Governments (SANDAG).....	RTC-20
Letter G	County of San Diego .....	RTC-25
Letter H	San Diego County Archaeological Society .....	RTC-27
Letter I	Otay Valley Regional Park Citizen Advisory Committee .....	RTC-28

Copies of all letters received by the City of Chula Vista regarding the Draft EIR and the responses to comments follow. The table below identifies the locations of the key changes to the text, tables, and/or graphics and a brief description of the changes which were made in response to the comments received during review of the Draft EIR.

<b>Location in the Final EIR</b>	<b>Summary<sup>1</sup></b>
Page 1-7	Correction made to number of dwelling units for project alternatives
Page 1-27	Clarification to a ten-day time period
Page 3-40	Clarification added regarding updated Recorded Easement Agreement
Figure 5.2-1	Correction made to Viewpoint #5
Page 5.6-35	Clarification to a ten-day time period

<sup>1</sup>See Page RTC-2 for additional description



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COMMENTS

RESPONSES



EDMUND G. BROWN JR.  
GOVERNOR

STATE OF CALIFORNIA  
GOVERNOR'S OFFICE of PLANNING AND RESEARCH  
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX  
DIRECTOR

Letter A – State Clearinghouse

March 4, 2014

Glen Laube  
City of Chula Vista  
276 Fourth Avenue  
Chula Vista, CA 91910

Subject: Second Tier Otay Ranch Village 9 Sectional Planning Area (SPA) Plan and Tentative Map (TM)  
SCH#: 2010061090

Dear Glen Laube:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on March 3, 2014, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan  
Director, State Clearinghouse

Enclosures  
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044  
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

**A-1** This comment letter from the Governor's Office of Planning and Research (OPR) confirms receipt and distribution of the Draft EIR to select State agencies for review and project compliance with State Clearinghouse requirements. Enclosed with the State Clearinghouse confirmation letter were comments submitted by the Native American Heritage Committee (NAHC). The comments from the NAHC are included as Letter D. This comment does not address the adequacy or accuracy of information provided in the Draft EIR. No further response is necessary.

A-1.

COMMENTS

RESPONSES

Document Details Report  
State Clearinghouse Data Base

**SCH#** 2010061090  
**Project Title** Second Tier City of Chula Vista's Village 9 Sectional Planning Area (SPA) Plan and Tentative Map (TM)  
**Lead Agency** Chula Vista, City of

---

**Type** EIR - Staff EIR  
**Description** The project includes the SPA Plan and TM for Village 9, including associated off-site improvements, consistent with the Otay Ranch (ODP). The development proposed by the Otay Land Company (OLC) pursuant to the Village 9 SPA Plan is referred to as the "project," and is the focus of this EIR. The Village 9 SPA Plan is incorporated by reference and is available for review at the offices of the City of Chula Vista, Development Services Department, located at 270 Fourth Avenue, Chula Vista, CA 91910. The components of the project description are summarized briefly below and detailed in Chapter 3.

**Lead Agency Contact**

**Name** Glen LaJue  
**Agency** City of Chula Vista  
**Phone** (619) 476-3329 **Fax**  
**email**  
**Address** 270 Fourth Avenue  
**City** Chula Vista **State** CA **Zip** 91910

**Project Location**

**County** San Diego  
**City** Chula Vista  
**Region**  
**Lat / Long** 32° 28' 15" N / 116° 57' 40" W  
**Cross Streets** southern terminus of Eastlake Parkway; western terminus of Hunt Parkway  
**Parcel No.** 844-070-10, 845-010-35  
**Township** **Range** **Section** **Base**

**Proximity to:**

**Highways** SR- 125  
**Airports** Brown Field  
**Railways**  
**Waterways**  
**Schools** High Tech HS  
**Land Use** Vacant land  
 Z-Planned Community

**Project Issues** Agricultural Land, Air Quality, Archaeology-History, Biological Resources, Drainage/Absorption, Flood Plain/Flooding, Forest Land/Fire Hazard, Geologic/Seismicity, Minerals, Noise, Population/Training Balance, Public Services, Recreation/Parks, Schools/Unincorporated, Sewer Capacity, Soil Erosion/Compaction/Grading, Solid Waste, Toxic/Hazardous, Traffic/Congestion, Vegetation, Water Quality, Water Supply, Wetland/Riparian, Wetlands Including Landuse, Cumulative Effects, Aesthetic/Visual Quality.

**Reviewing Agencies** Resource Agency: Department of Conservation, Department of Fish and Wildlife, Region 5, Office of Historic Preservation, Department of Parks and Recreation, Resources, Recycling and Recovery; California Highway Patrol, Caltrans, District #1, Department of Housing and Community Development; Air Resources Board, State Water Resources Control Board, Division of Financial Assistance, Regional Water Quality Control Board, Region 9; Department of Toxic Substances Control, Native American Heritage Commission

**Date Received** 07/14/2014 **Start of Review** 07/14/2014 **End of Review** 07/08/2014

COMMENTS

RESPONSES



U.S. Fish and Wildlife Service  
 Carlsbad Fish and Wildlife Office  
 2177 Salk Avenue, Suite 250  
 Carlsbad, California 92008  
 760-431-9440  
 FAX 760-431-9624



California Department of Fish and Wildlife  
 South Coast Region  
 3883 Ruffin Road  
 San Diego, California 92123  
 858-467-4201  
 FAX 858-467-4299

In Reply Refer To:  
 FWS/CDFW-SD-10B0635-14TA0191

MAR 03 2014

Mr. Glen Laube  
 City of Chula Vista  
 276 Fourth Avenue  
 Chula Vista, California 91910

Subject: Draft Environmental Impact Report for the Otay Ranch Village 9 Sectional Planning Area Plan and Tentative Map Project, City of Chula Vista, County of San Diego, California.

Dear Mr. Laube:

This letter provides the U.S. Fish and Wildlife Service (Service) and California Department of Fish and Wildlife (Department) (collectively, the Wildlife Agencies) comments on the January 17, 2014, draft Environmental Impact Report (EIR) for the Otay Ranch Village 9 Sectional Planning Area (SPA) Plan and Tentative Map Project in the City of Chula Vista.

The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and threatened and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Federal Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), including habitat conservation plans (HCP) developed under section 10(a)(1)(B) of the Act. The Department is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA); §§ 15386 and 15381, respectively) and is responsible for ensuring appropriate conservation of the State's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (Fish and Game Code § 2050 *et seq.*) and other sections of the Fish and Game Code. The Department also administers the Natural Community Conservation Planning (NCCP) program.

On January 11, 2005, the Service issued a section 10(a)(1)(B) permit pursuant to the Act for the City of Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan. The Department also issued Natural Community Conservation Plan Approval and Take Authorization per Section 2800 *et seq.*, of the California Fish and Game Code. The MSCP is a comprehensive, long-term habitat conservation planning program that addresses the needs of multiple species and the preservation of natural vegetation communities within the southwestern subregion of San Diego County. The MSCP also addresses the loss of covered species and their habitats due to the direct, indirect, and cumulative impacts associated with land development. The City's MSCP Subarea Plan and its associated Implementing Agreement and permits are the means by which the City of Chula Vista has obligated to assemble the MSCP Preserve and to mitigate for impacts to covered species and their habitats.

B-1.

- B-1 This comment introduces the commenter, establishes the agencies' responsibilities, and states that the proposed project is identified as a "covered" project in the City's Multiple Species Conservation Program (MSCP) Subarea Plan (SAP). This comment introduces the comments that are addressed in responses to comments B-2 through B-5. Refer to the responses to these comments.
- B-2 The City will coordinate with the wildlife agencies as necessary following the results of the pre-construction surveys as described in mitigation measure 5.6-4. As stated in mitigation measure 5.6-4 in Section 5.6 of the Draft EIR, if occupied burrows are detected, the city-approved biologist shall prepare a passive relocation mitigation plan subject to the review and approval by the wildlife agencies and city including any subsequent burrowing owl relocation plans to avoid impacts from construction-related activities. Depending on the results on the survey, this plan may include collapsing burrows. Additionally, mitigation measure 5.6-6 requires a biological monitor to be on site during clearing, grubbing, and/or grading activities for any areas adjacent to the Preserve and the off-site facilities located within the Preserve. A qualified biologist would train construction workers to recognize and avoid those areas that have been marked as sensitive biological resources for construction in areas not adjacent to the Preserve. Therefore, coordination with wildlife agencies and construction monitoring have already been incorporated into mitigation for the proposed project and will be included in the MMRP for Village 9. As requested by the agencies, a minor revision has been made to mitigation measure 5.6-4 in Section 5.6 of the Draft EIR, Biological Resources, that reflects the recommended ten-day time period to conduct burrowing owl surveys prior to initial ground disturbance. This change has been added to the Draft EIR on page 1-27 (Table 1-2) and page 5.6-35, and the MMRP. No further response is necessary.



COMMENTS

RESPONSES

Mr. Glen Laube (FWS/CDFW-SD-10B0635-14TA0191) 2

B-1.  
cont.

The proposed project involves implementation of a Sectional Planning Area plan for both residential and commercial development on approximately 323 acres of land within Otay Ranch, located at the southern edge of the City of Chula Vista. Village 9 is identified as a "covered" project in the City's MSCP Subarea Plan. The Wildlife Agencies appreciate the efforts that have been made to comply with the City's MSCP Subarea Plan and offer the following comments to ensure consistency with the Subarea Plan's conservation goals.

B-2.

1. The draft EIR states that burrowing owls (*Athene cunicularia*) were observed within the project site in 2006 and that suitable habitat remains on the site. We recommend early coordination with the City, applicant, and Wildlife Agencies if burrowing owls are identified on the project site to develop an appropriate relocation strategy that maximizes the effectiveness of the relocation effort and avoids significant project delays. Specifically, we recommend burrowing owl surveys be conducted within 10 days of initial ground disturbance and, if scoping of burrows shows that no burrowing owls are present on the site, burrows should be collapsed to minimize the likelihood for recolonization of the site. We also recommend that a qualified biologist be on site on the day of initial ground disturbance to assess burrowing owl occupancy and initiate the appropriate response, if necessary.

B-3.

2. The Wildlife Agencies would appreciate the opportunity to review drafts of the Maritime Succulent Scrub Restoration Plan, Resource Salvage Plan, Revegetation Plan, Preserve Edge Plan, and the Area-Specific Management Directives associated with the proposed project.

B-4.

3. The Biological Resources Report for the proposed project (Appendix E in the EIR) identifies that impacts to foraging raptors are significant but mitigable (page 4-7). However, the DEIR does not identify what measures would be implemented to offset the anticipated loss of foraging habitat for raptors. This information should be provided in the final EIR.

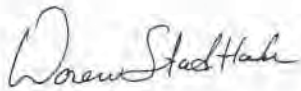
B-5.

4. The draft EIR (page 5.6-23) discusses the narrowing of the access/utility road to 40 feet in the area of the Preserve to minimize potential impacts to a population of snake cholla (*Cylindropuntia californica* var. *californica*) that occurs in the vicinity of this proposed road. We support the narrowing of the roadway and recommend that it be included as a mitigation measure for the project.

B-6.

Thank you for the opportunity to comment on the subject draft EIR. If you have any questions, please contact Kyle Dutro of the Department at 858-467-4267/ kyle.dutro@wildlife.ca.gov; or Eric Porter of the Service at 760-431-9440/ eric\_porter@fws.gov.

Sincerely,



Karen A. Goebel  
Assistant Field Supervisor  
U.S. Fish and Wildlife Service



Gail K. Sevrens  
Environmental Program Manager  
California Department of Fish and Wildlife

B-3

Consistent with the Otay Ranch General Development Plan (GDP) and Resource Management Plan (RMP), a Preserve Edge Plan was prepared in conjunction with the Village 9 SPA Plan and Tentative Map (TM) to ensure that the proposed land uses will not adversely affect resources within the Otay Ranch Preserve. The Preserve Edge Plan was prepared by a qualified biologist familiar with the Otay Ranch RMP and was included as Appendix D to the Village 9 SPA Plan during the public review period. A copy of the Preserve Edge Plan will be provided to the Wildlife Agencies under a separate cover. Concerning the other documents referenced, the City will coordinate with the wildlife agencies to provide the Maritime Succulent Scrub Restoration Plan, Resource Salvage Plan, Revegetation Plan, Preserve, and the Area-Specific Management Directives, at the time of preparation.

B-4

Impacts to foraging raptors as a result of loss of habitat are mitigated through preservation of habitat in the Otay Ranch Preserve in accordance with the MSCP SAP and the Otay Ranch RMP (mitigation measures 5.6-17 through 5.6-19). In addition, the MSCP Subregional Plan, as implemented through the City of Chula Vista MSCP Subarea Plan and other Subarea Plans, is designed to mitigate for the direct, indirect, and cumulative impacts of development within the respective Subregional and Subarea Planning Areas. The project's consistency with the Chula Vista MSCP Subarea Plan is addressed in Section 5.6(E) of the Draft EIR. Cumulative impacts associated with habitat loss are addressed in Section 6.2.6(A) of the Draft EIR. The Draft EIR concluded that implementation of mitigation measures 5.6-1 through 5.6-19 would ensure long-term sustainability of sensitive species and their associated habitats as well as mitigate cumulative biological impacts to MSCP covered species and their associated habitats, including foraging raptors. These measures ensure consistency with the MSCP Subarea Plan, which mitigates the cumulative impacts of development in the City. No revisions to the Draft EIR are necessary as a result of this comment.

B-5

The width of the access/utility road is not required as a mitigation measure for the project because it is a project feature. In light of this, the following TM condition has been prepared and added to the TM to ensure easement widths are reduced to maintain compliance with Chula Vista impact thresholds for MSCP narrow endemic species:

To ensure compliance with the Chula Vista MSCP Subarea Plan impact threshold for narrow endemic species within the Preserve (specifically snake cholla), grading and infrastructure plans for the off-site sewer and storm drain facilities (TM 09-05, Sheet 5) shall limit the width of the construction easement to 40 feet within the initial 400 feet extending south from Planning Area II. The combined width of the permanent easement for the off-site sewer and storm drain facilities shall not exceed 30 feet (EIR 10-04, page 5.6-23).

No revision to the Draft EIR is necessary as a result of this comment.

B-6

This comment provides a closing statement to the letter and does not raise a significant environmental issue for which a response is required.

COMMENTS

RESPONSES

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN, J. Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 11  
4050 Taylor St., MS 240  
SAN DIEGO, CA 92110  
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March 6, 2014

11-SD-125/805  
PM 4.182 and PM 4.4  
Otay Ranch Village 9  
DEIR SCH 2010061090

Mr. Glen Laube  
City of Chula Vista  
276 Fourth Avenue  
Chula Vista, CA 91910

Dear Mr. Laube:

**C-1.** The California Department of Transportation (Caltrans) appreciates the opportunity to have reviewed the Otay Ranch Village 9 Draft Environmental Impact Report (DEIR). Caltrans has the following comments:

**C-2.** As part of the approval of the Otay Ranch Village 9 EIR, the City of Chula Vista should consider the ongoing evaluation of potential interchanges on State Route 125 (SR-125) for the purposes of preserving right-of-way (R/W) and identifying mitigation and funding for future improvements, as well as consistency with future plans identified in the Regional Transportation Plan (RTP). Caltrans is scheduling a meeting with the City to discuss the details of a Caltrans interchange analysis for future proposed interchanges on SR-125 as part of a Cooperative Agreement between Caltrans and the City of Chula Vista.

Project Impacts/Mitigation:

**C-3.** The Otay Ranch Village 9 DEIR currently has inadequate mitigation planned for Caltrans facilities. Appropriate mitigation is strongly recommended, including maintaining already deficient conditions. It is also recommend that the City work with Caltrans to further evaluate and consider feasible options to mitigate impacts on State facilities via the City's Transportation Development Impact Fees (TDIF) program. Possible mitigation measures include the following:

- Improve/rebuild the I-805 and Olympic Parkway Interchange.
- Improve/rebuild the I-805 and Main Street Interchange.
- Additional auxiliary lanes and/or through lanes on I-805.
- Contribute to I-805 and SR-125 corridor improvement projects.
- Contribute to the SR-125 toll road to reduce or eliminate the toll fee for users.

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## Letter C – California Department of Transportation (Caltrans)

- C-1** This comment introduces the commenter and introduces the comments that are addressed in responses to comments C-2 through C-17. Refer to the responses to these comments.
- C-2** The City and Caltrans have met to discuss potential SR-125 interchanges at Main Street and Otay Valley Road. The proposed Otay Ranch Village 9 project would not preclude these potential interchanges. The City will participate in future meeting(s) with Caltrans on this topic. No revision to the Draft EIR is necessary as a result of this comment.
- C-3** This comment does not identify a specific impact of the project that has not been adequately mitigated. Mitigation measures are identified in Section 5.3, Transportation/Traffic, of the draft EIR to reduce all direct impacts of the proposed project on study area transportation facilities to a less than significant level. Further, in Year 2030, with implementation of mitigation measures 5.3-1 through 5.3-21, all roadway and intersection impacts related to the implementation of the SPA Plan and TM would be reduced to below a level of significance. However, a cumulative impact to the Olympic Parkway/I-805 northbound ramps intersection would occur in interim Year 2020. As discussed in Section 5.3.6 of the Draft EIR, the I-805 northbound ramps at Olympic Parkway are within the Caltrans right-of-way. Any improvements to the I-805 northbound ramps, such as the suggested interchange improvements, would be within the Caltrans ROW and would be outside of the jurisdiction of the City. Therefore, the City cannot ensure implementation of such improvements to reduce impacts to a less than significant level. As such, the Draft EIR determined that impacts to the Olympic Parkway/I-805 northbound ramps intersection would remain significant and unavoidable.

Contribution to the City's Transportation Development Impact Fees (TDIF) program is required for the proposed project (mitigation measure 5.3-17) to address the project's potential cumulative impacts to transportation facilities serving project development. The TDIF program collects a project's fair share fee contributions based on the project's traffic impacts and utilizes those funds to mitigate impacts to City roadway facilities. As described in the Draft EIR in Section 5.3.6, there are a number of improvements in the surrounding areas that are within the TDIF program, such as the construction of Heritage Road from Main Street to Olympic Parkway, extension of Main Street, and the Palomar Street DAR, that would reduce the traffic volumes through the Olympic Parkway/I-805 interchange. Additionally, the City of Chula Vista has historically used TDIF funding to contribute toward numerous Caltrans interchange projects along the I-805 corridor. The TDIF program was used to construct I-805/Olympic Parkway interchange, I-805/Telegraph Canyon interchange and I-805/H 8<sup>th</sup> Street interchange. Over more than two decades, the City has contributed toward interchange improvements along State facilities. As such, the TDIF fees collected for the proposed project may be used to make improvements to freeway interchanges, as recommended by the commenter. TDIF fees have not and cannot be used to improve the



COMMENTS

RESPONSES

Mr. Glen Laube  
 March 6, 2014  
 Page 2

Traffic:

C-4.

- The Otay Ranch Village 9 DEIR states that by 2030 there will be eight freeway lanes, plus four Managed Lanes on Interstate 805 (I-805) in the project area (East Palomar Street). The approved draft unconstrained freeway network for the Regional Plan only includes eight freeway lanes, plus two high occupancy vehicle lanes on I-805 between State Route 905 (SR-905) and State Route (SR-54). Please clarify this inconsistency in the DEIR.

C-5.

- The project build-out trip distribution that uses I-805 and SR-125 appears to be low and not realistic. Please clarify.
  - The existing plus project distribution shows a total of only 20% of the daily traffic volumes using I-805 and SR-125, and only 10% of the daily traffic volumes using I-805 and SR-125 to travel north.
  - The 2020 project distribution shows a total of only 13% of the daily traffic volumes using I-805 and SR-125, and only 5% of the daily traffic volumes using I-805 and SR-125 to travel north.
  - The 2025 project distribution shows a total of only 19% of the daily traffic volumes using I-805 and SR-125, and only 11% of the daily traffic volumes using I-805 and SR-125 to travel north.
  - The 2030 project distribution shows a total of only 25% of the daily traffic volumes using I-805 and SR-125, and only 13% of the daily traffic volumes using I-805 and SR-125 to travel north.

C-6.

- Please provide an analysis of the I-805 and SR-125 main lanes for the 2020, 2025, and 2030 conditions.

C-7.

- The trip reduction of 37% and 2030 transit reduction of 15% is unreasonable. Please clarify these assumptions.

General Comments:

Caltrans Permit:

Any work performed within Caltrans right-of-way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction.

C-8.

As part of the encroachment permit process, the applicant must provide an approved final environmental document including the California Environmental Quality Act (CEQA) determination addressing any environmental impacts within the Caltrans' R/W, and any corresponding technical studies. If these materials are not included with the encroachment permit application, the applicant will be required to acquire and provide these to Caltrans before the permit application will be accepted. Identification of avoidance and/or mitigation measures will be a condition of the encroachment permit approval as well as procurement of any

freeway mainline facilities. As such, the EIR has clearly stated project impacts related to State facilities and has provided adequate mitigation measures within the City's or Applicant's control, or has identified significant unavoidable impacts where appropriate. No revision to the Draft EIR is necessary as a result of this comment.

C-4

The NOP for the proposed project was published in June 2010 and the traffic impact analysis (TIA) for the project was prepared at this time. Section 15125 of CEQA Guidelines states "an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time of the notice of preparation is published or at the time environmental analysis is commenced". At the time the traffic modeling was conducted for this project (2010, Series 11), the Regional Plan included eight freeway lanes and two Managed Lanes on I-805. In addition, the model included the tolling structure in place prior to SANDAG's purchase of this facility. In December 2011, SANDAG removed the two additional lanes from the Regional Plan based on an assumed shift in traffic from I-805 to SR-125 with the lowering of tolls on that facility. As stated in the Addendum to the Final EIR for the 2030 Regional Transportation Plan (SCH #2002071059), the results of the traffic modeling conducted for these changes establish that removal of the I-805 managed lanes and reduction of the toll would not cause a negative impact to the level of service on I-805 or SR 125. Further, while some change in travel patterns would result (a shift of some traffic from I-805 to SR 125), the increase in traffic levels would not exceed established LOS standards.<sup>1</sup> Because this change occurred after the modeling was conducted for the proposed project and the draft traffic report was prepared based on the Series 11 model,, and based on the Addendum prepared by SANDAG these changes to planned improvements were determined not to result in additional traffic impacts, the modeling was not revised to reflect either the lower tolls or the change in the long-range plans for the I-805. No revision to the Draft EIR is necessary as a result of this comment.

C-5

The City of Chula Vista worked closely with SANDAG in developing the South Bay Subarea model used in assessing future traffic volumes and trip distribution patterns in 5 year increments for the Village 9 project. The distribution patterns included in the TIA were developed based on the select zone model run. As discussed on page 14 of the TIA, the traffic model resulted in very low loading onto SR-125 due to the tolling structure assumed in the model. The City and consultant team discussed this with SANDAG. Due to the low ramp volume loading in the model, the City and consultant team increased the traffic volume loading onto SR-125 compared to the model. For example, the SANDAG model does not forecast traffic volumes on some of the ramps at SR-125/Main Street. Traffic volumes at adjacent ramps were therefore reviewed along with traffic volumes along roadways connecting with the toll road (Olympic Parkway, Birch Road and Telegraph Canyon Road) to determine reasonable and conservative forecast for the ramps at SR-125/Main Street. For all existing ramps, reasonable traffic increases were assumed to occur and where volumes failed to increase over existing conditions. A growth rate was applied to reflect the daily volumes on the intersecting roadways. No revision to the Draft EIR is necessary as a result of this comment.

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<sup>1</sup> San Diego Association of Governments. 2011. Addendum to Final Environmental Impact Report, March 2003, Mobility 2030, the Transportation Plan for the San Diego Region, SCH #2002071059. December 16.

COMMENTS

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Mr. Glen Laube  
 March 6, 2014  
 Page 3

necessary regulatory and resource agency permits. Encroachment permit submittals that are incomplete can result in significant delays in permit approval.

C-8.  
 cont.

Improvement plans for construction within State Highway R/W must include the appropriate engineering information consistent with the State code and signed and stamped by a professional engineer registered in the State of California. The Caltrans Permit Manual contains a listing of typical information required for project plans. All design and construction must be in conformance with the Americans with Disabilities Act (ADA) requirements.

Additional information regarding encroachment permits may be obtained by contacting the Caltrans Permits Office at (619) 688-6158. Early coordination with Caltrans is strongly advised for all encroachment permits.

*Biology:*

The Otay Ranch Village 9 project elements may involve limited removal of existing vegetation which may impact sensitive plants (e.g. snake cholla and/or coast barrel cactus) or vegetation with potential to provide habitat for special-status species or support nesting migratory birds. If sensitive vegetation is impacted, mitigation at ratios of 1:1 to 3:1 would be likely (depending on sensitivity of species pursuant to the MSCP City of Chula Vista Subarea Plan). Existing sensitive vegetation will be avoided when feasible and protected by temporary fencing. If listed plants are found during focused preconstruction surveys, consultation shall occur with the U.S. Fish and Wildlife Service (USFWS) to obtain a Biological Opinion (BO) and mitigation measures will be identified in the BO by USFWS after a take permit is issued. Mitigation measures, including land conveyance to the Otay Ranch Preserve, will be implemented to ensure that impacts to listed plants will be reduced to a less than significant level.

C-9.

The project area contains suitable nesting habitat for various bird species, including the federally endangered least Bell's vireo, federally threatened coastal California gnatcatcher, and species of special concern coastal cactus wren, due to, presence of riparian scrub, coastal sage scrub, and maritime scrub. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by vegetation removal and indirectly impacted by noise, vibration or other construction related disturbances. To minimize impacts during nesting season, preconstruction surveys for the presence of nesting birds shall be conducted by a qualified biologist within 300 feet of the proposed construction areas. If active nests are identified in these areas a letter report or mitigation plan, as deemed appropriate by the City, shall be prepared including proposed measures to ensure that disturbance of breeding activity is avoided. If listed animals are found during focused preconstruction surveys, consultation shall occur with the U.S. Fish and Wildlife Service (USFWS) to obtain a Biological Opinion (BO) and mitigation measures identified in the BO by the USFWS should be implemented after a take permit is issued. Mitigation measures, including land conveyance and habitat restoration, shall be implemented to ensure that impacts to listed animals will be reduced to a less than significant level.

C-10.

*Drainage:*

Changes in drainage within the project area would result in impacts to jurisdictional waters of the United States, as determined by the U.S. Army Corps of Engineers (USACE) and to jurisdictional waters of the State as determined by the California Department of Fish and

*"Caltrans improves mobility across California"*

C-6

As SR-125 is a toll facility, a freeway mainline analysis was not conducted. It is assumed that the freeway conditions will be controlled through dynamic toll changes. At the time the traffic report was prepared, the I-805 improvements were planned through the study area that would increase the capacity (eight freeway lanes and two Managed Lanes on I-805). Traffic model data used to analyze the corridor included the improvements to the corridor as well as the tolls along the SR-125 corridor. According to the SANDAG website and sources within Caltrans, construction of the improvements are/were planned to occur through 2020, although the construction schedule was undetermined. With Caltrans/SANDAG plans to improve the I-805 and construction activity that would occur with the construction of the additional HOV lanes, the analysis of the freeway mainline was not included in the interim years. A project build-out analysis, which represents the highest traffic volume for the project, was conducted for the year 2030 to demonstrate that the project would not create any new impacts following the completion of the improvements along I-805. Interim year analysis would have shown lower volumes for the project and, based on the improvements identified by Caltrans/SANDAG, would have included the improvements to the I-805 corridor. Therefore, analysis of the interim year conditions would show no greater impact than the analysis provided in the TIA. No revision to the Draft EIR is necessary as a result of this comment.

C-7

As shown in Table 8 of the TIA, the internal capture is forecast to be 11,606 trips per day of the total 53,732 trips forecast for the site. This corresponds to a 22 percent internal capture rate. In addition, a 15 percent transit reduction was applied to account for the presence of the South Bay Bus Rapid Transit (BRT) line through Village 9. The BRT line will run directly through Village 9 with a stop in the heart of the village core. The land use in the village core includes a mix of high density residential and commercial and is intended to be a pedestrian friendly, transit oriented community. Combining the presence of the BRT and BRT stop in the village core with the proximity of the site to the University and local transit circulators, the 15 percent reduction is a reasonable assumption for transit oriented, not auto-related trips, applied for the study year 2030 based on SANDAG transit reduction rates. Additionally, as commercial office and retail develop within the village in 2025 and 2030, internal capture will also increase. At buildout of Village 9, internal capture and transit will account for a total approximate 37 percent reduction in daily trips, which was determined based on the ITE mixed use trip reduction analysis methodology. ITE mixed use trip reduction methodology is the standard industry practice for determining the potential internal trip capture rates for mixed use projects. Details of the ITE trip reduction calculation is provided as an appendix to the Traffic Impact Analysis Report. No revision to the Draft EIR is necessary as a result of this comment.

C-8

This comment does not address the adequacy or accuracy of the information provided in the Draft EIR. No further response is necessary.

C-9

The Draft EIR contains mitigation measures in Section 5.6, Biological Resources, to reduce impacts to sensitive plants and animals, as well as to vegetation with the potential to provide habitat for special-status species or support nesting migratory birds to a less than significant level. Mitigation measures that address these issues include 5.6-1 (Maritime Succulent Scrub Restoration Plan), 5.6-2 (Resource Salvage Plan), 5.6-3 (Coastal California Gnatcatcher, Coastal Cactus Wren, and Least Bell's



COMMENTS

RESPONSES

Mr. Glen Laube  
 March 6, 2014  
 Page 4

C-10.  
 cont.

Wildlife (CDFW). Impacts to jurisdictional waters are considered significant and will require mitigation under the City of Chula Vista Wetlands Protection Program and Clean Water Act Section 404 permit from the USACE and Section 1602 of the Lake and Streambed Alteration Agreement CDFW form. A Wetlands Mitigation and Monitoring Plan shall be submitted prior to undertaking any grading activities and shall implement all permit requirements during construction and operation, including land conveyance and habitat restoration as well as the implementation of best management practices during construction activities. Existing jurisdictional areas will be avoided when feasible and protected by temporary fencing.

C-11.

Any modification to the existing drainage and increase runoff to State facilities will not be allowed.

C-12.

*Lighting:*  
 All lighting (including reflected sunlight) within this project should be placed and/or shielded so as not to be hazardous to vehicles travelling on SR-125.

C-13.

*Noise:*  
 Caltrans will not be held responsible for any noise impacts to this development, including from the ultimate configuration of SR-125.

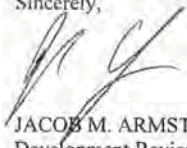
C-14.

*Visual:*  
 Visual studies will be required at later phases of the project when plans for SR-125 ramps are developed. If grading occurs within the SR-125 R/W to accommodate the western lots of Otay Ranch Village 9, a visual study will need to be completed.

C-15.

If you have any questions on the comments Caltrans has provided, please contact Roger Sanchez of the Development Review Branch, at (619) 688-6494.

Sincerely,



JACOB M. ARMSTRONG, Chief  
 Development Review Branch

Pre-Construction Survey), 5.6-8 (Migratory Bird Treaty Act Compliance), 5.6-4 (Burrowing Owl Pre-Construction Survey), 5.6-5 (Revegetation Plan), 5.6-8 (Migratory Bird Treaty Act Compliance), 5.6-9 (Northern Harrier Pre-Construction Survey), 5.6-12 (Retain Existing Vegetation), and 5.6-18 (Otay Ranch Land Conveyance). As indicated in Section 5.6, Biological Resources, Village 9 is considered a "covered project" in the Chula Vista MSCP Subarea Plan. Covered projects are those for which hard-line Preserve boundaries have been established pursuant to the approved Chula Vista Subarea Plan, and where conservation measures consistent with the MSCP Subregional Plan and Chula Vista Subarea Plan have been or will be specified as binding conditions of approval in such Project's plans and approvals. The City was issued a Section 10(a)(1)(b) Incidental "Take" Permit in 2005, which grants the City long-term authorization to "take" covered species as defined in the Endangered Species Act and allows the City to authorize a landowner or other public or private entity to impact sensitive species, provided impacts are covered under and/or comply with the requirements of the MSCP Subarea Plan. No revision to the Draft EIR is necessary as a result of this comment.

C-10

The project's potential impacts to jurisdiction waters are addressed under Threshold 3 in Section 5.6 of the Draft EIR, Biological Resources. Mitigation measures 5.11-1 through 5.11-5, 5.6-15, and 5.6-16 are proposed to reduce impacts to a less than significant levels, including obtaining all required regulatory permits, such as those required under Sections 404 and 401 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act, as well as preparation of a Wetlands Mitigation and Monitoring Plan. No revision to the Draft EIR is necessary as a result of this comment.

C-11

Analysis of the post-project drainage condition on page 5.11-15 in Section 5.11, Hydrology and Water Quality, of the Draft EIR concludes that the project site would be divided into two drainage basins, where the northeastern corner would drain to the Otay River via the University site and the remainder of the site would drain to the Otay River via one of two discharge points from the site. Post-project flows would be discharged into the Otay River or University Site; therefore, there will be no impact to SR-125 from the project changes to the site's drainage pattern and the project will not increase runoff onto this facility. No revision to the Draft EIR is necessary as a result of this comment.

C-12

As stated in Section 5.2, Aesthetics, of the Draft EIR the Otay Ranch SPA Plan requires the preparation of lighting plans for approval of future development, including locations, type, and hooding devices to shield adjoining properties. The Otay Ranch SPA Plan contains lighting performance standards, which include minimizing spillage, shielding techniques, sign regulations, community and neighborhood facility design guidelines, prohibiting lighting in designated open spaces, and implementation of the lighting guidelines established by the Village 9 Preserve Edge Plan in order to reduce the impacts associated new sources of lighting. Light pollution would be reduced or eliminated by the use of low-glare, full cutoff, and shielded fixtures, lower wattage luminaries, and lighting controls. Misdirected, excessive, and unnecessary lighting would be eliminated. All street lighting needs would be required to meet or exceed the City standards and shall be approved by the City Engineer. Lighting for community facilities and recreation areas would be considered as an element

**COMMENTS****RESPONSES**

of the site plan review. The Otay Ranch SPA Plan also includes requirements for buildings to limit glare, such as matte finishing for metal or glass awnings and a variety of building faces to break up expanses of reflective material. Additionally, Section 17.28 of the City's Municipal Code requires light shielding on commercial and industrial lighting near residences; prohibits residential lighting that spills over to adjacent properties during nighttime hours; and requires multi-family residential, commercial, and industrial developments to submit lighting plans to the City. City of Chula Vista Municipal Code Section 19.66.100 includes a performance standard for glare that prohibits glare beyond the lot line of the source. Because the exact location, orientation, and design of future buildings is unknown at this time, the EIR includes mitigation measures 5.2-1 (Lighting Plan and Photometric Analysis-Parks) and 5.2-2 (Lighting Plan and Photometric Analysis-New Structures), which would ensure that the proposed location, height, and intensity of exterior lighting would comply with the City's performance standards for light and glare (Chula Vista Municipal Code 17.28 and 19.66.100). Because future development would be required to comply with performance standards to prevent spillover of lighting and glare onto adjacent properties (which would include the adjacent SR-125 right-of-way), lighting and glare would be shielded, placed, or otherwise designed to reduce impacts to less than significant. No revision to the Draft EIR is necessary as a result of this comment.

- C-13** The noise analysis in Section 5.5, Noise, of the Draft EIR included an analysis of the potential impacts of traffic noise from SR-125 on the proposed project. An on-site noise barrier is proposed to reduce impacts to a less than significant level (see Figure 5.5-4 of the EIR). As such, the Draft EIR addresses and mitigates potential impacts of SR-125 on the project. It should be noted that future projects proposed on State facilities, such as "the ultimate configuration of SR-125," would be subject to CEQA and NEPA. If the Caltrans action would require mitigation, it will be the responsibility of Caltrans to implement the mitigation. No revision to the Draft EIR is necessary as a result of this comment.
- C-14** The planned SR-125 ramps are not included in the proposed project and, as such, were not analyzed as part of the Draft EIR. However, as stated on page 3-33 in Chapter 3, Project Description, some of the off-site grading occurs within the SR-125 ROW and has been included in the analysis of the Draft EIR (see pages 5.2-16 through 5.2-19 of the EIR). Visual analysis has already been completed for the area of the SR-125 ROW that will be graded as part of the project's off-site grading in the assessment of potential visual impacts in Section 5.2 of the Draft EIR, Aesthetics/Landform Alteration. No revision to the Draft EIR is necessary as a result of this comment.
- C-15** This comment provides a closing statement to the letter and does not raise a significant environmental issue for which a response is required.

COMMENTS

RESPONSES

SATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

**NATIVE AMERICAN HERITAGE COMMISSION**

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January 30, 2014

Mr. Glen Laube, Project Planner

**City of Chula Vista**

276 Fourth Avenue  
 Chula Vista, CA 91910

RE: SCH#2010061090 CEQA Notice of Notice of Completion; draft Environmental Impact Report (DEIR) for the **“Otay Ranch Village 9 Sectional Planning Area and Tentative Map Project;”** located in the City of Chula Vista; San Diego County, California

Dear Mr. Laube:

The Native American Heritage Commission (NAHC) has reviewed the above-referenced environmental document.

D-1.

The California Environmental Quality Act (CEQA) states that any project which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064.5(b)). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

D-2.

Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, pursuant to California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities. Also, California Public Resources Code Section 21083.2 require documentation and analysis of archaeological items that meet the standard in Section 15064.5 (a)(b)(f).

D-3.

We suggest that this (additional archaeological activity) be coordinated with the NAHC, if possible. The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. Any information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure pursuant to California Government Code Section 6254.10.

**Letter D – Native American Heritage Commission (NAHC)**

- D-1 This comment introduces the commenter and introduces the comments that are addressed in responses to comments D-2 through D-7. Refer to the responses to these comments.
- D-2 The City of Chula Vista currently does not have a policy in place to have tribal monitors on a project site concurrent with the archaeological monitors. Additionally, Section 15064.5(f) of the CEQA Guidelines does not require or specifically recommend Native American monitoring for potential inadvertent discoveries of cultural resources. In accordance with CEQA, the City of Chula Vista has detailed mitigation measures to address the potential for significant archaeological resource impacts. Please see Mitigation Measures 5.7-1 and 5.7-2 on pages 5.7-14 through 5.7-15 in Section 5.7, Cultural Resources, of the Draft EIR. As detailed in measure 5.7-1, all ground disturbing activities in areas of undisturbed soil would be monitored by an archaeological monitor. Mitigation measure 5.7-2 outlines specific provisions for the identification and evaluation of any accidentally discovered resources.
- D-3 Refer to response to comment D-2. No additional archaeological activity has been incorporated into the EIR in response to comment D-2 and the commenter’s suggestion does not apply. However, any discoveries would be treated in compliance with all applicable confidentiality requirements, including Government Code Section 6254.10. Please also see response to comment D-4 relative to coordination with the NAHC.



COMMENTS

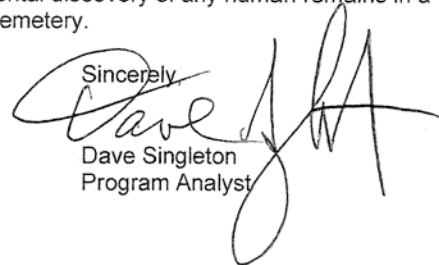
RESPONSES

**D-4.** A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources.

**D-5.** California Government Code Section 65040.12(e) defines "environmental justice" to provide "fair treatment of People...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies." (The California Code is consistent with the Federal Executive Order 12898 regarding 'environmental justice.' Also, applicable to state agencies is Executive Order B-10-11 requires consultation with Native American tribes their elected officials and other representatives of tribal governments to provide meaningful input into the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

**D-6.** Lead agencies should consider first, avoidance for sacred and/or historical sites, pursuant to CEQA Guidelines 15370(a). Then if the project goes ahead then, lead agencies include in their mitigation and monitoring plan provisions for the analysis and disposition of recovered artifacts, pursuant to California Public Resources Code Section 21083.2 in consultation with culturally affiliated Native Americans.

**D-7.** Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely  
  
 Dave Singleton  
 Program Analyst

CC: State Clearinghouse

Attachment: Native American Contacts list

- D-4** In accordance with SB 18, the City of Chula Vista invited all of the tribes included on the NAHC consultation list to consult with the City of Chula Vista on development in the University and South Otay Ranch Village, including Village 9. The invitation for consultation is dated June 10, 2009. SB18 is a separate process from CEQA; however, the tribes were also contacted during preparation of the *Cultural Resources Survey and Test for Otay Ranch Village 9*, prepared by Gallegos and Associates in February 2009 (Appendix F1 of the Draft EIR). As discussed in Section 2.5 of the report, The Native American Heritage Commission (NAHC) was contacted to request information and/or input regarding Native American concerns either directly or indirectly associated with the Otay Ranch project, as well as names of individuals in the area who should be contacted prior to completion of this study. Those individuals identified by the NAHC were contacted by letter and information as to cultural resources within the project area was requested. Carmen Lucas (Kwaaymii, Laguna Band of Indians) provided Native American monitoring services for fieldwork conducted. Carlene Chamberlain and Jesse Pinto from the Jamul Indian Village also visited the project area.
- D-5** This comment does not address the adequacy or accuracy of the information provided in the Draft EIR. Refer to response to comment D-4 regarding tribal consultation and coordination for the proposed project.
- D-6** The MMRP includes mitigation measure 5.7-2 (Resource Discovery Procedure) on page MMRP-37, which outlines the procedure that would be implemented in the event of inadvertent discovery of cultural resources. This measure recommends avoidance in the event that significant artifacts are uncovered. No revision to the Draft EIR is necessary as a result of this comment.
- D-7** The Draft EIR contains Mitigation Measure 5.7-3 (Human Remains Disturbance Protocol), which outlines the procedure to follow in the event of the inadvertent of human remains. The Human Remains Disturbance Protocol is in compliance with Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5(e), and Public Resources Code Section 5097.98. No revision to the Draft EIR is necessary as a result of this comment.

COMMENTS

COMMENTS

Native American Contacts  
San Diego County California  
January 30, 2014

Native American Contacts  
San Diego County California  
January 30, 2014

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This list is current only as of the date of this document.

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Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2010061090; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the Otay Ranch Village 9 Sectional Planning Area Plan and Tentative Map, located in the City of Chula Vista, San Diego County, California.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2010061090; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the Otay Ranch Village 9 Sectional Planning Area Plan and Tentative Map, located in the City of Chula Vista, San Diego County, California.



COMMENTS

RESPONSES

Letter E – City of San Diego



February 28, 2014

City of Chula Vista  
 Attn: Glen Laube  
 276 Fourth Avenue  
 Chula Vista, California 91910

Subject: **CITY OF SAN DIEGO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR VILLAGE 9 SECTIONAL PLANNING AREA PLAN AND TENTATIVE MAP**

The City of San Diego (“City”) has received and reviewed the above referenced project and appreciates this opportunity to provide comments to the City of Chula Vista.

**E-1.** Staff from the Open Space Division of the Park and Recreation Department, the Storm Water Division of the Transportation and Storm Water Department, and Transportation Development Section of the Development Services Department has reviewed the DEIR and provided the following comments:

**Park and Recreation - Open Space Division**

**General Comments**

- E-2.**
1. The Otay Valley Regional Park seeks to encourage appropriate trail connections to adjacent development, neighborhoods, and other open space areas.
  2. Trails within, and encouraged for trails outside of the OVRP, should be barrier free where possible and provide experiences and opportunities for persons with disabilities where feasible.

**Specific Trail Comments**

- E-3.**
1. 5.1 – 22 – Land Use – Objectives LUT 84 and 84.4 – The objectives are identified as "not to threaten the viability of sensitive biological habitats of the Otay Valley’s function."

**E-1** This comment introduces the commenter and introduces the comments that are addressed in responses to comments E-2 through E-8. Refer to the responses to these comments.

**E-2** The Village 9 SPA Plan includes a connection point at the southern edge of the project to the Regional Trail, which would connect neighborhoods and will ultimately connect to the OVRP. The trail that would ultimately extend south of the project site would traverse County of San Diego property and the MSCP Preserve. Therefore, the trail segment would be located and designed in cooperation with the County, City and OVRP CAC. The Sectional Planning Area (SPA) Plan for Village 9 also includes handicap accessibility standards on page 5-49 for trails where feasible. In locations where access standards cannot be achieved, the SPA Plan includes signage notifying that the trails are not handicap accessible. No revision to the Draft EIR is necessary as a result of this comment.

**E-3** Village 9 proposes various trails and pathways throughout the entire planning area. Village pathways, which run north to south, are proposed to increase walkability throughout the planning area. The Neighborhood Trail, which is referred to in the comment as item “b”, is proposed in the southern portion of project site and runs adjacent to designated open spaces within the planning area. In referring to “adjacent open spaces” in item “a,” these areas are the designated open spaces within the planning area and not in reference to the preserve. The Draft EIR is correct in stating that planned trail connections within the Village 9 planning area, including connections between adjoining villages, would not intrude into the preserve. As noted in response to comment E-2, the Village 9 SPA Plan includes a connection point at the southern edge of the project to the Regional Trail, which will ultimately connect to the OVRP. However, the alignment of the future off-site trail is unknown at this time. See response to comment E-2 regarding the connection between the project site and the OVRP trail. No revisions are necessary as a result of this comment.

COMMENTS

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Additionally, "the prior approval of any discretionary permit in the Otay Valley District is to ensure that the proposed project is consistent with the Otay Valley Regional Park Concept Plan.

The Consistent note states that "Planned connections would connect to the adjacent village to the west and east, and would not intrude into the preserve." Is this statement in conflict with Comments a. and b. below that suggest a trail connection to the open space?

a. Chapter 3 Project Description; Paragraph 2 Transect 2 – Suburban; Page 3-10 – The note provides that "a transition between the natural environment and the residential development will provide a connection to the adjacent open space."

b. 5.1 – 38 – Land Use – Paragraph 11 refers to "a trail that extends south from the project site and may eventually connect to the proposed regional trail system."

2. If a trail connection is anticipated from the project site to the adjacent open space (OVRP), please show the location of this connection to the OVRP open space on the Draft EIR or on the appropriate maps or graphics, and assess any associated environmental impacts.

**Development Services - Transportation Development**

1. Table 5.3-6 shows the expected trip generation for the project at Buildout (Year 2030).

a) Of the 53,732 ADT, there was a 21.6% reduction taken for "Internal Capture". The document should provide evidence of how this reduction was determined for a project of 4,000 residential units, an elementary school, 1.2M S.F. office and 300,000 S.F. of commercial.

b) Of the 53,732 ADT, there was a 15% reduction taken for "Transit Reduction" (the footnote states that a 5% reduction was used). The document should provide evidence of how this reduction was determined for this project using the future proposed SANDAG transit routes and the ability of all the village workers, shoppers and residential population to access the proposed transit routes with ¼ mile walk.

2. The DEIR should demonstrate whether the project would have any impacts on the City of San Diego transportation system.

E-3.  
cont.

E-4.

E-5.

E-6.

E-7.

E-4 As stated in Section 5.01, Land Use, of the Draft EIR, the project proposes a connection to a future trail that will ultimately extend south from the project site and connect to the proposed Regional Trail system. However, at this time the location of the Regional Trail connection is currently unknown. It should be noted that the development of the trail itself is not included in this project but rather that Village 9 proposes a potential connection point to the trail. Figure 3-15 in Chapter 3.0, Project Description, shows the potential location of the connection point with the Regional Trail. No revision to the Draft EIR is necessary as a result of this comment.

E-5 The trip reduction factor was determined based on the ITE mixed use trip reduction analysis methodology. ITE mixed use trip reduction methodology is the standard industry practice for determining the potential internal trip capture rates for mixed use projects. Details of the ITE trip reduction calculation is provided as an appendix to the Traffic Impact Analysis Report. No revision to the Draft EIR is necessary as a result of this comment.

E-6 SANDAG plans to operate at BRT line through Village 9 and other Eastern Chula Vista villages that will connect Chula Vista north to downtown San Diego. One transit stop for the BRT line is located in the heart of the Village 9 core and is surrounded by high density residential units, commercial and office. Short blocks, narrow, one-way streets and slow travel speeds are designed in Village 9 to encourage pedestrian, bicycle and transit usage. The highest density within the Village is located within ¼ to ½ mile walking distance of the BRT station. Street B running north-south through Village 9 has dedicated right-of-way to serve the BRT Route. The high density, walkable design is clearly discussed in the SPA plan prepared for the project and in the traffic study prepared for Village 9 (page 2, page 61 and Exhibit 39 of Appendix B), and in Chapter 3.0 of the Draft EIR, Project Description. No revision to the Draft EIR is necessary as a result of this comment. See also response to comment C-7.

E-7 Impacts on the City of San Diego's transportation system are addressed in Section 5.3, Traffic and Transportation, and Appendix B of the EIR. Based on the traffic impact analysis performed for Village 9 (Appendix B), the proposed project would add 1.3 percent of traffic volume on Heritage Road from Entertainment Circle to Avenida de Las Vistas within both the City of Chula Vista and City of San Diego under the Year 2030 scenario resulting in a cumulative impact. Improvements to this segment would be funded by the City of Chula Vista's TDIF program (mitigation measure 5.3-17) and the City of San Diego's Facilities Benefit Assessment. No revision to the Draft EIR is necessary as a result of this comment.

## COMMENTS

## RESPONSES

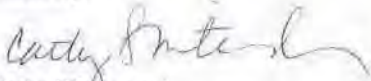
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**Transportation and Storm Water Department – Storm Water Division**

E-8.

Implementation of some of the mitigation measures in the Draft Environmental Impact Report, Section 5.11, Hydrology and Water Quality, will likely be influenced by the San Diego Regional Water Quality Control Board's May 8, 2013 approval (effective June 27, 2013) of a new National Pollutant Discharge Elimination System (NPDES) Permit (Order No. R9-2013-0001, NPDES No. CAS0109266) for discharges from Municipal Separate Storm Sewer Systems (MS4s).

Sincerely,



Cathy Winterrowd  
Interim Deputy Director  
Development Services Department

CW: ALM

cc: Anna L. McPherson, AICP, Senior Planner, Development Services Department  
Joel Hyatt, Senior Planner, Park and Recreation Department  
Mark G. Stephens, AICP, Associate Planner, Transportation & Storm Water Department  
Jim Lundquist, Associate Traffic Engineer, Development Services Department

E-8 At the time of preparation of the Draft EIR, this most recent NPDES Permit was not available. However, mitigation measures 5.11-1 (Storm Water Pollution Prevent Plan) and 5.11-3 (Post-Construction/Permanent Best Management Practices) in Section 5.11, Hydrology and Water Quality, of the Draft EIR requires that the project comply with the City of Chula Vista's Standard Urban Storm Water Management Plan (SUSMP), the City of Chula Vista Development Storm Water Manual, and the State Water Resources Control Board's NPDES for construction activity, which includes development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The project will be required to comply with the most recent water quality regulations, as adopted at the time future development is proposed. No revision to the Draft EIR is necessary as a result of this comment.



COMMENTS

RESPONSES



Letter F – San Diego Association of Governments (SANDAG)

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March 6, 2014

File Number 3330300

Mr. Glen Laube  
 Development Services  
 City of Chula Vista  
 276 Fourth Avenue  
 Chula Vista, CA 91910

Dear Mr. Laube:

SUBJECT: Comments on the Draft Environmental Impact Report for the Otay Ranch Village 9 Sectional Planning Area Plan and Tentative Map

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Otay Ranch Village 9 Sectional Planning Area (SPA) Plan and Tentative Map (TM).

Our comments are based on policies included in the Regional Comprehensive Plan (RCP) and the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) and are submitted from a regional perspective, emphasizing the need for land-use and transportation coordination, and implementation of smart growth and sustainable development principles. The goal of these regional plans is to focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure to create a more sustainable region.

The 2050 RTP/SCS sets forth a multimodal approach to meeting the region's transportation needs. Therefore, it is recommended that the traffic analysis consider the needs of motorists, transit riders, pedestrians, and bicyclists and the implementation of a robust Transportation Demand Management (TDM) Program.

The San Diego Association of Governments (SANDAG) recommends that the following comments be addressed and analyzed in the DEIR.

**Transportation and Traffic Impacts**

Please note that while the Otay Ranch Village 9 DEIR states that by 2030 there will be eight freeway lanes, plus four Managed Lanes on Interstate 805 (I-805) in the project area (East Palomar Street), the approved draft unconstrained freeway network for the Regional Plan only includes eight freeway lanes, plus two high occupancy vehicle lanes on I-805 between State Route 905 (SR 905) and State Route (SR 54). This change was made in the Regional Plan due to the fact that SR 125 has been added to the regional network to replace the capacity

- F-1 As shown on page 61 of Appendix B, Traffic Impact Analysis (TIA), the TIA includes a brief discussion of the pedestrian, bicycle and transit service within Village 9. The SPA plan goes into greater detail regarding these benefits. This comment introduces the comments that are addressed in greater detail in responses to comments F-2 through F-17. Refer to the responses to these comments.
- F-2 This comment states that the approved Draft unconstrained freeway network for the Regional Plan only includes 8 freeway lanes and 2 HOV lanes from 905 to SR-54. Refer to response to comment C-4. No further response is necessary.

F-1.

F-2.

COMMENTS

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F-2. cont.	previously provided by two I-805 Managed Lanes. This change was approved by the SANDAG Board of Directors on December 16, 2011 and determined that the project would not have a significant impact on the environment (State Clearinghouse Number 2002071059-Addendum). Please clarify this in the DEIR. Additionally, please make sure that the following projects are taken into	
F-3.	consideration in regards to the potential cumulative traffic and transportation impacts of Otay Ranch Village 9.	F-3 This comment requests confirmation that certain projects have been taken into consideration in the traffic analysis for the project. Refer to responses to comments F-4 through F-6 regarding specific projects.
F-4.	<ul style="list-style-type: none"> <li>• <b>State Route 11/Otay Mesa East Port of Entry Project:</b> The development of a new Port of Entry (POE), Otay Mesa East (Mesa de Otay II in Mexico), is underway and will provide an alternate entry for vehicles and commercial traffic approximately two miles east of the existing Otay Mesa commercial crossing. Otay Mesa East will be linked to SR 905 and State Route 125 (SR 125) through the construction of State Route 11 (SR 11). This POE will also connect to the Tijuana-Rosarito corridor, a highway in Baja California that connects the coastal area of Rosarito to the east of the Otay Mesa POE, SR 11 and the POE are anticipated to be open to traffic in late 2017. Once operational, traffic from a significant number of commercial and passenger border crossers who currently cross at the San Ysidro and Otay Mesa POEs will be diverted to the new POE, thereby increasing traffic density on SR 905, SR 125, and surrounding local roads, as well as increasing demand for mass-transit.</li> </ul>	F-4 The State Route 11/Otay Mesa Port of Entry (POE) project was considered in the project analysis. SANDAG traffic modeling staff has confirmed that SR-11 is coded as a 4-lane freeway on the old alignment with a speed reduction to mimic tolls in the South Bay Subarea Model (Series 11) used for this project. No revision to the Draft EIR is necessary as a result of this comment.
F-5.	<ul style="list-style-type: none"> <li>• <b>Redevelopment Plan at Brown Field Municipal Airport:</b> Metropolitan Airpark, a four-phase commercial development that will take place over the next 20 years will cover about 331 acres of the city-owned, 880-acre facility near the United States-Mexico border. The first phase calls for a 116,875-square-foot fixed-base operator facility for private aircraft, 10 large aircraft hangars, 45 small-plane hangars and solar-powered storage and support facilities, with a restaurant and other commercial elements. The development project would increase traffic in the area, especially on SR 905 and SR 125, as well as increasing demand for mass-transit.</li> </ul>	F-5 The Redevelopment Plan at Brown Field Municipal Airport project was considered in the project analysis. SANDAG traffic modeling staff has confirmed that expansion of Brown Field is anticipated by 2030, and additional heavy and light industry has been added in the South Bay Subarea Model (Series 11) used for this project. No revision to the Draft EIR is necessary as a result of this comment.
F-6.	<ul style="list-style-type: none"> <li>• <b>The San Diego-Tijuana Airport Cross-Border Facility:</b> The Cross-Border Facility (CBF) project is underway and will enable ticketed airline passengers who pay a toll to travel between Mexico's Tijuana International Airport (TIJ) and San Diego, California, via an enclosed, elevated pedestrian bridge. The CBF will consist of a main building on the United States side of the border, housing United States Customs and Border Protection inspection facilities along with shops and services to accommodate travelers; an approximately 525-foot pedestrian bridge from the main building on the United States side connecting into the TIJ passenger terminal on the Mexican side; and parking facilities and areas for car rentals and potentially bus service on the United States side. The facility is expected to open in mid-2015 and is expected to serve 2 million passengers annually, a number that is forecasted to increase to 4.9 million by 2030. This level of passenger traffic will increase traffic on SR 905 and SR 125, as well as increasing demand for mass-transit.</li> </ul>	F-6 The San Diego-Tijuana Airport Cross-Border Facility project was considered in the project analysis. SANDAG traffic modeling staff has confirmed that the cross border airport is included in TAZ 4588 in the South Bay Subarea Model (Series 11) used for this project. No revision to the Draft EIR is necessary as a result of this comment.
F-7.	<p><b>Smart Growth</b></p> <p>SANDAG promotes Smart Growth principles that result in higher density development in areas that are near transit, focus growth near jobs and services, and can increase housing and transportation choices for residents. SANDAG appreciates that Otay Ranch Village 9 is generally supportive of these principles and makes efforts to provide a diversity of employment, housing, and educational opportunities reinforced by multimodal design policies that consider all modes of transportation and optimize connections to these resources.</p>	F-7 This comment does not address the adequacy or accuracy of the information provided in the Draft EIR. No further response is necessary.



COMMENTS

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<p><b>F-7. cont.</b></p>	<p>A key goal of the RCP is to focus growth in Smart Growth Opportunity Areas. The boundaries of Otay Ranch Village 9 contain three areas that are identified as smart growth areas on the SANDAG Smart Growth Concept Map (SGCM): CV-6 Planned Urban Center, CV-7 Planned Town Center, and CV-15 Planned Special Use Center. We look forward for the incorporation of Smart Growth principles in this project.</p>
<p><b>F-8.</b></p>	<p>Please reference the SGCM Site Descriptions to ensure that the planned densities of the Eastern Urban Center, University Village, and University Site remain consistent with existing SANDAG plans. If there are any discrepancies between the preferred alternative for Otay Ranch Village 9 and the Smart Growth density requirements, please coordinate with SANDAG to update this information. Please refer to the SGCM and SGCM Site Descriptions on the SANDAG website.</p>
<p><b>TDM</b></p>	
<p><b>F-9.</b></p>	<p>SANDAG appreciates the City of Chula Vista General Plan Objective, LUT 18, which contains policies in support of TDM strategies to reduce traffic demand through encouraging the use of transit, bicycles, walking, and other trip reduction measures. In support of this guiding document, please consider including the following additional TDM measures to reduce single occupancy vehicle trips:</p> <ul style="list-style-type: none"> <li>• Adequate secure bicycle parking throughout the Specific Plan Area</li> <li>• Wayfinding signage for pedestrians and cyclists</li> <li>• Carshare and bikeshare programs that support first and last mile solutions to transit and improve citywide connections for residents and customers of Chula Vista</li> <li>• Preferred parking for carpools/vanpools.</li> </ul>
<p><b>F-10.</b></p>	<p>Specifically, in Appendix C1 of the DEIR, Page 2 contains a number of suggestions to help encourage non-single occupancy vehicle trips. Please consider including the accommodation of car-sharing services here and of vanpools in Item 6 in this section.</p>
<p><b>F-11.</b></p>	<p>SANDAG appreciates Objectives 30 to 33 of the City of Chula Vista General Plan intended to guide parking management strategies throughout the city. In addition to these leading policies, please consider developing a parking management strategy for Otay Ranch Village 9. Parking management strategies such as demand-based pricing, parking maximums, unbundled parking, and wayfinding signage to public parking can reduce the amount of land required for parking, reduce "cruising" for parking spaces, and encourage parking turn-over to improve access to businesses.</p>
<p><b>F-12.</b></p>	<p>Given that residential and mixed-use development will occur in Otay Ranch Village 9, please consider TDM policies and programs that require or incentivize new developments to provide site designs and/or on-site amenities that support alternative modes of transportation. The SANDAG TDM division, iCommute, can assist with efforts to promote and implement TDM measures during construction efforts, as well as with new development efforts. Please refer to the SANDAG publication, Integrating TDM into the Planning and Development Process – A Reference for Cities.</p>

<p><b>F-8</b></p>	<p>The majority of the project site is located within CV-7, with a small area in the northern area of Village 9 include in CV-6. The eastern edge of Village 9 included in CV-15 is not included within the proposed project boundary. Consistent with SANDAG's Smart Growth Concept Map site descriptions, the Village 9 SPA plan proposes high-intensity mixed-use urban development in CV-6, and a pedestrian-oriented town center in CV-7 with strong connections to CV-15. No revision to the Draft EIR is necessary as a result of this comment.</p>
<p><b>F-9</b></p>	<p>This comment does not address the adequacy or accuracy of information provided in the Draft EIR. However, as shown in Section 5.9 of the SPA Plan, Transportation Demand Management, TDM objectives and strategies are included within the SPA Plan. Additionally, the SPA Plan addresses the stated TDM measures in similar and adequate fashions. As shown in Item 5, Bicycle Parking, of Section 3.3.1(F), General Regulations Applying to all Zones-Parking, the SPA Plan establishes bicycle parking requirements. Section 5.9.2, Transportation Management Association (TMA), addresses way finding signage for pedestrians and cyclists through the proposed TMA, supports rideshare matching, way finding, car share, bicycle rentals and/or loan services, and proposes priority parking for HOVs and other alternative modes of transportation.</p>
<p><b>F-10</b></p>	<p>This comment does not address the adequacy or accuracy of information provided in the Draft EIR. However, the project features already incorporated into the SPA Plan are similar to the commenter's suggestion. For example, as referenced in Appendix C-1 to the SPA Plan, the Air Quality Improvements Plan, the Village 9 SPA Plan incorporates several features into the site design that promote the use of alternative transportation, such as designing parking lots to promote the use of mass transit and carpooling and includes other design features to promote alternative transportation. Refer to response to comment F-9 regarding TDM strategies incorporated into the SPA Plan. . . . Further, because the specific future business tenants are currently unknown, at the Specific Plan level, the proposed project cannot mandate individual employers to implement car-sharing or vanpools. The feasibility of these programs will be dependent on the size and type of individual future business that operate in Village 9.</p>
<p><b>F-11</b></p>	<p>This comment does not address the adequacy or accuracy of information provided in the Draft EIR. However, parking management is incorporated in the Village 9 SPA Plan. The SPA Plan includes shared-parking and directional signs as part of the proposed development code, and compliance with the Otay Ranch General Development Plan parking management objectives.</p>
<p><b>F-12</b></p>	<p>This comment does not address the adequacy or accuracy of information provided in the Draft EIR. However, the SPA Plan includes multiple features to support and enhance the appeal of alternative transportation, such as providing shower and locker facility at offices with more than ten occupants to encourage bicycle use and designing parking lots to promote use of mass transit and car pools. Refer to response to comment F-9 regarding additional TDM measures. Additionally, the proposed project is designed to connect all areas of the SPA Plan area with bicycle and pedestrian facilities, including connections to surrounding village. The project is also designed to accommodate planned transit service, including BRT.</p>

COMMENTS

RESPONSES

Natural Environment and Resources	
F-13.	A key RCP objective is to preserve and maintain natural areas in urban neighborhoods, such as canyons and creeks, and provide access for the enjoyment of the region's residents. Please consider these criteria if applicable to your project. Additionally, it is suggested that consideration be given to the policies included in the SANDAG Regional Energy Strategy that promote the reduction of energy demand and water consumption.
F-14.	
Consultation with the Metropolitan Transit System and Caltrans	
F-15.	SANDAG advises the project applicant to consult with Metropolitan Transit System, the transit service provider within the project area, and with Caltrans to coordinate planned transit and/or highway improvements.
Other Considerations	
F-16.	Section 15125(d) of the California Environmental Quality Act Guidelines state that the "Environmental Impact Report (EIR) shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans. Such regional plans include, but are not limited to...air quality attainment or maintenance plan...regional transportation plans, regional housing allocation plans, regional blueprint plans, plans for the reduction of greenhouse gas emissions..." Please ensure that the Village 9 DEIR adheres to this guideline and coordinates with SANDAG for consistency with regional plans, projects, and programs.
	Please note that the reduced project alternative dwelling units in Section 1.6 are not consistent with the detailed descriptions that follow in 1.6.2 and 1.6.3. Please clarify the following discrepancy (see below):
F-17.	<ul style="list-style-type: none"> <li>Under 1.6 Project Alternatives: "The EIR addresses the No Project (No Build) Alternative and two reduced project alternatives: Reduced Project Alternative #1 – 2,691 Dwelling Units, and Reduced Project Alternative #2 – 1,967 Dwelling Units"</li> <li>"1.6.2 Reduced Project Alternative #1 – 2,799"</li> <li>"1.6.3 Reduced Project Alternative #2 – 1,803 Dwelling Units"</li> </ul>
	We appreciate the opportunity to comment on the DEIR for the Otay Ranch Village 9 SFA Plan and TM. We encourage the City of Chula Vista, where appropriate, to consider the following tools in evaluating this update based on the following SANDAG publications, which can be found on our website at <a href="http://www.sandag.org/igr">www.sandag.org/igr</a> .
F-18.	<ol style="list-style-type: none"> <li>(1) <i>Designing for Smart Growth, Creating Great Places in the San Diego Region</i></li> <li>(2) <i>Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region</i></li> <li>(3) <i>Trip Generation for Smart Growth</i></li> <li>(4) <i>Parking Strategies for Smart Growth</i></li> </ol>

- F-13** This comment does not address the adequacy or accuracy of information provided in the Draft EIR. However, the SPA Plan incorporates various open space and park land use designations throughout the entire Village 9 to create a mix of natural and urban features.
- F-14** This comment does not address the adequacy or accuracy of information provided in the Draft EIR. However, the SPA Plan includes energy and water conservation incorporated into building design features, landscape water conservation design, and other energy and water saving materials and features. A Non-Renewable Energy Conservation Plan is included as Appendix C to the SPA Plan, and a Water Conservation Plan is included as Appendix G to the SPA Plan.
- F-15** The City has coordinated with MTS and Caltrans throughout the planning process for Otay Ranch and Village 9. The City currently meets with, and has historically met with, MTS and Caltrans on an on-going, routine basis to discuss regional transportation issues, including discussion of planned BRT routes. The City intends to continue this relationship into the future. Additionally, as shown in Figure 3-8 of the Draft EIR, Transit Circulation System, the project is designed to accommodate planned transit routes, including BRT.
- F-16** The project's consistency with applicable land use plans is addressed in each of section of Chapter 5, Environmental Impact Analysis, including regional air quality plans, regional transportation plans, regional housing plans, regional planning documents, and regional greenhouse gas emissions (GHG) documents. Section 5.1, Land Use, of the Draft EIR, the Draft EIR addresses the projects consistency with applicable planning documents including general, specific, and regional plans. The project's consistency with regional transportation is addressed in Section 5.3, Transportation/Traffic. The project's consistency with applicable air quality plans is addressed in Section 5.4, Air Quality. The project's consistency with applicable GHG planning is addressed in Section 5.10, Global Climate Change. The project's consistency with regional housing planning is addressed in Section 5.14, Housing and Population. No revision to the Draft EIR is necessary as a result of this comment.
- F-17** The sentence under subheading 1.6, Project Alternatives, in Chapter 1, Executive Summary, has been revised to correct this typographical error to be consistent with the designated number of dwelling units under subheadings 1.6.2 and 1.6.3 as well as in Chapter 10, Alternatives:
- Section 15126.6 of the CEQA Guidelines requires the discussion of "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project" and the evaluation of the comparative merits of the alternatives. The alternatives discussion is intended to "focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project," even if these alternatives would impede to some degree the attainment of the project objectives. The EIR addresses the No Project (No Build) Alternative and two reduced project alternatives: Reduced Project Alternative #1 – ~~2,691~~ 2,799 Dwelling Units, and Reduced Project Alternative #2 – ~~1,967~~ 1,803 Dwelling Units. Alternatives to the project are evaluated in full in Chapter 10 of this document.

COMMENTS

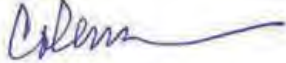
RESPONSES

F-18.  
cont.

- (5) *Regional Multimodal Transportation Analysis: Alternative Approaches for Preparing Multimodal Transportation Analysis in EIRs*
- (6) *Integrating Transportation Demand Management into the Planning and Development Process - A Reference for Cities*
- (7) *Riding to 2050, the San Diego Regional Bike Plan*

If you have any questions or concerns regarding this letter, please contact me at (619) 699-1943 or susan.baldwin@sandag.org.

Sincerely,



COLEEN CLEMENTSON  
Principal Regional Planner

CCL/SBA/SSTA/bga

- This minor revision does not constitute significant new information pursuant to Section 15088.5 of the CEQA Guidelines. No further response is necessary.
- F-18** This comment provides a closing statement to the letter and does not raise a significant environmental issue for which a response is required.



COMMENTS

RESPONSES



County of San Diego

MARK WARDLAW  
DIRECTOR  
(619) 694-2962  
(619) 694-2555

PLANNING & DEVELOPMENT SERVICES  
5510 OVERLAND AVENUE, SUITE 310, SAN DIEGO, CA 92123  
www.sdcclerk.org/pds

DARREN GRETLEN  
ASSISTANT DIRECTOR  
(619) 694-2962  
(619) 694-2555

Letter G – County of San Diego

March 3, 2014

Glen Laube  
City of Chula Vista  
276 Fourth Avenue  
Chula Vista, CA 91910  
Via email to [glaube@chulavistaca.gov](mailto:glaube@chulavistaca.gov)

COMMENTS ON THE VILLAGE 9 SECTIONAL PLANNING AREA PLAN AND TENTATIVE MAP DRAFT ENVIRONMENTAL IMPACT REPORT

Dear Mr. Laube:

The County of San Diego (County) has received and reviewed the Draft Environmental Impact Report (DEIR) for the Village 9 Sectional Planning Area Plan and Tentative Map dated January 2014, and appreciates this opportunity to comment. County Planning & Development Services (PDS) has completed their review and have the following comments:

G-1.

G-2.

G-3.

1. Page 3-40 of the Project Description states that a Recorded Easement Agreement from the County of San Diego may be required to implement the project. The location and purpose of the easement agreement should be clarified in the EIR project description.
2. The County PDS agrees with the following statement in the Public Utilities chapter of the DEIR (page 5.15): "The Salt Creek Interceptor was planned, designed, and constructed to convey projected development flows in the eastern portions of Chula Vista and unincorporated areas in San Diego County." The EIR should further clarify that the Salt Creek Interceptor has capacity to convey projected development flows within the unincorporated areas, including the Otay Ranch Villages 13 through 17 and Village 19.

- G-1** This comment introduces the commenter and introduces the comments that are addressed in responses to comments G-2 through G-3. Refer to the responses to these comments.
- G-2** As stated under the Off-Site Improvements subheading on page 3-11 of Chapter 3, Project Description, the project would include an off-site utility corridor to the south of the site. The corridor would be 30 feet wide, including a 20-foot sewer corridor to connect to existing sewer facilities, and a 10-foot storm drain corridor to direct drainage to the Otay River. Currently, there is an existing Recorded Easement Agreement for this utility corridor; however, the easement will need to be widened to accommodate the proposed alignment. The location and alignment of the off-site corridor is provided on Draft EIR Figures 3.3 through 3.19. The Discretionary Actions subheading on page 3-34 in Chapter 3, Project Description, includes a minor revision to clarify that an updated, rather than new, Recorded Easement Agreement is required. This minor clarification does not constitute significant new information pursuant to Section 15088.5 of the CEQA Guidelines that would require recirculation of the Draft EIR. No further response is necessary.
- G-3** This comment does not address the adequacy or accuracy of information contained in the Draft EIR, as the commenter agrees with the EIR statement regarding Salt Creek Interceptor. The referenced statement is sourced from page 2 of the Salt Creek Interceptor Technical Sewer Study, which states that the Salt Creek Interceptor was planned, designed, and constructed to convey projected development flows in the eastern portions of the City of Chula Vista and future areas in the County of San Diego. This comment requests an analysis of sewer capacity related to Otay Ranch Village 13 through 17 and Village 19, which are not part of the proposed project. The Salt Creek Interceptor Technical Sewer Study does not specifically address Otay Ranch Village 13 through 17 and Village 19; however, it does include an assumption for growth in the unincorporated County in the area to be served by the Salt Creek Interceptor.<sup>2</sup>

<sup>2</sup> PBS&J. 2010. *Salt Creek Interceptor Technical Sewer Study for the South Otay Ranch (Village 8 West and Village 9)*. November.

COMMENTS

RESPONSES

March 3, 2014

Page 2

G-4.

The County appreciates the opportunity to participate in the environmental review process for this project. We look forward to receiving future environmental documents related to this project or providing additional assistance at your request. If you have any questions regarding these comments, please contact Jennifer Domeier, Land Use Environmental Planner, at (858) 495-5204, or via email at [jennifer.domeier@sdcounty.ca.gov](mailto:jennifer.domeier@sdcounty.ca.gov).

G-4 This comment provides a closing statement to the letter and does not raise a significant environmental issue for which a response is required.

Sincerely,



TODD SNYDER, Chief  
Advance Planning Division

e-mail cc:

Michael De La Rosa, Policy Advisor, Board of Supervisors, District 1  
David Sibbet, Land Use Environmental Planning Manager, Planning & Development Services  
Mindy Fogg, Land Use Environmental Planning Manager, Planning & Development Services  
Daniel Brogadir, County Sanitation District, Department of Public Works  
Thomas Bosworth, Deputy County Counsel, County Counsel  
Mohamad Fakhreddine, Deputy Director, Department of Public Works  
Julia Quinn, Environmental Planning Manager, Department of Public Works  
Jennifer Domeier, Land Use Environmental Planner, Planning & Development Services

COMMENTS

RESPONSES

**Letter H – San Diego County Archaeological Society**



**San Diego County Archaeological Society, Inc.**

Environmental Review Committee

13 February 2014

To: Mr. Glen Laube  
 Development Services Department  
 City of Chula Vista  
 276 Fourth Avenue  
 Chula Vista, California 91910

Subject: Draft Environmental Impact Report  
 Village 9 Sectional Planning Area Plan and Tentative Map  
 EIR 10-04

Dear Mr. Laube:

- H-1. I have reviewed the cultural resources aspects of the subject DEIR on behalf of this committee of the San Diego County Archaeological Society.
- H-2. Based on the information contained in the DEIR and its Appendix F1, we have the following comments:
  - H-2. 1. Along with the archaeological monitor, it is normal practice to include a Native American monitor. Mitigation Measure 5.7-1 should be revised accordingly.
  - H-3. 2. Mitigation Measures 5.7-2(ii) and 5.7-2(iii) both refer to curation of "significant artifacts". Please clarify the intent of "significant" in this context.
  - H-4. 3. We note that the archaeological collection for SDI-4726, from the 2009 work by Gallegos & Associates, has already been curated at the San Diego Archaeological Center.
- H-5. Other than the above, we concur with the impact analysis and mitigation measures as defined in the DEIR.

Sincerely,

James W. Royle, Jr., Chairperson  
 Environmental Review Committee

cc: SDCAS President  
 File

P.O. Box 81106 San Diego, CA 92138-1106 (858) 538-0935

- H-1 This comment introduces the commenter and introduces the comments that are addressed in responses to comments H-2 through H-4. Refer to the responses to these comments.
- H-2 Refer to response to comment D-2 regarding the necessity of a Native American monitor for the project. No revision to mitigation measure 5.7-1 is required as a result of this comment.
- H-3 The term significant in this context refers to significance as defined in Section 15064.5 of the CEQA Guidelines. No revision to the Draft EIR is required as a result of this comment.
- H-4 This comment does not address the adequacy or accuracy of information contained in the Draft EIR. This comment is noted.
- H-5 This comment provides a closing statement to the letter and does not raise a significant environmental issue for which a response is required.



COMMENTS

RESPONSES

**Letter I – Otay Valley Regional Park Citizen Advisory Committee**

Otay Valley Regional Park Citizen Advisory Committee  
 County Administration Center  
 1600 Pacific Highway, Rm 335  
 San Diego, CA 92101

February 27, 2014

Glenn Laube, Environmental Planner  
 City of Chula Vista Development Services Department  
 276 Fourth Avenue  
 Chula Vista, CA 91910

Re: Village 9 Sectional Planning Area Plan and Tentative Map Draft Environmental Impact Report (EIR 10-04; SCH2010061090) Comments

Dear Mr. Laube:

Thank you for the opportunity to comment on the above-referenced draft EIR. The Otay Valley Regional Park (OVRP) Citizen Advisory Committee (CAC) consists of stakeholders appointed by the Cities of San Diego and Chula Vista, and the County of San Diego for the purpose of advising on implementation of the OVRP and ensuring that adjacent development is compatible. The OVRP is located immediately south of the proposed project. The CAC's review of the EIR focuses strictly on how the proposed project will impact the adjacent OVRP, as well as the adequacy of the EIR analysis with respect to that.

I-1. The Committee recognizes that urban development will occur where agricultural activities have historically occurred adjacent to the OVRP. Development of the Otay Ranch is guided by policies contained in the Chula Vista General Plan and the Otay Ranch General Development Plan, and must be consistent with the Multiple Species Conservation Plan, as well as policies contained in the adopted OVRP Concept Plan. Recognizing all of this, the Committee is focused on edge effects of the proposed project, connectivity of community trails to the planned OVRP trail system, and offsite impacts that might occur within the OVRP in support of the proposed project.

Our comments regarding the EIR are as follows:

General Comments

I-2. The proposed Village 9 development has been designed to be sensitive to visual effects of urban development along the ridgeline overlooking the river valley. Providing a pedestrian park at the southerly edge of the project and stepping back new single-family residential development from this edge should be effective at softening the visual impact of the project to users of the trail system within the OVRP. However, the creation of one development pad, identified on the Site Utilization Plan (EIR Fig. 3-3) as lot CC, will result in a multiple-family development project that will rise above the existing edge by

- I-1 This comment introduces the commenter and provides information about the commenter. This comment introduces the comments that are addressed in responses to comments I-2 through I-7. Refer to the responses to these comments.
- I-2 This comment does not address the adequacy or accuracy of the information provided in the Draft EIR. No further response is necessary.
- I-3 The proposed Village 9 development has been designed to be sensitive to the visual impacts along the edge adjacent to and overlooking the Otay River Valley. In addition to providing a pedestrian park along a substantial portion of the southerly edge (Park Site II) and stepping back the single family development areas (Planning Areas DD, EE, and FF), the proposed development also preserves 4.0 acres of land that will be dedicated to the Preserve (Areas OS-2 & OS-4) and also proposes contour grading of an additional 5.6 acres that will be revegetated to mimic the adjacent Preserve area (OS-1 & OS-3). Similar to the setbacks proposed for the single-family development that the commenter supports, Planning Area CC would be set back from the Village 9 property line and the OVRP by approximately 350 feet by Planning Areas OS-1 and OS-2, which include revegetated open space and Multiple Species Conservation Program (MSCP) Preserve. Additionally, the distance between Village 9 and the nearest OVRP trail alignment is 750 feet, for a total separation distance of over a thousand feet. At this distance, development would not be substantially visually distinct from the adjacent residential neighborhoods. Proposed grading has been designed to reinforce the existing topography and to be consistent with the Otay Ranch GDP criteria and Design Plan guidelines for sensitive grading within Otay Ranch. The project's consistency with these guidelines is described under Threshold 5 in Section 5.02, Aesthetics/Landform Alteration, of the Draft EIR. As described, the GDP guidelines have been incorporated into the grading plan for Village 9, provided in Section 6 of the SPA Plan. Additionally, visual impacts are minimized through substantial setbacks to the development pad, a robust revegetation program, as well as the plan to preserve substantial portions of the Village 9 edge through the MSCP. No revision to the Draft EIR is necessary as a result of this comment.

COMMENTS

RESPONSES

February 27, 2014  
 Village 9 OVRP CAC Comments  
 Page 2 of 4

I-3.  
 cont.

as much as thirty (30 ft.). This may result in a vertical element along the edge of the OVRP that doesn't currently exist and a negative visual element to users of the proposed OVRP trails to the south. If possible, a reduction of this pad elevation would reduce the significance of this vertical element and therefore mitigate potential negative aesthetic impacts.

Specific Comments

I-4.

Page 5.2-5 (EIR). In paragraph D, Key Views, there is a description of various views of the project site photographed from offsite locations. KVP 5 is the only photo taken from the Otay River Valley, and it is taken very close to the project site looking up at the higher elevation of the site. There should have been at least one photo taken from each of the anticipated major trails within the OVRP. The north side trail is Wyle Road, which is close to KVP 5; however, the south side trail is where the most visible change will occur as a result of the project. Please see Attachment 1 indicating where recommended viewpoints should have been assessed in the EIR. Aesthetic impacts of the new development have been found to be less than significant. This may not be the case if a

I-5.

proper analysis of offsite views by users of the regional park had been conducted.

I-6.

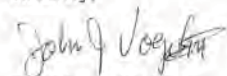
Modifications that propose reducing the height of lot CC would likely reduce any negative visual impacts of the proposed development. Please see Attachment 2, which shows the existing condition where Village 9 is proposed as viewed from the future south side trail in the OVRP. Additionally, this attachment includes the "Long-term" view of the proposed project, taken from Key View 5 and shown on Fig. 5.2-6 of the EIR.

I-7.

Thank you again for the opportunity to review and comment on the proposed project. It should be noted that a good effort has been made to minimize the aesthetic impacts of the proposed project. With adjustments to the grading as noted above, the project would be improved. In addition, a future trail stub to the OVRP has been included in the project, which will be an asset to the community. We look forward to your responses to these comments in the Final EIR, and are hopeful that adjustments could be made to the project. Comments or questions regarding this letter should be directed to Duane Bazzel, Vice Chairman of the CAC, at (619) 482-9626 or dbazzel@cox.net.

I-8.

Sincerely,



John Vogel, Chairman  
 Otay Valley Regional Park Citizen Advisory Committee  
 County Administration Center  
 1600 Pacific Highway, Rm 335  
 San Diego, CA 92101

JV/db

cc: OVRP Policy Committee Members  
 OVRP Joint Staff

I-4

CEQA Guidelines does not state that visual studies and/or simulations for every public viewpoint are required to be completed as part of the Draft EIR. Section 15151 of the CEQA Guidelines states that "an evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible." The Draft EIR contains a range of viewpoints to represent public viewpoints throughout the viewshed containing the proposed project. As stated in response to comment I-3, the distance to the northerly OVRP trail alignment is over a thousand feet. The aesthetic analysis utilized a closer viewpoint because development of this individual project is more dominant in closer views. At further distances the project would blend in with the surrounding landscape and development. Additionally, the location of Viewpoint #5 in Draft EIR Figure 5.2-1 is not correct. The actual location of the viewpoint is closer to what is identified at location #7 in the commenter's attachment at Wiley Road. No additional Draft EIR analysis is necessary as a result of this comment; however, Figure 5.2-1 has been revised to correct this minor error in location.

I-5

In accordance with CEQA Guidelines Section 15151 an EIR should provide "a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences." The EIR analysis complies with CEQA Guidelines Section 15151. Please also refer to response to comment I-4. No additional analysis is necessary as a result of this comment.

I-6

Refer to response to comments I-3 and I-4. No revision to the Draft EIR is necessary as a result of this comment.

I-7

Refer to response to comment I-4 and 1-5. No additional viewpoints are required to be addressed in the Draft EIR; however, Figure 5.2-1 has been revised to reflect that the viewpoint location is actually closer the commenter's proposed location #7.

I-8

This comment provides a closing statement to the letter and does not raise a significant environmental issue for which a response is required.

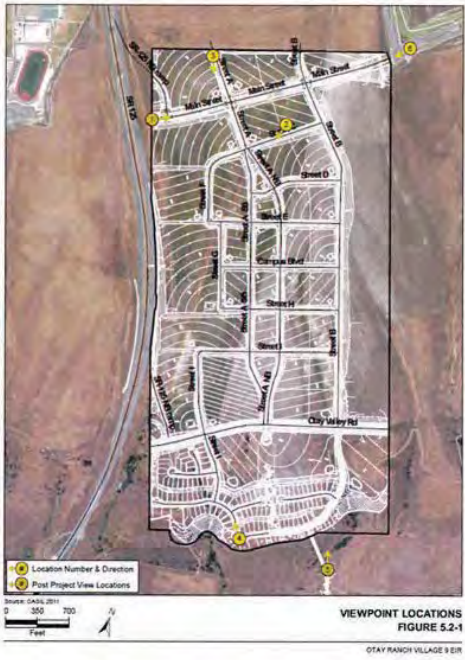


COMMENTS

COMMENTS

Attachment 1

Attachment 2



Key View 5 Long-term: Post-project view from Otay River Valley, including more mature trees.

# Chapter 1 Executive Summary

This Environmental Impact Report (EIR) is an informational document intended for use by the City of Chula Vista, other public agencies, and members of the general public in evaluating the potential environmental effects of the proposed Village 9 Sectional Planning Area (SPA) Plan and Tentative Map (TM), hereafter referred to as the project. The proposed SPA Plan is a document that refines and implements the land use plans, goals, and objectives of the Otay Ranch General Development Plan (GDP) for the development of Village 9.

CEQA Statute Section 21002 requires that an EIR identify the significant effects of a project on the environment and provide measures or alternatives that can mitigate or avoid these effects. This Draft EIR evaluates the environmental effects associated with development of the project and discusses the manner in which the project's significant effects can be reduced or avoided through the implementation of mitigation measures or feasible alternatives to the proposed project. In accordance with Section 15130 of the CEQA Guidelines, this EIR also includes an examination of the effects of cumulative development.

The 2013 General Plan Amendment/General Development Plan Amendment SEIR (SEIR 09-01), 2005 General Plan Update Final Program EIR (EIR 05-01), and the 1993 Otay Ranch GDP Program Final EIR (EIR 90-01) are incorporated by reference in accordance with CEQA Guidelines Section 15168(d). This Draft EIR addresses environmental issues associated with the project that were not evaluated in the previously certified EIRs and updates information in these EIRs pertaining to the project area.

This summary provides a brief synopsis of: 1) the proposed project, 2) results of the environmental analysis contained within this environmental document, 3) alternatives to the proposed project that were considered, and 4) major areas of controversy and issues to be resolved by decision-makers. This summary does not contain the extensive background and analysis found throughout the individual chapters within the EIR. Therefore, the reader should review the entire document to fully understand the project and its environmental consequences.

## 1.1 Project Location and Setting

The project consists of approximately 323 acres of land in Otay Ranch known as Village 9, located entirely within the city of Chula Vista, California, near the southeasterly edge of the city limits. Chula Vista is located in San Diego County, approximately seven miles south of the downtown area of the city of San Diego, and approximately seven miles north of the U.S./Mexico international border.

The project site is currently undeveloped. The project site is located adjacent to and east of State Route (SR-) 125 and is surrounded to the north, east, and south by undeveloped land. Eastlake Parkway and Hunte Parkway currently terminate at the northeast corner of the project site. Otay Valley Regional Park and the Otay River Valley are south of the site.

## 1.2 Project Background

Otay Ranch is a partially developed master-planned community that proposes a broad range of residential, commercial, retail, and industrial development interwoven with civic and community uses, such as libraries, parks, and schools. The community is 23,000 acres in size, and includes an open space preserve system consisting of approximately 11,375 acres. Village 9 is one of the designated fourteen villages within the Otay Ranch General Development Plan (GDP) area. The GDP was recently amended in 2013. The GDP establishes land plans, design guidelines, objectives, policies, and implementation measures that apply to all portions of Otay Ranch while supporting a balance of housing, shops, workplaces, schools, parks, civic facilities, and open spaces. The majority of development is intended to be clustered in villages, with conveniently located features and well-defined edges such as the Chula Vista greenbelt, open spaces, and wildlife corridors.

Under the implementation program for the Otay Ranch GDP, review and City Council approval of SPA plans is required before final development entitlements can be considered. The GDP describes Village 9 as an urban village with an emphasis on compatibility with the adjacent EUC and the University. The GDP states “Urban Villages are adjacent to existing urban development and are planned for transit oriented development with higher densities and mixed uses in the village cores.” The GDP recognizes that a portion of the land use within Village 9 will be designated as University and that the remainder of the village would contain an urban center to transition from the EUC, single-family and multi-family residential units, and a village core or town center containing mixed-use, community purpose facilities, a transit station, an elementary school, a town square, a public space/Campus Boulevard, and affordable housing.

## 1.3 Project Description

The project includes the SPA Plan and TM for Village 9, including associated off-site improvements, consistent with the Otay Ranch GDP. The development proposed by the Otay Land Company (OLC) pursuant to the Village 9 SPA Plan is referred to as the “project,” and is the focus of this EIR. The Village 9 SPA Plan is incorporated by reference and is available for review at the offices of the City of Chula Vista, Development Services Department, located at 276 Fourth Avenue, Chula Vista, California 91910. The components of the project description are summarized briefly below and detailed in Chapter 3.

### 1.3.1 Development Concept

Village 9 has been planned in transects to provide organization for development that focuses activity within the Town Center, transitioning into residential opportunities and rural open space at the edges. Uses include two elementary school sites, a variety of parks, various open space areas, multi-family and single-family residential units, and mixed-use areas. The proposed land uses and proposed maximum residential unit yield for Village 9 are provided below in Table 1-1.

**Table 1-1 Village 9 SPA Land Uses**

Use	Area (Acres)	Residential (Units)	Commercial (Square feet)
<b>Proposed Development</b>			
Mixed-Use Eastern Urban Center (EUC)	48.3	1,912	1,190,000
Town Center (TC)	36.1	894	278,000
Mixed Use (MU)	57.4	928	32,000
Medium Density Residential (M)	15.2	161	--
Low Medium Density Residential (LMD)	28.1	105	--
Schools	19.8	--	--
Community Purpose Facility	5.0	--	--
Parks	27.5	--	--
Open Space	9.6	--	--
Arterial Roadway Rights-of-Way & SR-125	26.1	--	--
Subtotal	273.1	4,000	1,500,000
<b>Remainder of Village 9</b>			
Future University	50.0	--	--
Total	323.1	4,000	1,500,000
EUC = Eastern Urban Center, TC = Town Center, MU = mixed-use, M = medium density, and LMD = low-medium density			
Source: Otay Land Company 2012			

### 1.3.2 Off-site Improvement Area

The project would include an off-site utility corridor to the south of the site. The corridor would be 30 feet wide, including a 20-foot sewer corridor to connect to existing sewer facilities, and a 10-foot storm drain corridor to direct drainage to Otay River. A 12-foot paved utility access road would provide access to the southern portion of the off-site utilities. The northern portion of the sewer and storm drain corridor south of the Village 9 development area will not have an access road due to the steep slopes that occur in this area. Direct access to the road would not be provided from Village 9.

### 1.3.3 Mobility

The Village 9 circulation system would provide a system of roadway and trail corridors to support both vehicular and non-vehicular modes of transportation. This system includes the extension of existing and planned roads, trails, and transit from adjacent villages, internal systems to serve the project site and a connection to the greenbelt system. Streets in the community are designed as “complete” streets, considering all modes of transportation by providing vehicular travel lanes, bike lanes or bike routes, sidewalks, and transit lanes where appropriate.

### 1.3.4 Infrastructure

The SPA Plan includes plans to provide adequate infrastructure to the proposed development, including water distribution, recycled water distribution, sewer service, and storm water collection.



### 1.3.5 Tentative Map

The TM for Village 9 details how the utilization plan would be implemented. The map includes the various land uses, proposed grading, and street layout. In addition, a TM depicts proposed utilities, easements and conceptual trail design.

### 1.3.6 Project Objectives

The SPA Plan identifies project objectives that would implement the aforementioned GDP vision for Village 9 as indicated below:

1. Create a recognizable “place” that is well designed to provide 500,000 to 1.5 million square feet of office and retail space in three unique and attractive urban districts accommodating cultural and social diversity.
2. Develop distinctive design standards and invest in design excellence to create inspiring and memorable places; emphasize the appearance and qualities of the public realm; create streetscapes, pathways, and public spaces of beauty, interest, and functional benefit to pedestrians.
3. Encourage a development pattern that promotes orderly growth, prevents urban sprawl, and promotes effective resource management, while implementing the GDP goals of a strong relationship between Village 9, the Eastern Urban Center, and the planned university.
4. Protect and enhance the natural environment and increase the quality of life. Design neighborhoods with compact and multi-dimensional land use patterns that ensure a mix of uses and joint optimization of transportation modes to minimize the impact of cars, promote walking and bicycling, and provide access to employment, education, recreation, entertainment, shopping, and services.
5. Create an appropriately scaled and economically healthy Town Center. Include a wide range of commercial, residential, cultural, civic, and recreational uses. The Town Center should contain businesses that serve the daily needs of nearby residents and employees including students, faculty, and Regional Technology Park employees.
6. Establish a pedestrian and transit-oriented village with an intense, vibrant Town Center to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and regional transit.
7. Encourage community development in mixed use and compact pedestrian oriented forms to accommodate all income levels and lifestyles.
8. Foster a compact form facilitated by “form-based planning,” resulting in efficient infrastructure investments and advanced opportunities to provide socially diverse housing.
9. Promote jobs that match the skills of existing and future residents through provision of housing opportunities and choices and by providing an opportunity for the City to attract a university or related uses by dedication of land for such purposes. Retain and recruit a skilled and motivated workforce to ensure economic stability into the future and support university development by providing attainable housing opportunities at increased densities.

10. Encourage diverse, informal centers of creativity, learning, and interaction that support the University. Focus community design on a manner of life and civic culture that embraces and fosters life-long learning. This shall take place in traditional educational institutions as well as diverse venues such as restaurants, arts, and cultural locations. This includes public and private places of exceptional design and open spaces that inspire and connect with the natural environment through features that spark creativity. Identify and promote business clusters that complement the University and the Regional Technology Park.
11. Promote synergistic uses and graceful transitions within the SPA Plan area and between the SPA Plan area and neighborhoods of adjacent SPA areas to balance activities, services, and facilities. Integrate Village 9 with existing Otay Ranch development, the University, the Regional Technology Park, and connectivity to the Greenbelt trail system.
12. Implement the goals, objectives and policies of the Chula Vista General Plan, the Otay Ranch General Development Plan, the Chula Vista Greenbelt Master Plan, and the Otay Valley Regional Park Concept Plan.
13. Encourage the interactivity of a wide range of people, promote community diversity, and enrich the human experience by providing a broad variety of public spaces and housing types and styles that appeal to all ages, incomes, and lifestyles.
14. Establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions.

### 1.3.7 Discretionary Actions

The project is a “discretionary project,” which is defined in Section 15357 of the CEQA Guidelines as “a project that requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity.” The following discretionary actions are associated with the project and would be considered by the Chula Vista Planning Commission and City Council:

- Adoption of the Village 9 SPA Plan and associated documents including but not limited to:
  - Village 9 SPA Plan
  - Air Quality Improvement Plan
  - Agricultural Plan
  - Non-Renewable Energy Conservation Plan
  - Preserve Edge Plan
  - Fire Protection Plan
  - Affordable Housing Plan
  - Water Conservation Plan
  - Parks, Recreation, Open Space Master Plan
  - Emergency Disaster Plan
  - Public Facility Finance Plan
- Approval of a tentative map to establish the location of development and open space lots and identify the infrastructure requirements for Village 9
- Approval of a development agreement amendment including conditions of approval for development within the Village 9 SPA Plan area
- Certification of a Final EIR and adoption of a Mitigation Monitoring and Reporting Program



## 1.4 Areas of Controversy

The Notice of Preparation (NOP) was distributed June 29, 2010 for a 30-day public review and comment period and a public scoping meeting was held in July 2010. Public comments were received on the NOP and at the scoping meeting related to several environmental issues. The NOP and comment letters are included in this EIR as Appendix A. Controversy associated with the project primarily concerns the issues of public services, landform alteration, hazards from Brown Field, wildland fire, biological resources, and traffic. These issues are analyzed in the EIR.

## 1.5 Issues to be Resolved by the City Council

The issues to be resolved by the decision-making body are whether to adopt the proposed project and how to mitigate significant effects created by its implementation. The City will decide if benefits of the project outweigh any significant unmitigable impacts associated with traffic (cumulative impacts to the Olympic Parkway/I-805 northbound ramps intersection), aesthetics (direct and cumulative alteration of visual character, cumulative loss of views of open space), air quality (direct and cumulative conflict with existing air quality plans and violation of air quality standards), cultural resources (cumulative impacts to unknown archaeological resources and human remains), potential effects of global climate change (direct and cumulative contribution to air quality problems), agricultural resources (direct and cumulative conversion of agricultural resources), noise (short-term increase in traffic noise), water (direct and cumulative guarantee of long term water supply), wastewater (direct and cumulative wastewater treatment capacity), and recycled water (cumulative recycled water supply), energy resources (direct and cumulative guarantee of long-term energy supply).

The City will also decide if the significant impacts associated with the environmental issues of land use (compatibility with existing water lines), aesthetics (lighting and glare, landform alteration); transportation and traffic (level of service standards, congestion management, air traffic patterns), air quality (sensitive receptors), noise (excessive noise levels), biological resources (sensitive plant and wildlife species, riparian habitat and other sensitive natural communities, federally protected wetlands, local policies and ordinances), cultural resources (direct impacts to archaeological resources, human remains, and paleontological resources), geology and soils (exposure to seismic related hazards, soil erosion or topsoil loss, soil stability, expansive soils), public services (fire and emergency medical services, police services, schools, libraries, parks and recreation), hydrology and water quality (water quality standards, erosion or siltation, exceed drainage capacity, degradation of water quality), agricultural resources (land use zoning conflicts), hazards and hazardous materials (accidental release of hazardous materials, hazards to schools, airport hazards, consistency with hazard policies, historic use of pesticides), and public utilities (water, wastewater, recycled water) have been fully mitigated below a level of significance. Lastly, the City would determine whether any alternative might meet the key objectives of the project while reducing its environmental impact.

## 1.6 Project Alternatives

Section 15126.6 of the CEQA Guidelines requires the discussion of “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project” and the evaluation of the comparative merits of the alternatives. The alternatives discussion is intended to “focus on alternatives to the project or its location which are capable of avoiding or substantially

lessening any significant effects of the project,” even if these alternatives would impede to some degree the attainment of the project objectives. The EIR addresses the No Project (No Build) Alternative and two reduced project alternatives: Reduced Project Alternative #1 – ~~2,691~~2,799 Dwelling Units, and Reduced Project Alternative #2 – ~~1,967~~1,803 Dwelling Units. Alternatives to the project are evaluated in full in Chapter 10 of this document.

### **1.6.1 No Project–No Build Alternative**

The No Project (No Build) Alternative assumes that no SPA Plan would be developed for Village 9 and that the project area would remain unchanged. Accordingly, the site characteristics of this alternative would be equivalent to the existing conditions for each category analyzed in this EIR.

### **1.6.2 Reduced Project Alternative #1 – 2,799 Dwelling Units**

Reduced Project Alternative #1 would include the development of 2,799 residential units, compared to 4,000 units under the proposed Village 9 SPA Plan and TM. This alternative is intended to provide a more suburban approach to development in the SPA Plan area. This alternative reduces residential development by almost 30 percent, and promotes a more horizontal mixed-use pattern in place of the more vertical mixed-use plan for the Town Center and Urban Center. It significantly reduces residential density in the Urban Center. A maximum of 1,030,000 square feet of commercial development would occur under this alternative, compared to 1,500,000 square feet under the proposed project. The reduction in commercial uses would occur primarily in the Urban Center to promote a more horizontal building pattern rather than high-rise structures. The Neighborhood Park (Planning Area L) would also be reduced by 2.3 acres to accommodate this building pattern. Additionally, one of the pedestrian parks proposed for the project would be eliminated under this alternative (Planning Areas HH). This additional open space area would provide additional transition from developed areas to the MSCP Preserve, but would not be incorporated into the Preserve.

### **1.6.3 Reduced Project Alternative #2 – 1,803 Dwelling Units**

Reduced Project Alternative #2 would include the development of 1,803 residential units, compared to 4,000 units under the proposed project. This alternative is a low-density alternative based on the minimum densities accommodated by the proposed land uses. The greatest reduction in development would occur in the Urban Center. Under this alternative, residential development would be reduced by approximately 65 percent. Residential densities would also be reduced in the Town Center, Urban Neighborhood, Neighborhood Edge, Neighborhood General, and Neighborhood Center Zones. Commercial development in the Town Center would also be reduced to 532,000 square feet, compared to 1,500,000 square feet under the project. Additionally, the Neighborhood Park proposed for the project would be reduced in size, and two pedestrian parks would be eliminated under this alternative. The pedestrian park areas (Planning Areas HH and II) would provide additional open space, 14.3 acres compared to 9.6 acres under the proposed project. One potential elementary school site (Planning G) would be eliminated. Under this alternative, Planning Area G would be developed with mixed-use residential and commercial development as part of the Urban Neighborhood Zone.

### 1.6.4 Environmentally Superior Alternative

The No Project (No Build) Alternative would be the environmentally superior alternative, as it would entirely avoid the project's significant and unavoidable impacts associated with aesthetics (direct and cumulative), air quality (direct and cumulative), noise (short-term direct), archaeological resources and human remains (cumulative), potential effects of climate change (direct and cumulative), agricultural resources (direct and cumulative), water supply (direct and cumulative), wastewater treatment capacity (direct and cumulative), recycled water (cumulative), and energy (direct and cumulative). However, as the No Project (No Build) Alternative is determined to be environmentally superior, another environmentally superior alternative must be identified among the remaining alternatives.

The Reduced Project Alternative #2 is identified as the environmentally superior alternative as it would reduce traffic (direct and cumulative), air quality (direct and cumulative), noise (direct and cumulative), biological resources (direct), public services (direct), water quality (direct), and public utilities (direct and cumulative) impacts. Mitigation measures 5.3-12 through 5.3-16, 5.3-19, 5.3-20, and 5.3-21 identified for potential traffic impacts would not be required under this alternative. However, as with the Reduced Project Alternative #1, this alternative would not avoid any of the project's significant and unavoidable impacts associated with traffic (cumulative impacts to the Olympic Parkway/I-805 northbound ramps intersection), aesthetics (cumulative), air quality (direct and cumulative), noise (short-term direct), archaeological resources and human remains (cumulative), potential effects of climate change (direct and cumulative), agricultural resources (direct and cumulative), water supply (direct and cumulative), wastewater treatment capacity (cumulative), recycled water (cumulative), and energy (direct and cumulative). This alternative would reduce significant carbon monoxide and PM<sub>2.5</sub> emissions by approximately 25 percent to a less than significant level.

## 1.7 Summary Tables

Table 1-2 identifies the subject areas analyzed in the SEIR, providing a summary of potential impacts, mitigation measures, and significance of impacts. Table 1-3 identifies the cumulatively significant subject areas and a summary of the potential impacts as analyzed in the SEIR. Table 1-4 provides a summary comparison of the potential impacts of the proposed project and the project alternatives. Mitigation measures that refer to the applicant would be implemented by the developer applying for permits to develop on the project site.

**Table 1-2 Summary of Significant Environmental Analysis Results**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<b>5.1 Land Use and Planning</b>			
Would the project physically divide an established community (incompatibility with adjacent and surrounding uses)?	A significant land use compatibility impact would occur if the on-site City of San Diego water lines would not be relocated before development of Village 9.	<p>5.1-1 <b>Waterline Agreement.</b> Prior to approval of the first final map, the applicant shall provide evidence, satisfactory to the City Engineer, that the:</p> <ul style="list-style-type: none"> <li>i. Applicant has entered into an agreement with the City of San Diego to relocate the City of San Diego waterlines within Village 9 to a location approved by both the City of San Diego and the City of Chula Vista.</li> <li>ii. City of San Diego has abandoned any water main easements not needed as a consequence of the relocation of the City of San Diego waterlines within Village 9.</li> </ul> <p>5.1-2 <b>Waterline Relocation.</b> Prior to issuance of the first grading permit within Village 9, the Applicant shall relocate the City of San Diego waterlines to the satisfaction of the City of San Diego and the City of Chula Vista.</p>	Less than significant.
Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance), adopted for the purpose of avoiding or mitigating an environmental effect?	No significant impacts related to the conflicts with land use plans, policies, and regulations have been identified for implementation of the SPA Plan and TM for Village 9.	No mitigation required.	Less than significant.
Would the project conflict with any applicable habitat conservation plan or natural community habitat conservation plan?	No significant impacts related to Habitat Conservation Plans or Natural Community Conservation Plans have been identified for implementation of the SPA Plan and TM for Village 9, other than significant impacts identified in Section 5.6 Biological Resources. Implementation of the mitigation measures identified in this section would reduce all potential land use impacts to a less than significant level.	No additional mitigation measures are required other than those listed in Section 5.6 Biological Resources.	Less than significant.
<b>5.2 Aesthetics/Landform Alteration</b>			
Would the project have a substantial adverse effect on a scenic vista?	No significant impacts to scenic vistas have been identified for the project.	No mitigation required.	Less than significant.
Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic highway?	No scenic resources would be damaged by the project.	No mitigation required.	Less than significant.

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>Would the project substantially degrade the existing visual character or quality of the site and its surroundings?</p>	<p>The project would permanently alter the character of the project site from open, rolling hills to urban development. This impact would be significant.</p>	<p>The project would implement mitigation measure 5.2.5-1 identified in the SEIR to reduce impacts related to visual character. However, because the project would result in development on the site, it would permanently alter the character of the existing site from open, rolling hills to urban development. No mitigation is available to maintain the undeveloped character of the site.</p>	<p>Significant.</p>
<p>Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</p>	<p>New sources of nighttime lighting may be incompatible with surrounding development and inconsistent with applicable regulations. Potential impacts associated with light, shadow, and wind cannot be determined until the location, size, and orientation of future buildings are established.</p>	<p><b>5.2-1 Lighting Plan and Photometric Analysis - Parks.</b> Concurrent with the preparation of site-specific plan(s) for park sites, including the town squares (Planning Areas C and I), Neighborhood Park (Planning Area L), and Pedestrian Parks (Planning Areas GG, HH, and II), and prior to issuance of a building permit for any park, the applicant shall prepare, or in the case of the City being the lead on the preparation of the site specific plan, the applicant shall fund the preparation of a lighting plan and photometric analysis. The plan shall be prepared to the satisfaction of the Development Services Director and evaluate the proposed height, location, and intensity of all exterior lighting for compliance with the City's performance standards for light, and glare (Chula Vista Municipal Code 19.66.100).</p> <p><b>5.2-2 Lighting Plan and Photometric Analysis – New Structures.</b> Concurrent with design review and prior to the issuance of building permits for mixed-use residential, commercial, Community Purpose Facility and multi-family residential, the applicant shall prepare a lighting plan and photometric analysis. The plan shall be prepared to the satisfaction of the Development Services Director (or their designee) and evaluate the proposed height, location, and intensity of all exterior lighting for compliance with the City's performance standards for light, and glare (Chula Vista Municipal Code 19.66.100).</p> <p><b>5.2-3 Shadow and Wind Pattern Analysis.</b> Prior to design review approval for any structure three stories and above, the applicant shall prepare to the satisfaction of the Development Services Director (or their designee), a shadow and wind pattern analysis demonstrating that adjacent shadow-sensitive uses are not permanently shadowed, and/or any other approved City-standard in place at the time the shadow and wind pattern analysis is performed.</p>	<p>Less than significant.</p>
<p>Would the project alter areas of sensitive landforms and grade steep slopes that may be visible from future development and roadways that negatively detract from the prevailing aesthetic character of the site or surrounding area?</p>	<p>The project would have the potential to impact steep slopes until the Landscape Master Plan and subsequent landscape and irrigation construction plans have been approved.</p>	<p><b>5.2-4 Landscape Master Plan.</b> Prior to issuance of the first final map for Village 9, the applicant shall prepare to the satisfaction of the Development Services Director (or their designee), a Landscape Master Plan. The Landscape Master Plan shall demonstrate compliance with GDP Policies pertaining to softening manufactured slopes, particularly on visible manufactured slopes greater than 25 feet in height, through plant selection, placement, and density, etc.</p>	<p>Less than significant.</p>



**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>Would the project be inconsistent with General Plan, GDP, or other objectives and policies regarding visual character, thereby resulting in a significant physical impact?</p>	<p>The project would be consistent with all applicable visual character policies.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p><b>5.3 Transportation/Traffic</b></p>			
<p>Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?</p> <p>Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</p>	<p>The project would result in direct and cumulative impacts on roadways and intersections under the Existing + Project, Year 2020, Year 2025, and Year 2030 Scenarios. Based on the Intersection Lane Volume Analysis, a significant direct impact would occur to the I-805 southbound ramps at Main Street, and a cumulative impact would occur to the I-805 northbound ramps at Main Street. Impacts related to congestion management would be potentially significant.</p>	<p><b>Growth Management Ordinance Compliance (Section 19.09 of the CVMC)</b></p> <p>5.3-1 <b>Olympic Parkway: Heritage Road to Oleander Avenue:</b> Prior to the issuance of the building permit for the 2,463<sup>rd</sup> dwelling unit for development east of I-805 (commencing from April 4, 2011), the applicant may:</p> <ol style="list-style-type: none"> <li>i. Prepare a traffic study that demonstrates, to the satisfaction of the City Engineer, that the circulation system has additional capacity without exceeding the Growth Management Ordinance traffic threshold standards; or</li> <li>ii. Demonstrate that other improvements are constructed which provide the additional necessary capacity to comply with the Growth Management Ordinance traffic threshold to the satisfaction of the City Engineer; or</li> <li>iii. Agree to the City Engineer's selection of an alternative method of maintaining Growth Management Ordinance traffic threshold compliance; or</li> <li>iv. Enter into agreement, approved by the City, with other Otay Ranch applicants that alleviates congestion and achieves Growth Management Ordinance traffic threshold compliance for Olympic Parkway. The agreement will identify the deficiencies in transportation infrastructure that will need to be constructed, the parties that will construct said needed infrastructure, a timeline for such construction, and provide assurances for construction, in accordance with the City's customary requirements, for said infrastructure.</li> </ol> <p>If Growth Management Ordinance compliance cannot be achieved through i, ii, iii, or iv above, then the City may, in its sole discretion, stop issuing new building permits within the project area, after building permits for 2,463 dwelling units have been issued for any development east of I-805 after April 4, 2011, until such time that Growth Management Ordinance traffic threshold standard compliance can be assured to the satisfaction of the City Manager.</p> <p>These measures shall constitute full compliance with growth management objectives and policies in accordance with the requirements of the General Plan, Chapter 10 with regard to traffic thresholds set forth in the Growth Management Ordinance.</p>	<p>Less than significant/ Significant and Unavoidable (cumulative impacts to Olympic Parkway/I-805 northbound ramps intersection only),</p>

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p><b>Access and Frontage Mitigation</b></p> <p>5.3-2 <b>Main Street/Village 9 Street A.</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall <u>secure or</u> install a traffic signal at the intersection of Main Street/Village 9 Street A.</p> <p>5.3-3 <b>Main Street:</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall <u>secure or</u> construct Main Street from Village 9 Street A to Eastlake Parkway as a six-lane gateway.</p> <p>5.3-4 <b>Village 9 Street A:</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall <u>secure or</u> construct Village 9 Street A from Main Street to Village 9 Street C as four-lane roadway, and from Village 9 Street C to Otay Valley Road as a two-lane, two-way roadway.</p> <p>5.3-5 <b>Otay Valley Road:</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall <u>secure or</u> construct Otay Valley Road from Village 9 Street I to Village 9 Street A as four-lane major roadway.</p> <p>5.3-6 <b>Village 9 Street I:</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall <u>secure or</u> construct Village 9 Street I south of Otay Valley Road as a two-lane roadway.</p> <p>5.3-7 <b>Otay Valley Road:</b> Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Otay Valley Road as a four-lane major roadway from Village 9 Street A to Village 9 Street B and install a traffic signal at the Otay Valley Road/Village 9 Street A intersection when warranted, or construct the improvements at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever comes first.</p> <p>5.3-8 <b>Village 9 Street A:</b> Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct two lanes to form a couplet and restripe Street A as two one-way segments (two northbound and two southbound lanes). The applicant shall construct the south end of the couplet to Otay Valley Road as a four-lane roadway and install traffic signals or stop control at internal intersections where appropriate, or construct the improvements at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.</p> <p>5.3-9 <b>Campus Boulevard:</b> Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Campus Boulevard from Village 9 Street G to Village 9 Street B as a two-lane roadway, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.3-10 <b>Village 9 Street B:</b> Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Street B from Campus Boulevard to its terminus south of Otay Valley Road as a two-lane roadway, with dedicated transit lanes from Campus Boulevard to Otay Valley Road, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.</p> <p>5.3-11 <b>Village 9 Street I:</b> Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Street I from Village 9 Street A to Otay Valley Road as a two-lane roadway, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.</p> <p>5.3-12 <b>Village 9 Street A:</b> Prior to issuance of the final map that contains the 3,074<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Village 9 Street A from the northern boundary of Village 9 to Main Street as a four-lane roadway and modify the traffic signal at the Main Street/Village 9 Street A intersection, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.</p> <p>5.3-13 <b>Village 9 Street B:</b> Prior to issuance of the final map that contains the 3,074<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Village 9 Street B from the northern boundary of Village 9 to Campus Boulevard as a two-lane roadway with dedicated transit lanes and install a traffic signal at the Main Street/Village 9 Street B intersection, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.</p> <p><b>Direct Impact Mitigation</b></p> <p>5.3-14 <b>Birch Road/La Media Road, Birch Road/Eastlake Parkway, and Main Street/Eastlake Parkway Intersections; Birch Road from La Media to SR-125; Magdalena Avenue from Birch Road to Main Street; and Eastlake Parkway from Birch Road to Main Street:</b> Prior to issuance of the final map that contains the 3,074<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Main Street from La Media Road to Village 9 Street A, including the construction of an overcrossing at SR-125.</p> <p>5.3-15 <b>Birch Road/SR-125 Northbound Ramps, Birch Road/Eastlake Parkway, and Main Street/I-805 Northbound Ramps Intersections; Birch Road, SR-125 to Eastlake Parkway; Main Street, I-805 to Brandywine Avenue; Main Street, Brandywine Avenue to Heritage Road:</b> Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct SR-125 northbound and southbound ramps at Main Street.</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p><b>5.3-16 Main Street/La Media Road Couplet and Main Street/ Magdalena Avenue Intersections; and Eastlake Parkway, Birch Road to Main Street:</b>                      Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall <u>secure or</u> construct Otay Valley Road from the Main Street to Village 9 Street I, including the construction of an overcrossing at SR-125.</p> <p><b>Cumulative Impact Mitigation</b></p> <p>5.3-17 To mitigate the project’s cumulative impact on the following roadway segments and intersections, prior to issuance of each building permit, the applicant shall pay the Chula Vista Transportation Development Impact Fee:</p> <ul style="list-style-type: none"> <li>i. Olympic Parkway/Brandywine Avenue intersection</li> <li>ii. Olympic Parkway from I-805 to Brandywine</li> <li>iii. Olympic Parkway from Brandywine Avenue to Heritage Road</li> <li>iv. Olympic Parkway from Heritage Road to La Media Road</li> <li>v. Birch Road from La Media Road to SR-125</li> <li>vi. Birch Road/La Media Road intersection</li> <li>vii. Main Street/I-805 southbound ramps intersection</li> <li>viii. Heritage Road from Main Street to Avenida de las Vistas</li> <li>ix. Main Street/Eastlake Parkway intersection</li> </ul> <p><b>Circulation System Assumptions</b></p> <p>5.3-18 The Year 2020 scenario assumes the following intersection and roadway improvements:</p> <ul style="list-style-type: none"> <li>i. Construction of Main Street/La Media Road intersection</li> <li>ii. Construction of Main Street/Magdalena Avenue intersection</li> <li>iii. La Media Road from Birch Road to Main Street roadway segment</li> <li>iv. Construction of Otay Valley Road from Village 9 Street A to University site</li> </ul> <p>If the first final map containing the first equivalent dwelling unit is submitted for approval prior to these improvements being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:</p> <ul style="list-style-type: none"> <li>i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or</li> </ul>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<ul style="list-style-type: none"> <li>ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or</li> <li>iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or</li> <li>iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance.</li> <li>v. All to the satisfaction of the City Engineer.</li> </ul> <p>5.3-19 The Year 2025 scenario assumes the following intersection and roadway improvements:</p> <ul style="list-style-type: none"> <li>i. Construction of Heritage Road from Olympic Parkway to Main Street; re-stripe southbound Heritage Road from Olympic Parkway to Main Street to include dual left turn lanes, three through lanes, and one right turn lane</li> <li>ii. Widening of Heritage Road from Main Street to Avenida de las Vistas from a Class II Collector to a six-lane Prime</li> <li>iii. Construction of Santa Victoria Road from Heritage Road to La Media Road</li> <li>iv. Construction of Main Street from La Media Road to Magdalena Avenue</li> <li>v. Construction of Olympic Parkway/Santa Victoria Road intersection</li> <li>vi. Construction of Santa Victoria/Heritage Road intersection</li> </ul> <p>If the project equivalent dwelling unit limit for study Year 2020 (1,312 equivalent dwelling units) is exceeded prior to these roadway segments being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:</p> <ul style="list-style-type: none"> <li>i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or</li> <li>ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or</li> </ul>	



Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or</p> <p>iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance.</p> <p>v. All to the satisfaction of the City Engineer.</p> <p>5.3-20 The Year 2030 scenario assumes the following roadway improvements:</p> <p>i. Construction of Main Street from Heritage Road to La Media Road</p> <p>ii. Construction of Village Path pedestrian/bicycle bridge over SR-125 to provide non-motorized access between Village 9 and Village 8 East</p> <p>If the project equivalent dwelling unit limit for study Year 2025 (3,074 equivalent dwelling units) is exceeded prior to these intersections or roadway segments being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:</p> <p>i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or</p> <p>ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or</p> <p>iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or</p> <p>iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance.</p> <p>v. All to the satisfaction of the City Engineer.</p> <p>5.3-21 Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall install traffic signals at the Otay Valley Road/Street I and Otay Valley Road/Street B intersections.</p>	
<p>Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</p>	<p>Potentially significant impacts could result from the location of structures proposed in Village 9 within a Federal Aviation Administration notification area.</p>	<p>Mitigation measures 5.13-2 through 5.13-4 in Section 5.13, Hazards and Hazardous Materials, would reduce impacts related to air traffic patterns.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
Would the project substantially increase hazards due to a design feature or incompatible uses?	Implementation of the project would not result in a significant direct impact related to road safety.	No mitigation required.	Less than significant.
Would the project result in inadequate emergency access?	Individual developments within Village 9 would be required to demonstrate adequate emergency access as part of the City design review process, including review by the Chula Vista Fire Department. In addition, construction activities including staging would occur in accordance with City requirements, which would ensure that adequate emergency access would be provided during construction of the project.	No mitigation required.	Less than significant.
Would the project conflict with adopted policies, plans or programs regarding the circulation network, public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	The project would not conflict with any General Plan or GDP policies.	No mitigation required.	Less than significant.
<b>5.4 Air Quality</b>			
Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Construction of the project would exceed the significance thresholds for nitrogen oxides, PM <sub>10</sub> , and PM <sub>2.5</sub> during grading, and the nitrogen oxide threshold during surface improvements (paving). Simultaneous construction activities would combine to exceed the significance thresholds VOC emissions. The project would exceed the daily regional thresholds for nitrogen oxides, VOCs, PM <sub>10</sub> , and PM <sub>2.5</sub> during operation of the development in Village 9.	<p><b>5.4-1 Short-term Air Quality Violations Reduction Measures.</b> The following techniques to reduce construction emissions shall be implemented during all construction activities:</p> <ul style="list-style-type: none"> <li>i. Minimize simultaneous operation of multiple construction equipment units (i.e., phase construction to minimize impacts).</li> <li>ii. Use low pollutant-emitting construction equipment.</li> <li>iii. Use electrical construction equipment as practical.</li> <li>iv. Use catalytic reduction for gasoline-powered equipment.</li> <li>v. Use injection timing retard for diesel-powered equipment.</li> <li>vi. Water the construction area twice daily to minimize fugitive dust.</li> <li>vii. Stabilize (for example hydroseed) graded areas as quickly as possible to minimize fugitive dust.</li> <li>viii. Pave permanent roads as quickly as possible to minimize dust.</li> </ul>	Significant.

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.4-2 <b>Dust Control Measures.</b> Mitigation of PM<sub>10</sub> impacts requires active dust control during construction. As a matter of standard practice, the City of Chula Vista shall require the following standard construction measures be included on all grading plans to the satisfaction of the City Engineer, and shall be implemented during construction to the extent applicable:</p> <ul style="list-style-type: none"> <li>i. All unpaved construction areas shall be sprinkled with water or other acceptable San Diego Air Pollution Control District dust control agents twice daily during dust-generating activities to reduce dust emissions. Additional watering or acceptable Air Pollution Control District dust control agents shall be applied during dry weather or on windy days until dust emissions are not visible.</li> <li>ii. Trucks hauling dirt and debris shall be properly covered to reduce windblown dust and spills.</li> <li>iii. A 20-mile-per-hour speed limit on unpaved surfaces shall be enforced.</li> <li>iv. On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce re-suspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.</li> <li>v. On-site stockpiles of excavated material shall be covered or watered.</li> <li>vi. Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the City and/or Air Pollution Control District to reduce dust generation.</li> <li>vii. To the maximum extent feasible: <ul style="list-style-type: none"> <li>a. Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction activities.</li> <li>b. Catalytic reduction for gasoline-powered equipment shall be used.</li> </ul> </li> <li>viii. Equip construction equipment with pre-chamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of nitrogen oxides, to the extent available and feasible.</li> <li>ix. Electrical construction equipment shall be used to the extent feasible.</li> <li>x. The simultaneous operations of multiple construction equipment units shall be minimized (i.e., phase construction to minimize impacts).</li> </ul>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.4-3 <b>Construction Best Management Practices.</b> During all construction activities for the project, the project applicant shall ensure implementation of the following best management practices to reduce the emissions of nitrogen oxides and fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>). Prior to issuance of a grading permit, the following best management practices shall be included on all grading plans to the satisfaction of the City Engineer and shall be implemented during construction to the extent applicable:</p> <ul style="list-style-type: none"> <li>i. All construction equipment shall be outfitted with best available control technology devices certified by California Air Resources Board. A copy of each unit's best available control technology documentation shall be provided at the time of mobilization of each applicable unit of equipment.</li> <li>ii. Approach routes to the site shall be cleaned daily of construction-related dirt.</li> <li>iii. Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.</li> <li>iv. Install wheel washers or rumble plates adjacent to a paved apron prior to any vehicle entry on public roads.</li> <li>v. Remove any visible track-out into traveled public streets within 30 minutes of occurrence.</li> <li>vi. Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.</li> <li>vii. Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.</li> <li>viii. General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues should turn their engines off when not in use to reduce vehicle emissions. Construction emissions should be phased and scheduled to avoid emissions peaks and shall be discontinued during second stage smog alerts.</li> <li>ix. During construction, site grading activities within 500 feet of a school in operation shall be discontinued or all exposed surfaces shall be watered to minimize dust transport off site to the maximum degree feasible, when the wind velocity is greater than 15 miles per hour in the direction of the school.</li> </ul>	

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
Would the project expose sensitive receptors to substantial pollutant concentrations?	The project would have the potential to result in the exposure of sensitive receptors to Toxic Air Contaminants during operation if the project does not comply with CARB siting criteria.	5.4-4 <b>San Diego Air Pollution Control District Toxic Air Contaminants Emission Criteria Compliance.</b> Prior to approval of the building permit for any uses that are regulated for toxic air contaminants emissions by the San Diego Air Pollution Control District, the project applicant shall demonstrate to the satisfaction of the Development Services Director (or their designee) that the use complies with established criteria (such as those established by San Diego Air Pollution Control District Rule 1200 and California Air Resources Board). Specifically, gas stations would not be allowed to be constructed within 50 feet of a sensitive receptor, in compliance with California Air Resources Board siting recommendations.	Less than significant.
Would the project create objectionable odors affecting a substantial number of people?	The project would not create or result in objectionable odors that may affect a substantial number of people, and odor impacts are less than significant.	No mitigation required.	Less than significant.
Would the project result in a conflict with, or obstruct implementation of, the Regional Air Quality Strategy or State Implementation Plan?	Implementation of the project would exceed the growth projections in the Regional Air Quality Strategy and would exceed the significant thresholds for ozone precursors and particulate matter during construction and operation. Impacts related to consistency with applicable air quality plans would be potentially significant.	Mitigation measures 5.4-1, 5.4-2, and 5.4-3 would also minimize impacts related to conflicts with air quality plans.	Significant.
Would the project be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding air quality thereby resulting in a significant physical impact?	The project would be consistent with applicable air quality policies and impacts would not be significant.	No mitigation required.	Less than significant.
<b>5.5 Noise</b>			
Would the project expose persons to or generate noise levels in excess of standards established in the Chula Vista General Plan or noise ordinance, or applicable standards of other agencies?	Implementation of the project would have the potential to result in exposure to excessive noise levels from traffic noise and operational sources including HVAC equipment, commercial equipment, and recreational facilities.	5.5-1 <b>Noise Attenuation in the Urban Center (Planning Area D), Urban Neighborhood (Planning Area F), and Neighborhood Center Zones (Planning Areas S-1 and V), and Neighborhood Park (Planning Area L).</b> Prior to the approval of grading permits for residential or park development along the western edge of Planning Areas D, F, L, S-1, and V in the Urban Center, Urban Neighborhood Edge, Neighborhood Center, and Neighborhood Park zones (as shown in Figure 3-4, Transect Zones), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. The site plan and acoustical analysis shall include, but not be limited to the following:	Less than significant



Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>i. Location, height, and building material of the noise barriers in accordance with Figure 5.5-4. Heights are provided relative to final pad elevation. Required heights may be achieved through construction of walls, berms or a wall/berm combination;</p> <p>ii. A detailed analysis which demonstrates that barriers and/or setbacks have been incorporated into the project design, such that noise exposure to residential receivers placed in all useable outdoor areas, including multi-family residential patios and balconies, are at or below 65 dBA CNEL; and</p> <p>iii. Should grading, lot configuration, and/or traffic assumptions change during the processing of any final maps, the barriers shall be refined to reflect those modifications.</p> <p>The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.</p> <p><b>5.5-2 Site-Specific Acoustic Analysis – Single-family Residences.</b>                      Concurrent with design review and prior to the approval of building permits for single-family residential development where the exterior noise level exceeds 65 dBA CNEL (Planning Areas AA and DD), the applicant shall prepare an acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that the proposed building plans ensure that interior noise levels due to exterior noise sources will be at or below 45 dBA CNEL in any habitable room. The analysis must also identify Sound Transmission Loss rates of each window. Design-level architectural plans will be available during design review and will permit the accurate calculation of transmissions loss for habitable rooms. For these lots, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 dBA CNEL. Consequently, the design for these units may need to include ventilation or an air conditioning system to provide a habitable interior environment with the windows closed based on the result on the interior acoustical analysis. The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 45 dBA CNEL in any habitable room.</p> <p><b>5.5-3 Site-Specific Acoustic Analysis – Multi-family Residences.</b>                      Concurrent with design review and prior to the approval of building permits for multi-family areas where first and/or upper floor exterior noise levels exceed 60 dBA CNEL and/or where required outdoor area (patios or balconies) noise levels exceed 65 dBA CNEL (Planning Areas A, B-1, B-2, D, E-1, E-2, F, H-1, K-1, M, N, O-1, P, R-1, S-1, S-2, T, U-1, V, Z-1, and Z-2), the applicant shall 1) prepare an acoustical analysis demonstrating to the</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>satisfaction of the Development Services Director (or their designee) that the proposed building plans ensure that interior noise levels due to exterior noise sources will be at or below California’s Title 24 Interior Noise Standards (i.e., 45 dBA CNEL) in any habitable room, and 2) that all outdoor useable areas are not exposed to noise levels in excess of the City’s Exterior Land Use/Noise Compatibility Guidelines for outdoor use areas (i.e., 65 dBA CNEL). The analysis must also identify Sound Transmission Loss rates of each window. Design-level architectural plans will be available during design review and will permit the accurate calculation of transmission loss for habitable rooms. For these areas, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 dBA CNEL. Consequently, the design for buildings in these areas may need to include a ventilation or air conditioning system to provide a habitable interior environment with the windows closed based on the result on the interior acoustical analysis. The Applicant shall construct and/or install the required noise attenuation features that would 1) reduce sound levels to 45 dBA CNEL in any habitable room, and 2) that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.</p> <p><b>5.5-4 Site-Specific Acoustic Analysis – Non-Residential Noise Sensitive Land Uses.</b> Concurrent with design review and prior to the approval of building permits for any non-residential noise sensitive land uses (schools, neighborhood parks, outdoor use areas, some Community Purpose Facility use, etc.) area where exterior noise levels exceed 65 dBA CNEL (Planning Areas A, B-1, B-2, C, D, F, E-1, E-2, L, S-1, V, and W), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. Measures to reduce noise levels may include, but would not be limited to, setback of structures from the roadway, installing acoustic barriers, or orienting outdoor activity areas away from roadways so that surrounding structures provide noise attenuation. Roof-ceiling assemblies making up the building envelope shall have a sound transmission class value of at least 50, and exterior windows shall have a minimum sound transmission class of 30 in compliance with the California Green Building Standards Code. The Applicant shall construct and/or install the required noise attenuation features would reduce sound levels to 65 dBA CNEL at outdoor usable areas. If Planning Area W is ultimately developed with multi-family residential uses rather than a school, this planning area would be subject to mitigation measure 5.5-3.</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.5-5 <b>Site-Specific Acoustic Analysis – Office Uses.</b> Concurrent with Design Review and prior to the approval of building permits for any office use within Planning Areas A, B-1, B-2, D, E-1, and E-2, the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that exterior noise levels at the property line are at or below the City’s Noise Compatibility Guidelines for office uses (i.e., 70 dBA CNEL). Measures to reduce noise levels may include, but would not be limited to, setback of structures from the roadway, installing acoustic barriers, or, in mixed-use buildings, orienting offices away from roadways so that surrounding structures provide noise attenuation. The Applicant shall construct and/or install the required noise attenuation features would reduce sound levels to 70 dBA CNEL at the property line.</p> <p>5.5-6 <b>Shielded Private Outdoor Usable Space for Urban Center Residences.</b> Concurrent with Design Review and prior to the approval of building permits for any private usable outdoor space such as patios, balconies, or outdoor dining areas for new residential or commercial development along Main Street or Street B (Planning Areas A, B-1, B-2, D, E-1, and E-2), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.</p> <p>5.5-7 <b>HVAC Mechanical Equipment Shielding.</b> Concurrent with Design Review and prior to the approval of building permits for non-residential development, the applicant shall submit a design plan for the project demonstrating to the satisfaction of the Development Services Director (or their designee) that the noise level from operation of mechanical equipment will not cumulatively exceed the noise level limits for a designated receiving land use category as specified in Section 19.68.030 of the City of Chula Vista Noise Ordinance. Noise control measures may include, but are not limited to, the selection of quiet equipment, equipment setbacks, silencers, and/or acoustical louvers. The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to allowable Chula Vista Noise Ordinance Standards.</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.5-8 <b>Site Specific Analysis - Neighborhood Park.</b> Concurrent with the preparation of site-specific plan(s), and prior to the approval of a precise grading plan for the Neighborhood Park, or Planning Area F (whichever occurs first), the project applicant shall prepare, or in the case of the City being the lead on the preparation of the site specific plan, the project applicant shall fund the preparation of an acoustical analysis to ensure that noise levels generated from any active uses at the Neighborhood Park, such as sports fields, shall not exceed the receiving land use category’s exterior noise limits as identified in the Chula Vista Noise Ordinance. The project applicant shall be responsible for the preparation of the acoustical analysis and to fund the implementation of any measures recommended as a result of the analysis. Measures to reduce noise levels may include, but would not be limited to, siting of structures or buildings either at the Neighborhood Park or at the receiving land use site in order to provide setbacks between active areas of the Neighborhood Park and adjacent noise sensitive uses, or construction of a wall to provide noise attenuation. Final noise attenuation design would be determined by a site-specific acoustic analysis conducted by a qualified acoustical engineer, to the satisfaction of the Development Services Director (or their designee).</p>	
<p>Would the project expose persons to or generation of excessive ground borne vibration or ground borne noise levels?</p>	<p>No significant impacts related to groundborne vibration have been identified for the project.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p>Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</p>	<p><b>Existing + Project Scenario.</b> Seven roadway segments would result in a significant noise impact under the Existing + Project Scenario: Birch Road, La Media Road to SR-125; Birch Road, SR-125 to Eastlake Parkway; Main Street, Street A to Eastlake Parkway; Hunte Parkway, Eastlake Parkway to Olympic Parkway; La Media Road, Olympic Parkway to Birch Road; Eastlake Parkway, Olympic Parkway to Birch Road; and Eastlake Parkway, Birch Road to Main Street. Traffic-related noise could be reduced either by constructing noise barriers, lowering traffic speeds, or by reducing traffic. However, the project is planned to be constructed in a series of phases over a period of up to 20 years, and over time would include the construction of new roadways that would provide new connections from the project area to the regional transportation system.</p>	<p>Mitigation measure 5.3-20 would ensure that the regional circulation system would be implemented concurrently with Village 9.</p>	<p>Significant (Short-term, Existing + Project Only)/Less than significant (Long-term).</p>

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
	<p>These new connections would reduce long-term traffic on the roadways surrounding the project site by routing some cumulative traffic through Village 9 instead of the surrounding roadways. Additionally, these connections would direct traffic generated by Village 9 away from the existing off-site roadways and reduce associated traffic noise.</p> <p>The 2030 buildout traffic scenario includes future roads that are proposed as part of the development plans for other villages. However, according to the traffic report, if the equivalent dwelling unit assumption for the buildout study year (2030) is reached prior to implementation of these roadways being open to traffic, then mitigation measure 5.3-20 in Section 5.3, Transportation and Traffic, would be implemented to ensure that this circulation system would be implemented concurrently with Village 9. Short-term increases in noise levels would remain significant until the proposed roadway system is complete.</p> <p><b>Unmitigated Year 2025 Scenario.</b> In the Unmitigated Year 2025 scenario, Village 9 not result in a significant traffic noise increase on any off-site roadway.</p> <p><b>Unmitigated and Mitigated Year 2030 Scenarios.</b> In the Unmitigated and Mitigated Year 2030 (Buildout) scenarios, Village 9 not result in a significant traffic noise increase on any roadway.</p>		
<p>Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</p>	<p>Construction of the project would have the potential to generative noise levels and that would significantly impact biological resources.</p>	<p>Mitigation measures 5.6-3, 5.6-6, 5.6-7, 5.6-8, 5.6-9, and 5.6-11 in Section 5.6, Biological Resources, would also reduce impacts related to construction noise.</p>	<p>Less than significant.</p>
<p>For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, expose people residing or working in the project area to excessive noise?</p>	<p>The proposed project would not have a significant impact on airport operations, nor would the project be exposed to excessive aircraft overflight noise levels.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>



**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>Would the project Be inconsistent with General Plan, GDP or other objectives and policies regarding noise, thereby resulting in a significant physical impact?</p>	<p>No significant impacts related to consistency with general plan policies have been identified for implementation of the Village 9 SPA Plan and TM.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p><b>5.6 Biological Resources</b></p>			
<p>Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p>	<p>Implementation of the project would result in significant direct and indirect impacts to several sensitive species, including snake cholla, least Bell’s vireo, southern California rufus-crowned sparrow, burrowing owl, raptors and breeding migratory birds.</p>	<p>In addition to the measures listed below, mitigation measures 5.4-1 through 5.4-3, 5.11-1 through 5.11-5, and 5.6-17 through 5.6-19 would also reduce impacts to sensitive species.</p> <p><b>5.6-1 Maritime Succulent Scrub Restoration Plan.</b> Prior to the issuance of any land development permits (including clearing and grubbing or grading permits) the applicant shall prepare a restoration plan to restore impacted maritime succulent scrub at 1:1 ratio, pursuant to the Otay Ranch Resource Management Plan. A total of 5.17 acres of maritime succulent scrub will require restoration. The restoration plan shall include, at a minimum, an implementation strategy; species salvage and relocation, appropriate seed mixtures and planting method; irrigation; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The maritime succulent scrub restoration <u>plan</u> shall be prepared by a City-approved biologist pursuant to the Otay Ranch Resource Management Plan restoration requirements. The applicant shall also be required to implement the revegetation plan subject to the oversight and approval of the Development Services Director (or their designee).</p> <p><b>5.6-2 Resource Salvage Plan.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall prepare a resource salvage plan for areas with salvageable resources, including, but not limited to, snake cholla Chula Vista Narrow Endemic Species, dot-seed plantain (Quino Checkerspot butterfly larval host plant), coast barrel cactus, other cacti species, and San Diego sunflower. The resource salvage plan shall, at a minimum, evaluate options for plant salvage and relocation, including native plant mulching, selective soil salvaging, application of plant materials on manufactured slopes, and application/ relocation of resources within the Preserve. Relocation efforts may include seed collection and/or transplantation to a suitable receptor site and will be based on the most reliable methods of successful relocation. The program shall contain a recommendation for method of salvage and relocation/ application based on feasibility of implementation and likelihood of success. The program shall include, at a minimum, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.</p>	<p>Less than significant.</p>

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>The resource salvage plan shall be prepared by a City-approved biologist. The applicant shall also be required to implement the resource salvage plan subject to the oversight of the Development Services Director (or their designee).</p> <p>5.6-3 <b>Coastal California Gnatcatcher, Coastal Cactus Wren, and Least Bell's Vireo Pre-Construction Survey.</b> For any work proposed between February 15 and <del>September</del> <u>August</u> 15 (March 15 and September 15 for least Bell's vireo), a pre-construction survey for the coastal California gnatcatcher, coastal cactus wren, and least Bell's vireo shall be performed in order to reaffirm the presence and extent of occupied habitat. The pre-construction survey area for the species shall encompass all potentially suitable habitat within the project work zone, as well as a 300-foot survey buffer. The pre-construction survey shall be performed to the satisfaction of the Development Services Director (or their designee) by a qualified biologist familiar with the Chula Vista Multiple Species Conservation Program Subarea Plan. The results of the pre-construction survey must be submitted in a report to the Development Services Director (or their designee) for review and approval prior to the issuance of any land development permits and prior to initiating any construction activities. If California gnatcatcher, cactus wren or least Bell's vireo is detected, a minimum 300-foot buffer delineated by orange biological fencing shall be established around the detected species to ensure that no work shall occur within occupied habitat from February 15 through August 15 for Coastal California gnatcatcher and cactus wren, and March 15 through September 15 for least Bell's vireo. On-site noise reduction techniques shall be implemented to ensure that construction noise levels not exceed 60 dBA Leq at the location of any occupied sensitive habitat areas. The Development Services Director (or their designee) shall have the discretion to modify the buffer width depending on site-specific conditions. If the results of the pre-construction survey determine that the survey area is unoccupied, the work may commence at the discretion of the Development Services Director (or their designee) following the review and approval of the pre-construction report.</p> <p>5.6-4 <b>Burrowing Owl Pre-Construction Surveys.</b> Prior to issuance of any land development permits (including clearing and grubbing or grading permits), the applicant shall retain a City-approved biologist to conduct focused pre-construction surveys for burrowing owls. The surveys shall be performed no earlier than <del>30</del> <u>10</u> days prior to the commencement of any clearing, grubbing, or grading activities. If occupied burrows are detected, the City-approved biologist shall prepare a passive relocation mitigation plan subject to the review and approval by the wildlife agencies and City including any subsequent burrowing owl relocation plans to avoid impacts from construction-related activities.</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.6-5 <b>Revegetation Plan.</b> Prior to issuance of land development permits, including clearing, grubbing, grading and construction permits, the applicant shall provide a revegetation plan to restore 0.2 acre of temporary impacts to maritime succulent scrub and 0.1 acre of temporary impacts to riparian scrub associated with off-site planned and future facilities. The revegetation plan must be prepared by a qualified City-approved biologist familiar with the Chula Vista Multiple Species Conservation Program Subarea Plan and must include, but not be limited to, an implementation plan; appropriate seed mixtures and planting method; irrigation method; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The applicant shall be required to prepare and implement the revegetation plan subject to the oversight and approval of the Development Services Director (or their designee).</p> <p>5.6-6 <b>Biological Construction Monitoring.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for any areas adjacent to the Preserve and the off-site facilities located within the Preserve, the applicant shall provide written confirmation that a City-approved biological monitor has been retained and shall be on site during clearing, grubbing, and/or grading activities. The biological monitor shall attend all pre-construction meetings and be present during the removal of any vegetation to ensure that the approved limits of disturbance are not exceeded and provide periodic monitoring of the impact area including, but not limited to, trenches, stockpiles, storage areas and protective fencing. The biological monitor shall be authorized to halt all associated project activities that may be in violation of the Chula Vista Multiple Species Conservation Program Subarea Plan and/or permits issued by any other agencies having jurisdictional authority over the project.</p> <p>5.6-7 <b>Pre-Construction Education.</b> Before construction activities occur in areas adjacent to and/or containing sensitive biological resources, all workers shall be educated by a City-approved biologist to recognize and avoid those areas that have been marked as sensitive biological resources.</p> <p>5.6-8 <b>Migratory Bird Treaty Act Compliance.</b> To avoid any direct impacts to raptors and/or any migratory birds protected under the Migratory Bird Treaty Act, removal of habitat that supports active nests on the proposed area of disturbance should occur outside of the breeding season for these species (January 15 to August 31). If removal of habitat on the proposed area of disturbance must occur during the breeding season, the applicant shall retain a City-approved biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey must be conducted within</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>10 calendar days prior to the start of construction, the results of which must be submitted to the City for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan as deemed appropriate by the City, shall be prepared and include proposed measures to be implemented to ensure that disturbance of breeding activities are avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City-approved mitigation monitor shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.</p> <p>5.6-9 <b>Northern Harrier Pre-Construction Survey.</b> Prior to issuance of any land development permits, including clearing and grubbing or grading permits, the applicant shall retain a City-approved biologist to conduct focused surveys for northern harrier to determine the presence or absence of this species within 900 feet of the construction area. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction. The results of the survey must be submitted to the City for review and approval. If active nests are detected by the City-approved biologist, a biological monitor shall be on site during construction to minimize construction impacts and ensure that no nests are removed or disturbed until all young have fledged.</p> <p>5.6-10 <b>Construction Fencing and Signage.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits, the applicant shall install fencing in accordance with Chula Vista Municipal Code Section 17.35.030. Prominently colored, well-installed fencing and signage shall be in place wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the qualified monitoring biologist. Fencing shall remain in place during all construction activities. All temporary fencing shall be shown on grading plans for areas adjacent to the Preserve and for all off-site facilities constructed within the Preserve. Prior to release of grading and/or improvement bonds, a qualified biologist shall provide evidence that work was conducted as authorized under the approved land development permit and associated plans.</p> <p>5.6-11 <b>Indirect Impact Avoidance.</b> In accordance with the Chula Vista Adjacency Management Guidelines and the Otay Ranch Village 9 Edge Plan, and in addition to mitigation measure 5.11-1, Storm Water Pollution Prevention Plan, the following measures shall be implemented to further reduce indirect impacts (from lighting, noise, invasive, toxic substances, and public access) to sensitive biological resources located in the adjacent Otay Ranch Preserve areas:</p>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>i. Prior to issuance of a building permit, a lighting plan and photometric analysis shall be submitted to the satisfaction of the Development Services Director (or their designee) to ensure lighting of all developed areas adjacent to the Preserve has been directed away from the Preserve, wherever feasible and consistent with public safety. The lighting plan shall illustrate the location of the proposed lighting standards and, if applicable, type of shielding measures required to minimize light spillage into the Preserve. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting.</p> <p>ii. Construction-related noise shall be limited within and adjacent to the Preserve during the typical breeding season of January 15 to September 15. Construction activity within and adjacent to any occupied sensitive habitat areas must not exceed 60 dBA Leq, or ambient noise levels if higher than 60 dBA Leq, during the breeding season. Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for areas within or adjacent to the Preserve, the applicant shall prepare and submit to the satisfaction of the Development Services Director (or their designee), an acoustical analysis to demonstrate that the 60 dBA Leq noise level is not exceeded at the location of any occupied sensitive habitat areas as determined based on the results the required biological pre-construction surveys. The acoustical analysis shall describe the methods by which construction noise shall not exceed 60 dBA Leq. Noise abatement methods may include, but are not limited to, reoperation of specific construction activities, installation of noise abatement at the source, and/or installation of noise abatement at the receiving areas.</p> <p>5.6-12 <b>Retain Existing Vegetation.</b> Existing vegetation shall be retained where possible during construction activities and grading activities shall be limited to the immediate area required for construction.</p> <p>5.6-13 <b>Landscape Plan.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for areas within the 100-foot Preserve edge, the applicant shall prepare and submit to the satisfaction of the Development Services Director (or their designee), landscape plans to ensure that the proposed plant palette is consistent with the plant list contained in Attachment A of the Otay Ranch</p>	



Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>Village 9 Preserve Edge Plan. The landscape plan shall also incorporate a manual weeding program for areas adjacent to the Preserve. The manual weeding program shall describe at a minimum, the entity responsible for controlling invasive species, the maintenance activities and methods required to control invasives, and a maintenance/monitoring schedule.</p> <p>5.6-14 <b>MCSP Preserve Boundary Delineation.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for the project, the applicant shall submit wall and fence plans depicting appropriate barriers to prevent unauthorized access into the Otay Ranch Preserve. The wall and fence plans shall, at a minimum, illustrate the locations and cross-sections of proposed walls, fences, informational and directional signage, access controls, and/or boundary markers along the Preserve boundary and any off-site pedestrian trails as conceptually described in the Otay Ranch Village 9 Edge Plan. The required wall and fence plan shall be subject to the approval the Development Services Director (or their designee).</p>	
<p>Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p>	<p>The project would result in significant direct impact to broom baccharis scrub, coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, disturbed maritime succulent scrub, chaparral, non-native grasslands, riparian scrub, and tamarisk scrub, as shown in Table 5.6-3.</p>	<p>Implementation of mitigation measures 5.6-1, 5.6-2, 5.6-5, 5.6-6, 5.6-7, and 5.6-10 through 5.6-19; mitigation measures 5.4-1 through 5.4-3 from Section 5.4, Air Quality; and mitigation measures 5.11-1 through 5.11-5 from Section 5.11, Hydrology and Water Quality, would reduce impacts to riparian habitat and other sensitive natural communities.</p>	<p>Less than significant.</p>
<p>Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?</p>	<p>Army Corps of Engineers regulated jurisdictional waters and California Department of Fish and Wildlife jurisdictional channels would be significantly impacted by development of the project.</p>	<p>Implementation of mitigation measures 5.11-1 through 5.11-5 would reduce impacts to federally protected wetlands.</p> <p>5.6-15 <b>Wetlands Mitigation and Monitoring Plan.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits that impact jurisdictional waters, the applicant shall prepare a wetlands mitigation and monitoring plan. This plan shall include, at a minimum, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. Areas under the jurisdictional authority of Army Corps of Engineers and California Department of Fish and Wildlife shall be delineated on all grading plans. Creation areas shall occur within the Otay River watershed in accordance with the wetlands mitigation and monitoring plan to the satisfaction of the Development Services Director (or their designee), Army Corps of Engineers, and California Department of Fish and Wildlife. The applicant shall also be required to implement the wetlands mitigation and monitoring plan subject to the oversight of the Development Services Director (or their designee), Army Corps of Engineers, and California Department of Fish and Wildlife.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.6-16 <b>Regulatory Permits.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits for areas that impact jurisdictional waters, the applicant shall provide evidence that all required regulatory permits, such as those required under Sections 404 and 401 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act, have been obtained.</p>	
<p>Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</p>	<p>The project would not result in potentially significant impacts related to wildlife corridors.</p>	<p>No mitigation required. However, mitigation measure 5.6-14 would ensure that fencing installed along the off-site trail would not impede wildlife movement.</p>	<p>Less than significant.</p>
<p>Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p> <p>Would the project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?</p>	<p>The project would have the potential to result in impacts to sensitive species that would conflict with Chula Vista Multiple Species Conservation Program Subarea Plan. Additionally, the project would have significant impacts related to biological resources management unless the Otay Ranch regional open space is preserved proportionally and concurrently with development, in accordance with the provisions of the Chula Vista Multiple Species Conservation Program Subarea Plan and the Otay Ranch Resource Management Plan.</p>	<p>Mitigation measures 5.6-1 through 5.6-7, and 5.6-9 through 5.6-16 would also reduce potential impacts related to conflicts with the Multiple Species Conservation Program Subarea Plan.</p> <p>5.6-17 <b>Annexation into Otay Ranch Preserve Community Facilities District No. 97-2.</b> Prior to the approval of the first final map for the SPA Plan, the applicant shall coordinate with the City Engineer and annex the project area within the Otay Ranch Preserve Community Facilities District No. 97-2.</p> <p>5.6-18 <b>Otay Ranch Preserve Land Conveyance.</b> Prior to recordation of each final map the applicant shall convey land within the Otay Ranch Preserve to the Otay Ranch Preserve Owner Manager or its designee at a ratio of 1.188 acres for each acre of development area, as defined in the Otay Ranch Resource Management Plan. Access for maintenance purposes shall also be conveyed to the satisfaction of the Preserve Owner Manager, and each tentative map shall be subject to a condition that the applicant shall execute a maintenance agreement with the Preserve Owner Manager stating that it is the responsibility of the applicant to maintain the conveyed parcel until the Otay Ranch Preserve Community Facilities District No. 97-2 has generated sufficient revenues to enable the Preserve Owner Manager to assume maintenance responsibilities. The applicant shall maintain and manage the offered conveyance property consistent with the Otay Ranch Resource Management Plan Phase 2 until the Otay Ranch Preserve Community Facilities District No. 97-2 has generated sufficient revenues to enable the Preserve Owner Manager to assume maintenance and management responsibilities.</p>	<p>Less than significant.</p>

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.6-19 <b>Area-Specific Management Directives.</b> Prior to the Preserve Owner Manager’s acceptance of the conveyed land in fee title, the applicant shall prepare, to the satisfaction of the Preserve Owner Manager, area specific management directives for the associated conveyance areas, which shall incorporate the guidelines and specific requirements of the Otay Ranch Resource Management Plan, management requirements of Table 3-5 of the Multiple Species Conservation Program Subarea Plan and information and recommendations from any relevant special studies. Guidelines and requirements from these documents shall be evaluated in relationship to the Preserve configuration and specific habitats and species found within the associated conveyance areas and incorporated into the area specific management directives to the satisfaction of the Preserve Owner Manager.</p>	
<p><b>5.7 Cultural and Paleontological Resources</b></p>			
<p>Would the project cause a substantial adverse change in the significance of a historical resource?</p>	<p>No significant impacts related to historical resources have been identified for implementation of SPA Plan and TM.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p>Would the project cause a substantial adverse change in the significance of an archaeological resource?</p>	<p>Construction activities associated with the project could inadvertently result in significant impacts to presently unknown archaeological resources that may be uncovered during clearing and grading.</p>	<p>5.7-1 <b>Archaeological Monitor.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall provide written confirmation and incorporate into grading plans, to the satisfaction of the Development Services Director (or their designee), that a principal investigator as listed by the Secretary of the Interior (Code of Federal Regulations Title 36, Section 61) has been retained in an oversight capacity to ensure that an archeological monitor will be present during all cutting of previously undisturbed soil. If these cutting activities would occur in more than one location, multiple monitors shall be provided to monitor these areas, as determined necessary by the principal investigator.</p> <p>5.7-2 <b>Resource Discovery Procedure.</b> During the initial grading of previously undisturbed soils within Village 9 and the off-site improvement area, prehistoric and historic resources may be encountered. In the event that the monitor identifies a potentially significant site, the archaeological monitor shall secure the discovery site from further impacts by delineating the site with staking and flagging, and by diverting grading equipment away from the archaeological site. Following notification to the Development Services Director (or their designee), the archaeological monitor shall conduct investigations as necessary to determine if the discovery is significant under the criteria listed in CEQA and the environmental guidelines of the City of Chula Vista.</p> <p>If the discovery is determined to be not significant, grading operations may resume and the archaeological monitor shall summarize the findings in a letter report to the Development Services Director (or their designee)</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>following the completion of mass grading activities. The letter report shall describe the results of the on-site archeological monitoring, each archaeological site observed, the scope of testing conducted, results of laboratory analysis (if applicable), and conclusions. The letter report shall be completed to the satisfaction of the Development Services Director (or their designee) prior to release of grading bonds. Any artifacts recovered during the evaluation shall be curated at a facility approved by the Development Services Director (or their designee).</p> <p>For those prehistoric/historic resources that are determined to be significant, the following measures shall be implemented:</p> <ul style="list-style-type: none"> <li>i. An alternate means of achieving mitigation shall be pursued. In general, these forms of mitigation include: 1) site avoidance by preservation of the site in a natural state in open space or in open space easements, 2) site avoidance by preservation through capping the site and placing landscaping on top of the fill, 3) data recovery through implementation of an excavation and analysis program, or 4) a combination of one or more of the above measures. Procedures for implementing the alternative forms of mitigation described herein are further detailed in the Mitigation Monitoring and Reporting Program adopted as part of the 1993 Otay Ranch General Development Plan Program EIR (EIR 90-01).</li> <li>ii. For those sites for which avoidance and preservation is not feasible or appropriate, the applicant shall prepare a Data Recovery Plan. The plan will, at a minimum, include the following: 1) a statement of why data recovery is appropriate as a mitigating measure, 2) a research plan that explicitly provides the research questions that can reasonably be expected to be addressed by excavation and analysis of the site, 3) a statement of the types and kinds of data that can reasonably be expected to exist at the site and how these data will be used to answer important research questions, 4) a step-by-step discussion of field and laboratory methods to be employed, and 5) provisions will be stated for curation and storage of the artifacts, notes, and photographs. In cases involving historic resources, archival research and historical documentation shall be used to augment field-testing programs. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). All significant artifacts collected during the implementation of the Data Recovery Plan shall be curated at a facility approved by the Development Services Director (or their designee).</li> </ul>	

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>iii. Following the completion of mass grading operations, the applicant shall prepare a plan that addresses the temporary on-site presentation and interpretation of the results of the archaeological studies for the project. This could be accomplished through exhibition within a future community center, civic building and/or multi-purpose building. This exhibition will only be for temporary curation of those materials being actively used for interpretation and display, and that permanent curation of artifacts and data shall be at a regional repository when one is established. All significant artifacts collected during the implementation of the Data Recovery Plan shall be permanently curated at a facility approved by the Development Services Director (or their designee).</p>	
<p>Would the project disturb any human remains, including those interred outside of formal cemeteries?</p>	<p>Construction activities associated with the project could inadvertently result in significant impacts to presently unknown human remains that may be uncovered during clearing and grading.</p>	<p>5.7-3 <b>Human Remains Disturbance Protocol.</b> If human remains are discovered during grading or site preparation activities within Village 9, the archaeological monitor shall secure the discovery site from any further disturbance. State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission. The Native American Heritage Commission will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American. The Most Likely Descendent will assist the Development Services Director (or their designee) in determining what course of action shall be taken to deal with the remains. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). The Archaeological Monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities.</p>	<p>Less than significant.</p>
<p>Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</p>	<p>Geological formations underlying Village 9 and off-site improvement areas have a high sensitivity for paleontological resources. Therefore, construction activities would have the potential to result in significant impacts to paleontological resources.</p>	<p>5.7-4 <b>Paleontological Resource Mitigation Program.</b> Prior to the issuance of grading permits for the SPA Plan or off-site improvement area, the applicant shall provide written confirmation to the Development Services Director (or their designee) that a qualified paleontologist has been retained to carry out an appropriate mitigation program. A qualified paleontologist is defined as an individual with a M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques. A pre-grade meeting shall be held among the paleontologist and the grading and excavation contractors.</p>	<p>Less than significant.</p>



Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.7-5 <b>Paleontological Monitor.</b> A paleontological monitor shall be on site at all times during the original cutting of previously undisturbed sediments of the Otay Formation or Quaternary alluvial and terrace deposits to inspect cuts for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of a qualified paleontologist.</p> <ul style="list-style-type: none"> <li>i. The monitor shall be on site on at least a quarter-time basis during the original cutting of previously undisturbed sediments of low sensitivity geologic formations (Holocene alluvial deposits) to inspect cuts for contained fossils. He or she shall periodically (every several weeks) inspect original cuts in deposits with unknown resource sensitivity (i.e., Quaternary alluvium).</li> <li>ii. In the event that fossils are discovered in unknown, low, or moderately sensitive formations, the per-day field monitoring time shall be increased. Conversely, if fossils are not discovered, the monitoring, at the discretion of the Planning Department, shall be reduced. A paleontological monitor is not needed during grading of rocks with no resource sensitivity (Santiago Peak Volcanics).</li> </ul> <p>5.7-6 <b>Fossil Discovery Procedure.</b> If fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short time frame. However, some fossil specimens (such as a complete whale skeleton) may require an extended salvage time. In these instances, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains such as isolated mammal teeth, it may be necessary in certain instances and at the discretion of the paleontological monitor to set up a screen-washing operation on the site.</p> <p>5.7-7 <b>Fossil Recording.</b> Prepared fossils along with copies of all pertinent field notes, photos, and maps shall be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum. A final summary report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils.</p>	
<p>Would the project be inconsistent with General Plan cultural and paleontological policies thereby resulting in a significant physical impact?</p>	<p>No significant impacts related to cultural resource policies have been identified for implementation of SPA Plan and TM.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<b>5.8 Geology and Soils</b>			
<p>Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; and/or landslides?</p>	<p>The exposure of people and structures to moderate-to-severe ground shaking generated from potential earthquakes along active faults in the region is considered to be a less than significant impact. However, grading activities could result in slope instabilities or landslides within the project area.</p>	<p><b>5.8-1 Geotechnical Recommendations.</b> Prior to the issuance of each mass grading permit for Village 9, the applicant shall verify that the applicable recommendations in the Geotechnical Investigation prepared by Advanced Geotechnical Solutions, Inc., dated November 9, 2010, have been incorporated into the final project design and construction documents to the satisfaction of the City Engineer. These recommendations address issues including but not limited to site grading, backdrain systems, undercuts, excavation and fill, monitoring, and soil testing. Geotechnical review of grading plans shall include a review of all proposed storm drain facilities to ensure the storm water runoff would not interfere with the proposed geotechnical recommendations.</p> <p><b>5.8-2 Slope Factor of Safety.</b> All graded slopes shall have a minimum factor of safety of 1.5. Strategies to increase stability may include, but are not limited to, a stability buttress or sheer pins. All slopes stability strategies shall be approved by the City Engineer.</p>	<p>Less than significant.</p>
<p>Would the project result in substantial soil erosion or the loss of topsoil?</p>	<p>Impacts associated with soil erosion and topsoil loss during and following project construction would be potentially significant. Compliance with applicable regulatory requirements would ensure that impacts associated with erosion and loss of topsoil would be minimized during construction activities. Following construction, implementation of the proposed drainage plan would reduce the long-term potential for erosion.</p>	<p>Implementation of mitigation measures 5.11-1 through 5.11-5 in Section 5.11, Hydrology and Water Quality, would reduce impacts related to soil erosion and topsoil loss.</p>	<p>Less than significant.</p>
<p>Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</p>	<p>The Otay formation and surficial units (alluvium, undocumented fill, and topsoil) within Village 9 could become unstable as a result of the project. As a result, there is the potential for landsliding, lateral spreading, and/or collapse.</p>	<p>Mitigation measures 5.8-1 and 5.8-2 would also reduce impacts related to slope stability.</p>	<p>Less than significant.</p>
<p>Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</p>	<p>Soils within Village 9 have high to very high expansion potential. Development of structures on these soils could create substantial risks to life or property. This is considered a potentially significant impact.</p>	<p>Mitigation measure 5.8-1 would also reduce impacts related to expansive soil.</p>	<p>Less than significant.</p>
<p>Would the project be inconsistent with General Plan geotechnical policies thereby resulting in a significant physical impact?</p>	<p>No significant impacts related to consistency with geotechnical policies have been identified for implementation of the SPA Plan and TM.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for disposal of wastewater?</p>	<p>Septic tanks and alternative wastewater disposal systems would not be required to the proposed project and no impact would occur.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p><b>5.9 Public Services</b></p>			
<p><b>5.9.1 Fire and Emergency Medical Services</b></p>			
<p>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency services?</p>	<p>No significant impacts related to fire and emergency medical facilities have been identified for the project.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p>Would the project further reduce the ability of properly equipped and staffed fire and medical units to respond to calls throughout the city within 7 minutes in 80 percent of the cases?  Would the project be inconsistent with General Plan, GDP, and other objectives and policies regarding fire protection and emergency medical services thereby resulting in a significant physical impact?</p>	<p>The anticipated increase in residential population of 10,923 people and the employment base from 1.5 million square feet of commercial and office development would increase demand on fire and emergency medical services. The increase in demand would be significant if fully operational and appropriately equipped and staffed fire stations are not provided commensurate with the demand on fire and emergency medical services.</p>	<p><b>5.9.1-1 Public Facilities Development Impact Fees.</b> Prior to the approval of each building permit, the applicant shall pay a Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan. Subject to approval of the City Council, in lieu of paying the required impact fee, the applicant may satisfy that requirement through a written agreement, by which the applicant agrees to either pay the fee or build the facility in question, pursuant to the terms of the agreement.</p> <p><b>5.9.1-2 Growth Management Program’s Fire and Emergency Medical Service Threshold Standard.</b> The City of Chula Vista shall continue to monitor the Chula Vista Fire Department responses to emergency fire and medical calls and report the results to the Growth Management Oversight Commission on an annual basis.</p> <p><b>5.9.1-3 Fire Code Compliance.</b> Prior to the approval of each building permit and to the satisfaction of the City of Chula Vista Fire Marshal, the project shall meet the provisions of the current City-adopted California fire code. In meeting said provisions, the project shall meet the minimum fire flow requirements based upon construction type and square footage.</p> <p><b>5.9.1-4 Fuel Modification Easements.</b> Prior to approval of a Final Map requiring off-site fuel modification, as determined the City Fire Marshal, the applicant shall secure any required permits and/or access easements necessary to perform the required brush abatement activities contained in the Village 9 Fire Protection Plan (Village 9 SPA Plan, Appendix F), to the satisfaction of the City’s Fire Marshal and Development Services Director.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<b>5.9.2 Police Services</b>			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services?	No significant impacts related to police service facilities have been identified for implementation of the project.	No mitigation required.	Less than significant.
<p>Would the project exceed the City’s growth management threshold standard to respond to Priority One emergency calls throughout the city; and/or exceed the City’s growth management threshold standard to respond to Priority Two urgent calls throughout the city?</p> <p>Would the project be inconsistent with General Plan objectives and policies regarding police protection thereby resulting in a significant physical impact?</p>	The project would not result in significant impacts associated with the provision of new or expanded police facilities. The project would result in a potentially significant increase demand on police protection if additional police officers are not provided commensurate with demand.	<p>5.9.2-1 <b>Public Facilities Development Impact Fees.</b> Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall pay a Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan, unless stated otherwise in a separate development agreement.</p> <p>5.9.2-2 <b>Growth Management Program’s Police Threshold Standard.</b> The City of Chula Vista shall continue to monitor the Chula Vista Police Department responses to emergency calls and report the results to the Growth Management Oversight Commission on an annual basis.</p> <p>5.9.2-3 <b>Crime Prevention Through Environmental Design Features.</b> Prior to the issuance of each building permit, site plans shall be reviewed by the Chula Vista Police Department (or their designee) to ensure the incorporation of Crime Prevention through Environmental Design features and other recommendations of the Chula Vista Police Department, including, but not limited to, controlled access points to parking lots and buildings; maximizing the visibility along building fronts, sidewalks, and public parks; and providing adequate street, parking lot, and parking structure visibility and lighting.</p>	Less than significant.
<b>5.9.3 Schools</b>			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for educational facilities services?	Project implementation would result in a significant impact to middle schools and high schools unless construction of schools coincides with student generation and associated service demands.	5.9.3-1 <b>School Service Fees.</b> Prior to the issuance of each building permit, the applicant(s) shall provide the City with evidence or certification by the Chula Vista Elementary School District and Sweetwater Unified High School District that any fee charge, dedication, or other requirement levied by the school district has been complied with or that the district has determined the fee, charge, dedication or other requirements does not apply to the construction.	Less than significant.

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		5.9.3-2 <b>School Site Protection.</b> Prior to approval of a final map for private development on Planning Areas G or W, designated for a future school, the applicant shall provide evidence from the Chula Vista Elementary School District that the site has not been determined by the district to be needed for use as a school site.	
Would the project locate schools on sites that are not appropriate for school facilities?	The potential exists for pesticides/herbicides to occur at the future school site and for potential unstable soils to occur on site. Impacts would be potentially significant.	Mitigation measure 5.8-1 in Section 5.8, Geology and Soils, and 5.13-1 in Section 5.13, Hazards and Hazardous Materials, would reduce impacts related to schools siting.	Less than significant.
Would the project be inconsistent with General Plan, GDP, and other objectives and policies regarding school services thereby resulting in a significant physical impact?	No significant impacts related to consistency with schools policies have been identified for the project.	No mitigation required.	Less than significant.
<b>5.9.4 Libraries</b>			
Would the project result in substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services?	No significant impacts related to library facilities have been identified for the project.	No mitigation required.	Less than significant.
Would the project fail to meet the City’s growth management threshold standard of 500 gross square feet of library space, adequately equipped and staffed, per 1,000 population?	The project would increase demand on library services, which would be significant if library resources are not provided commensurate with demand.	5.9.4-1 <b>Public Facility Development Impact Fees.</b> Prior to the issuance of each building permit for any residential dwelling units, the applicant shall pay a required Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan.  5.9.4-2 <b>Growth Management Program’s Libraries Threshold Standard.</b> The City of Chula Vista shall continue to monitor library facilities and services and report the results to the Growth Management Oversight Commission on an annual basis.	Less than significant.
Would the project be inconsistent with General Plan, GDP or other objectives and policies regarding library services thereby resulting in a significant physical impact?	No significant impacts related to consistency with library policies have been identified for the project.	No mitigation required.	Less than significant.



Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<b>5.9.5 Parks, Recreation, Open Space, and Trails</b>			
<p>Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</p> <p>Would the project fail to meet the City’s growth management threshold standard for parks and recreation of three acres of neighborhood and community parkland per 1,000 residents east of I-805?</p>	<p>The project would increase demand on recreational facilities, which would be significant if the proposed parks and recreational facilities are not provided commensurate with demand.</p>	<p><b>5.9.5-1 Public Facility Development Impact Fees.</b> Prior to the issuance of each building permit for any residential dwelling units, the applicant shall pay recreation facility development impact fees (part of the Public Facility Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Village 9 Public Facilities Finance Plan, subject to approval of the Director of Recreation.</p> <p><b>5.9.5-2 Park Acquisition and Development Fees.</b> Prior to the approval of each final map for the project, or, for any residential development project within Village 9 that does not require a final map, prior to building permit approval, the applicant shall pay applicable Park Acquisition and Development in-lieu fees for the area covered by the final map(s). The payment of in-lieu fees shall be in accordance with the phasing indicated in the Project’s approved SPA Plan, and a park agreement, if any, subject to approval of the Director of Recreation. In-lieu fees shall be based on the Park Acquisition and Development fees in effect at the time of issuance of building permits, unless stated otherwise in a parks or development agreement.</p> <p><b>5.9.5-3 Growth Management Program’s Parks and Recreation Threshold Standard.</b> The City of Chula Vista shall continue to monitor parks and recreation services and report the results to the Growth Management Oversight Commission on an annual basis.</p> <p><b>5.9.5-4 Dedication of Parkland.</b> Prior to approval of the first final map for the project, the applicant shall offer for dedication all public parkland identified in the Project’s approved SPA Plan, or as approved by the Director of Recreation. Park facilities such as Town Squares and privately owned/mini pedestrian parks identified as being required to meet the overall park obligation shall be identified on the first final map and shall be publically accessible.</p> <p><b>5.9.5-5 Town Square Parks and Pedestrian Parks.</b> Prior to issuing a total of 192 residential building permits from either Planning Area M, N, P, or Q, or in a combination thereof, the Town Square Park in Planning Area I shall be completed to the satisfaction of the Director of Recreation. Prior to issuing a total of 460 residential building permits from Planning Area A, B-1 or B-2, or in a combination thereof, the Town Square Park in Planning Area C shall be completed to the satisfaction of the Director of Recreation. Prior to the issuance of the 719<sup>th</sup> residential building permit south of Street H, the Pedestrian Parks in Planning Areas GG, HH, and II, including the pedestrian trail through OS-3 connecting Planning areas HH and II, shall be completed to the satisfaction of the Director of Recreation.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.9.5-6 <b>Off-site Park Obligation.</b> Prior to the approval of the first final map, the applicant shall have offered for dedication <u>to the City</u> a 9.0 acre park site within Village 8 West or other suitable parkland subject to the satisfaction of the Development Services Director.</p> <p>5.9.5-7 <b>Park Development Agreement.</b> Prior to the approval of the first final map for Village 9 the applicant shall enter into an agreement with the City that provides the following: dedication of public park sites, payment of Park Development Agreement Fees, schedule for completion of improvements, including utilities to streets adjacent to the park sites, all to the satisfaction of the Director of Recreation and Development Services Director. Under the current method for delivery of new parks the City will award a design-build contract for the Project's neighborhood park. The agreement will include provisions that in the event the City chooses not to go forward with a design-build contact, the applicant will be obligated to fully comply with the Parkland Ordinance and park threshold standards by constructing the parks in accordance with all City standards and under a time schedule as specified in the agreement.</p>	
<p>Would the project require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</p>	<p>No significant impacts related to new recreational facilities have been identified for the project.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p>Would the project be inconsistent with General Plan, GDP or other relevant objectives and policies regarding parks thereby resulting in a significant physical impact?</p>	<p>No significant impacts related to consistency with park policies have been identified for the project.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p><b>5.10 Global Climate Change</b></p>			
<p>Would the project conflict with or obstruct goals or strategies of the California Global Solutions Act of 2006 (AB 32) or related executive orders?</p>	<p>Greenhouse gas emissions from buildout of the SPA Plan and TM would be reduced by 29 percent compared to business-as-usual as a result of reduced trip lengths and required compliance with statewide and local greenhouse gas reduction measures. Therefore, implementation of Village 9 would comply with AB 32 and related executive orders.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>Would the project result in substantially increased exposure of the project from the potential adverse effects of global warming identified in the California Global Warming Solutions Act of 2006 (AB 32)?</p>	<p>The project would have significant impacts related to regional and local air quality resulting from vehicular emissions of ozone precursors. The project would result in a less than significant impact regarding water supply, marine and natural environment, sea level rise, and human health hazards.</p>	<p>The applicable mitigation measures from previous EIRs have already been incorporated into the project to reduce emissions and energy consumption that would contribute to global climate change. No additional feasible mitigation measures are available for this impact.</p>	<p>Significant.</p>
<p><b>5.11 Hydrology and Water Quality</b></p>			
<p>Would the project violate any water quality standards or waste discharge requirements, including City of Chula Vista engineering standards for storm water flows and volumes?</p> <p>Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off the site or City of Chula Vista Engineering Standards for storm water flows and volumes?</p> <p>Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off the site? Would the project create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?</p> <p>Would the project otherwise substantially degrade water quality?</p>	<p>Even though the project includes features and would implement best management practices to reduce the amount and rate of runoff to a less than significant level, these features are also prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.</p>	<p><b>5.11-1 Storm Water Pollution Prevention Plan.</b> Prior to issuance of each grading permit for the Village 9 SPA Plan area or any land development permit, including clearing and grading, the project applicant shall submit a notice of intent and obtain coverage under the National Pollutant Discharge Elimination System permit for construction activity from the State Water Resources Control Board. Adherence to all conditions of the General Permit for Construction Activity is required. The applicant shall be required under the State Water Resources Control Board General Construction Permit to develop a Storm Water Pollution Prevention Plan and monitoring plan that shall be submitted to the City Engineer and the Director of Public Works. The Storm Water Pollution Prevention Plan shall be incorporated into the grading and drainage plans and shall specify both construction and post-construction structural and non-structural best management practices on the site to reduce the amount of sediments and pollutants in construction and post-construction surface runoff before it is discharged into off-site storm water facilities. Section 7 of the City’s Storm Water Manual outlines construction site best management practice requirements. The Storm Water Pollution Prevention Plan shall also address operation and maintenance of post-construction pollution prevention measures, including short-term and long-term funding sources and the party or parties that will be responsible for said measures. The Storm Water Pollution Prevention Plan shall incorporate construction and post-construction best management practices as outlined in the Village 9 Edge Plan. The grading plans shall note the condition requiring a Storm Water Pollution Prevention Plan and monitoring plans.</p> <p><b>5.11-2 Supplemental Water Quality Report.</b> Prior to issuance of each grading permit, the applicant shall submit a supplemental report to the Master Water Quality Technical Report for Village 9 prepared by Hunsaker &amp; Associates dated August 10, 2011 that identifies which on-site storm water management measures from the Water Quality Technical Report have been incorporated into the project to the satisfaction of the City Engineer. If a storm water management option is chosen by the planning area owner</p>	<p>Less than significant.</p>

Table 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>that is not shown in the water quality technical report, a project-specific water quality technical report shall be prepared for the planning area, referencing the Master Water Quality Technical Report for Village 9 for information relevant to regional design concepts (e.g., downstream conditions of concern) to the satisfaction of the City Engineer.</p> <p><b>5.11-3 Post-Construction/Permanent Best Management Practices.</b> Prior to issuance of each grading permit, the City Engineer shall verify that parcel owners have incorporated and will implement post-construction best management practices in accordance with current regulations. In particular, applicants are required to comply with the requirements of Section 2c of the City of Chula Vista’s Standard Urban Storm Water Management Plan, the Chula Vista Development Storm Water Manual, and the Master Water Quality Technical Report for Village 9 or any supplements thereto to the satisfaction of the City Engineer. Specifically, the applicant shall implement low impact development best management practices in the preparation of all site plans and incorporate structural on-site design features into the project design to address site design and treatment control best management practices as well as requirements of the hydromodification management plan. The applicant shall monitor and mitigate any erosion in downstream locations that may occur because of on-site development.</p> <p><b>5.11-4 Limitation of Grading.</b> The project applicant shall comply with the Chula Vista Development Storm Water Manual limitation of grading requirements, which limit disturbed soil area to 100 acres, unless expansion of a disturbed area is specifically approved by the Director of Public Works. With any phasing resulting from this limitation, if required, the project applicant shall provide, to the satisfaction of the City Engineer, erosion and sediment control best management practices in areas that may not be completed, before grading of additional area begins.</p> <p><b>5.11-5 Hydromodification Criteria.</b> The project applicant shall comply, to the satisfaction of the City Engineer, with City hydromodification criteria or the hydrograph modification management plan, as applicable, addressed regionally at the SPA Plan level concurrent with grading and improvement plans for the project.</p> <p><b>5.11-6 Outfall Erosion.</b> Developer shall monitor any erosion at the project’s outfall at the Otay River and, prior to the last building permit for the project, obtain approval for and complete any reconstructive work necessary to eliminate any existing erosion and prevent future erosion from occurring, all to the satisfaction of the Development Services Director.</p>	

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?	No significant impacts related to groundwater supplies or recharge have been identified with implementation of Village 9.	No mitigation required.	Less than significant.
Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  Would the project place structures within a 100-year flood hazard area which would impede or redirect flood flows?	No significant impacts related to 100-year flood have been identified with implementation of Village 9.	No mitigation required.	Less than significant.
Would the project be inconsistent with General Plan, GDP or other objectives and policies regarding water quality thereby resulting in a significant physical impact?	No significant impacts related to consistency with water quality policies have been identified with implementation of Village 9.	No mitigation required.	Less than significant.
Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	No significant impacts related to flooding have been identified with implementation of Village 9.	No mitigation required.	Less than significant.
Would the project result in a substantial increase in risk of exposure to inundation by seiche, tsunami, or mudflow?	No significant impacts related to inundation have been identified with implementation of Village 9.	No mitigation required.	Less than significant.
<b>5.12 Agricultural Resources</b>			
Would the project convert prime farmland, unique farmland, or farmland of statewide importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Development of Village 9 would not result in significant land uses conflicts that would result in the conversion of agricultural resource. However, implementation of the SPA Plan and TM would result in a significant impact to agricultural resources, due to the permanent loss of approximately 190 acres of farmland of local importance and grazing land. Short-term land use incompatibility issues from ongoing agricultural activities adjacent to urban land uses would be significant without implementation of the Agricultural Plan.	5.12-1 <b>Agricultural Plan.</b> The Agricultural Plan included in the SPA Plan shall be implemented as development proceeds in Village 9. The following measures shall be implemented to the satisfaction of the Chula Vista Development Services Director (or their designee):  i. Prior to approval of each building permit, the applicant shall ensure that a 200-foot fenced buffer shall be maintained between development and any ongoing agricultural operations on the property.  ii. In those areas where pesticides are to be applied, the farmland owner shall utilize vegetation to shield adjacent urban development (within 400 feet) from agricultural activities. Use of pesticides shall comply with federal, state and local regulations.	Significant.



**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		iii. If permitted interim agricultural uses require the use of pesticides, the farmland owner shall notify adjacent developed property owners of potential pesticide application a minimum of 10 days prior to application through advertisements in newspapers of general circulation. Limits shall be established as to the time of day and type of pesticide applications that may be used. The use of pesticides shall comply with federal, state, and local regulations.	
Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?	Impacts related to land use zoning conflicts and consistency with agricultural resource policies would be potentially significant if the Agriculture Plan is not implemented concurrent with development.	Mitigation measure 5.12-1 would also reduce impacts related to land use zoning conflicts.	Less than significant.
Would the project be inconsistent with General Plan agricultural resource policies thereby resulting in a significant physical impact?	No significant impacts related to agricultural resources policies have been identified for implementation of the SPA Plan and TM.	No mitigation required.	Less than significant.
<b>5.13 Hazards and Hazardous Materials</b>			
Would the project create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials?	Adherence to federal, state, and local regulations regarding the use and disposal of hazardous materials and wastes would reduce potential impacts on human health and safety from handling and transport of hazardous construction materials to less than significant.	No mitigation required.	Less than significant.
Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Potentially significant impacts related to accidental release of hazardous materials and hazards to schools could result from the exposure of construction workers, future residents, and the future on-site schools to pesticide residue occurring in soils on the site.	<b>5.13-1 Soil Assessment.</b> Prior to issuance of a mass grade permit, the applicant shall prepare a soils assessment to the satisfaction of the City Engineer to determine if residual pesticides, herbicides, and/or arsenic are present on site. The assessment shall be prepared by a Registered Environmental Assessor in accordance with the Department of Toxic Substances Control guidance document. The assessment shall include analysis for organochlorine pesticides that include compounds such as toxaphene, dichlorodiphenyldichloroethane, dichlorodiphenyl-trichloroethane, and dichlorodiphenyldichloroethylene, which have been historically identified at properties in the site vicinity. The concentrations of the contaminants shall be compared to Department of Toxic Substances Control soil screening levels for residential land use. If levels of contamination exceeding the Department of Toxic Substances Control screening levels are found on site, a Soil Reuse Plan shall be prepared prior to construction on site. The Soil Reuse Plan shall include a determination of the suitability of the soils for on-site or off-site reuse, any special handling provisions that shall be incorporated as part of the site grading activities, and the procedure for the proper remediation and disposal of the	Less than significant.

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		contaminated soils, either on site or off site. The results of the limited soil assessment and the Soil Reuse Plan shall be submitted to the County of San Diego Department of Environmental Health, the Development Services Director (or their designee), and/or the Regional Water Quality Control Board for review and approval, prior to implementation.	
Would the project be located on a site that is included on a list of hazardous materials sites and, as a result, a significant hazard to the public or the environment is created?	The proposed project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	No mitigation required.	Less than significant.
<p>Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would result in a safety hazard for people residing or working in the project area?</p> <p>Would the project be located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area?</p>	Village 9 is located within the Federal Aviation Administration Height Notification Boundary and Airport Overflight Notification Area. Proper notification in compliance with the Brown Field Airport Land Use Compatibility Plan is required to reduce this impact to a less than significant level.	<p>5.13-2 <b>Federal Aviation Administration Notification.</b> Prior to issuance of a building permit for the first structure and/or dwelling unit within the Airport Influence Area of Brown Field, the applicant shall prepare and file a Form 7460-1, Notice of Proposed Construction or Alteration, with the Federal Aviation Administration to ensure that no objects related to development in Village 9 would present a hazard to air navigation.</p> <p>5.13-3 <b>Federal Aviation Administration Clearance.</b> Prior to the issuance of a building permit for the first structure and/or dwelling unit within the Airport Influence Area of Brown Field, the applicant shall obtain and provide proof of Federal Aviation Administration clearance to the satisfaction of the Development Services Director (or their designee).</p> <p>5.13-4 <b>Airport Overflight Agreement.</b> Prior to approval of the first Final Map for those areas within the overflight notification area for Brown Field, the applicant shall record the Airport Overflight Agreement with the County Recorder’s office, and provide a signed copy of the recorded Airport Overflight Agreement to the City’s Development Service Director (or their designee).</p>	Less than significant.
Would the project impair implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan?	The project would not interfere with City emergency response plans because it would not obstruct any existing roadways or evacuation routes.	No mitigation required.	Less than significant.
Would the project expose people or structures to a significant risk or loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	With implementation of the Fire Protection Plan, the impact associated with the risk of wildland fires would be reduced to a less than significant level.	No mitigation required.	Less than significant.
Would the project be inconsistent with General Plan, GDP, and other objectives and policies regarding hazards thereby resulting in a significant physical impact?	Potentially significant impacts related to consistency with hazard policies could result from the exposure of construction workers, future residents, and schools to pesticide residue occurring in soils on the site.	With the implementation of mitigation measure 5.13-1 identified above, hazards and hazardous materials impacts related to the historic pesticide use in Village 9 would be reduced to below a level of significance.	Less than significant.

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>Would the project result in an increase in the uses, transport, storage, and disposal of hazardous waste materials and an associated increase in the risk of an upset condition in the area; and/or the historic use of pesticides would result in soil contamination and health effects?</p>	<p>Elevated levels of pesticides in the near surface soils at the project area could be disturbed from grading and trenching activities and result in an increased health risk to construction workers on site and future inhabitants of the proposed development, particularly the future residential and school uses, and potentially impact water quality through storm water runoff.</p>	<p>Mitigation measure 5.13-1 would reduce impacts related to historic use of pesticides.</p>	<p>Less than significant.</p>
<p><b>5.14 Housing and Population</b></p>			
<p>Would the project displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere?</p>	<p>The project would not displace any existing households or people, or necessitate the construction of replacement housing elsewhere and impacts would not be significant.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p>Would the project be inconsistent with General Plan, GDP, and other objectives and policies regarding housing and population thereby resulting in a significant physical impact?</p>	<p>The project would be consistent with all applicable General Plan and GDP policies and impacts would not be significant.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p><b>5.15 Public Utilities</b></p>			
<p><b>5.15.1 Water Impacts</b></p>			
<p>Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</p>	<p>No significant impacts related to new water treatment facilities have been identified for implementation of the SPA Plan and TM.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<p>Would the project have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements?</p>	<p>Long-term water supply availability cannot be guaranteed; therefore, the increase in water demand that would result from implementation of the project would be potentially significant. Additionally, the transfer of density between planning areas could have a significant impact on on-site infrastructure.</p>	<p>No feasible mitigation measures are available to guarantee a long-term water supply would be available to serve the project. The following mitigation measure reduces impacts related to density transfers. <b>5.15.1-1 Density Transfer Technical Report.</b> Prior to design review approval in accordance with the Intensity Transfer provision in the Village 9 SPA Plan, the applicant shall provide an update to the Overview of Water Service for Otay Ranch Village 9 (Dexter Wilson Engineering, Inc. 2010) with each proposed project requesting an intensity transfer. The technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site water infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site water supply infrastructure to accommodate flows.</p>	<p>Significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<p>Would the project exceed City threshold standards which seek to ensure that adequate supplies of quality water, appropriate for intended uses, are available?</p>	<p>Until future developers provide service availability letters and get approved SAMPs from OWD, the project would not be in compliance with the City threshold standards.</p>	<p>5.15.1-2 <b>Service Availability Letters.</b> Prior to approval of each final map for Village 9, the applicant shall request and obtain a service availability letters from the Otay Water District and submit the letters to the City of Chula Vista.</p> <p>5.15.1-3 <b>Subarea Master Plan Preparation.</b> Prior to approval of the first final map, the applicant shall provide a Subarea Master Plan to the Otay Water District. Water facilities improvements shall be financed or installed on site and off site in accordance with the fees and phasing in the approved Public Facilities Finance Plan and Subarea Master Plan. The Subarea Master Plan shall include, but shall not be limited to:</p> <ul style="list-style-type: none"> <li>i. Existing pipeline locations, size, and capacity;</li> <li>ii. The proposed points of connection and system;</li> <li>iii. The estimated water demands and/or sewer flow calculations;</li> <li>iv. Governing fire department’s flow requirements (flow rate, duration, hydrant spacing, etc);</li> <li>v. Agency Master Plan;</li> <li>vi. Agency’s planning criteria (see Sections 4.1 through 4.3 of the Water Agencies Standards);</li> <li>vii. Water quality maintenance; and</li> <li>viii. Size of the system and number of lots to be served.</li> </ul> <p>5.15.1-4 <b>Subarea Master Plan Approval.</b> Prior to approval of the first final map, the applicant shall obtain Otay Water District’s approval of the Subarea Master Plan for potable water. Any on-site and off-site facilities identified in the Subarea Master Plan required to serve a final mapped area, including but not limited to water facilities within the SR-125 overcrossings at Main Streets and Otay Valley Road, shall be secured or constructed by the applicant prior to the approval of the final map and in accordance with the phasing in the Public Facilities Finance Plan.</p>	<p>Less than significant.</p>
<p>Would the project be inconsistent with General Plan, GDP or other relevant objectives and policies regarding water supply thereby resulting in a significant physical impact?</p>	<p>No significant impacts related to consistency with water supply policies have been identified for implementation of the SPA Plan and TM.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
<b>5.15.2 Wastewater</b>			
<p>Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the providers existing commitments?</p>	<p>A significant impact would occur if adequate wastewater facilities and adequate wastewater treatment capacity are not provided concurrently with new demand. Additionally, the transfer of density between planning areas could have a significant impact on on-site infrastructure.</p>	<p>5.15.2-1 <b>Sewer System Improvements.</b> The applicant shall finance or install all on-site and off-site sewer facilities required to serve development in Village 9 in accordance with the fees and phasing in the approved Public Facilities Finance Plan to the satisfaction of the City Engineer.</p> <p>5.15.2-2 <b>Salt Creek Development Impact Fee.</b> Prior to issuance of each building permit, the applicant shall pay the Salt Creek Development Impact Fee at the rate in effect at the time of building permit issuance and corresponding to the sewer basin that the building will permanently sewer to, unless stated otherwise in a development agreement that has been approved by the City Council. Existing fees are provided in Table 5.15-14.</p> <p>5.15.1-3 <b>Density Transfer Technical Report.</b> Prior to design review approval in accordance with the Intensity Transfer provision in the Village 9 SPA Plan, the applicant shall provide an update to the Overview of Sewer Service for Otay Ranch Village 9 (Dexter Wilson Engineering, Inc. 2010) with each proposed project requesting an intensity transfer. The technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site wastewater infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site sewerage facilities to accommodate flows.</p>	<p>Significant.</p>
<p>Would the project require the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of would cause significant environmental effects?</p>	<p>No significant impacts related to new treatment facilities have been identified for implementation of the SPA Plan and TM. However, the project would require sewage treatment beyond the City's existing wastewater treatment capacity rights and allocated additional treatment capacity. The development of treatment capacity beyond the City's existing and allocated capacity may result in a potentially significant environmental impact, even understanding that such projects would likely be subject to environmental review.</p>	<p>No mitigation is available at this time.</p>	<p>Significant.</p>
<p>Would the project generate sewage flows and volumes that exceed City Engineering Standards as set forth in the Subdivision Manual, as may be amended from time to time?</p>	<p>No significant impacts related to City engineering standards have been identified for implementation of the SPA Plan and TM.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>



**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
Would the project be inconsistent with the General Plan, GDP or other relevant objectives and policies regarding wastewater thereby resulting in a significant physical impact?	No significant impacts related to consistency with wastewater policies have been identified for implementation of the SPA Plan and TM.	No mitigation required.	Less than significant.
<b>5.15.3 Solid Waste</b>			
Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	There is sufficient existing and future landfill capacity to accommodate projected development of Village 9.	No mitigation required.	Less than significant.
Would the project comply with federal, state, and local statutes and regulations relating to solid waste?	The project would be consistent with all applicable statutes and regulations.	No mitigation required.	Less than significant.
Would the project be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding solid waste thereby resulting in a significant physical impact?	The project would be consistent with the General Plan and GDP policies that pertain to solid waste.	No mitigation required.	Less than significant.
<b>5.15.4 Recycled Water</b>			
Would the project require or result in the construction of new recycled water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	If recycled water facilities are not provided concurrently with demand, a potentially significant impact would occur.	<p><b>5.15.4-1 Subarea Master Plan Preparation.</b> Prior to approval of the first final map, the applicant shall provide a Sub Area Master Plan (SAMP) to the Otay Water District (OWD). Recycled water facilities improvements shall be financed or installed on site and off site in accordance with the fees and phasing in the approved Public Facilities Finance Plan and Subarea Master Plan. The Subarea Master Plan shall include, but shall not be limited to the following information related to recycled water:</p> <ul style="list-style-type: none"> <li>i. Existing recycled water pipeline locations, size, and capacity;</li> <li>ii. The proposed points of connection and system;</li> <li>iii. The estimated recycled water demand calculations; and</li> <li>iv. Size of the system and number of lots to be served.</li> </ul> <p><b>5.15.4-2 Subarea Master Plan Approval.</b> Prior to approval of the first final map, the applicant shall obtain Otay Water District approval of the Subarea Master Plan for recycled water. Any on-site and off-site facilities identified in the Subarea Master Plan required to serve a final mapped area shall be secured or constructed by the applicant prior to the approval of the final map and in accordance with the phasing in the Public Facilities Finance Plan.</p>	Less than significant.

**Table 1-2 Summary of Significant Environmental Analysis Results (continued)**

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
Would the project be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding recycled water thereby resulting in a significant physical impact?	No significant impacts related to recycled water polices have been identified for the project.	No mitigation required.	Less than significant.
<b>5.15.5 Energy</b>			
Would the project increase the demand of energy resources to exceed the available supply or cause a need for new and expanded facilities?	While energy consumed by future occupants of Village 9 would not be excessive, implementation of the SPA Plan and TM has the potential to result in impacts due to increased consumption of electricity and natural gas above that analyzed in the 2005 GPU EIR, which identified a significant and unavoidable impact related to energy demand. Although development pursuant to the project would be required comply with state and City building and energy codes and regulations related to reduction in energy use, there is no long-term assurance that energy supplies will be available as needed to support subsequent development projects.	No feasible mitigation measures are available for this impact.	Significant.
Would the project result in the wasteful, inefficient, or unnecessary use of energy?	Compliance with applicable policies and the energy conservation plan would ensure that average energy consumed by future occupants of Village 9 would not be wasteful, inefficient, or unnecessary, and would in fact be less than the regional average and less than statewide business-as-usual projections.	No mitigation required.	Less than significant.
Would the project be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding energy thereby resulting in a significant physical impact?	The project would be consistent with the General Plan and GDP policies that pertain to energy.	No mitigation required.	Less than significant.

**Table 1-3 Summary of Cumulative Impacts**

<b>Environmental Issue</b>	<b>Result of Impact Analysis</b>	<b>Significant Cumulative Impact?</b>	<b>Project Contribution</b>
<b>5.1 Land Use and Planning</b>			
Physical Division of an Established Community and Conflicts with Land Use Plans, Policies, and Regulations	The proposed project and the cumulative projects would be consistent with City's General Plan and the GDP, which are in turn consistent with regional plans. As such, the proposed project, as part of and combined with the cumulative projects, would not result in a significant cumulative land use impact.	No	No cumulative impact.
Conflicts with HCPs or NCCPs	The cumulative projects, including Village 9, would be required to demonstrate compliance with the MSCP Subarea Plan and the RMP as part of project approval. Therefore, cumulative land use impacts associated with potential conflicts with HCPs or NCCPs would be less than significant.	No	No cumulative impact.
<b>5.2 Aesthetics/Landform Alteration</b>			
Scenic Vistas and Scenic Resources	The project, in combination with the cumulative projects, would contribute to a cumulative loss of views of natural open space. Therefore, the project would result in a cumulatively considerable contribution to a significant and unavoidable cumulative impact.	Yes	Cumulatively considerable and unavoidable.
Visual Character or Quality and Landform Alteration	A cumulatively considerable and unavoidable impact would occur related to permanent alteration to the open, rolling hills within the cumulative planning area.	Yes	Cumulatively considerable and unavoidable.
Lighting and Glare	Development of Village 9 and cumulative growth in Otay Ranch would result in additional sources of nighttime lighting and would have the potential to result in significant cumulative impact.	Yes	Not cumulatively considerable.
Landform Alteration	The proposed project and other cumulative projects would be required to demonstrate compliance with the RMP steep slope standard. Therefore, cumulative impacts related to steep slopes would be less than significant.	No	No cumulative impact.
<b>5.3 Transportation/Traffic</b>			
Traffic and Level of Service Standards and Congestion Management	At full buildout, the project would result in a cumulatively considerable contribution to a significant impact at eight intersections and seven roadways segments.	Yes	<u>Cumulatively considerable and unavoidable impact to the Olympic Parkway/I-805 northbound ramps intersection in Year 2020.</u> Not cumulatively considerable at buildout with implementation of mitigation measures 5.3-1 through 5.3-21.
Air Traffic Patterns, Road Safety, Emergency Access	Construction of a project that would interfere with air traffic, result in a traffic hazard, or have inadequate emergency access would not affect these issues at another site. Similar to the project, cumulative development would be required to provide proper notification in compliance with Brown Field Airport Land Use Compatibility Plan when applicable and comply with all City requirements for parking, roadway design, and emergency access. Therefore, cumulative impacts would be less than significant.	No	No cumulative impact.

**Table 1-3 Summary of Cumulative Impacts (continued)**

Environmental Issue	Result of Impact Analysis	Significant Cumulative Impact?	Project Contribution
<b>5.4 Air Quality</b>			
Air Quality Violations	The SDAB is currently in non-attainment for ozone, PM <sub>10</sub> , and PM <sub>2.5</sub> . Therefore, a significant cumulative impact exists.	Yes	Cumulatively considerable and unavoidable.
Sensitive Receptors	Carbon monoxide concentrations at all of the studied intersections were below state and federal standards. Similar to the proposed project, new emitters of TACs would need to comply with the San Diego Air Pollution Control District criteria, such as Rule 1200. Potential diesel particulate matter emissions from commercial deliveries and bus service proposed in the adjacent villages would be subject to existing CARB regulations that would reduce emissions to the extent feasible. The potential for cumulative projects to be exposed to diesel particulates from mobile sources on SR-125 is site specific and is dependent on factors such as intervening topography, structures, and vegetation. Future projects would need to be analyzed on a site-specific basis. Therefore, a cumulative impact would not occur.	No	No cumulative impact.
Objectionable Odors	Similar to the proposed project, none of the adjacent villages propose land uses that are a typical source of odor complaints. Therefore, a cumulatively significant impact associated with objectionable odors would not occur.	No	No cumulative impact.
Air Quality Plans	A project that conflicts with the RAQS growth projections would be inconsistent with the RAQS and SIP and result in cumulative impact. As discussed in Section 5.4 under Threshold 4, the SPA Plan would exceed regional growth projections and therefore the project would result in a cumulatively considerable and unavoidable impact to consistency with adopted air quality plans.	Yes	Cumulatively considerable and unavoidable.
<b>5.5 Noise</b>			
Excessive Noise Levels	The noise study conducted for Village 9 included an analysis of impacts from cumulative traffic growth in 2030 to contribute to excessive noise levels on noise sensitive land uses within Village 9. Noise levels would potentially exceed the Chula Vista noise compatibility standards along Main Street, Otay Valley Road, Street A, Street B, and SR-125. Therefore, a cumulative impact would occur.	Yes	Not cumulatively considerable <u>with implementation of mitigation measures 5.5-2 through 5.5-8.</u>
Excessive Groundborne Vibration	The future cumulative projects that would potentially be located within 200 feet of Village 9 are not considered vibration sensitive.	No	No cumulative impact.
Permanent Increase in Ambient Noise Levels	Cumulative growth, including the proposed project, would result in five new roadway segments that would exceed 65 dBA CNEL. Cumulative growth would cause four existing roadway segments to exceed 65 dBA, and would result in an increase in traffic noise of 3 dBA CNEL or more on 11 existing roadway segments. A cumulatively considerable impact would occur on a total of 20 roadway segments.	Yes	Not cumulatively considerable.

**Table 1-3 Summary of Cumulative Impacts (continued)**

Environmental Issue	Result of Impact Analysis	Significant Cumulative Impact?	Project Contribution
Temporary Increase in Ambient Noise Levels	The cumulative projects and the proposed project would be subject to the Chula Vista construction noise ordinance, which limits the hours of construction to 7:00 a.m. and 10:00 p.m., Monday through Friday, and between the hours of 8:00 a.m. and 10:00 p.m., Saturday and Sunday. Compliance with the Chula Vista ordinance would reduce impacts to a less than significant level.	No	No cumulative impact.
Excessive Noise Exposure from a Public of Private Airport	Impacts related to nuisance noise from overflights are site specific and are not cumulative in nature. Therefore, a cumulative impact related to aviation would not occur.	No	No cumulative impact.
<b>5.6 Biological Resources</b>			
Sensitive Plant and Wildlife Species, Riparian Habitat and Other Sensitive Natural Communities, Federally Protected Wetlands, and Wildlife Movement Corridors and Nursery Sites	A cumulatively considerable impact would occur if a project would be inconsistent with the Chula Vista MSCP Subarea Plan.	Yes	Not cumulatively considerable <u>with implementation of mitigation measures 5.6-1 through 5.6-19.</u>
Local Policies, Ordinances, HCP and NCCP	The cumulative projects would be required to demonstrate compliance with the MSCP Subarea Plan and the RMP as part of project approval. Therefore, cumulative impacts would be less than significant.	No	No cumulative impact.
<b>5.7 Cultural and Paleontological Resources</b>			
Historic Resources	While any individual project may avoid or mitigate the direct loss of a specific resource, the effect is considerable when considered cumulatively.	Yes	Not cumulatively considerable.
Archaeological Resources and Human Remains	While any individual project may avoid or mitigate the direct loss of a specific resource, the effect is considerable when considered cumulatively.	Yes	Cumulatively considerable and unavoidable.
Paleontological Resources	While any individual project may avoid or mitigate the direct loss of a specific resource, the effect was considerable when considered cumulatively.	Yes	Not cumulatively considerable with implementation of mitigation measures 5.7-4 through 5.7-7.
<b>5.8 Geology and Soils</b>			
Exposure to Seismic Related Hazards, Soil Stability, and Expansive Soils	Potential impacts related to geologic hazards in Village 9 are not additive with other projects and are therefore not cumulatively significant.	No	No cumulative impact.
Soil Erosion or Topsoil Loss	The project and the other cumulative projects in Otay Ranch and the city would be required to comply with the federal, state, and local regulations and Chula Vista General Plan policies. Therefore, a cumulative impact related to erosion or topsoil loss would not occur.	No	No cumulative impact.



Table 1-3 Summary of Cumulative Impacts (continued)

Environmental Issue	Result of Impact Analysis	Significant Cumulative Impact?	Project Contribution
Septic Tanks and Alternative Waste Water Disposal Systems	Development in the city of Chula Vista and Otay Ranch would be serviced by city wastewater and would not require septic tanks or alternative waste water disposal systems. A cumulative impact would not occur.	No	No cumulative impact.
<b>5.9 Public Services</b>			
Fire and Emergency Medical Services	If growth would outpace the CVFD's ability to expand and serve new development, a cumulative impact would occur.	Yes	Not cumulatively considerable.
Police Services	If growth outpaces the Chula Vista Police Department's ability to expand and serve new development a cumulative impact would occur.	Yes	Not cumulatively considerable.
Schools	If new growth in school-aged children would exceed the capacity of available schools, a cumulative impact would occur.	Yes	Not cumulatively considerable.
Libraries	A shortfall of approximately 28,080 square feet of library facilities currently exists. Therefore, a cumulative impact currently exists.	Yes	Not cumulatively considerable.
Parks, Recreation, Open Space, and Trails	If growth outpaces the City's ability to provide additional facilities, a cumulative impact would occur.	Yes	Not cumulatively considerable.
<b>5.10 Global Climate Change</b>			
Compliance with AB 32	A project that would not comply with AB 32 would result significant cumulative impact.	Yes	Not cumulatively considerable.
Potential Effects of Global Climate Change	A project that would not exacerbate the potential effects of global climate change would result in a significant cumulative impact.	Yes	Cumulatively considerable and unavoidable.
<b>5.11 Hydrology and Water Quality</b>			
Water Quality Standards and Degradation of Water Quality	Compliance with the applicable regulatory requirements would ensure that the potential water quality impacts of the proposed project, and all cumulative projects, would not result in significant cumulative impact. Therefore, a cumulatively considerable impact related to water quality would not occur.	No	No cumulative impact.
Erosion or Siltation, Surface Runoff, and Exceed Drainage Capacity	The proposed project and other cumulative projects in Otay Ranch and the city would also be required to comply with the Chula Vista General Plan policies. Therefore, a cumulatively considerable impact related to hydrology would not occur.	No	No cumulative impact.
Groundwater Supplies and Recharge	Village 9 groundwater does not support an aquifer or local groundwater table. Therefore, no cumulative groundwater impact would occur as a result of implementation of the SPA Plan and TM.	No	No cumulative impact.

**Table 1-3 Summary of Cumulative Impacts (continued)**

Environmental Issue	Result of Impact Analysis	Significant Cumulative Impact?	Project Contribution
100-Year Flood Hazards, Flooding, and Inundation	Impacts related to flood and inundation hazards are site specific and not cumulative in nature. The location of one project in a flood hazard area would not affect the location of another cumulative project. Therefore, cumulative impacts related to flood and inundation hazards would be less than significant.	No	No cumulative impact.
<b>5.12 Agricultural Resources</b>			
Direct Conversion of Agricultural Resources and Land Use Zoning Conflicts	The incremental loss of farmland as a result of the project in combination with other projects in Otay Ranch would result in a cumulatively significant impact with respect to agricultural resources. No mitigation measures are available to reduce long-term impacts to below a level of significance without restricting the development proposed in the SPA Plan and TM to allow interim agricultural uses to continue in perpetuity. Therefore, this impact would remain cumulatively considerable and unavoidable.	Yes	Cumulatively considerable and unavoidable.
<b>5.13 Hazards and Hazardous Materials</b>			
Transport, Use, and Disposal of Hazardous Materials and Accidental Release of Hazardous Materials	The project and cumulative projects would not interfere with the implementation of General Plan Objective 19 or Policy E 20.2 and a cumulative impact related to hazardous materials would not occur.	No	No cumulative impact.
Emergency Response and Evacuation Plans	Similar to the proposed project, cumulative development would also enhance the Otay Ranch circulation network and provide additional connections to the regional circulation system. Therefore, cumulative emergency response and evacuation plan impacts would be less than significant.	No	No cumulative impact.
Hazards to Schools, Existing Hazardous Materials Sites, Airport Hazards, Wildland Fires, and Historic Use of Pesticides	Impacts related to schools sites, listing on a hazardous materials site, surrounding airports, wildland fires, and pesticide soil contamination are site specific and not cumulative in nature because impacts to individual projects would be site specific. Potential risks identified for Village 9 or on other cumulative project sites would not affect potential risks elsewhere in Otay Ranch. Cumulative impacts would be less than significant.	No	No cumulative impact.
<b>5.14 Housing and Population</b>			
Population Growth	Because the increase in population associated with the cumulative projects, including Village 9, would be accommodated by the proposed homes and town center commercial services, cumulative impacts associated with housing and population growth would be less than significant.	No	No cumulative impact.
Displacement of Housing and People	The project is currently undeveloped and would not result in the displacement of housing or people. Cumulative impacts related to displacement of housing and people are less than significant.	No	No cumulative impact.

**Table 1-3 Summary of Cumulative Impacts (continued)**

Environmental Issue	Result of Impact Analysis	Significant Cumulative Impact?	Project Contribution
<b>5.15 Public Utilities</b>			
Water Impacts	Long-term water supply cannot be guaranteed; therefore, any increase in water demand would be considered significant. Although the proposed project and the cumulative projects would comply with applicable regulations to reduce water demand, an increase in water demand would occur as a result in development. Cumulative impacts related to water supply would be significant and unavoidable.	Yes	Cumulatively considerable and unavoidable.
Wastewater	The location and scope of construction for any future expanded or newly developed treatment facilities is unknown and the development of additional treatment capacity may result in potentially significant and unavoidable cumulative impacts associated with construction of new or expanded treatment facilities even understanding that such projects would likely be subject to environmental review.	Yes	Cumulatively considerable and unavoidable.
Solid Waste	The Otay Landfill has sufficient capacity to accommodate Village 9 waste disposal in combination with the city-wide cumulative increase in solid waste generation projected in the 2005 GPU EIR. The project, in combination with the other cumulative projects, would not result in a significant cumulative wastewater impact.	No	No cumulative impact.
Recycled Water	A cumulatively considerable and unavoidable impact would occur until recycled water from the South Bay Water Treatment Plant is available to meet the projected future recycled water demand.	Yes	Cumulatively considerable and unavoidable.
Energy	While individual cumulative projects may be able to reduce their energy consumption through energy conservation measures, there remains no assurance that an adequate energy supply will be available to serve the cumulative increase in energy demand. The project would result in a cumulatively considerable and unavoidable contribution to the significant cumulative impact related to energy.	Yes	Cumulatively considerable and unavoidable.

**Table 1-4 Summary of Alternative Impacts Compared to Proposed Project**

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>5.1 Land Use and Planning</b>					
Land Use Compatibility	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Conflicts with Land Use Plans, Policies, & Regulations	LS	LS	▲	—	—
<i>Cumulative</i>	NCC	NCC	▲	—	—
Conflicts with HCPs or NCCPs	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<b>5.2 Aesthetics/Landform Alteration</b>					
Scenic Vistas	LS	LS	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Scenic Resources	LS	LS	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Visual Character or Quality	PS	SU	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Lighting and Glare	PS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Landform Alteration	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Consistency with Visual Character Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<b>5.3 Transportation and Traffic</b>					
Traffic and Level of Service Standards	S	LS	▲	▼	▼
<i>Cumulative</i>	CC	SU	▲	▼	▼
Congestion Management	S	LS	▲	▼	▼
<i>Cumulative</i>	CC	SU	▲	▼	▼
Air Traffic Patterns	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Road Safety	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Emergency Access	LS	LS	▲	—	—
<i>Cumulative</i>	NCC	NCC	▲	—	—
Consistency with Transportation Policies	LS	LS	▲	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<b>5.4 Air Quality</b>					
Air Quality Violations	S	SU	○	▼	▼
<i>Cumulative</i>	CC	SU	○	▼	▼
Sensitive Receptors	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Objectionable Odors	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Air Quality Plans	S	SU	○	▼	▼
<i>Cumulative</i>	CC	SU	○	▼	▼
Consistency with Air Quality Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—

Table 1-4 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>5.5 Noise</b>					
Excessive Noise Levels	S	LS	○	▼	▼
<i>Cumulative</i>	CC	LCC	○	▼	▼
Excessive Groundborne Vibration	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Permanent Increase in Ambient Noise Levels	LS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Temporary Increase in Ambient Noise Levels	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Aircraft Noise	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Consistency with Noise Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<b>5.6 Biological Resources</b>					
Sensitive Plant and Wildlife Species	S	LS	○	—	▼
<i>Cumulative</i>	CC	LCC	○	—	—
Riparian Habitat and Other Sensitive Natural Communities	S	LS	○	—	▼
<i>Cumulative</i>	CC	LCC	○	—	—
Federally Protected Wetlands	S	LS	○	—	▼
<i>Cumulative</i>	CC	LCC	○	—	—
Wildlife Movement Corridors and Nursery Sites	LS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Local Policies, Ordinances, HCP and NCCP	PS	LS	○	—	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
<b>5.7 Cultural Resources</b>					
Historical Resources	LS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Archaeological Resources	PS	LS	○	—	▼
<i>Cumulative</i>	CC	SU	○	—	▼
Human Remains	PS	LS	○	—	▼
<i>Cumulative</i>	CC	SU	○	—	▼
Paleontological Resources	PS	LS	○	—	▼
<i>Cumulative</i>	CC	LCC	○	—	▼
Consistency with Cultural Resource Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<b>5.8 Geology and Soils</b>					
Exposure to Seismic Related Hazards	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Soil Erosion or Topsoil Loss	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Soil Stability	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Expansive Soils	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Consistency with Geotechnical Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
Waste Water Disposal Systems	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—



Table 1-4 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>5.9 Public Services</b>					
<b>Fire and Emergency Medical Services</b>					
Fire and Emergency Medical Facilities	LS	LS	○	—	—
Fire Protection Service Standard	PS	LS	○	▼	▼
Consistency with Fire and Emergency Medical Service Policies	PS	LS	○	▼	▼
<i>Cumulative</i>	CC	LCC	○	—	—
<b>Police Services</b>					
Police Service Facilities	LS	LS	○	—	—
Police Service Standard	PS	LS	○	▼	▼
Consistency with Police Service Policies	PS	LS	○	▼	▼
<i>Cumulative</i>	CC	LCC	○	—	—
<b>Schools</b>					
School Facilities	PS	LS	○	—	—
Schools Siting	PS	LS	○	—	—
Consistency with School Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
<b>Libraries</b>					
Library Facilities	LS	LS	○	—	—
Library Service Standard	PS	LS	○	▼	▼
Consistency with Library Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
<b>Parks, Recreation, Open Space, and Trails</b>					
Deterioration of Facilities	PS	LS	○	—	—
New Recreational Facilities	LS	LS	○	—	—
Parks and Recreation Standard	PS	LS	▼	—	—
Consistency with Park Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	LCC	—	—	—
<b>5.10 Global Climate Change</b>					
Compliance with AB 32	LS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Potential Effects of Global Climate Change	PS	SU	▼	▼	▼
<i>Cumulative</i>	CC	SU	○	▼	▼
<b>5.11 Hydrology and Water Quality</b>					
Water Quality Standards	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Groundwater Supplies and Recharge	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Erosion or Siltation	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Surface Runoff	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Exceed Drainage Capacity	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—

Table 1-4 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
Degradation of Water Quality <i>Cumulative</i>	PS NCC	LS NCC	○ ○	▼ —	▼ —
100-Year Flood Hazards <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Consistency with Water Quality Policies <i>Cumulative</i>	LS NCC	LS NCC	— —	— —	— —
Flooding <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Inundation <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
<b>5.12 Agricultural Resources</b>					
Direct Conversion of Agricultural Resources <i>Cumulative</i>	PS CC	SU SU	○ ○	— —	— —
Land Use Zoning Conflicts <i>Cumulative</i>	PS CC	LS SU	○ ○	— —	— —
Consistency with Agricultural Resource Policies <i>Cumulative</i>	LS NCC	LS NCC	— —	— —	— —
<b>5.13 Hazards and Hazardous Materials</b>					
Routine Use and Accidental Release of Hazardous Materials <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Hazards to Schools <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Existing Hazardous Materials Sites <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Airport Hazards <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Emergency Response and Evacuation Plans <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Wildland Fires <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Consistency with Hazard Policies <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Historic Use of Pesticides <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
<b>5.14 Housing/Population</b>					
Displacement of Housing and People <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Consistency with Housing and Population Policies <i>Cumulative</i>	LS NCC	LS NCC	▲ —	— —	— —
<b>5.15 Public Utilities</b>					
<b>Water</b>					
New Water Treatment Facilities	LS	LS	○	—	—
Long-Term Water Supply and Entitlements	PS	SU	○	—	—
Compliance with City-wide Supply Thresholds	PS	LS	○	▼	▼
Consistency with Water Supply Policies <i>Cumulative</i>	LS CC	LS SU	— ○	— —	— —

Table 1-4 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>Wastewater</b>					
Adequate Wastewater Facilities	PS	LS	○	▼	▼
New Wastewater Treatment Facilities	PS	SU	○	—	—
Consistency with City Engineering Standards	LS	LS	○	—	—
Consistency with Wastewater Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	—	—
<b>Solid Waste</b>					
Sufficient Landfill Capacity	LS	LS	○	—	—
Solid Waste Regulations	LS	LS	○	—	—
Consistency with Solid Waste Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
<b>Recycled Water</b>					
New Recycled Water Facilities	PS	LS	○	▼	▼
Consistency with Recycled Water Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	▼	▼
<b>Energy</b>					
Energy Resources	S	SU	○	▼	▼
Wasteful Use of Energy	LS	LS	○	—	—
Consistency with Energy Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	▼	▼
<p>▲ Alternative is likely to result in greater impacts to issue when compared to project.</p> <p>— Alternative is likely to result in a similar impacts to issue when compared to project.</p> <p>▼ Alternative is likely to result in less impacts to issue when compared to project, however, impacts would still be significant before and/or after mitigation.</p> <p>○ Alternative is likely to result in less impacts to issue when compared to project and impacts would be less than significant and not require mitigation.</p> <p>CC = Cumulatively Considerable; LCC = Project would contribute to a cumulative impact, but contribution would less than Cumulatively Considerable; LS = Less Than Significant Impact; NCC = Not Cumulatively Considerable (A cumulatively considerable impact would not occur); PS = Potentially Significant; S = Significant Impact; SU = Significant and Unavoidable Impact</p>					

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# Chapter 2 Introduction

## 2.1 Project Background

Otay Ranch is a master-planned community that provides a broad range of residential, commercial, retail, and industrial development interwoven with civic and community uses, such as libraries, parks, and schools. The community is 23,000 acres in size, and includes an open space preserve system consisting of approximately 11,375 acres. Otay Ranch Village 9 is one of the designated fourteen villages within the Otay Ranch General Development Plan (GDP) area. The history of Otay Ranch planning documents that affect the project site are summarized in Table 2-1, and described in detail below.

**Table 2-1 Past and Present Planning Documents for Otay Ranch**

Planning Document	Associated Environmental Impact Report
1993 Otay Ranch General Development Plan/ Subregional Plan (adopted October 28, 1993) <sup>(1)</sup>	1993 Otay Ranch General Development Plan EIR (EIR 90-01) (SCH #89010154)
2005 City of Chula Vista General Plan Update	2005 Chula Vista General Plan Update Final Program EIR (EIR 05-01) (SCH #2004081066)
2005 Otay Ranch General Development Plan Update	
2013 Chula Vista General Plan Amendment/Otay Ranch General Development Plan Amendment (GPA/GDPA) (approved February 26, 2013)	2013 Chula Vista General Plan Amendment/Otay Ranch General Development Plan Amendment SEIR (SEIR 09-01) (SCH #2004081066)
Otay Ranch Village 9 SPA Plan	Otay Ranch Village 9 EIR (EIR 10-04) (SCH #2010061090)
<sup>(1)</sup> The GDP was amended in 2001; however, analysis associated with this amendment is not incorporated into this EIR.	

### 2.1.1 1993 Otay Ranch General Development Plan and EIR

The Otay Ranch GDP/Subregional Plan was originally adopted by the Chula Vista City Council and the San Diego County Board of Supervisors on October 28, 1993, and was accompanied by Environmental Impact Report (EIR) 90-01 (SCH #89010154). In addition to establishing community-wide land use policies, the Otay Ranch GDP includes an Overall Design Plan, which presents a design context for Otay Ranch that serves as a basis for individual Sectional Planning Area (SPA) Plans. The Otay Ranch GDP groups residential areas into “Villages.” Village cores are strategically located, mixed-use areas designed to contain essential facilities and services. The GDP has been amended several times since 1993, most recently in 2013, as described below.

## **2.1.2 2005 Chula Vista General Plan Update/Otay Ranch General Development Plan Amendment and Program EIR**

In 2005, the City of Chula Vista completed a comprehensive update of its General Plan, which included an amendment to the GDP. California law requires that each county and city adopt a general plan “for the physical development of the county or city, and of any land outside its boundaries which...bears relation to its planning” (Government Code Section 65300). The Chula Vista General Plan outlines goals, policies and objectives for land uses within Chula Vista in response to the community’s vision for the City. The General Plan includes specific requirements in the Land Use and Transportation Element for master planned communities and resource management plans for water, air quality, recycling, solid waste management, and energy. Specific policies for the central district of the Otay Ranch area, including Village 9, were included in the 2005 General Plan Update. The 2005 GDP Amendment (GDPA) revised regional information, added a discussion of the Multiple Species Conservation Program (MSCP), clarified plans and policies for several villages, and introduced the town center concept.

Although the 2005 General Plan Update included land use designations for the entire city, the City Council did not take action on the proposed land use designations and policies in the “Deferral Area,” which included several village sites, including Village 9.

The City Council certified the 2005 General Plan Update Final Program EIR (EIR 05-01; SCH #2004081066) on December 13, 2005 (hereinafter referred to as the 2005 GPU EIR [EIR 05-01]). The EIR assessed the environmental impacts of growth and development in the city associated with the general plan update and associated actions. While no action was taken by the City Council on the land uses within the Deferral Area, the certified EIR analyzed the impacts of the proposed amendments within the deferred area as part of the 2005 GPU Preferred Alternative.

## **2.1.3 2013 City of Chula Vista General Plan Amendment/Otay Ranch General Development Plan Amendment and SEIR**

In 2013, a General Plan Amendment and General Development Plan Amendment (GPA/GDPA) were approved that established land use designations for the “Deferral Area,” and re-designated land uses in the surrounding area. The GPA/GDPA land use change area includes Village 8 West, Village 9, the University Site and the Regional Technology Park (RTP). The GPA/GDPA includes policy revisions to the 2005 General Plan Update and 2005 GDPA, revisions to the General Plan Circulation Plan, reconfiguration of village boundaries, and land use designation amendments. As amended and approved in 2013, the General Plan and GDP are the applicable land use documents for the Village 9 SPA Plan. Unless stated otherwise, all references to the General Plan or GDP in this EIR refer to these documents as amended in 2013.

In 2013, a Supplemental EIR (SEIR 09-01) was certified for the GPA/GDPA in accordance with the California Environmental Quality Act (CEQA) and the guidelines of the City of Chula Vista. As a supplement, SEIR 09-01 only included an analysis of environmental topics that resulted in new or additional impacts compared to the land use assumptions made for the project area in the 2005 GPU EIR (EIR 05-01). The 2013 GPA/GDPA analyzed an additional 880 residential units within the Deferral Area, of which Village 9 accounted for an additional 386 residential units from the 2005 GPU EIR. The topics included in the SEIR were land use, landform alteration/visual quality, energy resources, transportation, air quality, noise, public services, public utilities, housing and population, and global climate change. The environmental topics that did not require supplemental analysis were biological resources, cultural



resources, geology and soils, paleontological resources, agriculture, hydrology and water quality, hazards, and mineral resources because the proposed land use designations would not change the resource information or conclusions in the SEIR for these issue areas.

## 2.2 Otay Ranch Village 9 SPA Plan and Tentative Map

The Otay Ranch GDP is implemented through individual SPA plans that specify the development standards, land plans, goals, objectives, and policies of the GDP for a particular planning area. SPA plans establish design criteria and define precisely the type and amount of development permitted. The plans also establish City standards including open space provisions and major improvements to be constructed by the project applicant. The proposed Otay Ranch Village 9 SPA Plan is based on the provisions for this area included in Section E.1.a of the Otay Ranch GDP, as amended in 2013. The GDP designates Village 9 as an “Urban Village” with a mixed-use “Town Center” and low-medium density residential uses to the south of the town center, and that provides seamless transitions to both the Eastern Urban Center (EUC) and University site. The Village 9 SPA Plan includes a Town Center and higher density Urban Center. Urban villages are planned for transit-oriented development with higher densities and mixed uses within a quarter mile of a transit stop or station. The SPA plan identifies planned transit stops in the Town Center, and additional potential transit stops on Main Street and Otay Valley Road. The proposed SPA Plan for Village 9 includes the following components:

1. Village 9 SPA Plan
2. Planned Community District Regulations
3. Public Facilities Finance Plan/Fiscal Impact Analysis
4. Air Quality Improvement Plan
5. Non-Renewable Energy Conservation Plan
6. Water Conservation Plan
7. Affordable Housing Plan
8. Community Purpose Facility Master Plan
9. Preserve Edge Plan
10. Park, Recreation, Open Space, and Trails Plan
11. Agricultural Plan
12. Fire Protection Plan

The tentative map (TM) that accompanies the SPA Plan establishes the subdivision of the site into planning areas, street standards and alignment, grading design, and infrastructure requirements, including alignment and improvements of the off-site utility corridor. The TM includes more detailed grading specifications compared to the overall grading plan, design and phasing of public facilities, storm drain locations in the Neighborhood Edge Zone, the actual location and design of interior slopes, the alignment of parkway residential streets in Planning Areas DD, EE, and FF, the alignment of common lanes, which are public alleyways that provide access to rear-loaded garages and parking. The TM also outlines individual lots in Planning Areas DD, EE, and FF. The TM may be further refined as grading plans and other development plans are finalized. Ultimately, a final map will be submitted to the City for approval.

Otay Land Company (OLC), which owns the property and is the project applicant, is responsible for applying for and obtaining necessary approvals from the City of Chula Vista to implement the Village 9 SPA Plan.

## 2.3 Subdivisions and Building Permits

Upon the approval of SPA plans, property may be subdivided in accordance with the California Subdivision Map Act and the applicable Subdivision Ordinances. Thereafter, building permits may be issued. As described earlier, the Village 9 project includes a TM for development of the site. The action to which this EIR applies is the approval of the SPA Plan and TM. Final maps and development permits needed for project implementation shall be examined in the light of this EIR to determine whether additional environmental review will be required.

## 2.4 Purpose and Legal Authority

This document is a Second Tier EIR that addresses the environmental effects of the proposed Village 9 SPA Plan and TM (hereafter referred to as the project) of the Otay Ranch GDP. The project requires the discretionary approval of the Chula Vista City Council. As such, the project is subject to the requirements of the CEQA.

This EIR has been prepared in accordance with CEQA (Public Resources Code Section 21000 et seq.) and the City of Chula Vista's environmental review procedures. Pursuant to Section 21067 of CEQA and Section 15367 and Sections 15050 through 15053 of the CEQA Guidelines, the City of Chula Vista is the Lead Agency under whose authority this EIR has been prepared. As such, the analysis and findings in this document reflect the independent judgment of the City of Chula Vista. In accordance with Section 15121 of the CEQA Guidelines, the purpose of the EIR is to serve as an informational document that "will inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project." This EIR provides decision-makers, public agencies, and the public with detailed information about the potential for significant adverse environmental impacts to occur as a result of the project.

Pursuant to CEQA Statute Section 21093, the analysis in this EIR tiers from the Supplemental EIR (SEIR 09-01) to the 2005 GPU EIR (EIR 05-01; SCH #2004081066). As stated in the CEQA Guidelines, Section 15152(a), the term tiering refers to "using analysis of general matters contained in a broader EIR (such as a previous EIR prepared for a general plan or policy document) with later EIRs and negative declarations on narrower projects incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project."

Due to the size and complexity of Otay Ranch, both the planning and environmental documentation for the specific planning areas or villages within the Otay Ranch have been tiered. As specific villages and planning areas are proposed for development, second-tier documentation is required for more precise or project-level planning and project-specific environmental documentation. As a second tier document, this EIR relies upon several previously certified EIRs, to determine whether or not the project is consistent with previously approved polices or ordinances. The 2013 SEIR was a supplemental analysis that updated the 2005 GPU EIR (EIR 05-01). The SEIR only included an environmental analysis of those issues that were affected by the updated policies and land use designations in the 2013

GPA/GDPA. Other environmental issues that were adequately addressed in the 2005 GPU EIR were not included in the 2013 SEIR analysis. Information that is not covered by either the 2005 GPU EIR or 2013 SEIR is tiered from EIR 90-01, the original EIR prepared in 1993 for the GDP. Table 2-2 lists the environmental topics included in this EIR and the environmental document from which the analysis was tiered.

**Table 2-2 Tiered Analysis by Environmental Issue**

<b>Environmental Topic</b>	<b>Documents Utilized in Tiered Analysis</b>
Land Use and Planning	2013 GPA/GDPA SEIR (09-01)
Landform Alteration/Aesthetics	2013 GPA/GDPA SEIR (09-01)
Transportation/Traffic	2013 GPA/GDPA SEIR (09-01)
Air Quality	2013 GPA/GDPA SEIR (09-01)
Noise	2013 GPA/GDPA SEIR (09-01)
Biological Resources	2005 GPU EIR (EIR 05-01) 1993 GDP Program EIR (EIR 90-01)
Cultural Resources	2005 GPU EIR (EIR 05-01) 1993 GDP Program EIR (EIR 90-01)
Geology and Soils	1993 GDP Program EIR (EIR 90-01)
Public Services	2013 GPA/GDPA SEIR (09-01)
Global Climate Change	2013 GPA/GDPA SEIR (09-01)
Hydrology and Water Quality	1993 GDP Program EIR (EIR 90-01)
Agricultural Resources	2005 GPU EIR (EIR 05-01) 1993 GDP Program EIR (EIR 90-01)
Hazards and Hazardous Materials	2005 GPU EIR (EIR 05-01) and 1993 GDP Program EIR (EIR 90-01)
Housing and Population	2013 GPA/GDPA SEIR (09-01)
Public Utilities	2013 GPA/GDPA SEIR (09-01) 2005 GPU EIR (EIR 05-01)

In accordance with CEQA Section 21094, those effects which the Lead Agency determined were either mitigated or avoided pursuant to the findings of these EIRs, or examined in sufficient detail to enable those effects to be mitigated or avoided through implementation of mitigation measures or standard conditions, do not need to be addressed in this second tier EIR document. Rather, this EIR focuses on the environmental effects associated with development of the proposed Village 9 SPA Plan that were not evaluated at a project level in the 2013 SEIR 09-01. Where appropriate, this EIR also updates information in the 1993 Otay Ranch GDP EIR 90-01 and the 2005 GPU EIR 05-01. Each of these prior certified EIRs are herein incorporated by reference. All referenced documents are available for review at the City of Chula Vista, Development Services Department, located at 276 Fourth Avenue, Chula Vista, California 91910.

Pursuant to CEQA Guidelines Section 15161, this document has been prepared as a “Project EIR” and is “focused primarily on the changes in the environment that would result from the development” (i.e., the project). Where environmental impacts have been determined to be potentially significant, this EIR presents mitigation measures directed at reducing those adverse environmental effects. The development of mitigation measures provides the Lead Agency with ways to substantially lessen or

avoid the significant effects of the project on the environment, to the degree feasible. Alternatives to the project are evaluated that could minimize or avoid significant impacts associated with the project.

## 2.5 Environmental Review Process

This Draft EIR was prepared following input from the public, responsible, and affected agencies through the EIR scoping process. In accordance with Section 15082 of the CEQA Guidelines, a Notice of Preparation (NOP) was prepared and distributed to responsible and trustee agencies, affected agencies, and other interested parties on June 29, 2010. Per Section 15381 of the CEQA Guidelines, the term “responsible agency” includes “all public agencies other than the Lead Agency which have discretionary approval power over the project,” such as the Regional Water Quality Control Board (RWQCB) for storm water permits and the California Department of Fish and Game for biological resources permits. A “trustee agency” is identified in Section 15386 of the CEQA Guidelines as “a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.”

The NOP is a document that is required to be submitted to the State Clearinghouse to officially solicit participation in determining the scope of the EIR. The State Clearinghouse distributed the Otay Ranch Village 9 SPA Project EIR NOP to state agencies, including the Office of Historic Preservation, Department of Fish and Game, Department of Transportation, Air Resources Board, and RWQCB. The NOP was also sent directly by the City of Chula Vista to federal, other state, county, and local agencies, as well as to other persons of interest (Appendix A). In addition, the NOP was posted at the Office of the San Diego County Clerk for 30 days. A public scoping meeting was held on July 8, 2010 to further solicit public input. A copy of the NOP is provided in Appendix A of this EIR.

Eleven letters were received in response to the issuance of the NOP. The NOP and comment letters are included in Appendix A. Comments covered a variety of topics, including water supply availability, increases in traffic within Chula Vista and surrounding jurisdictions, potential hazards from Brown Field airport, potential hazardous materials impacts, impacts to the Otay Valley Regional Park, impacts to biological resources, and wildfire hazards. These issues are addressed under the applicable environmental topic in Chapter 5, Environmental Impact Analysis.

This Draft EIR is being circulated for 45 days for public review and comment in accordance with Section 15087 of the CEQA Guidelines. Interested parties may provide comments on the Draft EIR in written form. The EIR and all related technical appendices are available for review at the offices of the City of Chula Vista, Development Services Department, located at 276 Fourth Avenue, Chula Vista, California 91910 and the Chula Vista Public Library, 365 F Street, Chula Vista, California 91910.

Upon completion of the public comment period, a Final EIR will be prepared that will provide written responses to comments received on the Draft EIR. Responses to written comments received from any public agencies will be made available to those agencies at least ten days prior to the public hearing, during which the certification of the Final EIR will be considered. These comments and their responses will be included in the Final EIR for consideration by the Chula Vista City Council.

Prior to approval of the project, the City of Chula Vista, as the Lead Agency and decision-making entity, is required to certify that the EIR has been completed in compliance with CEQA, that the project has been reviewed and the information in this EIR has been considered, and that this EIR reflects the independent judgment of the City. As defined by Public Resource Code (PRC) Section 21081, CEQA also

requires the City to adopt “findings” with respect to each significant environmental effect identified in the EIR. For each significant effect, CEQA requires the approving agency to make one or more of the following findings:

- The project has been altered to avoid or substantially lessen significant impacts identified in the Final EIR;
- The responsibility to carry out the above is under the jurisdiction of another agency; or
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

In addition, when approving a project, public agencies must adopt a Mitigation Monitoring and Reporting Program (MMRP), describing the changes that were incorporated into the project or made a condition of project approval in order to mitigate or avoid significant effects on the environment in compliance with PRC Section 21081.6. The MMRP is adopted at the time of project approval and is designed to ensure compliance with the EIR mitigation measures during project implementation. Upon approval of the project, the City of Chula Vista would be responsible for the implementation of the project’s MMRP.

Environmental impacts may not always be mitigated to a less-than-significant level. When this occurs, impacts are considered significant and unavoidable. If the City concludes that the project would result in significant and unavoidable impacts, which are identified in this Draft EIR, the City must adopt a “statement of overriding considerations” prior to approval of the project in compliance with PRC Section 21081. Such statements are intended under CEQA to provide a written means by which the Lead Agency balances the benefits of the project and the significant and unavoidable environmental impacts. Where the Lead Agency concludes that the economic, legal, social, technological, or other benefits outweigh the unavoidable environmental impacts, the Lead Agency may find such impacts “acceptable” and approve the project.

## 2.6 Content and Scope of this EIR

### 2.6.1 EIR Content

This EIR addresses the potential physical environmental impacts that could result from implementation of the Village 9 SPA Plan and TM. Based on the review of past environmental documents, the analysis of the project by City staff, and the comments received in response to the NOP, the following issues were determined to result in potentially significant impacts and are discussed in detail in Chapter 5 of this EIR:

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| ■ Land Use and Planning          | ■ Public Services                 |
| ■ Landform Alteration/Aesthetics | ■ Global Climate Change           |
| ■ Transportation/Traffic         | ■ Hydrology and Water Quality     |
| ■ Air Quality                    | ■ Agricultural Resources          |
| ■ Noise                          | ■ Hazards and Hazardous Materials |
| ■ Biological Resources           | ■ Housing and Population          |
| ■ Cultural Resources             | ■ Public Utilities                |
| ■ Geology and Soils              |                                   |

The content and format of this EIR are designed to meet the current requirements of CEQA and the CEQA Guidelines. The EIR is organized into the chapters as summarized below.

**Chapter 1, Executive Summary:** Presents a summary of the project and alternatives, potential impacts and mitigation measures, and impact conclusions regarding significant unavoidable adverse impacts and effects not found to be significant.

**Chapter 2, Introduction:** Describes the purpose and use of the EIR, provides a brief overview of the environmental review process, and outlines the organization of the EIR.

**Chapter 3, Project Description:** Includes a discussion of the project location, the objectives of the project, details of the project, and a listing of the discretionary actions and approvals required to implement the project.

**Chapter 4, Environmental Setting:** Describes the physical setting for the project. It describes the existing conditions for Village 9 at the time of the distribution of the NOP.

**Chapter 5, Environmental Impact Analysis:** Includes an analysis of each of the environmental issues outlined above and consists of a description of the existing conditions or setting for each issue area before project implementation, methods and assumptions used in the impact analysis, thresholds for determining the significance of impacts, impacts that would result from the project prior to mitigation, applicable mitigation measures that would eliminate or reduce significant impacts, and the level of significance after implementation of mitigation measures. This EIR utilizes the following categories to describe the level of significance of impacts identified in the environmental analysis:

- **Less than Significant.** This term is used to refer to: 1) impacts resulting from implementation of the project that are not likely to exceed the defined standards of significance, and 2) potentially significant impacts that are reduced to a level that does not exceed the defined standards of significance after implementation of mitigation measures.
- **Significant.** This term is used to refer to impacts resulting from implementation of the project that exceed the defined standards of significance before identification of mitigation measures. A “significant effect” is defined by Section 15382 of the CEQA Guidelines as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment [but] may be considered in determining whether the physical change is significant.”
- **Significant and Unavoidable.** This term is used to refer to significant impacts resulting from implementation of the project that cannot be eliminated or reduced to below standards of significance through implementation of feasible mitigation measures.

**Chapter 6, Cumulative Impacts:** Discusses the potentially significant cumulative impacts that may result from the project when taking into account the related or cumulative impacts resulting from other reasonably foreseeable past, present and future projects within and surrounding the Otay Ranch GDP area.



**Chapter 7, Growth-Inducing Impacts:** Discusses the potential growth-inducing impacts of the project, including the potential of the project to foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment.

**Chapter 8, Significant Irreversible Environmental Changes:** Provides a discussion of the irreversible environmental changes to the natural environment resulting from the implementation of the project. Furthermore, the significant unavoidable impacts that would result from project implementation are summarized in this section.

**Chapter 9, Effects Found Not to Be Significant:** Contains a summary of the issue areas that were determined to result in less than significant environmental impacts.

**Chapter 10, Alternatives:** Evaluates the environmental effects of feasible project alternatives, including the No Project Alternative. It also identifies the environmentally superior project.

**Chapter 11, References:** Identifies the documents (printed references) and individuals (personal communications) consulted in preparing this EIR.

**Chapter 12, EIR Preparation:** Lists the individuals involved in preparation of this EIR.

**Chapter 13, Persons and Organizations Contacted:** Identifies the organizations and persons consulted to ascertain supporting information to support the EIR analyses.

**Appendices:** Presents data supporting the analyses or contents of this EIR. The appendices include the following:

- Appendix A: Notice of Preparation, Comment Letters and Scoping Meeting Materials
- Appendix B: Traffic Impact Analysis
- Appendix C1: Air Quality Technical Report
- Appendix C2: Health Risk Assessment
- Appendix D: Noise Impact Study
- Appendix E: Biological Resources Report
- Appendix F1: Cultural Resources Survey
- Appendix F2: Paleontological Resources Assessment
- Appendix G: Geotechnical Report
- Appendix H1: Global Climate Change Analysis
- Appendix H2: Project Specific Greenhouse Gas Calculations
- Appendix I1: Water Quality Report
- Appendix I2: Drainage Study
- Appendix J: Phase I Environmental Site Assessment
- Appendix K1: Water Supply Assessment Verification
- Appendix K2: Overview of Water Service
- Appendix L: Overview of Sewer Service
- Appendix M1: Off-Site Biological Resources Summary
- Appendix M2: Off-Site Cultural Resources Summary

## 2.6.2 Scope for Village 9 SPA Plan and Tentative Map

As discussed in Section 2.4, this EIR addresses the impacts of the Village 9 SPA Plan and TM at a project-specific level pursuant to CEQA Guidelines Section 15161. This EIR thoroughly examines all phases of the project including planning, construction, and operation, as well as the preparation of the project-specific technical analyses listed above. A detailed description of the analyzed project components is provided in Chapter 3, Project Description.

## 2.6.3 Scope for Off-Site Mitigation Measures

As discussed in detail in Section 5.3 of this EIR, Transportation/Traffic, the construction of three roadway improvements are required as direct mitigation for the proposed project: 1) construction of Main Street from La Media Road to Village 9 Street A, including the construction of an overcrossing at SR-125 (mitigation measure 5.3-14); 2) construction of SR-125 northbound and southbound ramps at Main Street (mitigation measure 5.3-15); and 3) construction of Otay Valley Road from the Main Street to Village 9 Street I, including the construction of an overcrossing at SR-125 (mitigation measure 5.3-16). These roadway improvements include segments in Village 8 West, Village 8 East, and Village 9.

The roadway improvements required in mitigation measures 5.3-14 through 5.3-16 are part of the proposed Otay Ranch circulation network and the City's Land Use and Transportation Element circulation network. They are addressed at a programmatic level in the 1993 Otay Ranch General Development Plan EIR (EIR 90-01) (SCH #89010154), 2005 Chula Vista General Plan Update Final Program EIR (EIR 05-01) (SCH #2004081066), and the 2013 Chula Vista General Plan Amendment/Otay Ranch General Development Plan Amendment SEIR (SEIR 09-01) (SCH #2004081066). The potential environmental impacts that would result from construction of the portion of these roadway improvements in Village 9 are addressed at the project-specific level in this EIR as part of the SPA Plan, including off-site grading adjacent to Village 9 at the future SR-125 ramps. Impacts related to the portion of these improvements within Village 8 West are addressed in the Otay Ranch Village 8 West Sectional Planning Area Plan and Tentative Map EIR (EIR 10-03) (SCH #2010062093). The portion of Main Street across Village 8 East, from the eastern boundary of Village 8 West at Magdalena to the Olympian High School parking lot has already been constructed. The remaining portions of these improvements are planned to be addressed at the project level in the EIR for the University Villages project, the preparation of which was publically noticed on July 19, 2013. Mitigation measures 5.3-14 through 5.3-16 are not anticipated to be required until Year 2025 (mitigation measure 5.3-14) and Year 2030 (mitigation measures 5.3-15 and 5.3-16). According to the University Villages EIR NOP, construction of Village 8 East is anticipated to be complete in 2024, including the proposed circulation network and any associated project mitigation measures. However, because an EIR for Village 8 East has not yet been made available for public review, this EIR includes a summary of impacts that would potentially occur as a result of implementation of mitigation measures 5.3-14 through 5.3-16 on the Village 8 East property, should Village 8 East not be developed. The summary of impacts is provided at the end of Section 5.3.

# Chapter 3 Project Description

## 3.1 Project Location

The project site includes approximately 323 acres of land in Otay Ranch known as Village 9, located entirely within the City of Chula Vista, California, near the southeastern area of the city. Chula Vista is located in San Diego County, approximately seven miles south of the downtown area of the City of San Diego, and approximately seven miles north of the U.S./Mexico International Border.

Figure 3-1 and Figure 3-2 illustrate the project's location and surrounding uses. The project area ranges in elevation from approximately 324 feet above mean sea level (AMSL) in the southern portion to 621 feet AMSL in the northern portion of the site. Approximately 50 acres of the easternmost portion of the project site will be a future university site, and as such, would not be subject to the Village 9 development standards. This portion of Village 9 is contiguous with the University property directly east of the site. Otay Valley Regional Park and the Otay River Valley are south of the site; SR-125 is adjacent to the western boundary; and the EUC (currently undeveloped) is located north of the site. Eastlake Parkway and Hunte Parkway, which currently terminate at the northeastern boundary of the project site, provide access to the site.

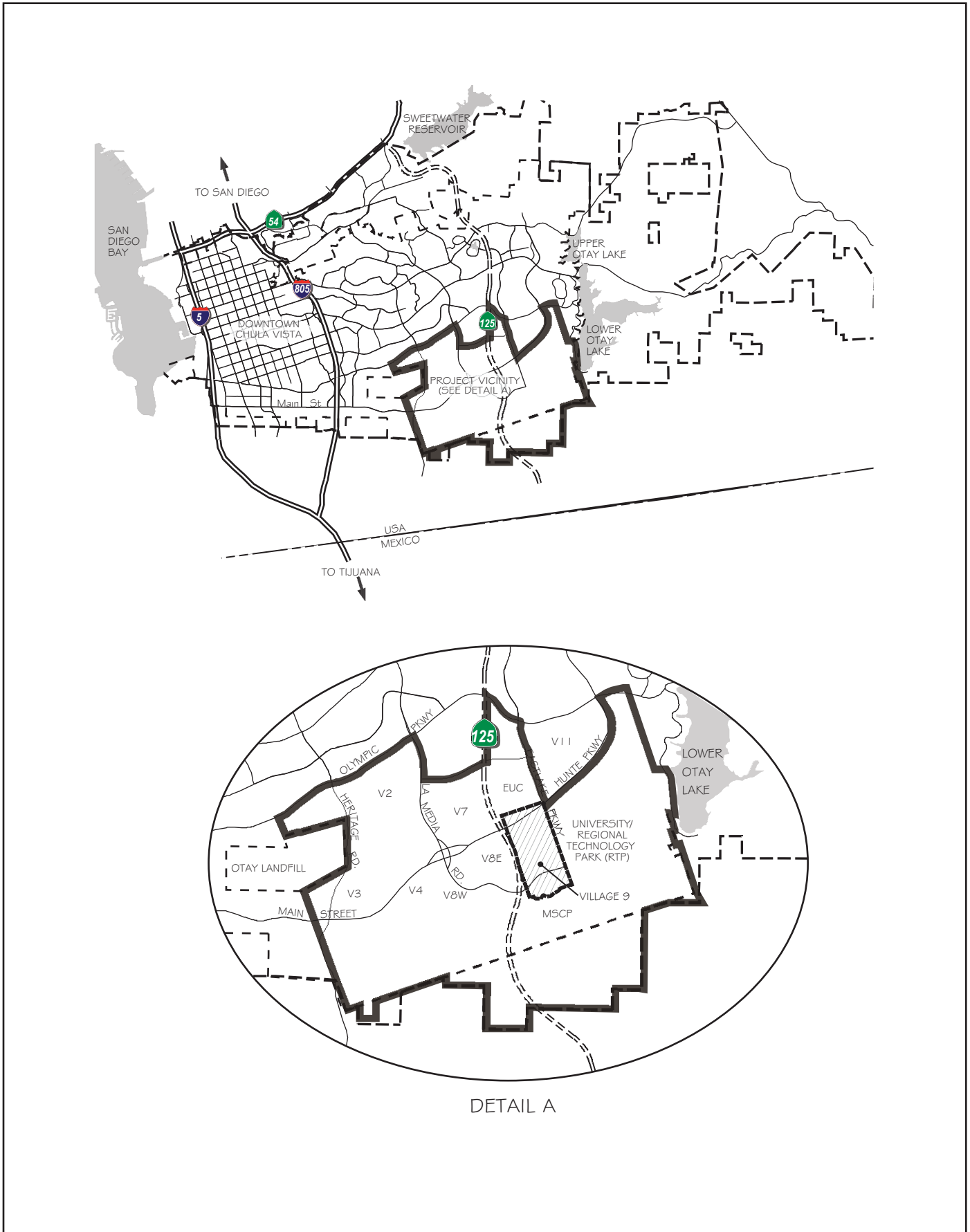
## 3.2 Statement of Project Objectives

The Otay Ranch GDP describes Village 9 as an urban village with an emphasis on compatibility with the adjacent EUC and the University. The GDP states, "Urban Villages are adjacent to existing urban development and are planned for transit oriented development with higher densities and mixed uses in the village cores." The GDP recognizes that a portion of the land use within Village 9 will be designated as University and that the remainder of the village would contain an urban center, single-family and multi-family residential units, and a village core or town center containing mixed-use, community purpose facilities, a transit station, an elementary school, a town square, and affordable housing.

Section 15124(b) of the CEQA Guidelines requires an EIR to include a statement of objectives for the proposed project. The objectives outline the underlying purpose of the project and assist in the development of project alternatives. The SPA Plan identifies project objectives that would implement the aforementioned GDP vision for Village 9 as indicated below:

1. Create a recognizable "place" that is well designed to provide 500,000 to 1.5 million square feet of office and retail space in three unique and attractive urban districts accommodating cultural and social diversity.

2. Develop distinctive design standards and invest in design excellence to create inspiring and memorable places; emphasize the appearance and qualities of the public realm; create streetscapes, pathways, and public spaces of beauty, interest, and functional benefit to pedestrians.
3. Encourage a development pattern that promotes orderly growth, prevents urban sprawl, and promotes effective resource management, while implementing the GDP goals of a strong relationship between Village 9, the Eastern Urban Center, and the planned university.
4. Protect and enhance the natural environment and increase the quality of life. Design neighborhoods with compact and multi-dimensional land use patterns that ensure a mix of uses and joint optimization of transportation modes to minimize the impact of cars, promote walking and bicycling, and provide access to employment, education, recreation, entertainment, shopping, and services.
5. Create an appropriately scaled and economically healthy Town Center. Include a wide range of commercial, residential, cultural, civic, and recreational uses. The Town Center should contain businesses that serve the daily needs of nearby residents and employees including students, faculty, and Regional Technology Park employees.
6. Establish a pedestrian and transit-oriented village with an intense, vibrant Town Center to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and regional transit.
7. Encourage community development in mixed use and compact pedestrian oriented forms to accommodate all income levels and lifestyles.
8. Foster a compact form facilitated by “form-based planning,” resulting in efficient infrastructure investments and advanced opportunities to provide socially diverse housing.
9. Promote jobs that match the skills of existing and future residents through provision of housing opportunities and choices and by providing an opportunity for the City to attract a university or related uses by dedication of land for such purposes. Retain and recruit a skilled and motivated workforce to ensure economic stability into the future and support university development by providing attainable housing opportunities at increased densities.
10. Encourage diverse, informal centers of creativity, learning, and interaction that support the University. Focus community design on a manner of life and civic culture that embraces and fosters life-long learning. This shall take place in traditional educational institutions as well as diverse venues such as restaurants, arts, and cultural locations. This includes public and private places of exceptional design and open spaces that inspire and connect with the natural environment through features that spark creativity. Identify and promote business clusters that complement the University and the Regional Technology Park.
11. Promote synergistic uses and graceful transitions within the SPA Plan area and between the SPA Plan area and neighborhoods of adjacent SPA areas to balance activities, services, and facilities. Integrate Village 9 with existing Otay Ranch development, the University, the Regional Technology Park, and connectivity to the Greenbelt trail system.
12. Implement the goals, objectives and policies of the Chula Vista General Plan, the Otay Ranch General Development Plan, the Chula Vista Greenbelt Master Plan, and the Otay Valley Regional Park Concept Plan.
13. Encourage the interactivity of a wide range of people, promote community diversity, and enrich the human experience by providing a broad variety of public spaces and housing types and styles that appeal to all ages, incomes, and lifestyles.
14. Establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions.



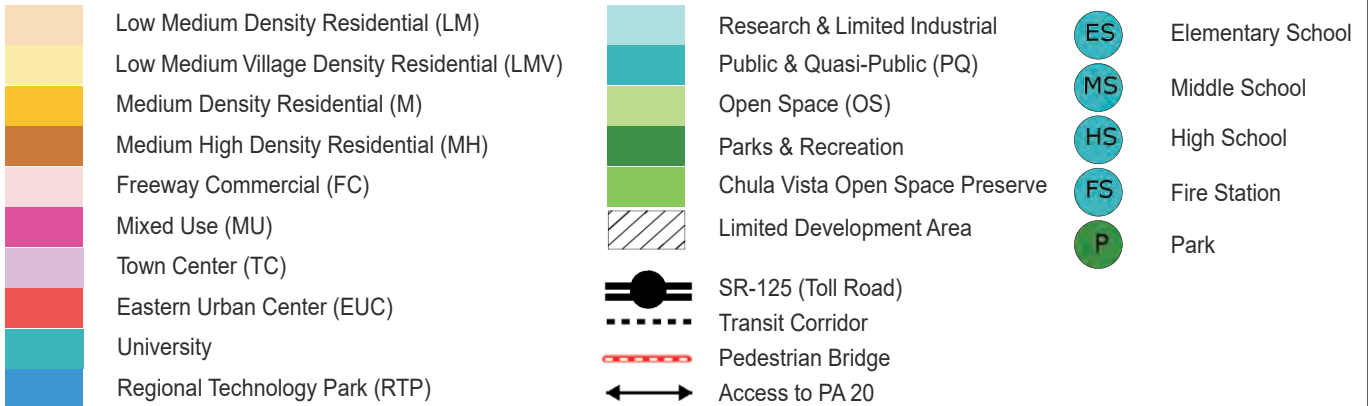
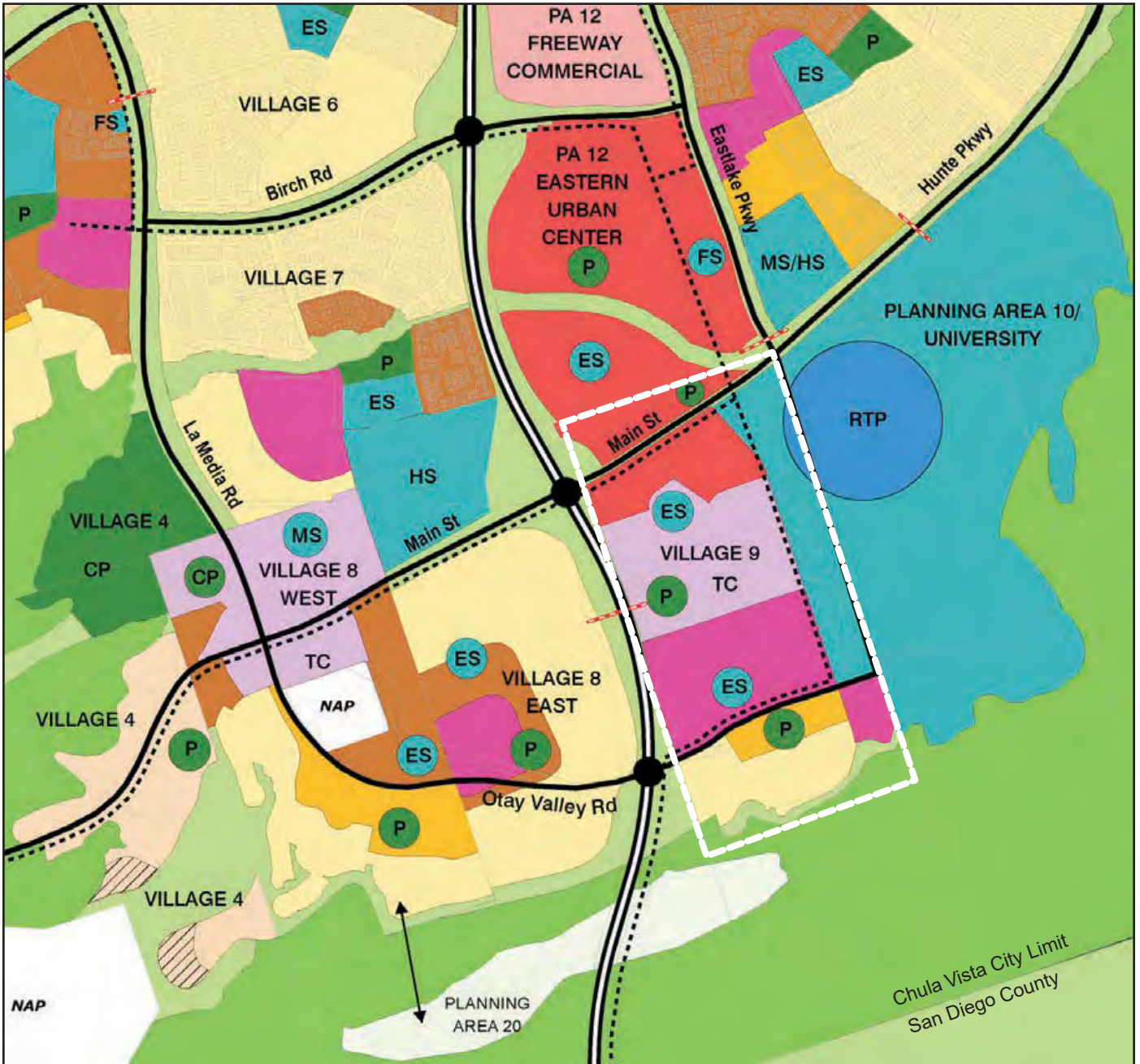
Source: William Hezmalhalch Architects, Inc. 2013

Not to Scale



**PROJECT VICINITY  
FIGURE 3-1**





Source: William Hezmalhalch Architects, Inc. 2012

Not to Scale



**EXISTING AND PLANNED LAND USES IN THE PROJECT VICINITY**  
**FIGURE 3-2**



## 3.3 Project Components

The project includes the SPA Plan and TM for Village 9, including associated off-site improvements, consistent with the Otay Ranch GDP. The development proposed by the Otay Land Company (OLC) pursuant to the Village 9 SPA Plan is referred to as the “project,” and is the focus of this EIR. The components of the Village 9 SPA Plan are described below. The Village 9 SPA Plan is available for review at the offices of the City of Chula Vista, Development Services Department, located at 276 Fourth Avenue, Chula Vista, California 91910.

### 3.3.1 Village 9 SPA Plan

#### A. Development Concept

Village 9 is one of the designated fourteen villages within the Otay Ranch GDP area. As prescribed in the Otay Ranch GDP, Village 9 is an Urban Village with a mixed-use urban center and town center, and residential development of low-medium density to the south of the Town Center. Urban Villages are intended to be adjacent to existing urban development and planned for transit-oriented development with higher densities and mixed uses within one-quarter mile of a transit stop or station.

Figure 3-3 illustrates the site utilization plan for the project site. Although not part of the proposed project, the conceptual alignments for the SR-125 ramps at Main Street and Otay Valley Road and the pedestrian bridge over SR-125 are shown in Figure 3-5 to illustrate the proposed land uses relative to regional connections. Village 9 has been planned in transects to provide organization for development that focuses activity within the Town Center, transitioning into residential opportunities and rural open space at the edges. Transects are further divided into zones, as illustrated in Figure 3-4. This site utilization plan assigns the land uses for each transect within the planning area. Uses include two elementary school sites, a variety of parks, various open space areas, multi-family and single-family residential units, and mixed-use areas. In addition to defining each transect, individual planning areas are also assigned a targeted number of dwelling units and the required minimum amount of commercial square feet. The residential targets are estimates that represent the maximum amount of development that may occur in each planning area without utilizing the density transfer provisions. The actual residential dwelling unit yield and subsequent density will be determined in conjunction with the discretionary development permits approved in conformance with the SPA Plan, such as precise plans and design review permits, or approval of the final map.

For purposes of land use and environmental analysis in this EIR, the project is evaluated using the maximum dwelling unit yield permitted by the SPA Plan (worst case analysis). The proposed land uses and maximum residential unit yield for Village 9 are provided in Table 3-1. Residential units and commercial square footage may ultimately be transferred between the planning areas; however, the total number of dwelling units and commercial square footage proposed for the Village 9 would not change.

The proposed SPA Plan would implement form-based regulations and standards that focus on the physical relationships between buildings, streets, and public spaces. Form-based codes approach the development of land by regulating the form, character, and street presence of a building to focus attention on the public presentation of buildings, and creating a public realm that is comfortable for pedestrians. Land uses are still controlled but they play a secondary role to the creation of walkable, pedestrian-friendly communities and streetscapes.

**Table 3-1 Village 9 SPA Plan Proposed Land Uses**

Use	Area (Acres)	Residential (Units)	Commercial (Square feet)
<b>Proposed Development</b>			
Mixed-Use Eastern Urban Center (EUC)	48.3	1,912	400,000 - 1,190,000
Town Center (TC)	36.1	894	100,000 - 278,000
Mixed Use (MU) – 10-45 dwelling units/acre	8.2	136	--
Mixed Use (MU) – 10-27 dwelling units/acre	49.2	792	0 - 32,000
Medium Density Residential (M)	15.2	161	--
Low Medium Density Residential (LMV)	28.1	105	--
Schools	19.8	--	--
Community Purpose Facility	5.0	--	--
Parks	27.5	--	--
Open Space	9.6	--	--
Arterial Roadway Rights-of-Way & SR-125	26.1	--	--
Subtotal	273.1	4,000	500,000 - 1,500,000
<b>Remainder of Village 9</b>			
Future University	50.0	--	--
Total	323.1	4,000	1,500,000
Source: OLC 2012			

Zone Standards in Section 3 of the SPA Plan, Development Code, regulate the configuration of lots and the placement of buildings within the various zones identified. Additionally, the SPA Plan defines building configurations that specify regulations for buildings and lots to regulate key characteristics (pedestrian and vehicle access, open space, parking, etc.) of the built form.

### **1. Transect 1 - Natural**

Transect 1 would consist of areas reserved for limited recreation, passive open spaces, and habitat preserves, providing a transition from natural areas to the built environment. Transect 1 would be characterized by rolling hills adjacent to the Otay River Valley. This transect would be intended for low-intensity recreation, hiking trails, and staging areas. Transect 1 is defined by the Open Space Preserve (OP) Zone and Open Space Slope (OS) Zone.

The Open Space Preserve Zone would protect natural areas that are part of the Chula Vista MSCP subarea. In Village 9, these lands consist of a total of 4.2 acres in two planning areas in the southern portion of the project site, adjacent to the Otay River Valley. This zone protects the habitat preserve and allows for limited uses pursuant to the regulations of the Chula Vista MSCP Subarea Plan and the Otay Ranch Resource Management Plan (RMP).

The Open Space Zone is intended to preserve perimeter slopes and other undevelopable areas within the site. Portions of the Open Space Zone are located within the Preserve Edge, a 100-foot buffer zone adjacent to the MSCP Preserve. The Preserve Edge is also regulated by Village 9 Preserve Edge Plan, described below in Section 3.3.1(M). This zone allows for landscaping and passive recreation such as hiking and nature trails.



**Land Use**

- Eastern Urban Center (EUC) - 28-60 du/ac
- Town Center (TC) - 18-45 du/ac
- Mixed Use (MU) - 10-45 du/ac
- Mixed Use (MU) - 10-27 du/ac
- Medium Density Residential (M)
- Low Medium Density Residential Village (LMV)
- Open Space (OS)
- Open Space (Preserve)
- Park (P)
- University/RTP (U)
- School

--- Boundary of Mixed Use Districts (Master Precise Plan Required, see Section 9.3.7)

\* See Tentative Maps for Lotting

Note: SR-125 ramp locations and designs as shown are conceptual. Final location and design to be determined by Caltrans.

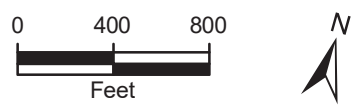
Commercial and Residential				
Eastern Urban Center (EUC) – 28-60 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2,3)</sup>
A	9.5	T-5: UC	380	235
B-1	4.6	T-5: UC	183	115
B-2	3.9	T-5: UC	136	101
D	11.2	T-5: UC	448	278
E-1	4.6	T-5: UC	183	115
E-2	4.2	T-5: UC	168	101
H-1	4.7	T-5: UC	188	115
H-2	5.6	T-5: UC	226	130
<b>Subtotal</b>	<b>48.3</b>		<b>1,912</b>	<b>1,190</b>
Town Center (TC) – 18-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
K-1	3.7	T-4: TC	148	0
K-2	3.8	T-4: TC	152	0
M	3.6	T-4: TC	80	29
N	3.5	T-4: TC	57	52
O-1	3.6	T-4: TC	80	29
O-2	3.6	T-4: TC	80	29
P	3.6	T-4: TC	80	29
Q	3.5	T-4: TC	57	52
R-1	3.6	T-4: TC	80	29
R-2	3.6	T-4: TC	80	29
<b>Subtotal</b>	<b>36.1</b>		<b>894</b>	<b>278</b>
Mixed Use (MU) – 10-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
F	8.2	T-4: UN	136	0
G <sup>(2)</sup>	--	T-4: UN	0	0
<b>Subtotal</b>	<b>8.2</b>		<b>136</b>	<b>0</b>
Mixed Use (MU) – 10-27 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
S-1	6.3	T-3: NC	104	0
S-2	3.5	T-3: NC	58	0
T	3.4	T-3: NC	34	0-32
U-1	3.5	T-3: NC	58	0
U-2	3.5	T-3: NC	58	0
V	8.6	T-3: NC	142	0
W <sup>(2)</sup>	--	T-3: NC	0	0
Y-1	3.3	T-3: NC	54	0
Y-2	3.0	T-3: NC	50	0
Z-1	3.7	T-3: NC	61	0
Z-2	2.7	T-3: NC	45	0
CC	7.7	T-3: NC	128	0
<b>Subtotal</b>	<b>49.2</b>		<b>792</b>	<b>32</b>
Mixed Density Residential (M) – 6-11 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	
AA	6.8	T-2: NG	72	
BB	8.4	T-2: NG	89	
<b>Subtotal</b>	<b>15.2</b>		<b>161</b>	
Low Medium Density Residential Village (LMV) – 3-6 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	
DD	12.2	T-2: NE	47	
EE	7.1	T-2: NE	26	
FF	8.8	T-2: NE	32	
<b>Subtotal</b>	<b>28.1</b>		<b>105</b>	
<b>TOTAL</b>	<b>185.1 acres</b>		<b>4,000</b>	<b>1,500K<sup>(3)</sup></b>

Public, Quasi Public, and Other				
Community Purpose Facility (CPF) <sup>(4)</sup>				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
J	TC	2.3	SD: CPF	CPF
X	MU	2.7	SD: CPF	CPF
<b>Subtotal</b>		<b>5.0</b>		
Potential School (S) Sites <sup>(5)</sup>				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
G	MU	7.9	T-4: UN	Elementary
W	MU	11.9	T-3: NC	Elementary
<b>Subtotal</b>		<b>19.8</b>		
Parks (P)				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
C	P	3.6	SD: P	Town Square
I	TC	1.5	SD: P	Town Square
L	P	14.8	SD: P	Neighborhood
GG	P	2.9	SD: P	Pedestrian
HH	P	1.3	SD: P	Pedestrian
II	OS	3.4	SD: P	Pedestrian
<b>Subtotal</b>		<b>27.5</b>		
Open Space (OS)				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
OS-1	OS	2.8	T-1: OS	Open Space
OS-2	CVOSP <sup>(6)</sup>	3.3	T-1: OP	Preserve
OS-3	OS	2.8	T-1: OS	Open Space
OS-4	CVOSP <sup>(6)</sup>	0.7	T-1: OP	Preserve
<b>Subtotal</b>		<b>9.6</b>		
Other				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
JJ	U	50.0	SD: U	University/RTP
Arterials		17.9		Right-of-Way
SR-125		8.2		Right-of-Way
<b>Subtotal</b>		<b>76.1</b>		
<b>TOTAL</b>		<b>138.0 acres</b>		

**SPA Total Area: 323.1 Gross Acres**

Footnotes:  
<sup>(1)</sup> Transects are defined in Chapter 3 of the SPA  
<sup>(2)</sup> Subject to intensity transfers and minimum retail/commercial square footage requirements  
<sup>(3)</sup> 1,200,000 square feet of office and 300,000 square feet retail; excludes live/work  
<sup>(4)</sup> As defined by CVMC Chapter 19.48  
<sup>(5)</sup> School sites will revert to mixed use if not accepted by the school district  
<sup>(6)</sup> Chula Vista Open Space Preserve

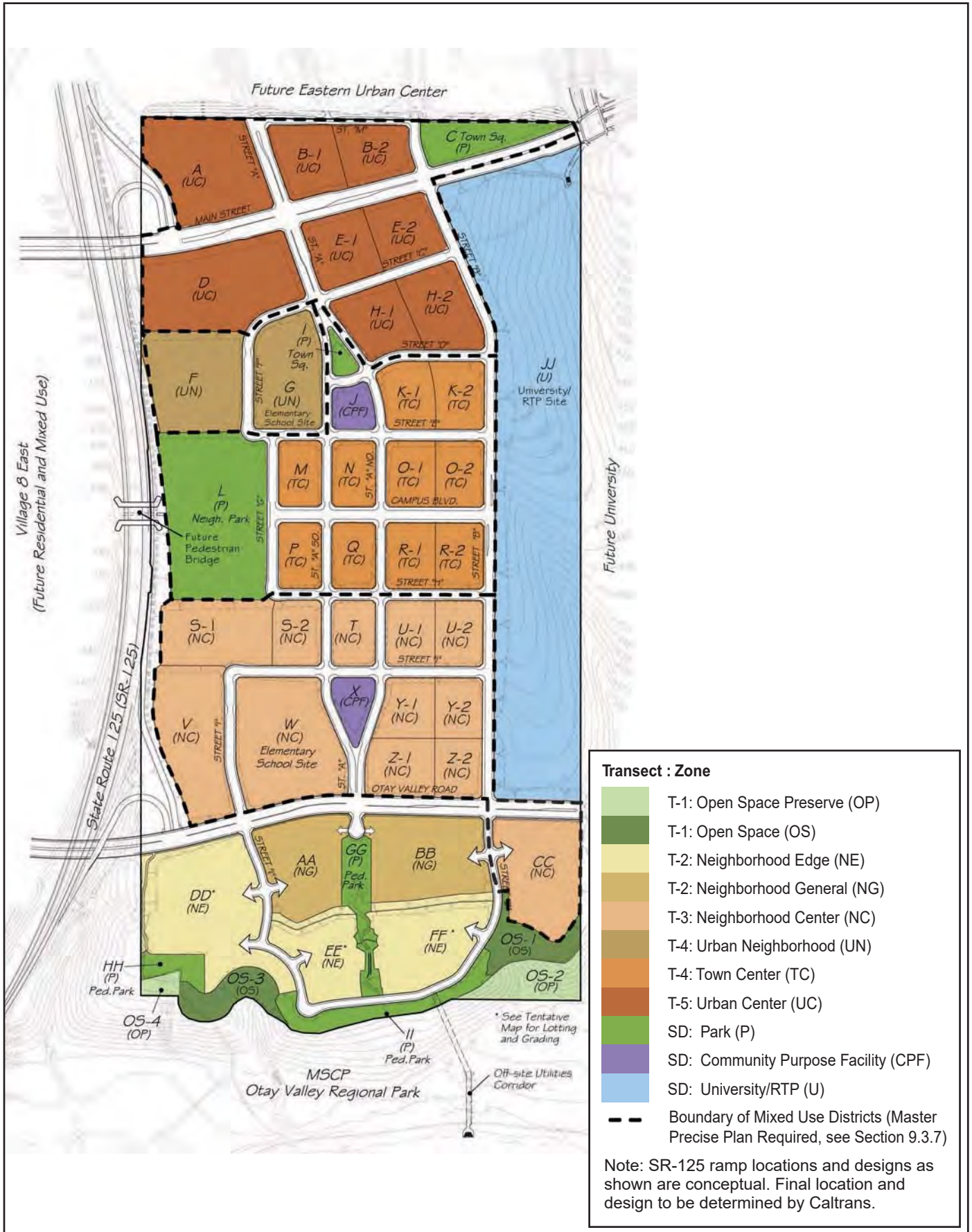
Source: William Hezmalhach Architects, Inc. 2013



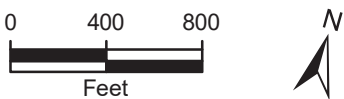
**SITE UTILIZATION PLAN  
FIGURE 3-3**

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Source: William Hezmalhalch Architects, Inc. 2013



**TRANSECT ZONES**  
**FIGURE 3-4**

## **2. Transect 2 - Suburban**

Transect 2 consists of primarily residential neighborhoods of low-medium (3-6 dwelling units per acre [du/ac]) and medium densities (6-11 du/ac) as a transition from open space to greater concentrations of development. There would be a focus on private front yards, distinct separation of private lots from the public street, naturalistic planting, deep setbacks, and larger residential blocks. This transect would be defined by the Neighborhood Edge (NE) Zone and the Neighborhood General (NG) Zone.

The Neighborhood Edge Zone is characterized by one-story and two-story detached single-family homes in southern portions of the transect that provide a transition between the natural environment and residential development. This zone would include park and trail connections to adjacent open space.

The Neighborhood General Zone is characterized by two-story attached and detached cluster homes in northern portions of this transect. These homes would provide a transition from the Neighborhood Edge Zone to the higher density, multi-family neighborhoods. Non-residential uses that foster a functional and walkable neighborhood would be permitted.

## **3. Transect 3 – General Urban**

Transect 3 consists of attached, small lot single-family, and mixed-use residential housing (10-27 du/ac) with occasional neighborhood serving commercial uses, and a potential elementary school. A horizontal mix of uses consists of small neighborhood retail and services in limited ground level locations. This transect would be defined by the Neighborhood Center (NC) Zone.

The primary intent of the Neighborhood Center Zone is to provide for multi-family and single-family cluster residential neighborhoods that foster walkability and provide a transition from residential neighborhoods to the mixed-use character of the Town Center and Urban Center. Secondary non-residential uses that foster a functional and walkable neighborhood would be permitted.

## **4. Transect 4 – Town Center and Urban Neighborhood**

Transect 4 consists of mixed-use development including retail, office, attached and small lot detached residential homes, and a potential elementary school in an urban setting. This transect is defined by the Town Center (TC) Zone and the Urban Neighborhood (UN) Zone. Transect 4 would be characterized by a horizontal and vertical mix of uses, with retail, residential, and office on the ground level and attached residential and office above. Building configurations are limited to those that provide limited or no setbacks, strong pedestrian-scaled frontages, and opportunities to de-emphasize parking. This transect would create an active and vibrant town center to support the daily needs of the University/RTP.

The primary intent of the Town Center Zone is to provide for mixed-use development that supports the University/RTP and fosters walkability. Uses within the Town Center Zone would include a mix of University/RTP oriented retail sales and services with high-density attached homes. The Town Center would be an urban walkable zone characterized by pedestrian-oriented ground floor commercial spaces, public plazas, and other pedestrian spaces that promote a vibrant 24-hour activity center and living environment.

The primary intent of the Urban Neighborhood Zone is to provide for higher-density, mixed-use neighborhoods that foster walkability and provide a transition from residential neighborhoods to the EUC and Town Center. Secondary non-residential uses that foster a functional and walkable neighborhood would be permitted.



### **5. Transect 5 – Urban Center**

Transect 5 consists of shopping, offices, hospitality uses (hotels, etc.), commercial recreation, and attached residential homes. This transect is defined by the Urban Center (UC) Zone. The primary intent of the Urban Center Zone is to provide a transition from the low to mid-rise mixed-use development in the Town Center to the high-rise development in the EUC. Uses within the Urban Center Zone would include a mix of high-density attached homes, office space, regional and local retail sales and services, and visitor serving uses. The Urban Center Zone is intended to be an urban walkable district.

### **6. Special District**

The Special District (SD) includes lands designated for the development of parks and community purpose facilities. This transect would be defined by the Parks (P) Zone and the Community Purpose Facility (CPF) Zone. The Parks Zone is intended to designate park locations throughout the community to ensure that adequate parkland would be provided to support the proposed intensity of development within the planning area. Parks are located to provide recreational opportunities for residents within walking distance of their home and to provide relief from the urban fabric. The SPA Plan would provide 27.5 acres of parks, including a 14.8-acre Neighborhood Park; 5.1 acres of Town Squares, which would consist of small plazas or open spaces in the Town Center; and 7.6 acres of pedestrian parks. These parklands are discussed in more detail in conjunction with the Parks, Recreation and Open Space Master Plan. The CPF Zone designates a 5 acre site for a community purpose facility. Permitted land uses for the community purpose facility site are discussed in more detail in Subsection L.

Village 9 also includes a portion of the University (U) Zone that consists of land dedicated to Chula Vista for the development of a future University. As noted previously, this area would be subject to future standards devoted to the development of the larger University site.

## **B. Off-site Improvements**

The project would include an off-site utility corridor to the south of the site. The corridor would be 30 feet wide, including a 20-foot sewer corridor to connect to existing sewer facilities, and a 10-foot storm drain corridor to direct drainage to the Otay River. A 12-foot paved utility access road would provide access to the southern portion of the off-site utilities from the existing Salt Creek Sewer maintenance road. The northern portion of the sewer and storm drain corridor will not have an access road due to the steep slopes that occur in this area. Direct access to the road would be from the Salt Creek Sewer maintenance road; there would be no access to the road from Village 9. However, a manhole would be provided at either end of utility corridor for maintenance. The northern manhole would be accessible from within Village 9, and the southern manhole would be accessible from the utility access road.

## **C. Mobility**

The Village 9 circulation system would provide a system of roadway and trail corridors to support both vehicular and non-vehicular modes of transportation. This system includes the extension of existing and planned roads, trails, and transit from adjacent villages, internal systems to serve the project site and a connection to the greenbelt system. Streets in the community are designed as “complete” streets, considering all modes of transportation by providing vehicular travel lanes, bike lanes or bike routes, sidewalks, and transit lanes where appropriate.

## **1. Existing Site Access**

Regional vehicular access to Village 9 is currently provided from SR-125 via Olympic Parkway and Birch Road to Eastlake Parkway. Eastlake Parkway currently terminates at its intersection with Hunte Parkway, which is located at the northeast corner of the site. Public transportation is currently provided by Chula Vista Transit, a part of the Metropolitan Transit System. Two routes, Route 707 and 709 serve the SPA Plan Area. Neither of these routes currently extend service to Village 9. The nearest stop is located approximately one mile north of the project site at Olympic Parkway and Eastlake Parkway. Both bus routes that service the area use this bus stop and connect the Otay Ranch area to the western areas of Chula Vista and the Eastlake community.

## **2. Proposed Vehicular Circulation Network**

### **a. Roadway System**

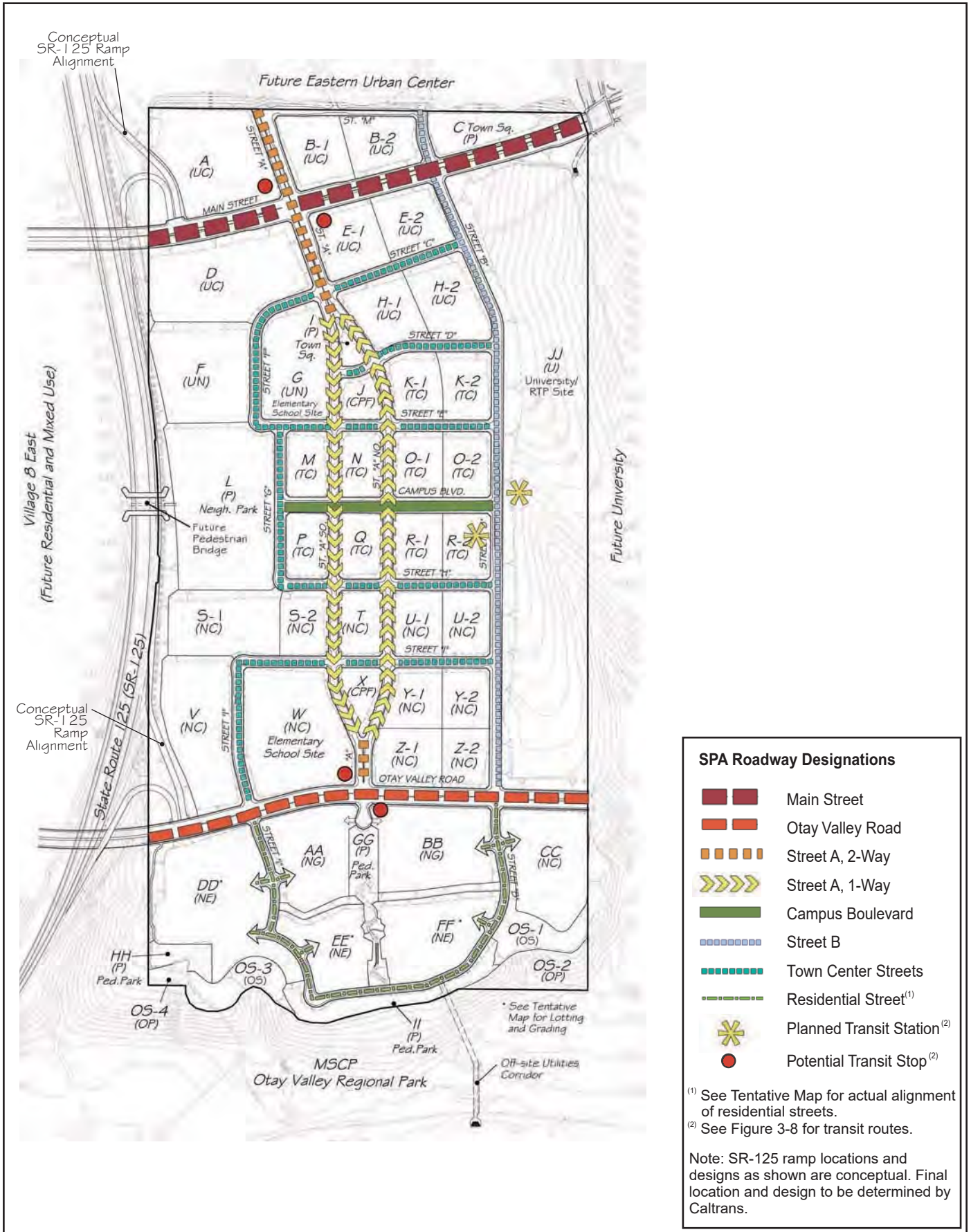
The Village 9 circulation system would organize traffic into roadway classifications consistent with the Otay Ranch GDP. In Village 9, roadways would form a grid street pattern that promotes pedestrian access and supports urban development in the Town Center and Urban Center. This grid pattern gives way to a more suburban street pattern near the southern edge of the project site, providing a transition to the natural open space areas in the south. The proposed roadway circulation system is shown on Figure 3-5. Roads within the site that are identified in the Circulation Element of the Chula Vista General Plan include Otay Valley Road and Hunte Parkway/Main Street.

Both Main Street and Otay Valley Road would serve as the primary gateways for Village 9 and adjoining villages by providing access from SR-125 via two future freeway access ramps. A conceptual alignment for these ramps is shown in Figure 3-5. Main Street would be a six-lane gateway road that would connect SR-125 and Village 8 East to existing Hunte Parkway, located east of the project site. Otay Valley Road would be a four-lane major roadway that would connect SR-125 to the proposed university located east of the project site, as well as to Village 8 East.

Street A and Street B would serve as the primary north-south connection through the project site. North and south of the Town Center, Street A would be a town center collector roadway with four travel lanes. Within the Town Center, Street A forms the urban couplet that carries four lanes of arterial traffic through the Town Center. An urban couplet is an arterial roadway that splits into a pair of one-way roadways. The intent is to bring traffic into the Town Center, promoting a vibrant and successful commercial mixed-use area. This pair of roadways would handle the same volume of traffic as a traditional two-way arterial while maintaining pedestrian scaled street widths, more efficient traffic flow and turning movements for motorists and transit, and safer bicycle routes.

Street B would be a two-lane roadway that would separate the Village 9 Town Center from the University. Street B would not include a couplet and would provide a more direct connection between Main Street and Otay Valley Road. Street B would be the major transit corridor through Village 9 by providing dedicated transit lanes and a transit stop near Campus Boulevard. Street B would accommodate Bus Rapid Transit (BRT), as described below under Alternative Transportation Network.

Campus Boulevard would serve the Town Center. This street would be a two-lane roadway that would include a special street section that would allow the street to be closed to traffic and serve as a public space for community events. The Village Pathway, described below under Bicycle Circulation Network, is also part of this public space. Campus Boulevard has been strategically located and designed to create a strong visual and physical connection between the neighborhood park and the future University/ RTP. Campus Boulevard is intended to extend into the University in the future as a main pedestrian route.



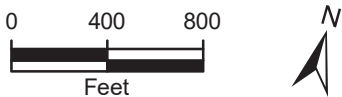
**SPA Roadway Designations**

- Main Street
- Otay Valley Road
- Street A, 2-Way
- Street A, 1-Way
- Campus Boulevard
- Street B
- Town Center Streets
- Residential Street<sup>(1)</sup>
- Planned Transit Station<sup>(2)</sup>
- Potential Transit Stop<sup>(2)</sup>

<sup>(1)</sup> See Tentative Map for actual alignment of residential streets.  
<sup>(2)</sup> See Figure 3-8 for transit routes.

Note: SR-125 ramp locations and designs as shown are conceptual. Final location and design to be determined by Caltrans.

Source: William Hezmalchal Architects, Inc. 2013



**ROADWAY CIRCULATION SYSTEM  
AND TRANSIT STOP  
FIGURE 3-5**

As described above, a transit stop is proposed at the intersection of Street B and Campus Boulevard. The Village Pathway, bicycle lanes, and sidewalk along this roadway would provide direct non-vehicular access to the transit stop. The alternative transportation network proposed for Village 9 is described in detail below.

Remaining streets in the Town Center, Urban Center, and Urban Neighborhood Zones include a grid pattern of town center streets that feed into the couplet and Campus Boulevard. The geometry of these streets would minimize travel distance due to the reduction of isolated areas of development and the provision of direct routing. Multiple parallel routes to the Town Center provide shorter and more convenient routes for pedestrians and alternate routes for automobile traffic. The remaining roadway system in Village 9 would be parkway residential streets. Parkway residential streets would consist of two travel lanes, and provide direct access to single-family homes.

#### **b. Traffic Calming Measures**

Traffic calming measures promote pedestrian and bicycle safety as well as vehicle safety by controlling the speed and distribution of vehicles travelling through the project site. All proposed traffic calming features would require City approval prior to installation. In addition to urban couplets, the SPA Plan proposes intersection bulb-outs to narrow the through travel way at some intersections, multi-modal streets and on-street parking to slow vehicular traffic, and multiple connections to evenly distribute traffic.

### **3. Alternative Transportation Network**

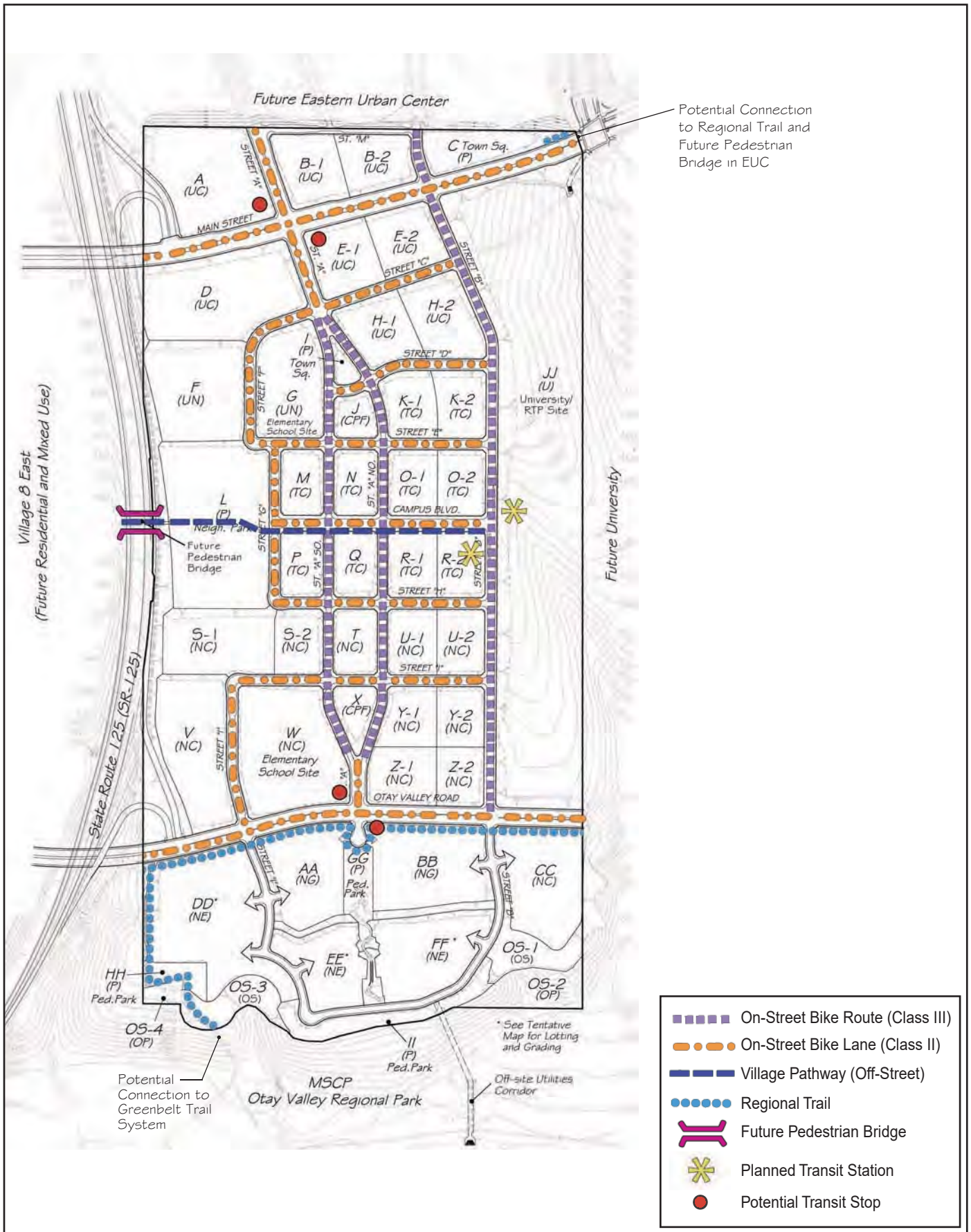
The following section describes the major alternative mode circulation systems for bicycles, pedestrians, public transit, and low speed vehicles.

#### **a. Bicycle Circulation Network**

A village pathway would be provided along the south side of Campus Boulevard that would extend between the Neighborhood Park and the University, providing a direct connection between the two uses as well as to Village 8 East via a bridge over SR-125. Village pathways in Otay Ranch, including a regional trail, would implement the Chula Vista Greenbelt Master Plan facilities identified in Village 9, and are intended to provide an off-street, interconnected multi-use trail that allows bicycles and pedestrians to travel between village cores and Town Centers. The Village Pathway would consist of 10-foot wide, paved trails. The Village Pathway would ultimately connect to a planned pedestrian bridge over SR-125 to facilitate bicycle travel between Village 9, Village 8 East, and the University; however, this pedestrian bridge is not part of the proposed project. The bridge would be 15-feet wide to accommodate separate bicycle and pedestrian facilities. On-street bike lanes would also be provided along Campus Boulevard to allow for an alternative route for bicycles that would not conflict with pedestrians. The proposed Bicycle Circulation is provided on Figure 3-6.

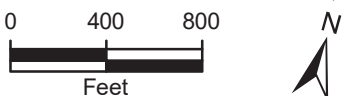
All main vehicular thoroughfares and all internal town center streets would include dedicated, striped, on-street Class II bike lanes or an off-street trail. Although no dedicated lanes would be provided for bicycles on local streets, the traffic volumes and vehicular speeds on these residential streets would be low enough to accommodate bicycles as well as vehicles.





Potential Connection to Regional Trail and Future Pedestrian Bridge in EUC

Source: William Hezmalhalch Architects, Inc. 2013



**BICYCLE CIRCULATION SYSTEM**  
**FIGURE 3-6**



Another regional trail connection would occur at the south side of Otay Valley Road. This trail would be extended to connect to Village 8 in the west and into the University to the east. A Greenbelt Trail would extend from Otay Valley Road along the westerly edge of the project site, southward through the park and open space. This trail may ultimately connect to the Otay Valley Regional Park trail system; however, at this time a connection is not proposed as part of this project. Greenbelt trails would conform to the Chula Vista Greenbelt Master Plan. Some park pathways would be designed to accommodate bicycles subject to City of Chula Vista approval. The alignment of these Class I pathways would be determined by individual park site master plans.

#### **b. Pedestrian Circulation Network**

The pedestrian circulation network includes an interconnected system of sidewalks, the village pathway and greenbelt trails described above, connections to pedestrian bridges, and other trails. The proposed pedestrian circulation is shown in Figure 3-7.

All streets in the project site would include a sidewalk or trail, providing connections between destinations including residential neighborhoods, the Town Center, the Urban Center, parks, schools, and rural trails through open space. Neighborhood trails are off-street trails that would provide pedestrian connections between neighborhoods. They would typically occur on slopes and within parks.

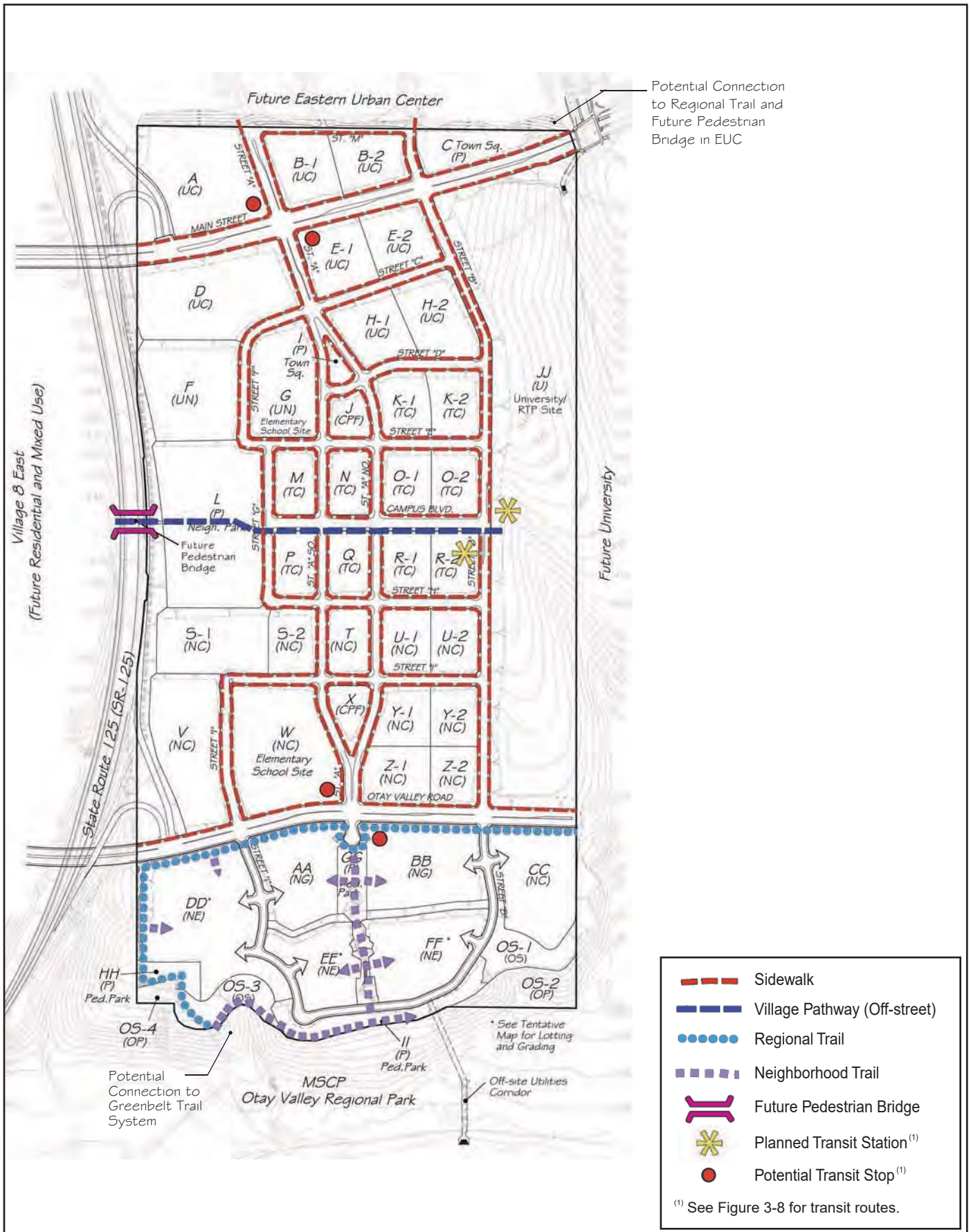
Multiple pathways would also be provided through parks, the Urban Center, the Town Center, and multi-family neighborhoods to provide direct pedestrian connections to adjacent Village 8 East and the EUC. The alignment of park pathways would be determined by the individual park site master plans, while the alignment of public pathways would be determined by the precise plans and tentative maps for the various planning areas.

#### **c. Transit Network**

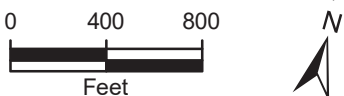
Village 9 would accommodate the future extension of transit service into the site. Transit service would consist of a bus system that would provide local connections between residential, employment, and major activity centers within Village 9 and Otay Ranch, as well as regional connections. The proposed South Bay BRT Line would traverse Village 9 and would provide a regional transit connection to surrounding cities and to the Mexico-United States border. The types of bus service that would be available are described greater detail in Section 5.3, Transportation/Traffic. Figure 3-8 identifies the anticipated transit stops and transit routes across the project site. The final route, type of service, and timing of service would ultimately be determined by the transit agency.

#### **d. Low Speed Vehicles Circulation Network**

Low speed vehicles, which are small electric vehicles with a low maximum speed, provide a clean, alternative vehicular mode of transport, ideal for shorter trips. The circulation network, as illustrated in Figure 3-9, consists of low speed streets. Low speed vehicles would be permitted on all streets with a posted speed limit of 35 miles per hour or less. The circulation system has been designed to provide an internally connected system of low speed streets that allow low speed vehicles to travel between various destinations within the project site. Street B also provides a connection for these vehicles to the EUC. Low speed vehicles would not be permitted on sidewalks or trails.

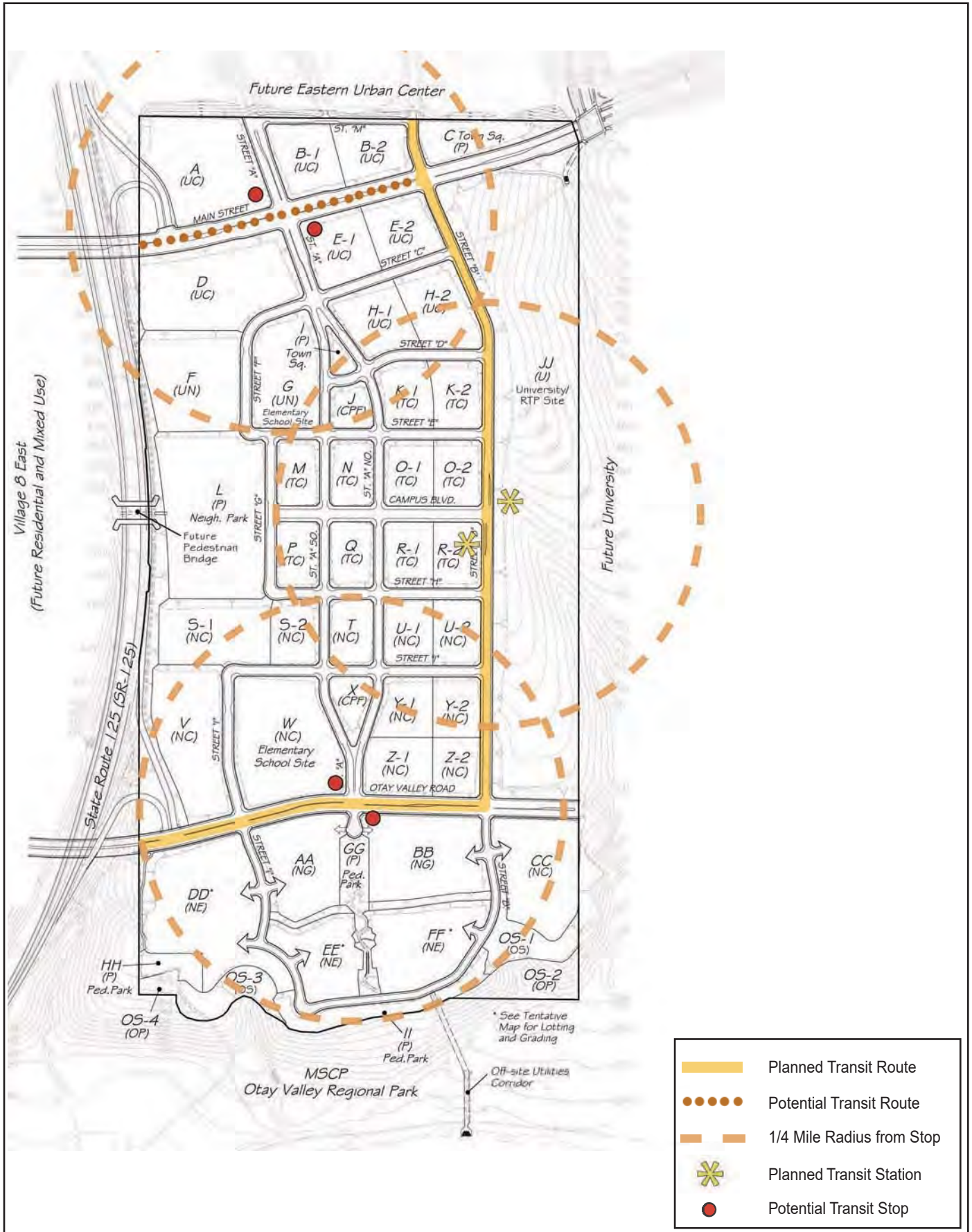


Source: William Hezmalhalch Architects, Inc. 2013

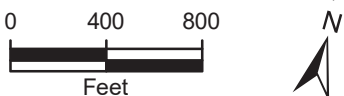


PEDESTRIAN CIRCULATION SYSTEM  
FIGURE 3-7





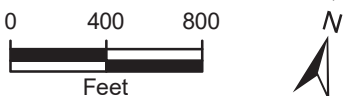
Source: William Hezmalhalch Architects, Inc. 2013



**TRANSIT CIRCULATION SYSTEM**  
**FIGURE 3-8**



Source: William Hezmalchalch Architects, Inc. 2013



**LOW SPEED STREETS**  
**FIGURE 3-9**



## **D. Water Supply**

### **1. Potable Water Demand**

Village 9 is located within the boundaries of the Otay Water District (OWD), which is the local agency responsible for providing water service. OWD is a member agency of the San Diego County Water Authority which, in turn, is a member agency of the Metropolitan Water District. The project site would be required to annex into OWD Improvement Districts 22 and 27 prior to receiving service.

The project is within the central service area of OWD. Water would be provided to the project area via a connection to the existing system at the intersection of Eastlake Parkway and Main Street/Hunte Parkway, extension of pipelines in Main Street to the west of the project site, and connecting to existing lines in Eastlake Parkway to the east and within the EUC to the north. OWD has three existing reservoirs in the project service area. No additional reservoir storage would be required to supply water to Village 9.

Domestic water demand for the project is estimated to be 1,345,070 gallons per day (gpd). OWD would require a water subarea master plan (SAMP) prior to the approval of final engineering improvement plans for the project to establish final water demands, project phasing, recycled water requirements, processing and facility requirements for the project. A water supply assessment and verification report (WSAV) has been completed for the project that assures sufficient supplies are planned to be available as demand is generated for the project.

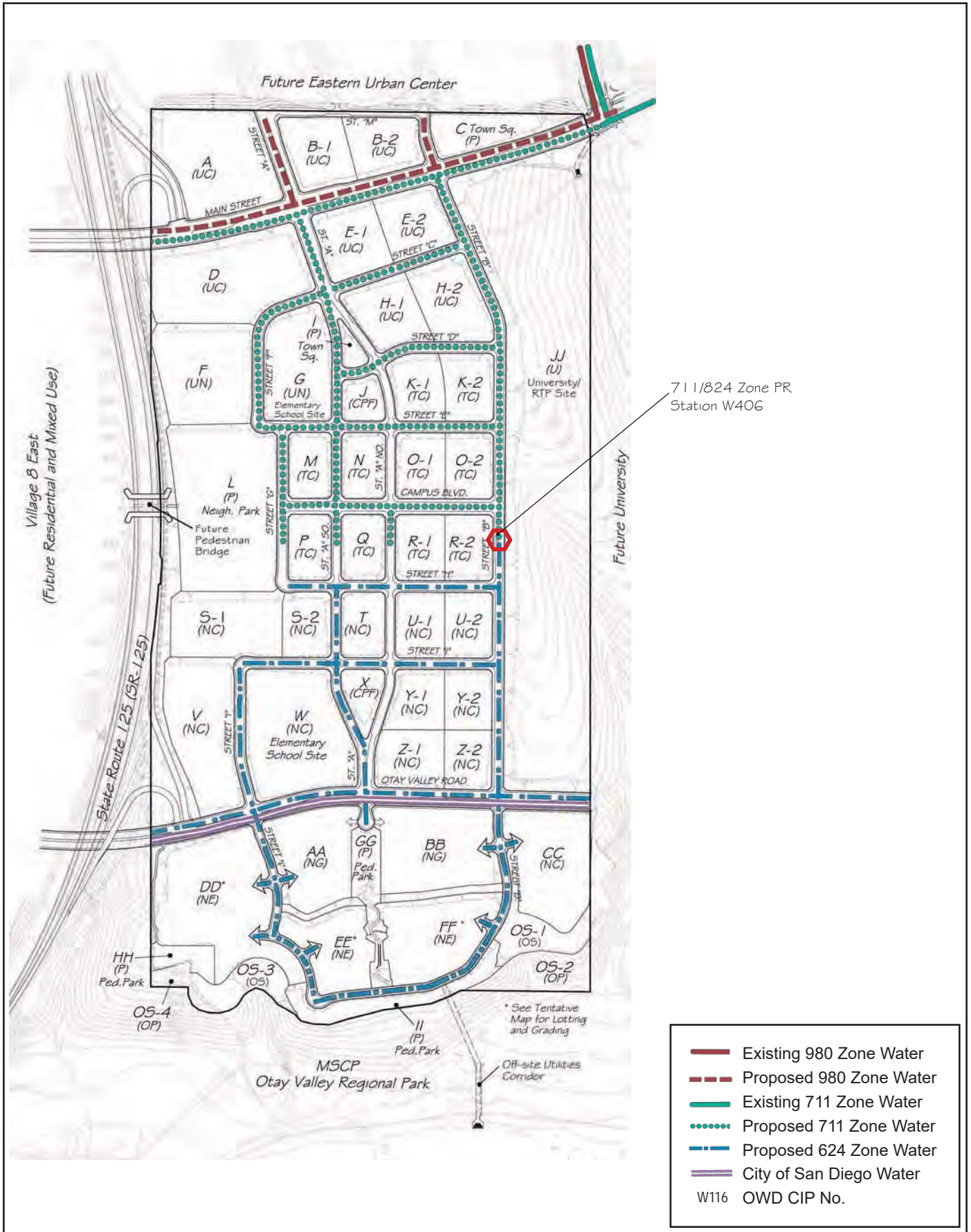
Several water transmission lines traverse the southern area of the project site that are owned, operated, and maintained by the City of San Diego. These pipelines would not provide water to the project, but would be relocated into the future public right of way of Otay Valley Road to facilitate the SPA plan. The relocation of these water transmission pipelines would be required prior to any development in Village 9 located within existing City of San Diego waterline easements. Figure 3-10 depicts the proposed distribution system required to meet demands within the project site and the relocated City of San Diego water transmission pipelines.

### **2. Recycled Water System**

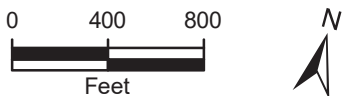
Current OWD policies regarding new subdivision development require the use of recycled water where available. Consistent with the Otay Ranch GDP, recycled water would be used to irrigate street landscaping, parks, manufactured slopes, and landscaped areas of commercial and multi-family residential sites. The use of recycled water directly offsets potable water use, making it an important component in meeting water supply challenges in the region. The estimated recycled water demand for Village 9 is projected to be 0.116 million gallons per day (mgd).

The primary source of recycled water to Village 9 would be the South Bay Water Reclamation Facility. From this plant, the recycled water system consists of a series of pump stations, transmission piping, and storage reservoirs that provide recycled water to the area. Recycled water would be provided via an existing line located in Eastlake Parkway. Recycled water would be stubbed at the easterly termination of Otay Valley Road to allow for a connection to the University. The plan to distribute recycled water within the project is depicted in Figure 3-11. Irrigation of open space areas adjacent to the MSCP would be carefully designed to prevent recycled water from draining into and affecting the MSCP open space area. For this reason, only a portion of slopes in Village 9 would be able to be irrigated with recycled water.

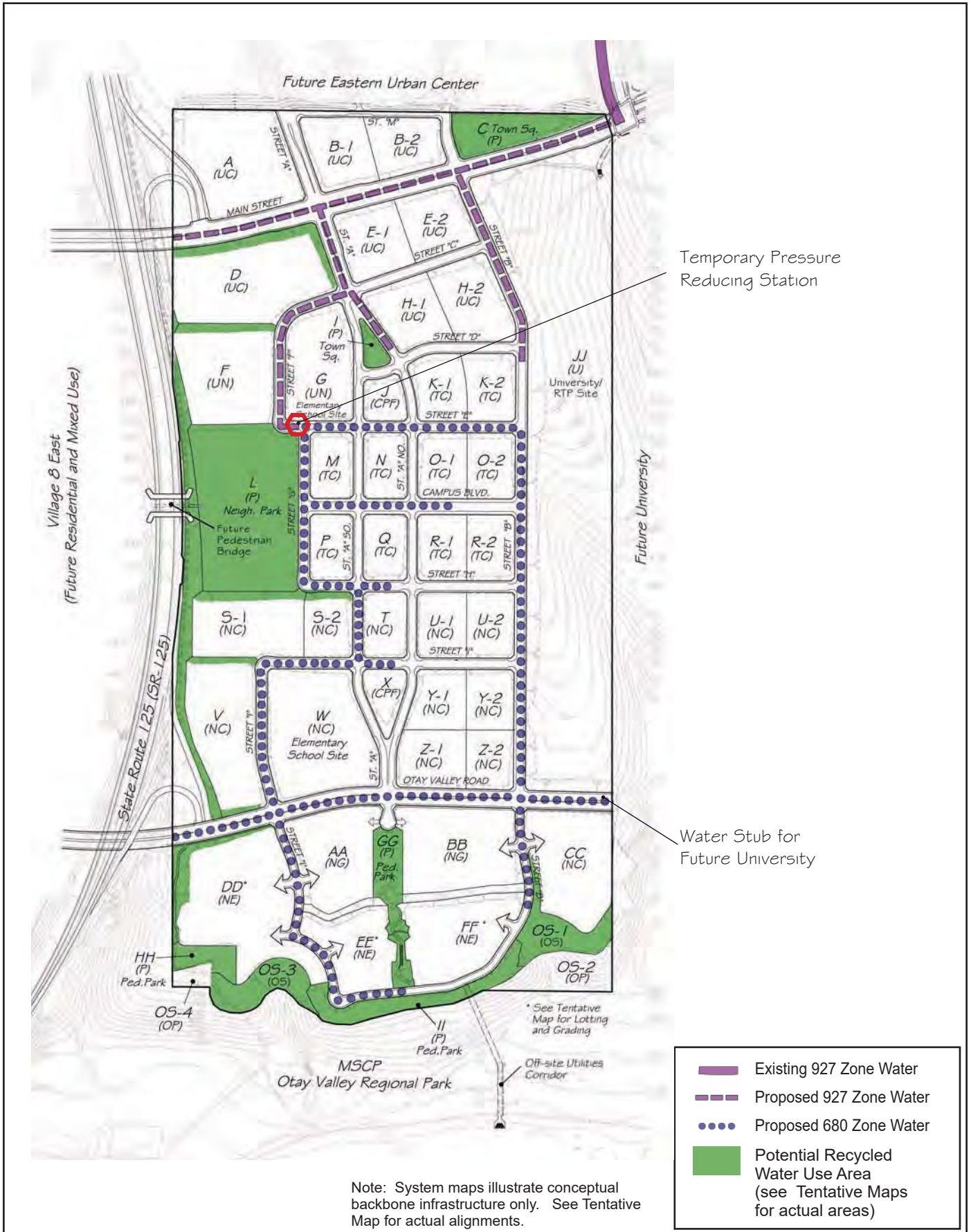




Source: William Hezmalchal Architects, Inc. 2013



## POTABLE WATER SYSTEM FIGURE 3-10





## **E. Sewer Service**

Sewer service to Village 9 would be provided by the City of Chula Vista, which operates and maintains its own sanitary sewer collection system that connects to the San Diego Metropolitan Sewerage System. Wastewater from the project would flow to the Salt Creek sewer basin. The Chula Vista Subdivision Manual establishes sewage generation factors based on population multipliers used to project sewage flows. Based on the maximum development that would be allowed in Village 9, at project buildout the average daily flow into the Salt Creek sewer basin from the project would be approximately 0.91 mgd with a projected peak sewage flow of 1.68 mgd.

Since the off-site EUC and other surrounding properties do not plan to convey flows through Village 9, on-site facilities have been sized to serve the needs of the project only. All of Village 9 would be served by constructing 8-inch through 15-inch gravity sewer lines to convey flow south to a single point of connection with the Salt Creek Interceptor. Sewer facilities are shown on Figure 3-12. The project would be required to pay development impact fees as connections are made that convey flows to the Salt Creek Interceptor.

## **F. Storm Water Drainage System**

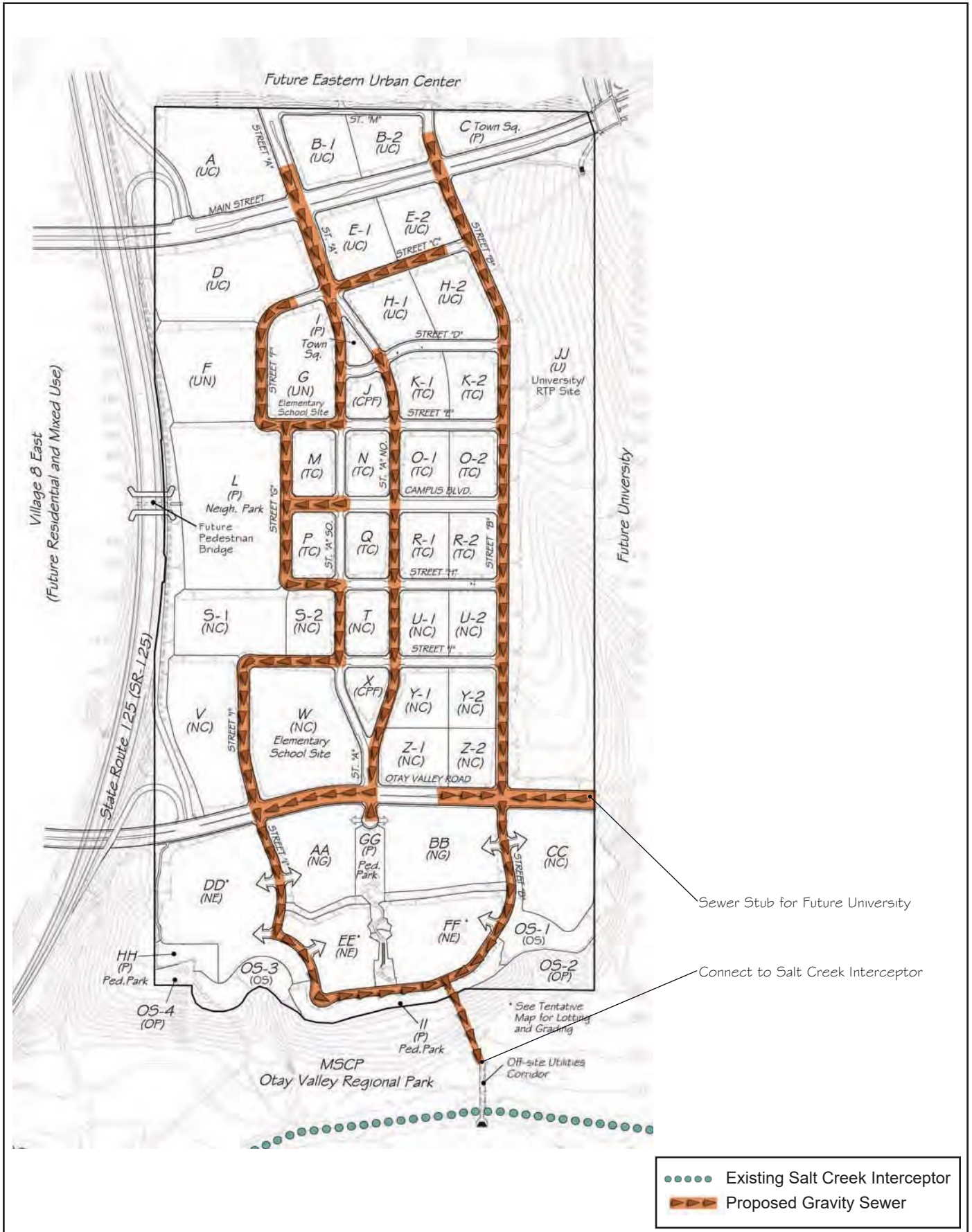
Urban runoff from Village 9 and a small portion of the EUC development located to the north of the site would be conveyed via a storm drain system which conveys flow directly to the Otay River. The proposed storm drain outlet location would incorporate full energy dissipation measures to ensure that the potential for erosion in the Otay River Channel would be minimized. The proposed drainage system is shown on Figure 3-13.

Bio-retention based best management practices (BMPs) are proposed to treat urban runoff pollutants generated via the proposed roadways and sidewalks. To ensure that all runoff contained within the storm drain systems are treated prior to entering the storm drains, these BMPs would be located throughout the site at the proposed storm drain inlet locations. Low Impact Development (LID) practices would also be incorporated within the roadway and sidewalk design in accordance with state and local requirements. The proposed drainage facilities for Village 9 and proposed BMPs are described in greater detail in Section 5.9, Hydrology and Water Quality.

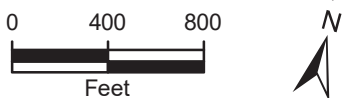
## **G. Schools**

### **1. Elementary Schools**

Two potential elementary school sites have been identified in Village 9, Planning Area W and Planning Area G. The primary school site, designated as Planning Area W on Figure 3-3, consists of 11.9 acres of land located in the Urban Neighborhood Zone. An alternative site, Planning Area G, consists of 7.9 acres of land located in the Town Center. These sites would be reserved for acquisition by the Chula Vista Elementary School District. If acquired by the district, each site would be large enough to accommodate approximately 750 students. Construction timing of the school and selection of the school site would be determined by the school district. Until such time that the school would be completed, students residing within Village 9 would attend schools in neighboring villages as determined by the district. If the district decides not to acquire the elementary school site, it would be designed for multi-family residential uses but is not allowed to increase the overall residential dwelling unit yield or density of the village.

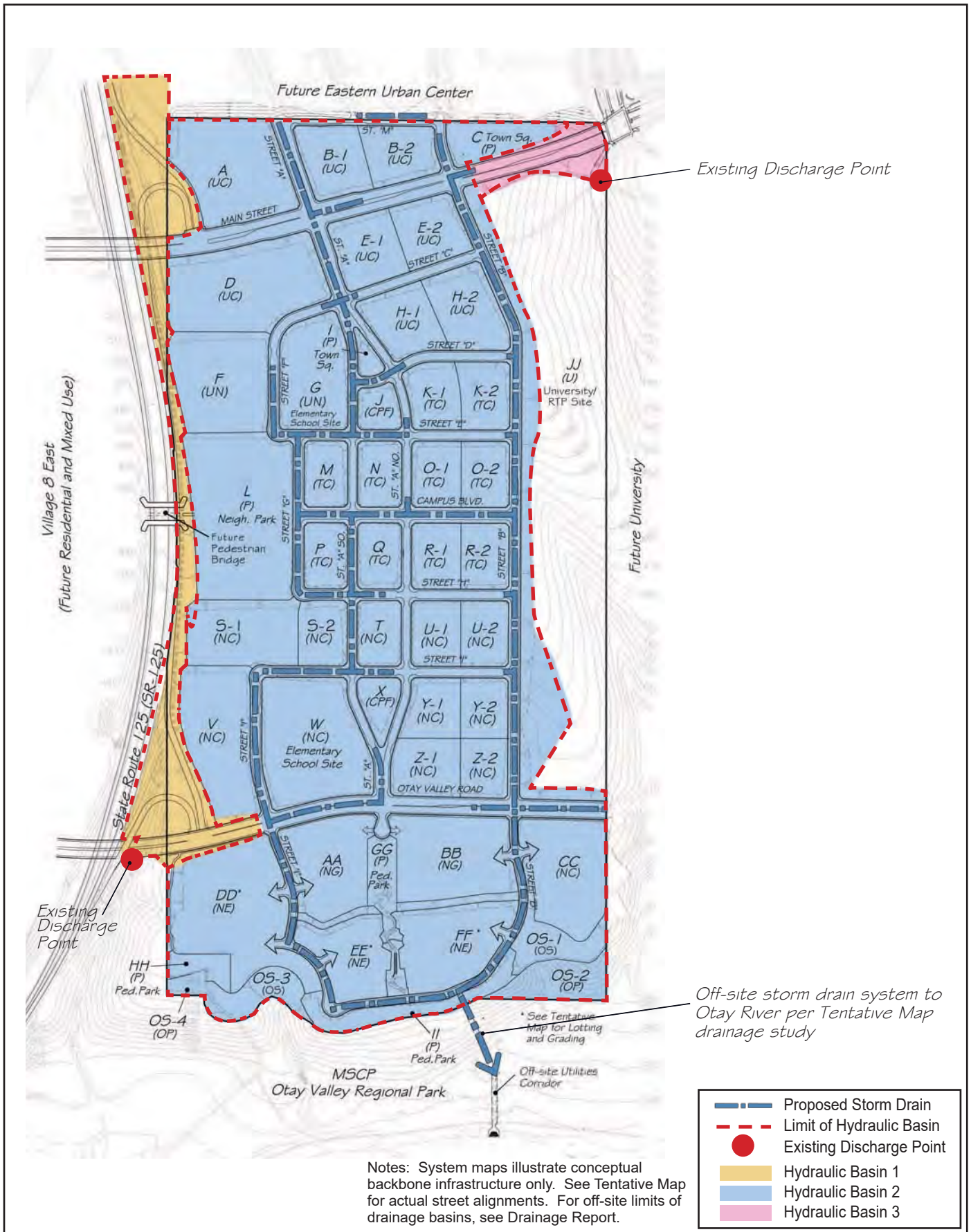


Source: William Hezmalchal Architects, Inc. 2013

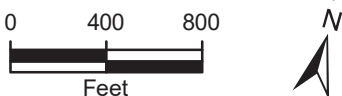


## SEWER SYSTEM FIGURE 3-12





Source: William Hezmalchal Architects, Inc. 2013



## HYDROLOGIC BASINS AND PROPOSED DRAINAGE SYSTEM FIGURE 3-13



## **2. Middle Schools & High Schools**

Middle School students residing in Village 9 would attend either the planned middle/high school located in Village 11, or the planned middle school in Village 8 West. High School students residing in Village 9 would attend Olympian High School, located in Village 7, less than one-half mile away.

## **H. Police Protection**

The Chula Vista Police Department would provide law enforcement services to Village 9 from its existing police facility in downtown Chula Vista. The project would increase the demand for police services as discussed in Section 5.9, Public Services and Utilities.

The principles of Crime Prevention Through Environmental Design (CPTED) will be utilized during implementation of the SPA Plan. These principles include, but are not limited to, controlling access points to public and private spaces; maximizing the visibility of public areas; and using building and structure features, orientation and design to reinforce and define boundaries between public and private spaces.

## **I. Fire Protection**

Village 9 would be served by the Chula Vista Fire Department (CVFD). The closest fire stations to Village 9 are Fire Station 7 located at 1640 Santa Venetia Road, Fire Station 6 located at 605 Mount Miguel Road, and Fire Station 8 located at 1180 Woods Drive. The EUC, located north of Village 9, includes a proposed fire station. The SPA Plan also allows for the construction of a temporary fire station in the Urban Center, Urban Neighborhood, Town Center, Neighborhood General, or Neighborhood Edge Zones. Additional fire equipment, staff and facilities required to serve the increased population proposed by the SPA Plan is described in the Public Facilities Finance Plan (PFFP). A Fire Protection Plan and Preserve Edge Plan have also been prepared in conjunction with this SPA Plan to identify fire prevention measures such as fuel modification zones and architectural controls. The proposed fuel modification zones are shown in Figure 3-14. These plans are described in Section 3.3.1.N. All development applications in the project site would be subject to these plans and the review and approval of the Fire Department.

## **J. Emergency Medical Services**

Currently, American Medical Response provides contract emergency medical services for Chula Vista, National City, and Imperial Beach. There are five paramedic units assigned to the south county: two are located in Chula Vista, two in National City, and one in Imperial Beach.

## **K. Library**

The Chula Vista Library Master Plan identifies library services, which are provided by the City of Chula Vista. The nearest library to the project site is located in the Otay Ranch Town Center, approximately one mile north of the project site.





**Fire Protection Planning Area A**

- Fuel Management Zone 1: 0-50 Feet  
Low-Fuel, Native Plants
- Fuel Management Zone 2: 51-100 Feet  
3 feet or less in height, shrub clusters limited to 400 square feet.
- Fuel Management Zone 3: 101-150 Feet  
Height limited to 3 feet, shrub clusters limited to 400 square feet.

**Fire Protection Planning Area B**

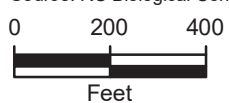
- Fuel Management Zone 1: 0-Varies  
Depth of FMZ based on top and toe of manufactured slopes adjacent to project boundary; Low-fuel native plants.

**Fire Protection Planning Area C**

- Fuel Management Zone 2: 0-Varies  
Depth of FMZ based on top and toe of manufactured interior slopes. Native or ornamental plants. See Landscape Plans for details.

MSCP Open Space Boundary

Source: RC Biological Consulting 2012



**FUEL MODIFICATION PLAN  
FIGURE 3-14**



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## **L. Other Services**

### **1. Solid Waste Management**

Solid waste management services for the project would be provided by Allied Waste Management. Solid waste would be collected curb-side once a week and transported to the Otay Landfill located in Chula Vista. Allied Waste Management also provides a comprehensive recycling program with the City of Chula Vista for residential, commercial and industrial generators.

### **2. Electricity, Gas, Telephone, and Cable**

Gas, electricity, cable and telephone would be extended to the site in accordance with provisions of the applicable service providers.

### **3. Community Purpose Facilities**

The SPA Plan would designate a CPF Zone for the development of a CPF, as defined in Chapter 19.48 of the Chula Vista Municipal Code (CVMC). CPF zones are defined in the CVMC as lands intended for non-profit and certain for-profit uses that serve the social, cultural and recreational needs of the community. All uses within CPF designated lands require a conditional use permit (CUP), as specified in the SPA Plan. Permitted uses include, but are not limited to, day care facilities, private schools, recreational facilities for non-profit organizations serving the local community, senior care and recreation, and worship, spiritual growth and development facilities. Village 9 includes two CPF Zones totaling 5 acres, one located on the north side of Street E in Planning Area J, and one located south of Street I in Planning Area X, as shown in Figure 3-3, Site Utilization Plan.

## **M. SPA Elements**

The Otay Ranch GDP requires the following elements be included in the SPA Plans.

### **1. Air Quality Improvement Plan**

An Air Quality Improvement Plan (AQIP) has been prepared in conjunction with the SPA Plan in accordance with the Chula Vista Growth Management Ordinance (GMO), Municipal Code Section 19.09.050B. The AQIP demonstrates how the final SPA Plan for Village 9 reduces vehicle trips, maintains or improves traffic flow, and reduces vehicle miles traveled. The AQIP is discussed in greater detail in Section 5.4, Air Quality.

### **2. Agriculture Plan**

Agricultural uses may commence within the project until the site is developed. An Agricultural Plan has been prepared in conjunction with the SPA Plan to control these potential uses and ensure that agricultural operations do not conflict with proposed development. The Agricultural Plan is discussed in greater detail in Section 5.12, Agricultural Resources.

### **3. Non-Renewable Energy Conservation Plan**

A Non-Renewable Energy Conservation Plan identifies feasible methods to reduce the consumption of non-renewable energy resources. The goals, objectives, and policies of the GDP require that any new projects identify a plan that assists in a long-range strategy that would increase conservation of and decrease the consumption of non-renewable energy resources. The three main categories identified in the SPA Plan where reductions in energy occur are land use and community design, building siting/

construction techniques, and transit facilities/ alternative transportation modes. The Non-Renewable Energy Conservation Plan is described in greater detail in Section 5.10, Global Climate Change.

#### **4. Preserve Edge Plan**

The Preserve Edge Plan identifies allowable uses for areas adjacent to the Otay Ranch Preserve, in accordance with Policy 7.2 of the Otay Ranch RMP. The Otay Ranch Preserve is located on the southern boundary of Village 9. The Preserve Edge Plan area includes a 100-foot wide strip of land adjacent to the Preserve. As described in the SPA Plan, no structures other than fencing and walls would be constructed within the 100-foot Preserve Edge. Fencing and walls would be designed to minimize visual impacts to the Preserve and the Otay Valley Regional Park. The Preserve Edge Plan lists the Chula Vista MSCP Subarea Plan policies related to land use adjacency and describes how Village 9 would be consistent with each policy.

#### **5. Fire Protection Plan**

The purpose of a fire protection plan is to address fire safety and compliance with applicable codes, ordinances, and regulations relative to development adjacent to native vegetation. Topics addressed in the Fire Protection Plan include, but are not limited to, the urban-wildland interface, emergency service access, water supply and fire flow, fire history, risk for wildland fire analysis, fire resistive construction, fuel management and fire protection planning. As noted previously, the Fuel Modification Plan included in the Fire Protection Plan is shown above in Figure 3-14.

#### **6. Affordable Housing**

The City of Chula Vista requires that 10 percent of proposed dwelling units be affordable. Five percent of those units must be affordable to households earning at or below moderate income (80 percent to 120 percent of the San Diego area median income) and the remaining five percent of those units must be affordable to households earning at or below low income (combined incomes do not exceed 80 percent of the San Diego area median income). Approximately 400 affordable housing units would be available in Village 9. High-density housing in the Town Center would provide opportunities for affordable housing.

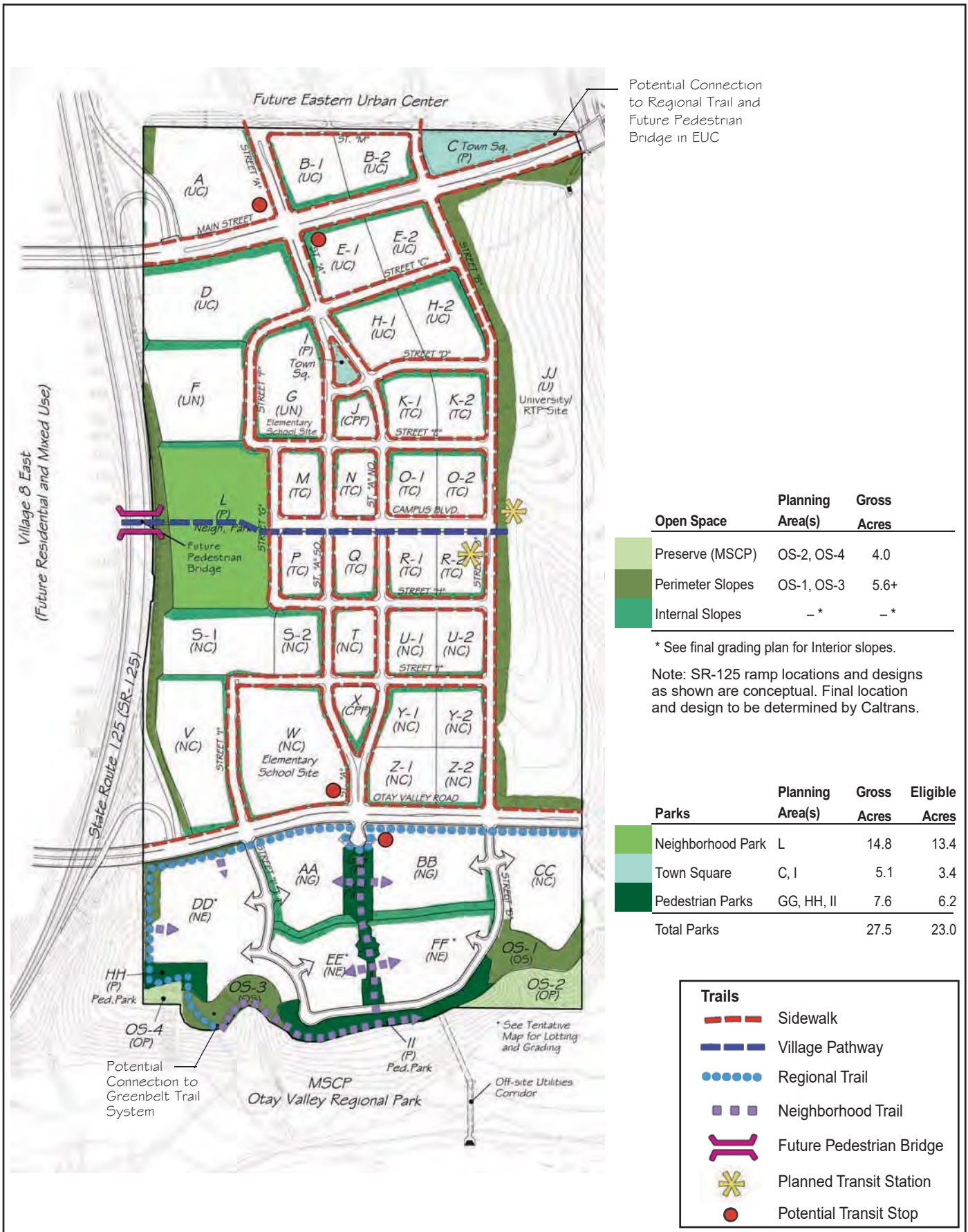
#### **7. Water Conservation Plan**

The Village 9 Water Conservation Plan (WCP) includes water conservation measures that are incorporated into the planning and design of the project, including the requirements outlined in the Chula Vista Landscape Water Conservation Ordinance. The focus of the plan is on additional water conservation measures that are not mandated by state or local regulations. The identified water conservation measures include installation of hot water pipe insulation, pressure reducing valves, and water efficient dishwashers in all single-family and multi-family residential units. Additionally, developers would install dual flush toilets and water efficient landscaping in compliance with the Landscape Water Conservation Ordinance.

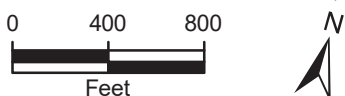
#### **8. Parks, Recreation, and Open Space Master Plan**

Chapter 7 of the SPA Plan serves as the Parks, Recreation, and Open Space Master Plan required by the Otay Ranch GDP. The Parks and Open Space Master Plan designates a variety of parks and open spaces throughout Village 9, as shown in Figure 3-15, including a community center building. The plan implements the goals, objectives, policies and implementation measures of the GDP, the City of Chula Vista Parks Master Plan (City of Chula Vista 2002), and the Chula Vista Greenbelt Master Plan (City of Chula Vista 2003b).





Source: William Hezmalhalch Architects, Inc. 2013



**PARKS AND OPEN SPACE**  
**FIGURE 3-15**

The plan defines appropriate amenities and facilities, landscaping, paving and surfaces, and lighting for each type of park or open space. Trails linking these parks and open space areas are discussed in Section 3.5.1.C, Mobility. The proposed park and open space facilities are described in greater detail in Section 5.9, Public Services.

The SPA Plan provides a total of 27.5 gross acres of parks. A 14.8-acre neighborhood park within Planning Area L is intended for active and passive recreation for the surrounding neighborhood. Features may include small-scale multi-purpose play fields, sport courts, and playgrounds. Sports courts and other activity areas, parking lots, and major pathways would include lights for nighttime events. The SPA Plan also designates 5.1 acres of town square in Planning Areas C and I, which would consist of small plazas or open spaces in the high-density areas. These gathering spaces can be used for functions such as farmer's markets and art shows. Planning Areas GG, HH, and II are designated for a total of 7.6 acres of pedestrian parks. Pedestrian parks are intended to be small parks located within residential neighborhoods to provide toddler play areas (tot lots), shared green space, resting places for pedestrians, and a visual identity for the adjacent neighborhood.

In addition, the Otay Ranch RMP establishes performance standards for achieving an 11,375-acre Otay Ranch open space preserve in order to mitigate biological impacts from development in Otay Ranch. Compliance relies on progressive acquisition, or funding for acquisition, of the designated Otay Ranch Preserve areas with each development approval. Future final maps will be required to convey open space in accordance with the RMP at a rate of 1.188 acres for each acre of development area. This RMP requirement is further discussed in Section 5.6 of this EIR, Biological Resources.

### **9. Emergency Disaster Plan**

The Otay Ranch GDP requires all SPA plans to provide an emergency disaster plan that addresses the various hazards that have the potential for disrupting communities, causing damage and creating casualties within the area. Possible natural disasters include earthquakes, floods, fires, landslides and tropical storms. There is also the threat of man-made incidents such as war, nuclear disasters, hazardous materials spills, major transportation accidents, crime, fuel shortages, terrorism, or civil disorder. The SPA Plan addresses these disaster situations by implementing the plans already developed for the area. The plans listed below are described further in Section 5.13, Hazards and Hazardous Materials:

1. San Diego County Emergency Plan
2. San Diego County Multi-Jurisdiction Hazard Mitigation Plan
3. Unified San Diego County Emergency Services Organization
4. California Disaster and Civil Defense Master Mutual Aid Agreement
5. Community Emergency Response Team (CERT) Program

### **10. Public Facilities Finance Plan**

A PFFP is required as part of the SPA Plan by the CVMC Section 19.09.050. The PFFP and utility master plan for the project provide detailed explanations of the public facilities and infrastructure required to support new development within Village 9 and assign responsibilities for construction and financing. The PFFP would implement the Chula Vista Growth Management Program and Ordinance. The intent of the document is to ensure that the phased development of the project is consistent with the overall goals and policies of the Chula Vista General Plan, Growth Management Program, and the Otay Ranch GDP. The PFFP components include an analysis of infrastructure facilities, such as water and sewer, and the provision of community services and facilities including fire protection and emergency services, law

enforcement, libraries, schools, and parks. The PFFP would require specific facilities to be built in conjunction with development to ensure that improvements adequately serve such development and meet City threshold standards.

The Otay Ranch GDP also requires all new development within Otay Ranch to meet the demands for regional services and facilities by participating in a regional impact fee program and/or by reserving land or facilities for regional service programs. Village 9 would contribute an equitable financial share to the following services for Otay Ranch in accordance with the PFFP:

- Arts and Cultural Facilities
- Cemeteries
- Health and Medical Facilities
- Community and Regional Purpose Facilities
- Social and Senior Services
- Correctional Facilities
- Justice Facilities
- Animal Control Services
- Civic facilities

This EIR analyzes the worst-case scenario and assumes maximum buildout of the proposed Village 9 land use targets and associated facilities.

### **11. Fiscal Impact Agreement**

The City and OLC will enter into a fiscal impact agreement to offset the proposed development impact on City services and comply with the City's GMO.

## **3.3.2 Conceptual Grading Plan and Concept**

Grading for the project would include primarily on-site improvements and would utilize grading practices consistent with the requirements of the Chula Vista General Plan, Otay Ranch GDP, the Otay Ranch Overall Design Plan, and the Otay Ranch Phase 2 RMP. Slopes would occur along roadways and adjacent to the perimeter of the development area. Slopes over 25 feet in height would feature contour grading and would not have slope gradients that are greater than 2:1. All slopes would be landscaped. Approximately 6.74 million cubic yards of soil would be excavated during grading. The excavated material would be used as fill material on the site. The conceptual grading plan is provided in Figure 3-16, and the cut and fill map is provided in Figure 3-17.

Off-site grading would occur in four locations, and shown in Figure 3-16. The first area is located adjacent to SR-125 toll road, near the southwest corner of the project site. The second area is located near the southeast corner of the site. The third area is located along the northwestern boundary of the site, adjacent to SR-125, and the fourth area is located along the northern edge of the project site.

## **3.3.3 Tentative Map**

A TM is proposed in conjunction with the SPA Plan. A TM is a map that depicts the layout of the parcels within a proposed community. The TM for Village 9 details how the utilization plan shown in Figure 3-3 would be implemented. The map includes the various land uses, proposed grading, and street layout. In addition, a TM depicts proposed utilities, easements and conceptual trail design. A conceptual TM exhibit is provided as Figure 3-18. The TM may be further refined as grading plans and other development plans are finalized. Ultimately, a final map would be submitted to the City for approval. Any TM or final map revisions shall be examined in light of this EIR to determine whether additional environmental review will be required. Once the TM is approved by the City of Chula Vista, final engineering and mapping plans would be completed for construction.

### 3.3.4 Development Phasing

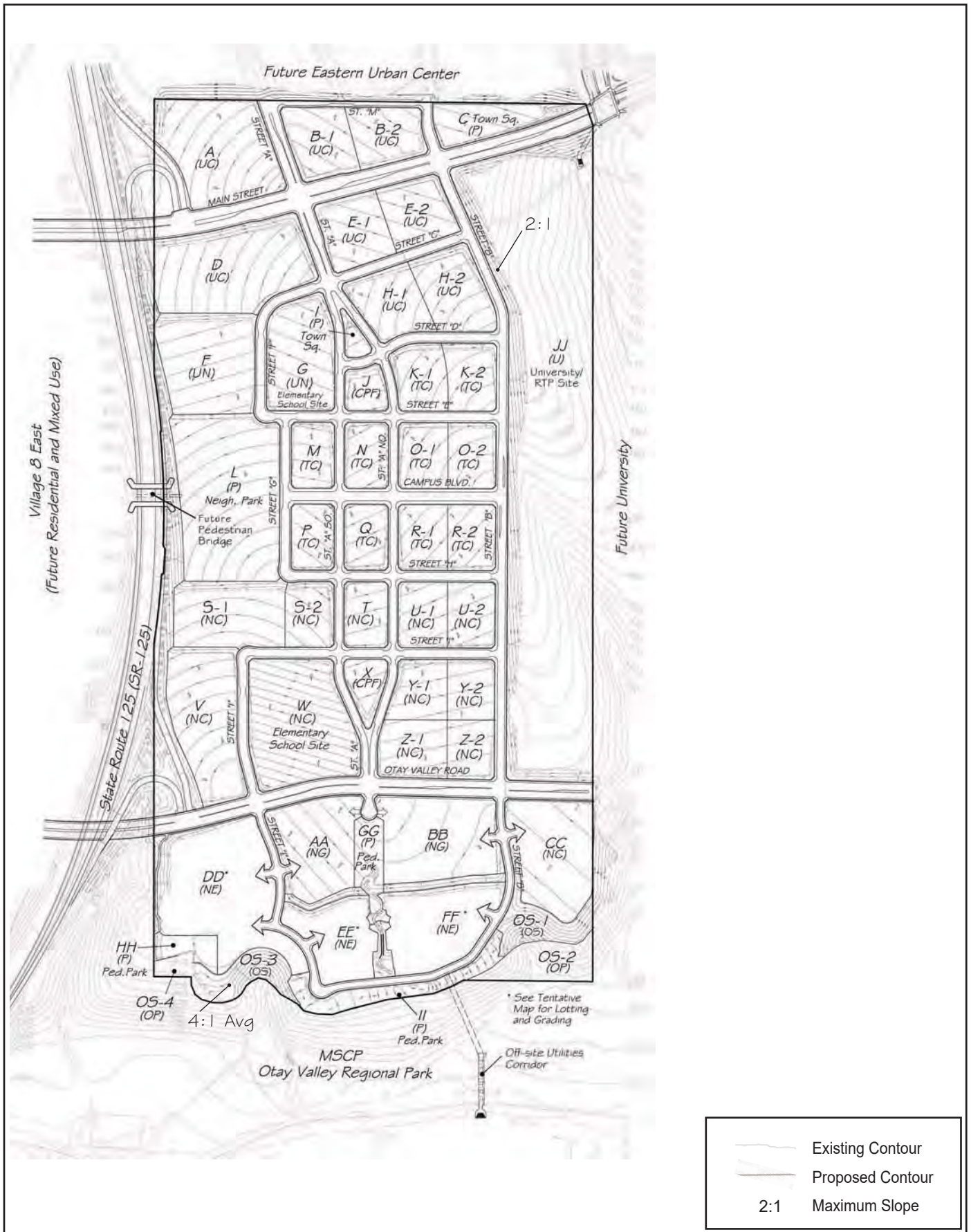
Development of Village 9 would be completed in four phases, which are identified in Figure 3-19. Full buildout of the project is not expected until 2030. The sequencing of phases would be determined by market conditions as well as the PFFP. The Orange phase shown in Figure 3-19 includes Planning Areas G, M, N, P, Q, T, AA, DD, and EE. Development in this phase would include a maximum of 308 multi-family residential units, 145 single-family units, two potential elementary school sites, two CPF sites, a town square, a pedestrian park, and 194,000 square feet of commercial space in primarily the central and southwest portions of Village 9. The Blue phase would develop a maximum of 1,239 multi-family residential units, 494,000 square feet of commercial space, and a neighborhood park in Planning Areas D, E-1, E-2, F, S-1, S-2, and V, which are located in the western area of Village 9. The Yellow phase would develop Planning Areas R-1, R-2, U-1, U-2, Y-1, Y-2, Z-1, Z-2, BB, CC, and FF which include a maximum of 614 multi-family units, 121 single-family units, a pedestrian park, and 58,000 square feet of commercial land use in the central and southeast areas of Village 9. The Purple phase would develop Planning Areas A, B-1, B-2, H-1, H-2, K-1, K-2, O-1, and O-2 which include a maximum of 1,573 multi-family residential units, a town square, and 754,000 square feet of commercial space in the northern portion of the project site.

## 3.4 Discretionary Actions

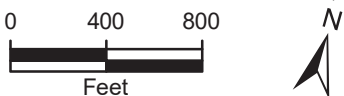
The project is a “discretionary project,” which is defined in Section 15357 of the CEQA Guidelines as “a project that requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity.” The following discretionary actions are associated with the project and would be considered by the Chula Vista Planning Commission and City Council:

- Adoption of the Village 9 SPA Plan and associated documents including but not limited to:
  - Village 9 SPA Plan
  - Air Quality Improvement Plan
  - Agricultural Plan
  - Non-Renewable Energy Conservation Plan
  - Preserve Edge Plan
  - Fire Protection Plan
  - Affordable Housing Plan
  - Water Conservation Plan
  - Parks, Recreation, Open Space Master Plan
  - Emergency Disaster Plan
  - Public Facility Finance Plan
- Approval of a tentative map to establish the location of development and open space lots and identify the infrastructure requirements for Village 9.
- Approval of a development agreement amendment including conditions of approval for development within the Village 9 SPA Plan area.
- Certification of a Final EIR and adoption of a Mitigation Monitoring and Reporting Program.



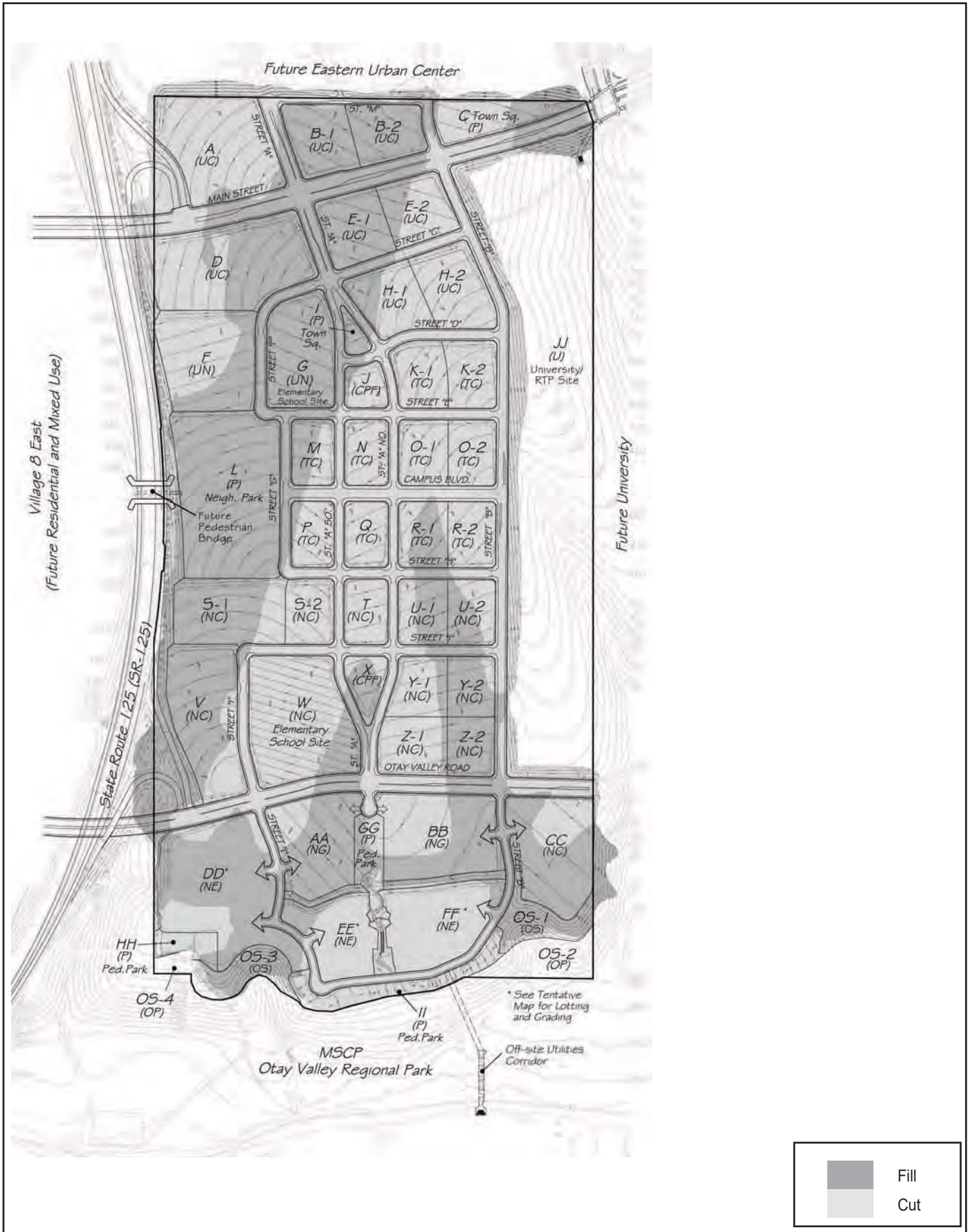


Source: William Hezmalchal Architects, Inc. 2013

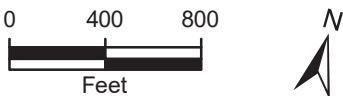


## CONCEPTUAL GRADING PLAN FIGURE 3-16



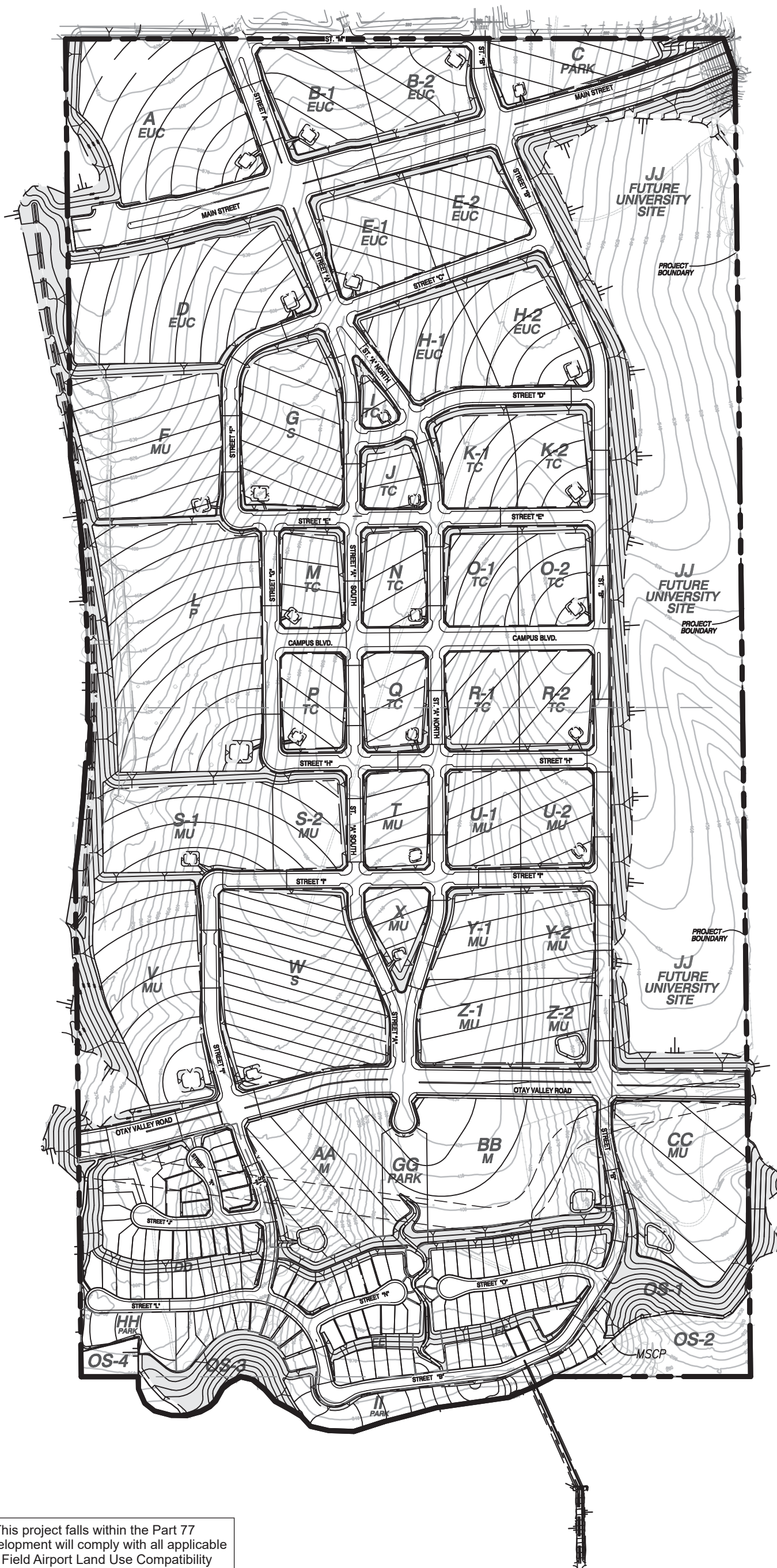


Source: William Hezmalhalch Architects, Inc. 2013



**CONCEPTUAL CUT AND FILL MAP**  
**FIGURE 3-17**





Airport Notification Note: This project falls within the Part 77 Airspace Study Area. Development will comply with all applicable requirements of the Brown Field Airport Land Use Compatibility Plan and Federal Aviation Regulation Part 77. Airport overflight notification will be provided to new residents in compliance with the Brown Field Airport Land Use Compatibility Plan.

Source: Hunsaker & Associates 2013

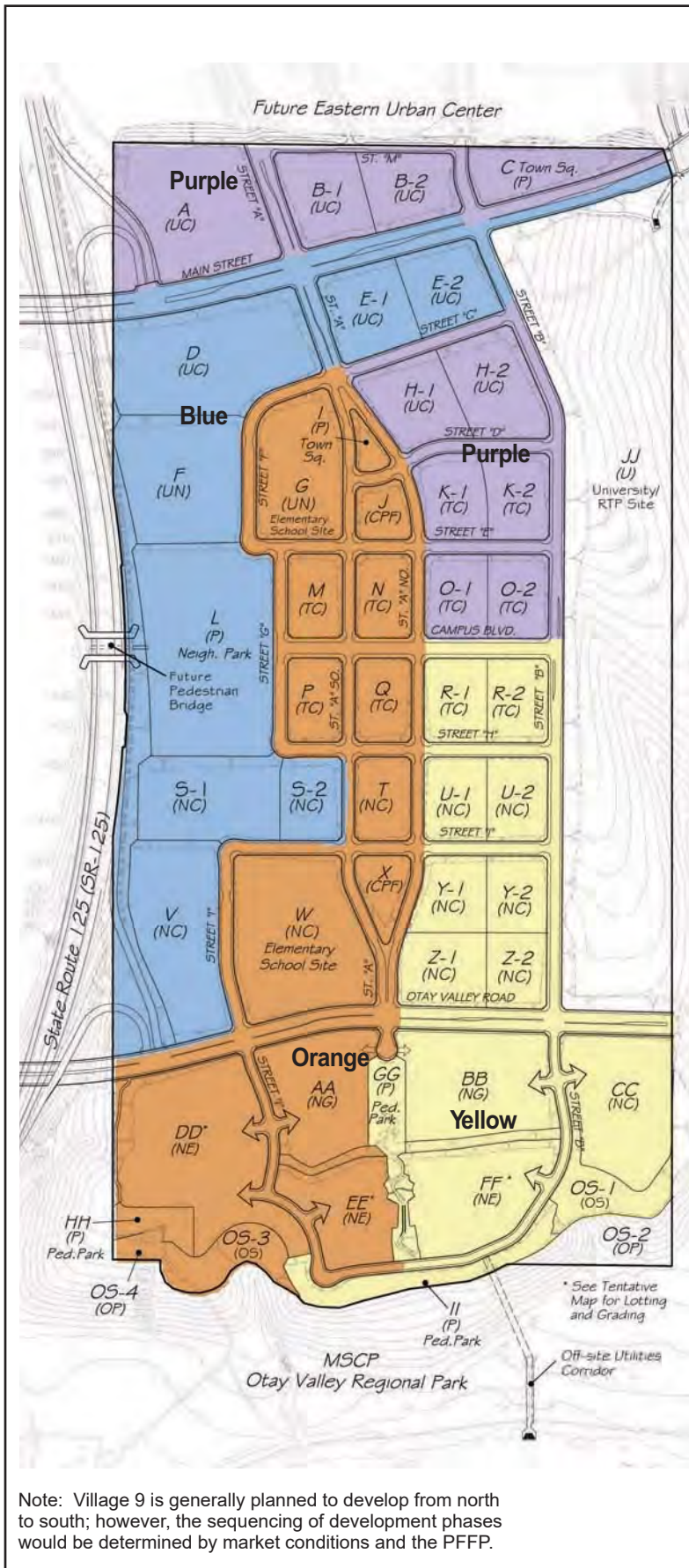
No Scale



VILLAGE 9 CONCEPTUAL TENTATIVE MAP  
FIGURE 3-18

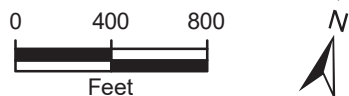
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Plan Area	MF Units	SF Units	C'ml Sq. Ft ( K)
<b>Orange</b>			
G	0	0	0
I	0	0	0
J	0	0	0
M	80	0	29
N	57	0	52
P	80	0	29
Q	57	0	52
T	34	0	32
W	0	0	0
X	0	0	0
AA	0	72	0
DD	0	47	0
EE	0	26	0
HH	0	0	0
OS-3	0	0	0
OS-4	0	26	0
<b>Subtotal</b>	<b>308</b>	<b>145</b>	<b>194</b>
<b>Blue</b>			
D	448	0	278
E-1	183	0	115
E-2	168	0	101
F	136	0	0
L	0	0	0
S-1	104	0	0
S-2	58	0	0
V	142	0	0
<b>Subtotal</b>	<b>1,239</b>	<b>0</b>	<b>494</b>
<b>Yellow</b>			
CC	128	0	0
R-1	80	0	29
R-2	80	0	29
U-1	58	0	0
U-2	58	0	0
Y-1	54	0	0
Y-2	50	0	0
Z-1	61	0	0
Z-2	45	0	0
BB	0	89	0
FF	0	32	0
GG	0	0	0
II	0	0	0
OS-1	0	0	0
<b>Subtotal</b>	<b>614</b>	<b>121</b>	<b>58</b>
<b>Purple</b>			
A	380	0	235
B-1	183	0	115
B-2	136	0	101
C	0	0	0
H-1	188	0	115
H-2	226	0	130
K-1	148	0	0
K-2	152	0	0
O-1	80	0	29
O-2	80	0	29
<b>Subtotal</b>	<b>1,573</b>	<b>0</b>	<b>754</b>
<b>TOTAL</b>	<b>3,734</b>	<b>266</b>	<b>1500 K</b>

Source: William Hezmalchal Architects, Inc. 2013



**DEVELOPMENT PHASES**  
**FIGURE 3-19**

Additionally, implementation of the project may require that the applicant obtain approval, permits, licenses, certifications or other entitlements from various federal, state, and local agencies, including but not limited to the following:

- Individual/Nationwide Section 404 Permit (CWA, 33 U.S.C. §1344) from the U.S. Army Corps of Engineers.
- General Construction Activity Storm Water Permit SWRCB Order No. 2009-0009 DWQ from the RWQCB.
- 401 Certification (CWA, 33 USC 1341, if the project requires U.S. Army Corps of Engineers 404 Permit) from the RWQCB.
- Lake/Streambed Alteration Agreement (California Fish and Game Code Section 1600 et seq.) from the California Department of Fish and Wildlife.
- Updated Recorded Easement Agreement from the County of San Diego

For the proposed project, the term applicant refers to the developer that would be applying for permits to develop on the project site.



# Chapter 4 Environmental Setting

## 4.1 Location

The Village 9 site is located within the City of Chula Vista, San Diego County, California. The project site is located adjacent to and east of State Route (SR-) 125 and is surrounded to the north, east, and south by undeveloped land. Eastlake Parkway and Hunte Parkway currently terminate at the northeast corner of the project site. Otay Valley Regional Park and the Otay River Valley are south of the site.

## 4.2 Climate

The climate in the project area is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The nearest climatological monitoring station that records precipitation data is located at the lower Otay Reservoir, approximately three miles east of the project site. The normal precipitation in the lower Otay Reservoir area is 11 inches annually, occurring primarily from December through March (WRCC 2011a). Temperature is recorded at the monitoring station located in the community of Bonita, north of the Otay Ranch area. According to the Western Regional Climate Center, in summer (August) the normal daily maximum temperature in Bonita is 81 degrees Fahrenheit (°F), and in winter (January) the normal daily minimum temperature is 40 °F (WRCC 2011b).

## 4.3 Landform and Vegetation

Surface elevations across Village 9 range from 300 feet AMSL in the southerly portion of the site to approximately 600 feet AMSL in the northerly portion of the site. The site consists of rolling hills of low to moderate relief, with south-flowing tributary drainages of the Otay River. The project site generally slopes to the south toward the Otay River Valley, with a flat mesa area in the northern portion of the project site. Six native vegetation communities occur on the site: broom baccharis scrub, chaparral, disturbed and undisturbed coastal sage scrub, disturbed and undisturbed maritime succulent scrub, riparian scrub, and tamarisk scrub. In addition to native habitats, non-native vegetation communities also occur in the project area, including non-native grasslands, agricultural lands, bare ground, disturbed vegetation, and developed land. A few dirt and gravel roadways have been established across the project site.

## 4.4 Access

Regional vehicular access to Village 9 is currently provided from SR-125 via Olympic Parkway to Eastlake Parkway. As discussed above, Eastlake Parkway and Hunte Parkway currently terminate at the Village 9 boundary. Eastlake Parkway provides north/south access to the site. Hunte Parkway provides east/west access to the site and, as part of the project, Hunte Parkway would be extended westerly through Village 9 to become Main Street. A future access ramp will connect Hunte Parkway/Main Street to SR-125, providing direct access to the site. An access ramp will also connect the future Otay Valley Road to SR-125.

## 4.5 Surrounding Land Uses

Village 9 is surrounded on three sides by undeveloped land. The future locations for Village 8 East, to the west of the site (across SR-125); the EUC, to the north of the project site; and the future University, to the east of the site, are currently undeveloped. The Otay River Valley is located to the south. The open space area adjacent to the project site is the Otay Ranch component of the MSCP Subarea Plan Preserve, and the MSCP boundary extends along the southern boundary of the project site, and seen in Figure 3-3. The closest development to the project site is in Village 7, located northwest of the project site across SR-125. Development begins approximately 0.2 mile from the project site and includes residences, Olympian High School, and the Wolf Canyon Elementary School. High Tech High, High Tech Middle, and High Tech Elementary Chula Vista are located on one campus approximately 0.25 mile northeast of the project site on Discovery Falls Drive. Residences are also located approximately 0.3 mile to the northeast of the project site on Discovery Falls Drive.

# Chapter 5 Environmental Impact Analysis

## 5.1 Land Use

This section describes the existing land use setting of Village 9 and the surrounding area and evaluates the impacts of implementation of the SPA Plan and TM in two categories: 1) conformance to, or conflict with, adopted plans, policies, and regulations; and 2) effects on established communities. Other issues associated with land use decisions include aesthetics, noise, and resource conservation. These issues are addressed in their respective sections of this EIR. Potential conflicts with agricultural land uses are addressed in Section 5.12, Agricultural Resources.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (SEIR 09-01). Section 5.1, Land Use, of the final SEIR for the GPA/GDPA (SEIR 09-01) analyzed the existing conditions, potential impacts, and mitigation measures related to the proposed land uses for the GDA/GDPA area, including Village 9. The GPA/GDPA SEIR identified a potentially significant impact related to community character because, although the GPA/GDPA conforms to the City's General Plan goals, it does not include design standards necessary to assure that community character issues are implemented. These standards are included at the SPA level. The analysis and discussion of land use contained in the GPA/GDPA SEIR are incorporated by reference.

### 5.1.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Regional

##### a. Regional Comprehensive Plan

San Diego Association of Governments (SANDAG) is a council of governments that provides a forum and decision-making body for regional planning issues including population growth, transportation, and land use in San Diego County. SANDAG's Regional Comprehensive Plan (RCP) serves as a framework for decision-making with respect to anticipated regional growth, and the effect of regional growth on housing, economics, transportation, environmental planning, and overall quality of life needs. The goals of the RCP are to establish a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth" while preserving natural resources and limiting urban sprawl. SANDAG'S Smart Growth Concept Map identifies Village 9 as a Town Center that would provide

a pedestrian-oriented Town Center of mixed-use and higher residential densities strongly tied to the planned university campus. It would provide housing, retail, and other commercial and related services necessary to support the university. It also would be the interface and “common meeting ground” with the university. Basic smart growth principles from the RCP that are applicable to Village 9 to strengthen land use and transportation integration are summarized as follows:

- **Land Use and Urban Design.** Reduce land consumption by focusing future growth in the cities and in the appropriate unincorporated suburban communities and village centers through new development, redevelopment, and infill, emphasizing pedestrian-friendly design and mixed-use development.
- **Travel Choices.** Provide people with additional travel choices (walking, biking, rail, bus, and automobile).
- **Jobs/Housing Mix.** Locate housing near or within major employment areas and provide employment opportunities near major housing areas.
- **Housing Choices.** Provide, in each community, a variety of housing types for residents of all incomes.
- **Infrastructure, Capacity, and Location.** Provide adequate infrastructure in designated smart growth opportunity areas.
- **Environment.** Protect open space and habitat areas. When constructing residential, commercial, or industrial areas, or building transportation systems, provide environmentally sensitive development that conserves water and energy, protects water quality, promotes the use of alternative energy sources, protects sensitive plants and habitats, and restores natural open spaces through the use of native plants.

#### **b. Regional Transportation Plan**

The 2050 Regional Transportation Plan and Sustainable Communities Strategy were adopted by SANDAG on October 28, 2011. The 2050 Regional Transportation Plan maps out a system designed to maximize transit enhancements, integrate biking and walking elements, and promote programs to reduce demand and increase efficiency. The Regional Transportation Plan also identifies the plan for investing in local, state and federal transportation facilities in the region over the next 40 years. The Sustainable Communities Strategy integrates land use and housing planning within the transportation plan and addresses how the transportation system will be developed in such a way that the region is able to reduce per-capita greenhouse gas (GHG) emissions to state-mandated levels.

## **2. Local**

#### **a. City of Chula Vista General Plan**

The Chula Vista General Plan, known as Vision 2020, was adopted by the City on December 13, 2005 and more recently amended in 2013. The General Plan provides a long-term strategy to address planning issues for the growth and development of the city and is comprised of the following six elements: land use and transportation, economic development, public facilities and services, growth management, environmental, and housing. Village 9, and the rest of the Otay Ranch, is located in the Otay Ranch subarea of the General Plan. Otay Ranch is identified as a master planned community in the Chula Vista General Plan.

#### **Land Use and Transportation Element**

The Land Use and Transportation Element establishes the land use categories, roadway classifications, and generalized land use patterns for city development, while focusing on themes that: 1) support

strong community character and image; 2) support strong and safe neighborhoods; and 3) improve mobility. This element establishes plans and policies to identify the general distribution of housing, businesses, industry, open space (including parks), education facilities, and public buildings. Standards for population density and building intensity in each land use classification are also provided.

The element separately addresses the city's geographic areas. Village 9 is located in the Eastern University District of the Otay Ranch subarea, in the East Planning Area. According to the element, the eastern university district is intended to serve as the urban center for the East Planning Area, and serves much of the inland south San Diego County region. This district would provide higher value employment opportunities along with business and commercial services; cultural and entertainment services; and a multi-institutional university center or traditional university and related support uses. A key component of the district is the University Campus Focus Area, which comprises a multi-institutional university center or traditional university. The adjoining University Village Focus Area, including Village 9, comprises a university-oriented Town Center of transit-oriented mixed use, and medium to medium-high residential densities.

### **Economic Development Element**

The Economic Development Element establishes policies to ensure the long-term vitality of the local economy and to help develop, guide, and encourage appropriate employment and business ownership in Chula Vista. It promotes a sustainable local economy to benefit present and future generations without detrimentally affecting resources. Employment land, or land designated for commercial, industrial, and other non-residential or open space use, is concentrated in three principal areas: the tideland area, the Montgomery area, and the Otay Ranch area. Village 9 is within an Employment Land Area in the Economic Development Element as part of the University site. Village 8 West, the EUC and RTP are also areas of Otay Ranch that are identified as Employment Land Areas.

### **Public Facilities and Services Element**

The Public Facilities and Services Element establishes the plan to provide and maintain infrastructure and public services for future growth, without diminishing services to existing development within the city. The overall goal of this element is to provide and maintain public facilities and services within Chula Vista through abundant public infrastructure and community services that support and enhance the well being of the city and its residents.

### **Growth Management Element**

The purpose of the Growth Management Element is to guide future development in the city based on the principles that: 1) rapid population growth and development have the potential to cause a variety of problems and impact the well being of a city and its residents and 2) impacts can be mitigated by balancing competing demands for growth and development through the adoption of comprehensive objectives and policies. This element serves as the assurance that the vision described within the General Plan is achieved without sacrificing the quality of life enjoyed in the community, and establishes a framework for directing new development, redevelopment, and community enhancement, and provides the guidance to realize the vision for the city.

### **Environmental Element**

The Environmental Element establishes the policy framework for improving sustainability through the stewardship of the city's natural and cultural resources, promotion of environmental health, and protection of persons and property from environmental hazards and noise. Sustainable development is



identified as a means of balancing current growth and economic progress with protection of future resources.

### **Housing Element**

The Housing Element details a five-year strategy for enhancement and preservation of the city character, identifies strategies for expanding housing opportunities for the various economic segments of the city, and provides policy guidance for local decision-making related to housing. The focus of this element is to: 1) maintain and enhance the quality of housing and residential neighborhoods in the city, 2) support housing opportunities to meet the city's diverse needs; and 3) fund and implement services that provide vital community resources for lower income residents. Inclusionary policies of this element require 10 percent affordable ("inclusionary") housing, including five percent low-income and five percent moderate-income, for projects consisting of 50 or more dwelling units.

#### **b. Otay Ranch General Development Plan**

The Otay Ranch GDP/Subregional Plan was originally approved jointly by the City of Chula Vista and County of San Diego in 1993 for the future development of Otay Ranch. As discussed in Section 2.2, Otay Ranch Planning Documents, the Otay Ranch GDP was amended in 2001, in December 2005 concurrently with the preparation of the 2005 General Plan, in 2011, and most recently with the 2013 GDPA. The GDP establishes land plans, design guidelines, objectives, policies, and implementation measures that apply to all portions of Otay Ranch while supporting a balance of housing, shops, workplaces, schools, parks, civic facilities, and open spaces on a total of 23,976 acres. The majority of development is intended to be clustered in villages, with conveniently located "core" features and well-defined edges such as the Chula Vista greenbelt, open spaces, and wildlife corridors. The goals of the Otay Ranch GDP are to: 1) create a well-integrated, balanced land use; 2) reduce reliance on the automobile and promotion of alternative modes of transportation; and, 3) diversify the economic base within Otay Ranch.

The GDP designates Village 9 as an urban village with a mixed-use town center and low-to-medium density residential uses to the south of the town center. Urban Villages are intended to be adjacent to existing urban development and are planned for transit-oriented development with higher densities and mixed uses within a quarter mile of a transit stop or station. Densities generally decrease away from the core/town center area. The plan states that town centers should be located close to arterial intersections and along transit corridors to promote pedestrian mobility, transit opportunities, commercial viability, sense of community and social activity. This organization of land uses is intended to promote pedestrian travel internally and supports transit opportunities for external trips. The design creates a sense of community within each village and town center by attracting village residents to the village core or town center for social, commuting, public service and shopping activities. Residential neighborhoods surround the village core and town center and connect to it by pedestrian and circulation systems. This encourages internal, non-vehicular trips. The purpose of the village design is to provide an efficient and comfortable living environment for its residents.

#### **c. Zoning Code**

Title 19 of the CVMC is the City zoning title, which is intended to implement the Chula Vista General Plan. The eastern planning area, which includes the Otay Ranch area, is a Planned Community (P-C) Zone, as defined in Chapter 19.48 of the CVMC. The purposes of the P-C zone are to:

- Provide for the orderly preplanning and long-term development of large tracts of land. These tracts may contain a variety of land uses, but are under unified ownership or development control, so that the entire tract will provide an environment of stable and desirable character.
- Give the developer reasonable assurance that sectional development plans in accordance with the approved GDP will be acceptable to the City. Sectional development plans may include subdivision plans and/or planned unit development plans as provided in this title.
- Enable the City to adopt measures for the development of the surrounding area compatible with the planned community zone.

According to Chapter 19.48.020 of the zoning title, P-C zoning may be established on lands that are suitable for, and of sufficient size to be planned and developed in a manner consistent with the purpose of the zone and shall not include any area of less than 50 acres of contiguous land.

#### **d. City of Chula Vista Multiple Species Conservation Program Subarea Plan**

The MSCP (August 1998) is a subregional plan under the California Natural Community Conservation Planning (NCCP) Act of 1991 covering an area encompassing twelve jurisdictions and 582,243 acres. The MSCP addresses the potential impacts of urban growth, loss of natural habitat and species endangerment, and creates a plan to mitigate for the potential loss of covered species and their habitat due to the direct, indirect and cumulative impacts of future development of both public and private lands within the MSCP area. The MSCP Subregional Plan is implemented through local subarea plans prepared by participating jurisdictions. The Chula Vista MSCP Subarea Plan was approved in February 2003 and provides for conservation of upland habitats and species through Preserve design, regulation of impacts and uses, and management of the Preserve.

For development projects located within Otay Ranch, the Chula Vista MSCP Subarea Plan relies on the Otay Ranch Preserve design and policies contained in the Otay Ranch RMP as the framework for conservation and management of biological resources within Otay Ranch Preserve. Otay Ranch, including Village 9, is considered a "Covered Project" under the City's MSCP Subarea Plan. This means that the areas proposed to be preserved (100 percent Conservation Areas) are either already in public ownership or will be dedicated to the Preserve as part of the development approval process for covered projects. As it pertains to development in Otay Ranch, lands shall be conveyed to the Otay Ranch Preserve in accordance with the RMP.

In addition, the City's MSCP Subarea Plan allows for infrastructure within the Preserve to support planned development, subject to specific conditions. The conditions affecting Village 9 include facilities siting criteria for the proposed storm drain and sewer facilities to be located in the Preserve. A discussion of the facilities siting criteria is contained in Section 5.6, Biological Resources.

#### **e. Otay Ranch Resource Management Plan**

The Otay Ranch RMP was adopted in 1993 with the approval of the Otay Ranch GDP in order to establish a permanent preserve within Otay Ranch. The RMP is comprised of two separate documents, the Phase 1 RMP and Phase 2 RMP.

The Phase 1 RMP identifies preserve areas within Otay Ranch, and contains policies regarding species and habitat conservation and long-term management of the Preserve. The purpose of the Otay Ranch Preserve is to protect and enhance biological, paleontological, cultural, and scenic resources. The RMP objectives include biological diversity and promotion of the survival and recovery of native species and habitats. The RMP identifies an open space system of 11,375 acres dedicated within the Otay Ranch.

The Otay Ranch Preserve would also connect large areas of open space through a series of wildlife corridors. The Preserve boundaries from the RMP have been incorporated into the adopted Otay Ranch GDP. The Preserve/development boundary of the GDP is consistent with the objectives, policies, and criteria established in the RMP.

The Phase 2 RMP includes ranch-wide studies that were conducted pursuant to the Phase 1 RMP and provides additional detail on conveyance, management and funding. The RMP incorporates a preserve conveyance plan as a transfer mechanism for land with high quality resources. The estimated conveyance obligation of 11,375 acres to the Otay Ranch Preserve would be met on a village-by-village basis. In accordance with the Otay Ranch RMP, land shall be conveyed within the Otay Ranch Preserve at a ratio of 1.188 acres for each acre of development. The conveyance obligation is required prior to the City's approval of each final map.

#### **f. Growth Management Ordinance**

The purpose and intent of the Chula Vista GMO (CVMC Section 19.09) is to provide quality housing opportunities for all economic sections of the community; to balance the community with adequate commercial, industrial, recreational and open space areas to support the residential areas of the city; to provide that public facilities, services and improvements exist or become available concurrent with the need created by new development; to control the timing and location of development by tying the pace of development to the provision of public facilities and improvements to conform to the City threshold standards; and to meet the goals and objectives of the growth management program and other programs associated with quality of life. The GMO prohibits new development unless adequate public facilities are provided in advance of or concurrently with the demands created by new development.

The GMO sets forth the "quality of life" threshold standards for police, fire and emergency response times; anticipated demand for schools according to a 12- to 18-month development forecast and evaluation of school funding; establishment of a library service ratio of 500 square feet of equipped and staffed library facility per 1,000 residents; a service ratio of 3 acres of neighborhood and community park land with appropriate facilities per 1,000 residents; water service availability; compliance with City engineering sewage flow and other standards (subdivision manual); compliance with City engineering storm water drainage standards (subdivision manual); maintenance of acceptable city-wide traffic flows; and air quality and pollution overview and evaluation to foster air quality improvement pursuant to relevant regional and local air quality improvement strategies. The GMO also requires PFFPs, AQIPs, and WCPs for every SPA Plan, or if a SPA Plan is not required, for every TM application.

The PFFP must provide a complete description of the proposed development project and a complete description of all public facilities included within the boundaries of the plan as defined by the Development Services Director, including phasing and financing of infrastructure. The plan must contain an analysis of the individual and cumulative impacts of the proposed development on the community as it relates to the growth management program, the specific facility master plans and the threshold standards. Proposed development must also prepare a fiscal impact report and provide funding for periods when the City's expenditures for the development would exceed projected revenues.

#### **g. Park Land Dedication Ordinance**

Chapter 17.10 of the CVMC establishes requirements for parklands and public facilities, including regulations for the dedication of land and development of improvements for park and recreational purposes (Section 17.10.010), determination of park and recreational requirements (Section 17.10.020), area to be dedicated (Section 17.10.040), specifications for park improvements (Section 17.10.050),

criteria for area to be dedicated (Section 17.10.060), procedures for lieu fees for land dedication and/or park development improvements (Section 17.10.070), and other regulations regarding park development and collection and distribution of fees.

#### **h. Tentative Map**

Title 18 of the CVMC establishes policies and procedures, definitions, design requirements, dedications, improvements, deposits and fees and other elements and requirements of the subdivision process. Title 18 of the CVMC requires the adoption of a TM for division and development of land into five or more parcels. A TM is made for the purpose of showing the design of a project, including the locations and layouts of streets and parcels. Under CVMC Section 18.04.050, provisions shall be made in a TM to assure adequate access, light, air, and privacy on all parcels of property, regardless of the land use. CVMC Section 18.05.060 provides for necessary land for community facilities, including schools, parks, open space, playgrounds, and other required public facilities. The TM shall be reviewed by the Director of Public Works to assure compliance with regulations applicable to public and private utilities, streets, and respective rights-of-way and corridors. The TM will also be reviewed by the Development Services Director (or their designee) to assure compliance with regard to the number, size, and configuration of lots to be created and the alignment and width of streets and corridors. TMs may be adopted at the time of project approval and shall expire in 36 months in accordance with the Subdivision Map Act, although extensions may be requested.

#### **i. Parks and Recreation Master Plan**

The Chula Vista Parks and Recreation Master Plan, adopted by City Council in 2002, describes a comprehensive parks and recreation system that services the community at large through the delivery of a variety of park sites containing a variety of recreational experiences. Each park within the Master Plan is viewed in the context of the whole park system to insure that it functions properly in providing a balance of recreational opportunities. The Master Plan describes existing and future park sites and as such identifies parks within the Otay Ranch area. The plan does not include a specific community or neighborhood park acreage requirement for Village 9 since the 2002 Parks and Recreation Master Plan envisioned a university site in the location of the Village 9 site. However, a residential village has always been a secondary land use designation for Village 9, which would include a neighborhood park requirement.

The 2002 Parks and Recreation Master Plan has not yet been updated to reflect the GDP amendments or village boundary adjustments since 2002. However, the City of Chula Vista is currently in the process of updating the plan. A draft Park and Recreation Master Plan Update was released in December 2010, and identifies a range of passive and active park elements to serve the residents of Village 9. The Plan has not yet been approved.

#### **j. Greenbelt Master Plan**

The Chula Vista Greenbelt Master Plan provides guidance and continuity for planning open space and constructing and maintaining the Greenbelt Trail. There are two general types of trails: multi-use and rural. Multi-use trails are designed for a variety of users, such as bicyclists, equestrians, pedestrians, joggers and other non-motorized activities. According to the Greenbelt Master Plan, even a single-track pedestrian-only trail would be considered multi-use since it could accommodate hikers, backpackers, runners, bird watchers, etc. Minimum standards for trails are set forth in the City Landscape Manual and in the Greenbelt Master Plan. A multi-use trail may also be improved with a variety of trail surfaces, with concrete and asphalt surfacing to accommodate the broadest range of users in an urban setting. A

paved multi-use trail would be 10 feet with two-feet of natural shoulders. However, variation in the minimum standards may be allowed, based on consideration of the number and types of trail users and environmental constraints. Other minimum standards include greenbelt trail signs. Standards including fencing and signage shall be determined based upon environmental and other constraints and are subject to City review and approval of the Development Services Director.

#### **k. Brown Field Airport Land Use Compatibility Plan**

The purpose of an airport land use compatibility plan (ALUCP) is to provide for the orderly growth of airports and the areas surrounding the airports, and to safeguard the general welfare of inhabitants within an airport's vicinity. An ALUCP addresses compatibility between airport operations and future land uses that surround them by providing policies and criteria for noise, safety, airspace protection, and overflights. An ALUCP serves to both minimize the public's exposure to excessive noise and safety hazards within an airport influence area and preserve the viability of airport operations. The 2004 Brown Field ALUCP was revised and adopted by the County Airport Land Use Commission on December 20, 2010.

#### **l. Otay Valley Regional Park Concept Plan**

The Otay Valley Regional Park Concept Plan defines the boundary of the regional park, provides for the protection of environmentally sensitive areas and important cultural resources by identifying an open space core/preserve area, identifies areas adjacent to the open space core for active and passive recreational development opportunities, includes a trail system with staging areas, viewpoints and overlooks and connections to recreation areas and adjacent public lands and trails, and envisions two interpretive centers for environmental and educational programs. Village 9 is located north of the "Heritage Road (Paseo Ranchero) to Otay Lake Vicinity" segment of the concept plan. Approximately 1,000 acres of Otay Ranch Preserve are contiguous with the regional park.

### **B. Existing Land Use Conditions**

#### **1. On-site Conditions**

The project site is approximately 323 acres of which 273 acres would be developed in accordance with the Village 9 SPA Plan. The SPA Plan area ranges in elevation from 324 feet AMSL in the southern portion of the site to approximately 621 feet AMSL in the northern portion of the site. The existing site is undeveloped, and consists of vacant, ranch, and dry-farmed lands.

#### **2. Surrounding Land Uses**

The project site is surrounded by undeveloped property to the north, east, and south. SR-125 is located immediately to the west of the project site. Bluffs abutting the Otay River Valley are located to the south. Village 8 East is located to the west of the site beyond SR-125. The site of the future EUC is contiguous with the site's northern boundary, and the future University/RTP site is located to the east. Eastlake Parkway and Hunte Parkway currently terminate at the northeast corner of the Village 9 boundary. Village 11, to the northeast of the project site, is partially developed with residential and some commercial development. To the north of the EUC site is the Otay Ranch Town Center, a shopping mall that features stores, a movie theater, and restaurants. The location of the surrounding land uses are illustrated in Figure 3-2, Existing and Planning Land Uses in the Project Vicinity.

In accordance with the Otay Ranch GDP, future development is planned in Otay Ranch Village 8 East, EUC, and the University/RTP. The planned land uses for Village 8 East in the GDP include a mixed-use



village core and a range of residential densities. Future land uses planned for the EUC include destination retail, commercial, and entertainment development with higher density residential development, schools, and parks. The University Site is proposed for university supporting land uses, including commercial, cultural, and entertainment services. The RTP is planned for a large, master-planned business park, providing research and high-tech manufacturing industries, arranged in clusters.

The open space to the south of the project site is the Otay River Valley, which is part of the Chula Vista MSCP Subarea Plan Preserve (Otay Ranch Preserve) and the Otay River Valley Regional Park. The 8,700-acre multi-jurisdictional regional park extends about 13 miles from the southeastern edge of the San Diego Bay Wildlife Refuge at the mouth of the Otay River, through the Otay River Valley, to the land surrounding both Lower and Upper Otay Lakes. The park provides recreational opportunities ranging from playing fields and picnic areas to hiking, biking, and horse trails. The park is also intended to protect open space, wildlife, historic, agricultural, and archaeological resources. The Otay Ranch Preserve consists of 11,375 acres of land identified in the MSCP that is to be set-aside as mitigation for impacts to sensitive resources resulting from Otay Ranch development that would occur both within the city and in the unincorporated San Diego County.

## 5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would have a significant impact on land use if it would:

- **Threshold 1:** Physically divide an established community (incompatibility with adjacent and surrounding uses).
- **Threshold 2:** Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance), adopted for the purpose of avoiding or mitigating an environmental effect.
- **Threshold 3:** Conflict with any applicable habitat conservation plan or natural community habitat conservation plan.

## 5.1.3 Impact Analysis

### A. Threshold 1: Physically divide an established community (incompatibility with adjacent and surrounding uses).

Village 9 is currently undeveloped; thus, the project would not incur an impact related to physically dividing an established community on the site. Instead, the following discussion focuses on potential land use incompatibilities with surrounding off-site and future on-site land uses. First, potential land use conflicts associated with construction are discussed. Then the project's operational compatibility with surrounding land uses, internal land uses, and the off-site improvement area are analyzed. Lastly, the project's impact on community character is addressed.

#### 1. Short-term Construction Conflicts

Construction of the project would require site grading, road building, installation of utilities, and building construction. Short-term construction land use conflicts with surrounding land uses are discussed below.

Village 9 is adjacent to currently undeveloped land on three sides. Some off-site grading would be required in the southeastern portion of Village 9 in the future University site, in the southwestern area adjacent to the future SR-125/Otay Valley Road interchange, in the northwestern area of the site at the future Main Street/SR-125 interchange, and along the northern boundary of the project site. Grading adjacent to SR-125 would not affect operations of the toll road because no vehicles currently access this area. Construction activities on the project site would not be incompatible with the vacant land to the north, east, and west of the project site.

The Chula Vista MSCP Subarea Plan Preserve is located partially within the project site along the southern boundary of Village 9 in Planning Areas OS-2 and OS-4, and extends further beyond the site to the west and south. The SPA Plan proposes only parks and open space adjacent to the Preserve. North of the open space area is proposed for single-family development, the lowest density development on the project site. A mixed-use area is proposed in the southeast area of the project site; however, it is set back from the Preserve by approximately 400 feet. The designated open space areas provide a buffer between the proposed development and the Preserve. As a result, little or no construction activity would be required adjacent to the Preserve. Additionally, all construction activities would be required to comply with the Preserve Edge Plan, as discussed in Section 5.6, Biological Resources. The mitigation measures in Section 5.11, Hydrology and Water Quality, would protect the Preserve from storm water runoff from construction. Requirements for noise levels, pre-construction biological surveys, and habitat replacements and restoration are included as mitigation in Section 5.5, Noise, and Section 5.6, Biological Resources. Dust-minimizing construction practices are required in mitigation measures 5.4-1 through 5.4-3 in Section 5.4, Air Quality that would protect sensitive species from indirect impacts related to fugitive dust, such as reduced access to sunlight. No land use conflict with the MSCP Subarea Plan Preserve would occur during construction as a result of indirect biological resources impacts.

Construction of Village 9 would not divide an established community or be incompatible with existing adjacent land uses. Impacts would be less than significant.

## **2. Incompatibility with Surrounding Land Uses**

### **Otay Ranch Villages**

Village 8 East, located to the west of the project site beyond SR-125, the EUC, located to the north, and the University/RTP site, located to the east, are currently undeveloped. These villages are planned for development in accordance with the adopted GDP. The Village 9 SPA Plan does not include any components that would extend into neighboring villages. Therefore, implementation of the Village 9 SPA Plan would not divide an established off-site community. Because these areas are currently undeveloped, no conflicts with existing land uses would occur.

The potential for the project to result in future land use compatibilities with these Otay Ranch Villages as a result of excessive noise is addressed in Section 5.5, Noise. As discussed in this section, operational noise sources within Village 9 would not exceed noise standards at existing development closest to the project site, including Olympian High School, Wolf Canyon Elementary School, and the High Tech High campus. Therefore, land uses in Village 9 would be compatible with surrounding land uses. Impacts would be less than significant.

### **MSCP Subarea and Otay Ranch Preserve**

The open space to the south of Village 9 is part of the Chula Vista MSCP Subarea Plan Preserve and within the Otay Valley Regional Park boundary. The SPA Plan and TM would be compatible with the

sensitive open space area to the south by designating the adjacent development areas for the lowest density residential development. Consistent with the RMP, a 100-foot open space buffer consisting of contoured manufactured slopes is proposed between the low-density development and the MSCP Preserve boundary.

Lighting, landscaping, and irrigation of the areas adjacent to the Preserve that are controlled by the SPA Plan and the accompanying Preserve Edge Plan would limit disruption to the naturally occurring plant and animal species that occur within the MSCP area. Fire protection measures are also considered within the SPA Plan and the accompanying Fire Protection Plan to address this wildland interface. Section 5.6, Biological Resources, identifies mitigation measures that would reduce potentially significant indirect impacts to sensitive biological resources to a less than significant level. Mitigation measures in Section 5.11, Hydrology and Water Quality, would reduce potential off-site water quality impacts to a less than significant level. Therefore, land use impacts associated with incompatibility would be less than significant. The project's consistency with the policies of MSCP is addressed under Threshold 3.

### **3. Internal Land Use Compatibility Within Village 9**

Several water transmission lines traverse the southern area of the project site that are owned, operated, and maintained by the City of San Diego. These pipelines would not provide water to the project, but the SPA Plan and TM would construct development directly above ground of where these pipelines are currently located. The construction of the proposed development would impede the availability of access to these pipeline easements. The project proposes to relocate these pipelines into the future public right of way within Otay Valley Road. If relocation of these water transmission pipelines does not occur prior to construction of the proposed development, a conflict with the existing City of San Diego waterline easements would occur. This impact is potentially significant.

The SPA Plan is designed to facilitate a high level of compatibility between adjoining land uses within the project area. As discussed in Section 3.5.1.1, Development Concept, the SPA Plan utilizes transect, or form-based, planning that focuses on the form of development rather than land use and seeks to provide a gradual transition from intense urban development to open space areas. The SPA Plan would implement form-based regulations and standards that focus on compatibility between buildings, streets, and public spaces. Form-based codes approach the development of land by regulating the form, character, and street presence of a building focusing attention on the public presentation of buildings, and creating a public realm with compatible land uses that is comfortable for pedestrians. Land use types are still controlled but they play a secondary role to the creation of communities and streetscapes that are pedestrian friendly as a result of compatible development. A key objective of transect-based planning is the creation of integrated and coherent land uses.

The SPA Plan establishes the plan for development implementation that would ensure that the project site is developed with compatible land uses. The SPA Plan also includes a Development Code in Chapter 3 that specifies development standards, establishes transect zones, and includes allowable land uses. Additionally, Chapter 4, Community Design, of the SPA Plan establishes design guidelines for development. Development standards that ensure compatibility between different land uses include requirements for building configuration, open space, parking, design considerations, frontage types, performance standards, and sign regulations. Examples include:

- Building Configurations
  - Architecture of Live/Work Building Configurations shall complement the architectural character of the neighborhood in which it is located; however, additional glazing, non-

- residential design elements and/or roll-up access doors are permitted; design of these elements shall be done in a manner that does not detract from the character of the neighborhood.
- Commercial blocks shall have a strong pedestrian relationship to the street.
  - Building elevations facing streets, public spaces, and large parking areas shall be considered front elevations and require a comparable level of architectural design and detail.
- Performance Standards
    - All equipment shall be operated and located so that they do not disturb the peace, quiet, and comfort of neighboring residents.
    - All ground mounted mechanical equipment, including heating, ventilation, and air conditioning (HVAC) units shall be completely screened from public view and surrounding properties by use of a landscaping, wall, or fence, or shall be enclosed within a building.
    - Loading activities shall be located and operated so that they do not disturb neighboring residents.
    - All light sources shall be shielded in such a manner to minimize light spillage onto adjacent properties.

Design guidelines are required for a variety of land uses in order to promote consistency of character between land uses. Examples of these guidelines include:

- Arrange buildings to create a variety of outdoor spaces;
- Design pedestrian and vehicular circulation routes that are intuitive, well-defined and easily discernible for appropriate and functional maneuverability and activity levels; and
- Orient buildings toward public streets, pedestrian pathways, and/or active spaces.

The potential for internal land use conflicts to occur as a result of air quality, noise, and water quality are addressed in the applicable sections of Chapter 5 of this EIR. As discussed in Section 5.4, Air Quality, compliance with San Diego Air Pollution Control District regulations would minimize potential toxic air contaminant risks. Section 5.5, Noise, describes how on-site noise sensitive land uses may be exposed to excessive traffic noise and/or operational noise from sources including HVAC equipment, commercial equipment, and recreational facilities. However, the mitigation measures identified in Section 5.5 would reduce potentially excessive noise levels to the standards established in the City noise compatibility guidelines. The project would have the potential to result in water quality impacts; however, mitigation measures would reduce impacts to a less than significant level, as discussed in Section 5.11, Hydrology and Water Quality. Therefore, implementation of the SPA Plan and TM would not result in any internal incompatible land uses within the project area and impacts would be less than significant.

#### **4. Compatibility of the Off-site Improvements and Grading with Surrounding Land Uses**

The off-site infrastructure improvements associated with the project would be placed within the MCSP Preserve, including sewer and storm water facilities. These improvements have been located in the least biologically sensitive area pursuant to the Chula Vista MSCP Subarea Plan's facility siting criteria. The infrastructure improvements have been designed consistent with the MSCP Siting Criteria to minimize impacts to covered species in the Preserve. Following construction, the sewer and storm water facilities would be located underground and would not result in any land use impacts. Use of the associated access road would be compatible with the Facilities Siting Criteria contained in Section 6.3.3.4 of the Chula Vista MSCP Subarea Plan, as discussed in Section 5.6, Biological Resources, and

would not conflict with use of the Preserve for habitat management. A detailed analysis of the project's consistency with the siting criteria is provided in Section 5.6, Biological Resources, under Thresholds 5 and 6. Impacts would be less than significant.

The off-site grading areas included as part of the project support future infrastructure and development planned for in the GDP, such as the Main Street and Otay Valley Road interchanges with SR-125. Off-site grading would occur in four locations, all of which are vacant land. The first area is located adjacent to SR-125 toll road, near the southwest corner of the project site. The second area is located near the southeast corner of the site. The third area is located along the northwestern boundary of the site, adjacent to SR-125, and the fourth area is located along the northern boundary of the project site. Grading in these areas would accommodate planned uses that would not conflict with the GDP. Land use impacts associated with off-site improvement compatibility would be less than significant.

### **5. Community Character Impacts**

The SPA Plan would implement a form based code that would regulate the form, character, and street presence of a building to focus attention on the public presentation of buildings, creating a public environment that is comfortable for pedestrians. The SPA Plan also includes a development code in Chapter 3 that specifies development standards for the entire project area, specific transect zones, as well as individual development types. Additionally, Chapter 4, Community Design, of the SPA Plan establishes design guidelines for the project area as a whole, as well as for specific land uses and the Town Center. As discussed in greater detail in Section 5.2, Aesthetics/Landform Alteration, the development standards and guidelines proposed in the SPA Plan would ensure that a consistent community character is maintained within Village 9, as well as with surrounding development in Otay Ranch. The GPA/GDPA SEIR determined that specific design guidelines and regulations would minimize community character impacts. Therefore, implementation of the proposed SPA Plan would assure that impacts to community character are less than significant.

### **B. Threshold 2: Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, or zoning ordinance), adopted for the purpose of avoiding or mitigating an environmental effect.**

Construction of the project would be required to comply with the Chula Vista Building Code and other established regulations. Potential physical impacts that would result from construction, including air quality, noise, and water quality, are addressed in Section 5.4, 5.5, and 5.11, respectively. Mitigation measures identified in these sections would reduce potential land use conflicts with state and local air quality and noise regulations, and federal, state, and local water quality regulations to a less than significant level. The project would be required to adhere to existing construction regulations and codes; therefore, no significant construction land use impacts with respect to regulatory plans and policies would occur. Consistency between applicable land use plans, policies, and regulations are evaluated below.

#### **1. Regional Comprehensive Plan**

As described in Section 5.1.1.A, Regulatory Framework, SANDAG's RCP establishes a planning framework to increase the region's sustainability and encourage "smart growth" while preserving natural resources and limiting urban sprawl. SANDAG'S Smart Growth Concept Map identifies Village 9 as a town center to include a pedestrian-oriented Town Center of mixed-use and higher residential densities strongly tied to the planned university campus. According to SANDAG, it would provide housing, retail, and other



commercial and related services necessary to support the university. It also would be the interface and “common meeting ground” with the university. A future BRT route would include a transit station at this location.

The SPA Plan proposes mixed-use development, including commercial and retail opportunities, in a town center that is surrounded by a variety of residential densities. The Town Center and higher density development areas in Village 9 are oriented toward the University site. As described in Section 5.1.4.1, Campus Boulevard would serve the Town Center and provide a common meeting ground with the university. Campus Boulevard has been strategically located and designed to create a strong visual and physical connection between the neighborhood park, and the future University/RTP.

As described in Chapter 3, Project Description, Village 9 would be ready for future extension of transit service into the area. A potential transit station has been identified in the Town Center adjacent to the university. Safe pedestrian and bicycle access to the transit station and transit stop would be provided through a system of village pathways, sidewalks, trails, and bicycle lanes that connect all project areas. Vehicular access would be provided by town center arterials, four and six lane arterials, and residential collector streets. Therefore, the proposed project would be consistent with the town center designation in the RCP.

Additionally, as a designated smart growth area, the project is subject to the basic smart growth principles established in the RCP, which are designed to strengthen land use and transportation integration. The project is compared to the RCP’s basic smart growth principles in Table 5.1-1. The project would support the smart growth principles of the RCP with features such as mixed-use development, a range of housing choices, walkability, proximity to employment centers, environmentally sensitive design, providing adequate infrastructure, and by providing a variety of transportation choices. Therefore, the SPA Plan would not conflict with the RCP and land use impacts would be less than significant.

**Table 5.1-1 Comparison of the Village 9 SPA Plan with the Applicable Smart Growth Principles of SANDAG’s Regional Comprehensive Plan**

Principle	Comparison
<p><b>Land Use and Urban Design.</b> Reduce land consumption by focusing future growth in the cities and in the appropriate unincorporated suburban communities and village centers through new development, redevelopment, and infill, emphasizing pedestrian friendly design and mixed use development.</p>	<p><b>Consistent.</b> The project would provide a variety of land uses, including a mixed-use Town Center. The project area is designed to be a walkable community focused around a pedestrian oriented town center. As discussed in Chapter 3, Project Description, the pedestrian circulation network includes an interconnected system of village pathways, sidewalks, and other trails. All streets would include sidewalks so that all development would be accessible to pedestrians.</p>
<p><b>Jobs/Housing Mix.</b> Locate housing near or within major employment areas and provide employment opportunities near major housing areas.</p>	<p><b>Consistent.</b> Employment opportunities for Village 9 residents would be provided within the mixed-use areas, including the Town Center. Additionally, the planned EUC, University, and RTP are major employment centers in Otay Ranch that would be located within or adjacent to Village 9. A bus rapid transit line is proposed for Otay Ranch to connect residential and employment centers. The project would provide a transit station, as well and pedestrian and bicycle access to the transit station and surrounding villages to connect Village 9 to the major employment centers.</p>
<p><b>Housing Choices.</b> Provide, in each community, a variety of housing types for residents of all incomes.</p>	<p><b>Consistent.</b> The project would provide single-family and multi-family residential development, including affordable units, in a variety of sizes and types.</p>

**Table 5.1-1 Comparison of the Village 9 SPA Plan with the Applicable Smart Growth Principles of SANDAG’s Regional Comprehensive Plan (continued)**

Principle	Comparison
<p><b>Infrastructure Capacity and Location.</b> Provide adequate infrastructure in designated smart growth opportunity areas.</p>	<p><b>Consistent.</b> As discussed in Chapter 3, Project Description, the PFFP includes an analysis of infrastructure facilities, such as water and sewer, and the provision of community services and facilities including fire protection and emergency services, law enforcement, libraries, schools, and parks. The PFFP will require specific facilities to be built in conjunction with development to ensure that improvements adequately serve such development and meet the City threshold standards.</p>
<p><b>Environment.</b> Protect open space and habitat areas. When constructing residential, commercial, or industrial areas, or building transportation systems, provide environmentally sensitive development that conserves water and energy, protects water quality, promotes the use of alternative energy sources, protects sensitive plants and habitats, and restores natural open spaces through the use of native plants.</p>	<p><b>Consistent.</b> Otay Ranch is a Covered Project in the Chula Vista MSCP Subarea Plan. Conserved habitat for Otay Ranch is located in the Otay Ranch Preserve. The Otay Ranch Preserve is managed in accordance with the Otay Ranch RMP, which requires the development of each Otay Ranch village to contribute to the Otay Ranch Preserve. In accordance with the Otay Ranch RMP, prior to the approval of each final map, the applicant shall convey land within the Otay Ranch Preserve at a ratio of 1.188 acre for each acre of development. The SPA Plan would be compatible with these biologically sensitive areas by designating the adjacent development areas for open space, followed by the lowest density residential development proposed in the SPA. Additionally, the Preserve Edge Plan established requirements to ensure that development in the area is compatible with the Preserve. As discussed in Section 5.10, Global Climate Change, the project includes environmentally sensitive design considerations to conserve water and energy. As discussed in Section 5.11, Hydrology and Water quality, implementation of the SPA Plan would not result in a significant impact to water quality with implementation of mitigation measures 5.11-1 through 5.11-5.</p>
<p><b>Travel Choices.</b> Provide people with additional travel choices (walking, biking, rail, bus, and automobile).</p>	<p><b>Consistent.</b> As discussed in Chapter 3, Project Description, the Village 9 circulation system would provide a system of roadway and trail corridors to support both vehicular and non-vehicular modes of transportation to serve the community. This system includes the extension of existing and planned roads, trails, and transit from adjacent villages as well as internal systems to serve the area. Community streets are designed as “complete” streets, considering all modes of transportation by providing vehicular travel lanes, bike lanes or bike routes, sidewalks, and transit lanes where appropriate.</p>

**2. City of Chula Vista General Plan**

Table 5.1-2 compares the SPA Plan for Village 9 to the applicable land use policies of the General Plan. General Plan policies that pertain to a specific environmental issue, such a transportation or noise, are addressed in the applicable environmental issue section (Section 5.2 through 5.16). As detailed in Table 5.1-2, the SPA Plan and TM would be consistent with applicable land use objectives and policies of the General Plan. This land use impact would be less than significant.

**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies**

Applicable Policies	Evaluation of Consistency
<b>Land Use and Transportation Element</b>	
<p><b>Objective LUT 1:</b> Provide a balance of residential and non-residential development throughout the City that achieves a vibrant development pattern, enhances the character of the City, and meets the present and future needs of all residents and businesses.</p> <p><b>Policy LUT 1.1:</b> Ensure that land uses develop in accordance with the Land Use Diagram and Zoning Code in an effort to attain land use compatibility.</p> <p><b>Policy LUT 1.2:</b> Coordinate planning and redevelopment activities and resources to balance land uses, amenities, and civic facilities in order to sustain or improve the quality of life.</p> <p><b>Policy LUT 1.4:</b> Seek to achieve an improved balance between jobs and housing in Chula Vista.</p> <p><b>Policy LUT 1.5:</b> Endeavor to create a mixture of employment opportunities for citizens at all economic levels.</p> <p><b>Policy LUT 1.6:</b> Attract and maintain land uses that generate revenue for the City of Chula Vista, while maintaining a balance of other community needs, such as housing, jobs, open space, and public facilities.</p> <p><b>Policy LUT 1.7:</b> Provide high-quality public facilities, services, and other amenities within close proximity to residents.</p> <p><b>Policy LUT 1.8:</b> Pursue higher density residential categories and retail demand that are not being met within the City.</p> <p><b>Policy LUT 1.9:</b> Provide opportunities for development of housing that respond to diverse community needs in terms of density, size, location, and cost.</p> <p><b>Policy LUT 1.10:</b> Maintain an adequate supply of land designated and zoned for residential use at appropriate densities to meet housing needs, consistent with the objective of maintaining a balance of land uses.</p> <p><b>Policy LUT 1.12:</b> Encourage regional-serving, high-volume retail or other uses to locate near freeway access to minimize traffic on City streets.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with Objective LUT 1 and its supporting policies. The SPA Plan proposes a mix of land uses that provides for a variety of both residential and commercial uses to meet the current and future needs of residents.</p> <p>As discussed above under Threshold 1, the land uses proposed within the project area are compatible with each other and with surrounding land uses outside of the project area.</p> <p>The SPA Plan is coordinated with the Otay Ranch GDP, and proposes residential and commercial land uses, as well as parks and open space, community purpose facilities, public transit opportunities, and schools, and would allow for the development of other facilities such as museums to maintain a high quality of life. This mix of uses would generate revenue and provide for the community’s needs.</p> <p>Village 9 would improve the jobs and housing balance in Chula Vista because the commercial and other non-residential land uses proposed in the project area would provide job opportunities for new residents in the proposed housing units.</p> <p>The proposed land uses offer a mixture of employment opportunities for citizens that are projected to generate revenue for Chula Vista. Commercial blocks would offer retail jobs, as well as office space for professional use. Live/work units and retail areas offer space for residents to open businesses. Beauty salons, automobile service stations, and other permitted uses provide a mixture of job opportunities.</p> <p>Amenities would be concentrated in the Town Center, which would be accessible to all residents through a variety of modes of transportation, but resident-serving uses such as daycare and parks would be also permitted throughout the project area in even closer proximity to residents.</p> <p>High density residential and retail uses would be provided in the Urban Center and Town Center, and a diverse range of housing would be provided throughout the project area, including single-family detached units, attached single-family units, live/work units, and multi-family units. Village 9 includes a portion of the EUC (the Urban Center), and is adjacent to the RTP, and university, which would be major employment centers for Otay Ranch. The SPA Plan designates zones in the project area for residential and commercial land uses. Compliance with the SPA Plan would be required for future development and would ensure that the balance of land uses is maintained. Village 9 is located adjacent to SR-125. At buildout of the Otay Ranch circulation network, Main Street and Otay Valley Road would provide direct access from Village 9 to SR-125 and minimize traffic on city streets.</p>

**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy LUT 1.13:</b> Maintain neighborhood and community shopping centers of sizes and at locations that offer both choice and convenience for shoppers and residents, while sustaining a strong retail base for the City.</p> <p><b>Policy LUT 1.15:</b> Allow office uses that are associated with complementary commercial service businesses in commercial service areas.</p> <p><b>Policy LUT 1.17:</b> Encourage the development of cultural and performing arts nodes in different areas throughout the City, each with a specific non-competing focus, such as viewing performances or works of art, and learning about, creating, or purchasing art.</p>	<p>The mixed-use designated areas would accommodate a variety of retail uses, as well as office use. It would be located in the center and northern area of the project area, adjacent to the future University site, RTP, and EUC and would provide amenities for these areas as well.</p> <p>The SPA Plan includes a CPF Zone in the center of the project area, which is intended to serve the social, cultural and recreational needs of the community. The SPA Plan provides potential areas for indoor and outdoor facilities including pedestrian parks, neighborhood parks, town squares, and other small plazas and open spaces. Additionally, Campus Boulevard would include a special street section that allows the street to be closed to traffic and serve as a public space for community events. These facilities would be able to accommodate art and cultural events. The Town Center and Urban Center permit art galleries and studios as potential uses. Additionally, Village 9 would contribute an equitable financial share to the development of arts and cultural facilities within Otay Ranch in accordance with the PFFP.</p>
<p><b>Objective LUT 3:</b> Direct the urban design and form of new development and redevelopment in a manner that blends with and enhances Chula Vista's character and qualities, both physical and social.</p> <p><b>Policy LUT 3.1:</b> Adopt urban design guidelines and/or other development regulations for all Districts or Focused Areas of Change as presented in Sections LUT 8.0 - 10.0 of the Land Use and Transportation Element, as necessary, to ensure that new development or redevelopment recognizes and enhances the character and identity of adjacent areas, consistent with this General Plan's Vision.</p> <p><b>Policy LUT 3.2:</b> Any such urban design guidelines and/or other development regulations shall be consistent with other, related policies and provisions in this General Plan, including Sections 7.3 through 7.6.</p>	<p><b>Consistent.</b> Chapter 3, Development Code, and Chapter 4, Community Design, of the SPA Plan would implement design guidelines for the project area that would enhance Chula Vista's character and quality. The development code includes zone standards, which regulate the block pattern, building placement, building configurations, height, and other development features; performance standards, which regulate the on-going operation of uses within the project area to ensure noise, odor, and other issues resulting from the on-going operation of each use do not negatively impact neighborhoods and the community; and sign regulations. The Community Design chapter is intended to establish an overall design vision for Village 9. As described in the discussion of Objective LUT 1, the project area would include several areas for social and cultural enhancement.</p>
<p><b>Objective LUT 5:</b> Designate opportunities for mixed use areas with higher density housing that is near shopping, jobs, and transit in appropriate locations throughout the City.</p> <p><b>Policy LUT 5.1:</b> Promote mixed use development, where appropriate, to ensure a pedestrian-friendly environment that has opportunities for housing; jobs; childcare; shopping; entertainment; parks; and recreation in close proximity to one another.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with Objective LUT 5 because the majority of SPA area is included in either the Town Center or Urban Center Zone, which would be mixed-use areas that would support adjacent residential neighborhoods and foster walkability. These mixed-use areas would also be adjacent to proposed major job centers in Otay Ranch: the future University site, RTP, and EUC. The mixed-use areas would include compact development consisting of a mix of retail sales and services, office use, and high-density attached homes. Allowed uses would include childcare; entertainment such as restaurants and museums; parks, and recreational uses such as sports fields and courts. The mixed-use areas locate neighborhood-serving commercial uses near employment opportunities.</p>

**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy LUT 5.2:</b> Encourage new development that is organized around compact, walkable, mixed use neighborhoods and districts in order to conserve open space resources, minimize infrastructure costs, and reduce reliance on the automobile.</p>	<p>Walkability would be encouraged through the use of an urban couplet, which organizes traffic to allow for a better mix of vehicles, bicycles, pedestrians, and transit. Additionally, the building design guidelines encourage pedestrian oriented development to encourage pedestrian activity, such as requiring little or no setback from the public right-of-way, and buildings oriented to create plazas and public spaces. Development density would gradually decrease south and west of the Urban Center and Town Center to transition from mixed-use to single-family housing. As discussed in Chapter 3, Project Description, the project area would include a multi-modal transportation network to encourage alternative forms of transportation.</p>
<p><b>Policy LUT 5.3:</b> Authorize and encourage mixed use development in focus areas, including high-density residential housing, neighborhood-serving commercial, and office uses.</p> <p><b>Policy LUT 5.4:</b> Develop the following areas as mixed use centers: Urban Core; Palomar Trolley Station; EUC; and Otay Ranch Village Cores and Town Centers.</p>	<p>The compact, mixed-use Town Center and Urban Center would provide services and workplaces in close proximity to each other. The mixed-use areas would provide residential-serving uses easily accessible to residents in the entire project area, and residential serving uses such as childcare, would be permitted throughout the project area to encourage functionality and walkability. A proposed transit station is included in the Town Center to provide regional transit access to the employment center of the area, and to connect the project with the surrounding major employment centers.</p>
<p><b>Policy LUT 5.7:</b> Encourage new ownership or rental housing in mixed use designations and near major transit services, where compatible with adjacent neighborhoods. Mixed use housing should minimize impacts on designated single-family neighborhoods.</p>	<p>As discussed under Objective LUT 1, implementation of the SPA Plan would encourage a variety of housing types, including housing in the mixed-use Urban Center and Town Center, which would include transit stops and a transit station. The SPA Plan minimizes impacts on single-family neighborhoods by gradually reducing densities as distance from the mixed-use areas increases.</p>
<p><b>Policy LUT 5.8:</b> Encourage a wide variety of retail and commercial services, such as restaurants and cultural arts/entertainment, in appropriate locations.</p> <p><b>Policy LUT 5.9:</b> Encourage active and inviting pedestrian-friendly street environments that include a variety of uses within commercial and mixed use areas.</p>	<p>The Town Center and Urban Center would accommodate a variety of retail and commercial services. The mixed-use areas and community purpose facilities would provide opportunities for cultural arts/entertainment.</p> <p>As described above, the mixed-use areas would be designed with a pedestrian-friendly street environment.</p>
<p><b>Policy LUT 5.11:</b> Endeavor to reduce the number of peak hour automobile trips by supporting increased services near workplaces.</p>	<p>The mixed-use Town Center and Urban Center would support office use along with commercial and retail services.</p>
<p><b>Policy LUT 5.12:</b> Minimize local and regional traffic by concentrating higher density employment near major transit services.</p>	<p>The Town Center and Urban Center would be the employment centers for Village 9, and would be served by bus transit, including rapid bus transit.</p>
<p><b>Policy LUT 5.13:</b> Higher density residential and mixed use residential/commercial development should be designed to: create a pleasant walking environment to encourage pedestrian activity; maximize transit usage; provide opportunities for residents to conduct routine errands close to their residence; integrate with surrounding uses to become a part of the neighborhood rather than an isolated project; use architectural elements or themes from the surrounding neighborhood; and provide appropriate transition between land use designations to minimize neighbor compatibility conflicts.</p>	<p>As described above, the mixed-use areas would create a pleasant walking environment, encourage transit, provide commercial and retail uses in close proximity to residences, and comply with design guidelines that create transitions and compatibility across the project area. Densities would decrease away from the mixed-use areas to gradually transition to single-family residential neighborhoods.</p>



**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Objective LUT 6:</b> Ensure adjacent land uses are compatible with one another.</p> <p><b>Policy LUT 6.1:</b> Ensure, through adherence to design guidelines and zoning standards, that the design review process guarantees excellence in design and that new construction and alterations to existing buildings are compatible with the best character elements of the area.</p> <p><b>Policy LUT 6.2:</b> Require that proposed development plans and projects consider and minimize project impacts upon surrounding neighborhoods.</p> <p><b>Policy LUT 6.3:</b> Require that the design of new residential, commercial, or public developments is sensitive to the character of existing neighborhoods through consideration of access, compatible building design and massing, and building height transitions, while maintaining the goals and values set forth in the General Plan. Within transit focus areas, design provisions should include requirements for a minimum building stepback of 15 feet for every 35 feet in height, for edges abutting residential uses.</p> <p><b>Policy LUT 6.5:</b> Require, through sensitive and attractive design, that neighborhood retail centers and commercial service buildings are compatible with the surrounding neighborhood.</p> <p><b>Policy LUT 6.6:</b> Establish design guidelines and development standards for commercial and mixed use development that respect and complement the character of surrounding neighborhoods and uses.</p> <p><b>Policy LUT 6.7:</b> Require that outdoor storage areas or salvage yards be screened from any public right-of-way.</p> <p><b>Policy LUT 6.10:</b> Coordinate and work closely with the City of San Diego, National City, and San Diego County in the Otay Valley Regional Park and Sweetwater/Bonita areas to participate in the development review processes of projects proposed in these areas. Work to ensure that such development takes applicable City of Chula Vista standards into consideration, as appropriate.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and relevant policies. The SPA Plan provides design guidance and regulations for development within Village 9 to protect visual quality. The land uses proposed in the SPA Plan would be compatible with adjacent land uses within Village 9 and surrounding planning areas. For example, the proposed transects and zones in the SPA Plan provide organization for development that focuses activity within the mixed-use areas, transitioning into residential opportunities and rural open space at the edges. In order to ensure that the design intent would be carried throughout individual projects within the planning area, all building and landscape development proposals would be required to submit an architectural and site review application to the City of Chula Vista Development Services Department.</p> <p>As described in Section 3.5.1.1, Development Concept, the SPA Plan includes zone standards in Chapter 3 of the SPA, Development Code, that regulate the configuration of lots and the placement of buildings. This section starts with general regulations that apply to all zones and then provides specific standards for each zone. Additionally, the SPA Plan defines building configurations that define specific regulations for important characteristics such as pedestrian and vehicle access, setbacks, compatible building design and massing, and building height. The proposed transect planning would transition building heights from taller buildings in the Urban Center and Town Center, to shorter buildings in the single-family residential neighborhoods. The Village 9 area is not a transit focused area designated in the General Plan; however, the design guidelines in Section 4.3.3 of the SPA encourage differentiation in building mass, roof forms, materials, color, and apparent floor heights to reduce building bulk and create variety within the building façade. The SPA Plan established a maximum height limit of 215 feet tall for buildings in the Urban Center, which would be the tallest structures in Village 9. Chapter 4 of the SPA, Community Design, includes additional design guidelines and development standards to ensure that design throughout Village 9 would complement the community character of the project and adjacent land uses.</p> <p>Performance standards are provided within Chapter 3 of the Village 9 SPA Plan, Development Code, which regulate outdoor storage to ensure screening of outdoor storage areas from any public right-of-way.</p> <p>The relationship to surrounding uses and jurisdictions was carefully coordinated during the planning process. The Urban Center in Village 9 is an extension of the Eastern Urban Center proposed to the north of the project site. The Town Center and residential development proposed in Village 9 is intended to support the University/RTP by providing commercial uses, residential units, and retail services that support students, faculty, and University/RTP staff. The Village 9 land plan and circulation plan have been intentionally designed to create a strong urban interface between the proposed Town Center and the University/RTP and create multiple opportunities for</p>

Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)

Applicable Policies	Evaluation of Consistency
	<p>vehicular and pedestrian connections between these uses. Pedestrian, vehicle, and bicycle connections between Village 9 and Village 8 East will be provided across SR-125 at Main Streets and Otay Valley Road. In addition, a future pedestrian and bicycle bridge will be provided across SR-125 between Village 9's neighborhood park and Village 8 East. The plan for Village 9 respects the adjacencies to sensitive open space areas within the MSCP by designating the adjacent development areas for the lowest density residential development proposed by the plan. In addition, a buffer of parks and open space areas, provides a separation between proposed development areas and the MSCP. Lighting, landscaping, and irrigation of these open space and park areas as well as adjacent residential uses are controlled by the SPA and the accompanying Preserve Edge Plan.</p>
<p><b>Objective LUT 7:</b> Appropriate transitions should be provided between land uses.</p> <p><b>Policy LUT 7.1:</b> Protect adjacent, stable residential neighborhoods by establishing guidelines that reduce the potential impacts of higher intensity mixed use, commercial, and urban residential developments (i.e. transitional areas).</p> <p><b>Policy LUT 7.2:</b> Require new or expanded uses to provide mitigation or buffers between existing uses where significant adverse impacts could occur.</p> <p><b>Policy LUT 7.3:</b> Require that commercial and industrial development adjacent to residential or, educational uses be adequately screened and buffered to minimize noise, light, glare, and any other adverse impacts upon these uses.</p> <p><b>Policy LUT 7.4:</b> Require landscape and/or open space buffers to maintain a naturalized or softer edge for proposed private development directly adjacent to natural and public open space areas.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and relevant policies. See discussion above for Objective LUT 6. In addition, the SPA Plan includes performance standards to regulate the on-going operation of uses within the project area to ensure noise, odor, and other issues resulting from the on-going operation of each use do not negatively impact neighborhoods and the community. The land use plan for Village 9 is designed to transition from higher-density to lower-density land uses from north to south. Additionally, the grading plan and proposed slope create natural buffers between land uses. The southern portion of the project is designated for open space to transition into the MSCP area and would be landscaped with non-invasive, native species. Refer to Appendix A of the Preserve Edge Plan for a list of acceptable species.</p>
<p><b>Objective LUT 16:</b> Integrate land use and transportation planning and related facilities.</p> <p><b>Policy LUT 16.1:</b> Promote the development of well-planned communities that will tend to be self-supportive and, thus, reduce the length of vehicular trips, reduce dependency on the automobile, and encourage the use of other modes of travel.</p> <p><b>Policy LUT 16.2:</b> Ensure that new development and community activity centers have adequate transportation and pedestrian facilities.</p>	<p><b>Consistent.</b> The SPA plan includes standards for both transportation facilities and land uses in order to ensure compatibility.</p> <p>As discussed in LUT 1, Village 9 would include a mix of residential, retail, office, commercial, and recreational development to create a self-supportive community. Additionally, the SPA is located adjacent to future major employment areas and provides vehicle and non-motorized transportation links to these surrounding planning areas. A series of trails, sidewalks, and bike lanes make the entire project area accessible to non-motorized transportation and the design guidelines in Chapter 5 minimize conflicts between vehicles and non-motorized transportation, such as the traffic calming measures described in Section 5.8 of the SPA Plan. A proposed transit station would be located within the Town Center and would be accessible to pedestrians and cyclists.</p>

Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Objective LUT 61:</b> Create balanced communities that can provide a high quality of life for residents.</p> <p><b>Policy LUT 61.1:</b> Adhere to the regulations established in existing GDPs and SPAs.</p> <p><b>Policy LUT 61.2:</b> Future SPAs shall focus on creating a vibrant sense of community, a vigorous economy, and a healthy environment.</p> <p><b>Policy LUT 61.3:</b> Require all future community identification signs and monuments to recognize communities as part of the City of Chula Vista.</p>	<p><b>Consistent.</b> Village 9 is consistent with this objective, because the SPA Plan includes a mixed-use town center and urban center which, at build out, will offer residential, employment, and retail opportunities providing for balanced communities and a high quality of life. The diversity of residential and commercial densities, a variety of parks, and potential residential-serving retail and other uses throughout the project area would provide a vibrant sense of community and contribute to a vigorous economy, and a healthy environment. All entryway signage would be consistent with the requirement to include "City of Chula Vista" on all community identification signs, as required by Section 3.7 of the SPA Plan, Sign Regulations.</p>
<p><b>Objective LUT 72:</b> Develop comprehensive, well-integrated, and balanced land uses within villages and town centers that are compatible with the surroundings.</p> <p><b>Policy LUT 72.1:</b> Create a series of town centers of size or intensity greater than the typical village core concept, and characterized by higher density, mixed use development, with an appropriate amount of commercial, community, and other necessary services.</p> <p><b>Policy LUT 72.2:</b> Provide for mixed land use in each Village Core and Town Center focusing on shops, plazas, parks, and housing arranged to encourage social interaction.</p> <p><b>Policy LUT 72.3:</b> Provide a variety of housing types, including single-family and multi-family, in residential neighborhoods and mixed use village centers, responding to the needs of families, singles, students, and seniors.</p> <p><b>Policy LUT 72.4:</b> Concentrate higher intensity land uses and those uses that generate pedestrian activity toward the Village Core or Town Center, with densities generally decreasing away from core areas.</p> <p><b>Policy LUT 72.5:</b> Each Village Core or Town Center must provide neighborhood commercial services within ¼-mile radius of residences and/or transit.</p> <p><b>Policy LUT 72.6:</b> Town Centers should provide community/neighborhood serving commercial services.</p> <p><b>Policy LUT 72.7:</b> Provide pedestrian and street connectivity between Villages utilizing a grid circulation pattern that offers a wider range of mobility choices and routes.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and supporting policies because the plan proposes a mixed-use urban center and town center that would accommodate higher density development that would support the remaining project area. The Town Center and Urban Center would be the commercial centers of the project area and would accommodate a wide range of commercial, residential, cultural, civic, recreational uses, and businesses that serve the daily needs of nearby residents. The Town Center and Urban Center include town squares and would also include plazas.</p> <p>The project area would be pedestrian-oriented to encourage social interaction. The SPA Plan proposes a wide variety of housing types ranging in density from low-medium to high. The variety of housing types would accommodate families, singles and those with special housing needs, including the handicapped and the elderly. Fair housing practices would be employed in the sale, rental and advertising of all units. In addition, an affordable housing program has been prepared in conjunction with this document.</p> <p>Housing density is highest in the Urban Center in the northern area of the project area, and transitions to lower density single-family residences in the southern area of the project area.</p> <p>A transit station is proposed in the mixed-use Town Center. The Town Center would provide neighborhood commercial services within ¼-mile of residences and transit access.</p> <p>As described above, the mixed-use areas would provide community/neighborhood serving services.</p> <p>The SPA Plan circulation network proposes several connections to adjacent villages. Main Street would connect Village 9 to the University site/RTP, the EUC, and Village 8 East. Otay Valley Road would connect Village 9 to the University and Village 8 East. Campus Boulevard would provide another connection to the University. Main Street would include an on-street bicycle lane and sidewalks. An off-street village pathway would run along Campus Boulevard. A regional trail is proposed along the entire length of Otay Valley Road in the project area.</p>

Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Objective LUT 74:</b> Accommodate land uses that diversify the economic base within Otay Ranch and the surrounding south San Diego County region.</p> <p><b>Policy LUT 74.1:</b> Provide sufficient land and infrastructure to accommodate commercial and industrial uses.</p> <p><b>Policy LUT 74.2:</b> Promote additional business and higher paid employment opportunities for residents of Chula Vista.</p> <p><b>Policy LUT 74.3:</b> Promote synergistic uses between the villages of Otay Ranch to provide a balance of activities, services and facilities.</p>	<p><b>Consistent.</b> The proposed Town Center, Urban Center, and Neighborhood Center would accommodate 1,500,000 square feet of commercial and office development that would provide employment opportunities. A wide range of employment land uses would be allowed in the mixed-use areas, including retail and professional services. The Urban Center and Town Center area centrally located in the northern area and center of the project area in close proximity to three adjacent villages. The SPA Plan circulation network provides vehicle, pedestrian, and bicycle connections to these villages.</p>
<p><b>Objective LUT 84:</b> Designate and allow for appropriate and carefully planned land uses that provide additional recreational activities, both public and private, and entertainment and supporting commercial activities that do not threaten the viability of sensitive biological habitats or the Otay Valley's function as a key component of the Otay Ranch Preserve.</p> <p><b>Policy LUT 84.4:</b> Prior to approval of any discretionary permit in the Otay Valley District, ensure that the proposed project is consistent with the Otay Valley Regional Park Concept Plan, and assist implementation of the Concept Plan through project features and design that support or provide access; staging areas; trails; and appropriate buffering.</p>	<p><b>Consistent.</b> The SPA Plan allows for appropriate and carefully planned land uses in Village 9, by proposing a variety of parks and recreational facilities, as well as allowing for private facilities. The mixed-use Urban Center and Town Center would be 24-hour activity centers for the project area. The Urban Center and Town Center would be located in the central and northern area of the project area, farthest from the Otay Ranch Preserve. Land uses would transition to low-density residential development in the southern area of the site and a Preserve Edge Plan would be implemented to transition into the preserve area. The proposed development areas in the SPA Plan are designated for development under the Otay Ranch RMP and the Chula Vista MSCP Subarea Plan. Access to the Urban Center and Town Center would be provided from the existing SR-125 to the west, Eastlake Parkway to the north, and Heritage Parkway to the east of the project area. Planned connections would connect to adjacent village to the west and east and would not intrude into the Preserve.</p>
<p><b>Objective LUT 86:</b> Develop a corridor of integrated, high-intensity urban uses; office and business parks; retail centers; residential uses; and a major higher educational institution along the SR-125 corridor to serve the East Planning Area and the broader south county region.</p>	<p><b>Consistent.</b> The project would develop high-intensity urban uses, office, retail, and residential development along SR-125. High-intensity uses would be provided in the Urban Center, at the proposed Main Street/SR-125 ramps to serve the East Planning Area and south county region.</p>
<p><b>Objective LUT 87:</b> Establish a distinctly identifiable corridor that creates a unique sense of place through its integration of diverse uses and land uses within a cohesive development pattern that result in interconnected uses and facilities between the District's Focus Areas and to adjoining communities, open spaces and the sub-region.</p> <p><b>Policy LUT 87.1:</b> Integrate public schools; parklands; cultural and community facilities; libraries; a higher education facility; and comparable uses that support the other primary land uses.</p> <p><b>Policy LUT 87.2:</b> Locate and design buildings, public spaces, and landscaping to create a distinct character and identity for each Focus Area, emphasizing development patterns that foster pedestrian activity and enhance community livability.</p>	<p><b>Consistent.</b> As discussed under Threshold 1, the SPA Plan includes development guidelines and design regulations to create a cohesive development pattern consistent character throughout Village 9. The proposed development in Village 9 is consistent with the GDP and includes land uses to support the future University, RTP, and EUC, and regional development. Land uses in Village 9 would decrease in density to the south to transition to single-family residential development and open space near the MSCP Preserve. Form-based code would locate buildings, public spaces, and landscaping to create a development patterns that would foster pedestrian activity and enhance community livability. The SPA Plan includes two potential elementary school sites, several types of parkland, two community purpose facility sites, and connections to the University/RTP to support proposed commercial and residential land uses.</p>

**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy LUT 87.3:</b> Connect the corridor's uses to surrounding open spaces with pedestrian and bike paths and greenbelts.</p> <p><b>Policy LUT 87.4:</b> As part of any SPA Plan within the University Village Study Area, establish a coordinated system of physical elements that interconnect and unify the University Focus Area and University Village Focus Area, including streets, grading, transit, sidewalks, streetscapes, signage, lighting, building placement and form, and architectural character.</p>	<p>Main Street would include an on-street bicycle lane and sidewalks. An off-street village pathway would run along Campus Boulevard. A regional trail is proposed along the entire length of Otay Valley Road in the project area. The regional trail would also extend south along the western edge of the project site to ultimately connect to the Otay Valley Regional Park trail system. Ultimately, the project would provide a connection to the greenbelt trail system.</p> <p>The buildings in the Village 9 Town Center in Village 9 are oriented toward the University/RTP site. Campus Boulevard has been strategically located and designed to create a strong visual and physical connection between the neighborhood park, and the future University/RTP.</p>
<p><b>Objective LUT 95:</b> Establish a pedestrian-oriented, mixed use Town Center that serves as the interface, or common meeting ground, of the University, RTP, and surrounding residential development and serves the university campus at the size and location shown on the General Plan as well as the RTP workforce.</p> <p><b>Policy LUT 95.1:</b> Accommodate retail; professional office; entertainment; cultural; restaurant; and mixed use structures that integrate housing with retail or office uses, a diversity of housing, and comparable uses that support the residential and university communities and regional technology work force.</p> <p><b>Policy LUT 95.2:</b> Allow the development of uses that directly support or complement the university, such as commercial services, office, and faculty, staff, and student housing.</p> <p><b>Policy LUT 95.3:</b> Preclude the development of regional serving, large-format retail, automobile sales and service, and comparable uses that are not supportive of intense pedestrian activity.</p> <p><b>Policy LUT 95.4:</b> Allow the development of retail and office uses in a more intense format necessary to serve the university village and related businesses that are complimentary to business and retail needs intended for the EUC.</p> <p><b>Policy LUT 95.5:</b> Locate and design the development of university and supporting uses to achieve a cohesive and integrated mixed use Town Center, in consideration of the following principles:</p> <ul style="list-style-type: none"> <li>▪ Development of a pedestrian-oriented, mixed use Town Center (e.g., a Main Street) along the transportation couplet/transit corridor that has the highest intensity of development, is directly linked to the University, RTP, and EUC, and serves as the centerpiece of identity and community character. Continuity shall be provided through urban form; the massing and scale of buildings; interconnected street network and sidewalks; and landscaping.</li> <li>▪ Development intensity shall transition and be reduced to the south, within residential neighborhoods located between the Town Center and surrounding open spaces. Because of the expected need for increased housing resulting from the university, detached single-family development shall be focused only along canyon rims adjacent to open space.</li> </ul>	<p><b>Consistent.</b> The Village 9 Town Center would connect to and be oriented toward the University. Campus Boulevard would serve as the plaza of the Town Center and provide a common meeting ground with the university. This street would be a two-lane plaza roadway that would include a special street section that allows the street to be closed to traffic and serve as a public space for community events. Campus Boulevard has been strategically located and designed to create a strong visual and physical connection between the neighborhood park, and the future University and RTP. Retail, office, entertainment, cultural, restaurant, and mixed-use structures would be accommodated adjacent to the University in the Town Center, Urban Center, and, to a limited extent, the Neighborhood Center Zones adjacent to the University site/RTP. A variety of housing types would be provided in Village 9, including mixed-use and multi-family structures, attached single-family homes, and detached single-family homes. The SPA Plan identifies the land uses that would be allowable in Village 9. Future development would be required to comply with the SPA Plan, which would preclude the development of incompatible land uses, such as big box stores and automotive dealerships, as shown in Section 3.3, Zone Standards. The highest intensity development would occur in the northern area of the site, adjacent to the proposed EUC, including retail and office uses.</p> <p>Street A would provide an urban couplet through the mixed-use Urban Center and Town Center, which would provide the highest-intensity development. The Town Center would be directly linked to the University/RTP by Campus Boulevard. Main Street, Street A, and Street B would connect Village 9 to the EUC. Main Street would also connect Village 9 to the RTP. As discussed under Threshold 1, the SPA Plan guidelines and regulations would ensure continuity through urban form; the massing and scale of buildings; interconnected street network and sidewalks; and landscaping.</p> <p>Land uses in Village 9 would transition from the high-intensity Urban Center in the north to single-family residential development in the south. The single-family residential planning areas would only be located south of Otay Valley</p>



**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)**

Applicable Policies	Evaluation of Consistency
<ul style="list-style-type: none"> <li>▪ Development intensity shall transition and be reduced to the south, within residential neighborhoods located between the Town Center and surrounding open spaces. Because of the expected need for increased housing resulting from the university, detached single-family development shall be focused only along canyon rims adjacent to open space.</li> <li>▪ A permeable edge shall be established where uses that support the University, RTP, and residential community may be developed (e.g., arts, cultural, retail, entertainment, etc.).</li> <li>▪ Structures within the heart of the Town Center area shall be located and designed to form a common “building wall” along sidewalks, with parking to the rear or in structures, to stimulate pedestrian activity. Ground floor uses shall be limited to retail sales, dining, and other purposes that are “pedestrian active.”</li> <li>▪ Develop an interconnected grid street system, with narrow streets that foster pedestrian activity.</li> <li>▪ Incorporate a consistent and well-designed program of landscape; furniture; lighting; signage; and other amenities along the Town Center’s sidewalks and public places.</li> <li>▪ Establish greenway linkages between the University Village and surrounding open spaces.</li> <li>▪ Incorporate pedestrian-oriented retail uses in the ground floor of parking structures where adjacent to public streets or pedestrian-oriented spaces.</li> </ul> <p><b>Policy LUT 95.6:</b> Design and site housing to relate to the public street as a “living room” of community identity, diminishing the visual dominance of the garage, locating them to the rear of the properties when alleys are developed.</p> <p><b>Policy LUT 95.7:</b> Promote the development of uses that may be shared by the University, RTP, and residential community, such as libraries, performing arts, galleries; cultural facilities; retail; food service; and similar uses.</p> <p><b>Policy LUT 95.8:</b> Integrate the development of a transit station that is linked to the regional transit system to serve the Town Center, RTP and University.</p> <p><b>Policy LUT 95.9:</b> Accommodate a mix of single-family attached, townhomes; apartment/condominiums; mixed residential-commercial units; and single-family detached homes, recognizing a need for higher residential densities and different types of housing to support the university at the size and location shown of Figure 5-47.</p> <p><b>Policy LUT 95.11:</b> Residential uses may be developed as single-use structures or combined with retail and office/professional uses in mixed use buildings.</p> <p><b>Policy LUT 95.12:</b> Residential development beyond the mass transit service area or beyond the Town Center shall transition to lower densities allowing variable housing types such as town homes and stacked flats.</p>	<p>Road, adjacent to open space, and would separate the open space to the south of Village 9 from the Town Center.</p> <p>The SPA Plan proposes a grid system of streets in the central area of the site that provide multiple connections to the University and a permeated frontage along Street B adjacent to the University. The Urban Center, Town Center, and Neighborhood Center would accommodate land uses to support the University, including opportunities for arts, cultural, retail, and entertainment. Development in the Town Center would be pedestrian oriented with parking to the rear or in structures. Ground floor uses would be pedestrian-active uses, include retail sales and restaurants.</p> <p>The proposed Village 9 circulation system includes an interconnected grid street system with narrow streets that foster pedestrian activity.</p> <p>The design guidelines in the SPA Plan and a Master Precise Plan would ensure a well-designed program of landscape, furniture, lighting, signage, and other amenities along the Town Center’s sidewalks and public places.</p> <p>An off-street village pathway would run along Campus Boulevard and connect to the University site. A regional trail is proposed along the entire length of Otay Valley Road in the project area and would connect to the University site/RTP. The regional trail would also extend south along the western edge of the project site to ultimately connect to the Otay Valley Regional Park trail system.</p> <p>As described above, the ground floor of the Town Center would include pedestrian-active uses. Parking would be oriented to the rear or structures.</p> <p>The SPA Plan includes guidelines and regulations for residential neighborhoods that require orientation of residences toward the public right-of-way and building placement that would diminish the visual dominance of the garage, such as placing garages in lanes rather than along the public street.</p> <p>Village 9 would accommodate uses in the Urban Center and Town Center to serve the University, RTP, and residents, including cultural and entertainment opportunities, retail, and food service.</p> <p>A transit station is proposed in the Town Center. Bus transit service is planned for Village 9 and would connect Village 9 to the University site, RTP, and other surrounding areas. Village 9 would provide a mix of single-family attached townhomes, apartment/condominiums, mixed residential-commercial units, and single-family detached homes. Residential densities would transition from high-intensity multi-family residential development in the Urban Center and Town Center, to lower density residential types in the southern area of Village 9, including attached single-family residences. Detached single-family residences would be located at the southern edge of Village 9, adjacent to permanent open spaces. Residential density of up to 45 dwelling units per acre would be accommodated in the Town Center and up to 60 dwelling units per acre in the Urban Center, both in the transit service area.</p>

**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy LUT 95.13:</b> Provide accessible shuttle service and/or local transit routes and shelters beyond the mass transit service area to serve residents of the University Village.</p> <p><b>Policy LUT 95.14:</b> Concentrate the highest residential densities that adjoin the Town Center, EUC, university, and transit corridors. The lower densities shall be located adjacent to permanent open spaces.</p> <p><b>Policy LUT 95.15:</b> Allow residential density of up to 45 dwelling units per acre within the transit service area (one-quarter mile radius from a transit station), subject to the provisions of policy LUT 95.16.</p>	
<p><b>Objective LUT 96:</b> Establish a unified community that provides public facilities, such as schools, parks, and open spaces; and promotes walking and biking, within Otay Ranch.</p> <p><b>Policy LUT 96.1:</b> Allow for the development of public or private parking structures that can be shared by multiple uses within the Town Center.</p> <p><b>Policy LUT 96.2:</b> Integrate parks, schools, community and cultural facilities, and similar uses that support the residential neighborhoods.</p> <p><b>Policy LUT 96.3:</b> Establish a system of pedestrian and bicycle paths throughout the residential areas and the Town Center that connect to the University, RTP, EUC, and adjoining open spaces.</p>	<p><b>Consistent.</b> The SPA plan is consistent with this objective and supporting policies. The SPA plan includes a land use plan which supports connectivity among the Otay Ranch Villages, parks, Town Centers, University site, RTP, and EUC. Main Street and Otay Valley Road connect to the surrounding villages. The plan includes parks, schools, CPF sites, and other residential supporting land uses. Parking structures would be allowed in the Urban Center, Urban Neighborhood, Town Center, and Neighborhood Center Zones and could be shared by multiple uses. The project provides modality choices for motorists, bikers, and pedestrians, including along Main Street and Otay Valley Road. These roadways connect to the EUC, RTP, and surrounding town centers and other commercial areas. In addition, the project will ultimately provide a connection to the Greenbelt trail system and OVRP.</p>
<b>Economic Development Element</b>	
<p><b>Objective ED 2:</b> Maintain a variety of job and housing opportunities to improve Chula Vista's jobs/housing balance.</p> <p><b>Policy ED 2.2:</b> Facilitate increased employment densities near transit stations and routes.</p> <p><b>Policy ED 2.3:</b> Pursue a diverse supply of housing types and costs, as well as a diverse supply of jobs with varying income potential, to balance local job and housing opportunities.</p> <p><b>Policy ED 2.5:</b> Encourage mixed use projects where retail, commercial and office development is developed with residential opportunities on the same lot site or in the same building.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective because the proposed land use designations create a variety of residential densities and unit types to be located in proximity to transit and employment opportunities. The SPA Plan provides a balance of job and housing opportunities within the site and within surrounding development. A variety of housing types would be accommodated, including high-density urban units and single-family homes. A variety of employment opportunities would also be accommodated, including retail and commercial opportunities, professional offices, and University support. The mixed-use Town Center includes a proposed transit station. The residential types proposed in the SPA Plan include live/work units that would include residential and retail or office use in the same building.</p>
<p><b>Objective ED 8:</b> Develop and maintain a City-wide image that promotes the City's assets.</p> <p><b>Policy ED 8.2:</b> Facilitate identification of activity areas throughout the City to aid in promoting recognizable destinations for shopping, recreating, and business.</p> <p><b>Policy ED 8.3:</b> Designate the location, function, and characteristics of primary City gateways and key corridors, and enhance them to make them attractive and inviting.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective because it would promote new activity areas in the Urban Center and Town Center. These areas would provide destinations for shopping, recreating, and business. The Urban Center would be part of the larger EUC, which is intended to be a regional destination. The design guidelines outlined in the SPA Plan would create a recognizable destination. One gateway has been identified for Village 9 on Main Street. The Main Street Gateway would include streetscaping and signage to create an attractive and inviting entrance into Village 9, the University site, RTP, and EUC.</p>

Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Objective ED 9:</b> Develop community-serving and neighborhood uses to serve residents and visitors, alike.</p> <p><b>Policy ED 9.1:</b> Provide for community and neighborhood commercial centers in areas convenient to residents. These centers should complement and meet the needs of the surrounding neighborhood through their location; size; scale; and design. The neighborhood concept of providing pedestrian, bicycle, and other non-motorized access should be encouraged.</p> <p><b>Policy ED 9.5:</b> Encourage clustered commercial uses to prevent and discourage strip development. Locate commercial uses at focal points along major arterial streets or expressways and in village core areas.</p> <p><b>Policy ED 9.6:</b> Encourage clustered, smaller scale office and professional uses along major streets and in neighborhood centers in a variety of areas dispersed throughout the community to meet the needs of nearby neighborhoods.</p> <p><b>Policy ED 9.7:</b> Encourage merchants, neighborhood associations and other groups to enhance business districts and meet the needs of adjacent neighborhoods.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and supporting policies because the mixed-use Urban Center and Town Center would include community-serving and neighborhood uses to serve residents and visitors. Commercial uses would be clustered along major streets and in focal points. In the Urban Center, commercial uses would be focused on Main Street. In the Town Center, commercial uses would be clustered along the Street A urban couplet and Campus Boulevard. Neighborhood services would also be allowable outside of the Town Center and Urban Center. A neighborhood park, pedestrian parks, and town squares are proposed, and playground and other recreational facilities would be accommodated throughout the proposed neighborhoods. Two CPF planning areas are proposed in the center of Village 9. Bicycle and pedestrian facilities would be provided on all circulation network roadways. The facilities would also provide connections to adjacent villages to make Village 9 facilities available to serve surrounding development.</p>
<b>Public Facilities and Services Element</b>	
<p><b>Objective PFS 19:</b> Provide art and culture programs, childcare facilities and health and human services that enhance the quality of life in Chula Vista.</p> <p><b>Policy PFS 19.1:</b> Promote land use designations that accommodate location of childcare facilities and other health and human services near homes, schools, work places, activity centers, and major transit facilities and routes.</p> <p><b>Policy PFS 19.3:</b> Encourage the development of childcare space within residential and commercial development projects, including new construction, replacement and reuse, to meet the needs of residents and employees.</p> <p><b>Policy PFS 19.10:</b> Continue to require community purpose facility acreage, in accordance with the Municipal Code, for the provision of childcare and other social service facilities.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and supporting policies because the project area includes the CPF designation within Village 9, which can accommodate uses such as art and cultural programs, childcare facilities, and other health and human services. The proposed SPA Plan includes two CPF planning areas proposed to be centrally located in the project area. Implementation of the SPA Plan would provide 5.0 acres of CPF in two planning areas. The balance of the CPF requirements for Village 9 (10.2 acres) would be provided in the manner allowed by the CPF Ordinance by the terms of that certain Land Offer Agreement dated April 17, 2008. The Urban Center and Town Center also provide opportunities for a variety of art and cultural programs, such as events in the town squares. Childcare facilities and human services are allowable uses in the mixed-use areas as well as the lower-density residential neighborhoods.</p>
<p><b>Objective PFS 20:</b> Develop a cultural arts center in Chula Vista.</p> <p><b>Policy PFS 20.3:</b> Encourage the installation of art pieces in publicly owned spaces and require developers to pay fees or provide art pieces that serve to enhance an individual project and contribute to the appearance and vitality of the development.</p>	<p><b>Consistent.</b> The SPA Plan promotes the use of public art in public areas of the Urban Center, Town Center, and Urban Neighborhood Zones, and community use facilities, such as parks.</p>

**Table 5.1-2 Project Consistency with Applicable General Plan Land Use Policies (continued)**

Applicable Policies	Evaluation of Consistency
<b>Growth Management Element</b>	
<p><b>Objective GM 2:</b> Provide adequate and sustainable fiscal base.</p> <p><b>Policy GM 2.1:</b> Achieve and maintain a balance of land uses within the city that assures residential development is complemented by expanded local employment opportunities, retail and commercial services, and recreation and entertainment venues; and that the city-wide mix of land uses provides fiscal balance between those that produce revenues and those that require public expenditures.</p> <p><b>Policy GM 2.2:</b> Require a fiscal impact analysis to be conducted for major development projects that documents the project’s effects upon the city operating budget over time.</p>	<p><b>Consistent.</b> The Village 9 SPA Plan would accommodate 1.5 million square feet of commercial/retail employment opportunities concurrently with residential development. The PFFP includes a Fiscal Impact Analysis (FIA) identifying public expenditures and revenues associated with the project. The FIA for Village 9 indicates that the project would be net positive at buildout. Therefore, the provision of 1.5 million square feet of commercial/retail employment provides for an adequate and sustainable fiscal base.</p>
<p><b>Objective GM 3:</b> Create and preserve vital neighborhoods.</p> <p><b>Policy GM 3.3:</b> Assure that all new and infill development within existing urban areas pays its proportional share of the cost for urban infrastructure and public facilities required to maintain the Threshold Standards, as adopted for its area of impact.</p> <p><b>Policy GM 3.8:</b> Encourage the creation of vibrant and varied neighborhoods and a diversity of housing types, including, housing affordable to a range of income groups, consistent with housing element objectives.</p>	<p><b>Consistent.</b> The SPA Plan proposes a variety of neighborhoods and a diversity of housing, from high-density in the Town Center, to single-family residences in the Neighborhood Edge Zone. The SPA Plan includes an affordable housing plan that would supply approximately 400 units for low and moderate-income households, and a PFFP to identify the applicable funding mechanisms to maintain public services and utilities in the project area.</p>

**3. Otay Ranch General Development Plan**

Table 5.1-3 compares the SPA Plan for Village 9 to the land use policies of the Otay Ranch GDP. GDP policies that pertain to a specific environmental issue, such a transportation or noise, are addressed in the applicable environmental issue section (Section 5.2 through 5.16). The SPA Plan would be consistent with applicable land use objectives and policies of the GDP. This land use impact would be less than significant.

**4. Zoning Code (Zoning Designation)**

Table 5.1-4 compares the project to existing P-C zoning regulations (CVMC Section 19.48.010 A). The P-C zone requires the preparation of an SPA plan. The proposed SPA plan and TM would comply with the purpose of the P-C zone because it implements an orderly preplanning for the long-term development of Village 9 through the implementation of approved site utilization plans and form-based code, as described in Section 3.3.1.A, Development Concept. Village 9 has been planned using transects to provide organization for development that focuses activity within the Town Center, transitioning into residential opportunities and rural open space at the edges. The form-based code in the SPA Plan would implement regulations and standards that focus on the physical relationships between buildings, streets, and public spaces. This approaches the development of land by regulating the form, character, and street appearance of a building to focus attention on the public presentation of buildings, and creating a public setting that is comfortable for pedestrians. This approach also provides design standards for landscape zones, open space and recreational areas, lighting, parking areas, and signage. The project is also consistent with general regulations applicable to the P-C zone in that Village 9 exceeds 50 acres in size and is held under a single ownership. Therefore, the proposed project is consistent with the zoning code and land use impacts would be less than significant.

**Table 5.1-3 Comparison of the Village 9 SPA Plan with the Applicable GDP Goals**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 1, Section B: Goals, Objectives, and Policies</b>	
<p><b>Goal:</b> Develop comprehensive, well-integrated and balanced land uses which are compatible with the surroundings.</p> <p><b>Objective:</b> Provide a well-integrated land use pattern which promotes both housing and employment opportunities, while enhancing the unique environmental and visual qualities of the Otay Ranch.</p> <p><b>Objective:</b> Provide a wide range of residential housing opportunities, from rural and estate homes to high-density multi-family projects. Provide a balanced and diverse residential land use pattern for the Otay Valley Parcel which promotes a blend of multi-family and single-family housing styles and densities, integrated and compatible with other land uses in the area.</p> <p><b>Objective:</b> Provide development patterns complementary to the adopted plans and existing development of the adjacent communities.</p>	<p><b>Consistent.</b> A diverse range of housing and employment opportunities is proposed across the site. The plan is consistent with the GDP specific directives for Village 9 to create an intensified town center (composed of mixed-use, commercial, and residential land uses within a quarter mile of a transit stop or station) and residential neighborhoods that offer a variety of housing styles and densities. The organization of the land uses within the Village 9 meets the objectives of integration and compatibility of land uses within villages and with adjacent communities. Housing and employment are combined in a mixed-use town center and urban center. The SPA Plan also supports the objective of enhancing the unique environmental and visual qualities of Otay Ranch. The grading plan is complementary to the natural topography of the site and maintains views towards open spaces. As discussed under Threshold 1, the proposed development is compatible with surrounding developed villages and consistent with the land uses planned for the site in the GDP.</p>
<p><b>Goal:</b> Environmentally sensitive development should preserve and protect significant resources and large open space areas.</p> <p><b>Objective:</b> Provide land use arrangements which preserve significant natural resource areas, significant landforms and sensitive habitat.</p>	<p><b>Consistent.</b> The SPA Plan area is designated for development and it does not contain significant natural resources. Transect planning would be applied to the site to create a gradual transition toward lower densities in areas adjacent to the Otay River Valley. Proposed development adjacent to these areas would consist of compatible uses with appropriate design, landscaping, drainage and other development standards sensitive to the environment, in accordance with the Preserve Edge Plan included in the SPA Plan. Furthermore, the portion of the site conveyed into the Preserve would be retained as open space to protect environmentally sensitive land in accordance with the MSCP.</p>
<p><b>Goal:</b> Promote villages and town center land uses which offer a sense of place to residents and promotes social interaction.</p> <p><b>Objective:</b> Organize Otay Ranch into villages and town centers, each having its own identity and sense of place.</p> <p><b>Objective:</b> The design of the Otay Ranch should promote variety and diversity at the village or town center scale, while providing a sense of continuity through the use of unifying design elements.</p> <p><b>Objective:</b> Promote a diverse range of activities and services to encourage a mixture of day/night and weekday/weekend uses.</p>	<p><b>Consistent.</b> Village 9 would provide an intensified urban center and town center. Land uses within the Urban Center and Town Center would include mixed-use commercial and high density residential, community purpose facilities, elementary school, and parks. The land uses, coupled with a set of design guidelines that control the quality and appearance of buildings and landscaping create the village identity and establish it as a recognizable place. The village will incorporate Ranch-wide design elements such as signage and landscaping to connect it with the other villages of Otay Ranch. Public open spaces such as the town squares would provide opportunities for community events. The Urban Center and Town Center are intended to be 24-hour activity areas, and the variety of allowed uses would provide a range of activities and services.</p>



**Table 5.1-3 Comparison of the Village 9 SPA Plan with the Applicable GDP Goals (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Goal:</b> Diversify the economic base within Otay Ranch.</p> <p><b>Objective:</b> Create an economic base that will ensure there is adequate public revenue to provide public services.</p>	<p><b>Consistent.</b> Village 9 would contribute to the economic base of Otay Ranch with neighborhood-serving businesses. The Urban Center and Town Center would provide significant employment centers for the area. The Urban Center and Town Center would also provide the opportunity for employers to locate jobs within walking distance of a diverse mix of housing, retail, and transit stops/stations. Mixed-use development provides clear diversification of non-residential uses in an urban setting. The PFFP included in the SPA Plan would ensure that public facilities are adequately funded concurrent with development.</p>
<p><b>Goal:</b> Promote synergistic uses between the villages and town centers of the Otay Ranch to provide a balance of activities, services and facilities.</p> <p><b>Objective:</b> Develop individual villages and town centers to complement surrounding villages/town centers.</p> <p><b>Objective:</b> Select villages/town centers to provide activities and uses which draw from surrounding villages/town centers. Uses serving more than one village, such as a cinema complex, should be located in a village core or town center that has convenient access to adjacent villages/town centers.</p>	<p><b>Consistent.</b> The SPA Plan proposes a walkable, mixed-use community. The proposed land uses would serve Village 9 and the surrounding Otay Ranch GDP area, through the establishment of recreational opportunities and 1.5 million square feet of commercial, retail, and office uses. Village 9 would provide a balance of activities, services, and facilities within the Urban Center and Town Center to serve the University/RTP and surrounding villages. The mixed-use areas would include land uses, such as retail, restaurants, etc., which will serve surrounding villages.</p>
<p><b>Part II, Chapter 1, Section D: Land Use Design, Character, and Policies</b></p>	
<p><b>1a. Village/Town Center Land Use Policies</b></p> <p><b>Goal:</b> Organize land uses based upon the village/town center concept to produce a cohesive, pedestrian friendly community. Encourage non-vehicular trips and foster interaction amongst residents.</p> <p><b>Policy:</b> Phase villages/town centers to ensure the provision of adequate facilities and services.</p> <p><b>Policy:</b> Land uses, roads and buildings shall be designed and located to encourage walking between uses and foster a pedestrian scale.</p> <p><b>Policy:</b> Encourage a pedestrian-friendly village/town center environment through the use of amenities such as shaded streets, street furniture, on-street parking, buildings fronting the streets, narrow streets, reduced design speeds, visible landmarks, entries and porches facing the street, commercial areas with zero front yard setbacks (build to line), plazas and courtyards in commercial areas, and multi-modal circulation systems.</p> <p><b>Policy:</b> To define the village core edge and to provide a greenbelt between villages cores, landscaped buffers shall be provided adjacent to arterial highways. The buffer shall vary in size, in relation to highway alignments, topography, village community character, location of proposed facilities and existing natural features. Scenic highways have an expanded buffer.</p>	<p><b>Consistent.</b> The SPA Plan incorporates the village concept, in an intensified land use pattern. All areas of Village 9 would be connected by an extensive trail and bikeway system. These pedestrian and bicycle routes reinforce a pedestrian friendly concept as well as promote the use of alternative modes of transportation. By reducing the need for an automobile, people will have opportunities to interact with their neighbors and other residents of the village as they walk or ride to their destinations. The location of medium and high-density residential, elementary school, shopping, work, entertainment and neighborhood park uses near the village core will also encourage non-vehicular trips. The SPA Plan encourages a pedestrian-friendly village/town center environment by setting standards for shaded streets, street furniture, on-street parking, buildings fronting the streets, narrow streets, reduced design speeds, visible landmarks, entries and porches facing the street, commercial areas with zero front yard setbacks (build to line), plazas and courtyards in commercial areas, and multi-modal circulation systems. The SPA Plan also includes requirements for streetscaping, including along Main Street and Otay Valley Road. The proposed circulation system includes an off-street village pathway and regional trail that would connect Village 9 to surrounding villages.</p> <p>Development in Village 9 would be phased. The provision of infrastructure would be phased with development, as discussed in Sections 5.3 (Transportation/Traffic), 5.9 (Public Services), 5.11 (Hydrology and Water quality), and 5.15 (Public Utilities). In addition, the SPA Plan includes a PFFP which identifies necessary facilities and services costs, and timing for</p>

**Table 5.1-3 Comparison of the Village 9 SPA Plan with the Applicable GDP Goals (continued)**

Applicable Policies	Evaluation of Consistency
	<p>completion to assure facilities and services are provided commensurate with demand.</p> <p>All roadways would include landscaping, including Main Street and Otay Valley Road. The proposed parks on the southern edge of the SPA Plan area would provide a buffer between the project and open space. Proposed perimeter slopes would separate the western edge of Village 9 from SR-125. The slope would include the clustering of trees and shrubs.</p>
<p><b>1b. Village Core Policies</b></p> <p><b>Policy:</b> A village core is defined by the mixed-use and medium-high land use categories as depicted within the GDP/SRP Land Use Map. A town center is defined by the town center land use designation as depicted with the GDP/SRP Land Use Map. Village cores and town centers and may contain higher intensity uses, including civic presence and community purpose facilities, village square or green, elementary school, commercial and office uses, transit stop or station, parking areas or facilities.</p> <p><b>Policy:</b> Village cores should be centrally located, within approximately one-quarter mile of the majority of a village’s population.</p> <p><b>Policy:</b> The location and form of the village core shall reflect the physical constraints of the village and the village’s relationship to surrounding land uses and the circulation system. A town center shall provide for a more defined grid system of roadways the center of which is the town center arterial. The town center arterial provides for greater support to mixed-use retail centers by accommodating high-traffic volumes yet does so in a pedestrian friendly environment. It is anticipated that these roadways will be composed of a pair of two one-way streets.</p> <p><b>Policy:</b> Community purpose facilities shall be provided in accordance with the provision of Chapter 5, Capital Facilities and Chapter 19.48 (P-C zone) of the CVMC unless otherwise permitted by City Council pursuant to the expressed terms set forth by agreement, ordinance or such other manner approved by City Council.</p> <p><b>Policy:</b> Village core and town center buildings shall not exceed four stories. Buildings constructed at lower heights may be converted to four-story buildings.</p> <p><b>Policy:</b> Locate taller buildings near the center of the village core or town center, with building heights and sizes gradually decreasing outward from the center.</p> <p><b>Policy:</b> Buildings shall have front access and orientation to streets and sidewalks. Access to parking lots shall be secondary to the street.</p> <p><b>Policy:</b> Avoid street side facades of unarticulated blank walls or an unbroken line of garage doors.</p> <p><b>Policy:</b> Building facades shall be varied and articulated to provide visual interest. Encourage street level windows and numerous building entries. Arcades, porches, bays, and balconies shall be encouraged.</p> <p><b>Policy:</b> Use landscape themes to help define village/town center character.</p>	<p><b>Consistent.</b> The proposed Urban Center and Town Center would be surrounded by multi-family residential land uses. The proposed Town Center would be centrally located within one quarter mile of the majority of proposed residences. The proposed land use plan and circulation system would support walkable communities and access to transit. The circulation system through the Town Center would include a grid of streets, including an urban couplet. The siting of the proposed Town Center reflects the GDP plan for surrounding land uses including the University, RTP, and EUC. The Urban Center is located adjacent to the RTP and EUC, and the Town Center is located adjacent to the University.</p> <p>Implementation of the SPA Plan would provide 5.0 acres of CPF in two planning areas. The balance of the CPF requirements for Village 9 (10.2 acres) would be provided in the manner allowed by the CPF Ordinance by the terms of that certain Land Offer Agreement dated April 17, 2008.</p> <p>The SPA Plan establishes a maximum height limit of four stories in the Town Center. Allowable building heights decrease further from the Town Center, and increase in the EUC. The SPA Plan includes design standards that promote orientation of buildings toward the public street and sidewalks, require parking access to be secondary to the street, avoid unarticulated blank walls on any side of buildings, encourage varied and articulated building facades, and establish landscaping themes for Village 9.</p>

**Table 5.1-3 Comparison of the Village 9 SPA Plan with the Applicable GDP Goals (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>1c. Village Core/Town Center – Mixed Use Policies</b></p> <p><b>Policy:</b> Land uses permitted within mixed use and town center categories may vary from village/town center to village/town center as the needs warrant.</p> <p><b>Policy:</b> The mixed use town center areas are contiguous pedestrian zones which includes the following activities, as listed below:</p> <ul style="list-style-type: none"> <li>▪ <b>Retail/Office Uses:</b> Uses such as, but not limited to, retail shops, professional offices, service commercial, restaurants, cinemas, health clubs, entertainment facilities, supermarkets and studios are permitted, along with attendant parking areas or facilities. Residential uses may be permitted above commercial uses. These uses should not front on circulation element roads in village cores but may be in town centers in order to activate the street scene and increase the viability of commercial uses.</li> <li>▪ <b>Schools:</b> Schools shall be located within or adjacent to the mixed use area, where population warrants. However, schools shall not be located so as to disrupt the contiguous retail uses. School sites are shown symbolically on the GDP/SRP land use map to indicate the conceptual location. The specific location of schools shall be identified at the SPA level. Residential uses are permitted, in the event the school sites shift from the mapped location.</li> </ul> <p><b>Policy:</b> Civic Presence Facilities: Each village/town center should contain one or more civic presence facilities within the village core/town center. The architecture of civic presence facility may be the hallmark of the character of the village/town center and help to create a focal point for village/town center activity. (In some cases, a commercial building could be the focal point.) Civic presence facilities may be drawn from a wide variety of uses, including but not limited to, libraries, community centers, a public plaza, town square or town hall, fire/police stations, cultural arts, public and/or private schools, churches, day care centers and commercial recreation facilities. In some instances, civic presence facilities may also be “community purpose facilities” sized in accordance with the requirements of Chapter 5, Capital Facilities and Chapter 19.48 (P-C zone) of the CVMC.</p> <p><b>Policy:</b> Encourage mixed uses throughout mixed use and town center areas, including residential or office uses above retail uses.</p> <p><b>Policy:</b> The design and location of residential areas shall complement the pedestrian friendly environment.</p> <p><b>Policy:</b> Commercial uses shall be sized to meet the day-to-day needs of surrounding villages/town centers. Uses which rely extensively upon regional markets, heavy autos or truck access are not appropriate in the village core or town center.</p> <p><b>Policy:</b> Concentrate retail uses near the transit station/stops in mixed use and town center areas. Orient mixed use and town center area activities which generate higher volumes of trips toward the transit facilities, rather than toward parking areas.</p>	<p><b>Consistent.</b> The SPA Plan includes design guidelines and regulations for the proposed Town Center to ensure the area is pedestrian-friendly, including traffic calming measures and requiring buildings to be oriented toward pedestrian facilities. A transit station would be provided in the Town Center. Retail and office uses are proposed, including a variety of allowable uses. Mixed-use residential development is also proposed for the Town Center to further promote it as a pedestrian-friendly activity center. Commercial development in the Town Center would be appropriately scaled for the development and would service residents in Village 9 and surrounding villages. “Big box” stores would not be allowed. An elementary school is proposed adjacent to the Town Center, or south of the Town Center, connected by pedestrian and bicycle facilities. The Town Center would include a town square and the SPA Plan encourages the development of additional public spaces and civic facilities. Additionally, a CPF zone is proposed for two planning areas. The SPA Plan includes landscaping requirements for Village 9.</p>

Table 5.1-3 Comparison of the Village 9 SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Policy:</b> Landscape mixed use and town center areas to create an urban feeling through the use of hardscape, tree wells, pots, street furniture, thematic light fixtures, benches, bollards, and enriched paving patterns. Town center arterials, village entry streets and promenade streets should be tree-lined with a formal landscape pattern.</p> <p><b>Policy:</b> Public access spaces, such as a plaza, town square, park, or town hall or community building, shall be provided in mixed use and town center areas. Public access spaces may be privately owned if significant public access is assured.</p>	
<p><b>1d. Village Core/Town Center Residential Policies</b></p> <p><b>Policy:</b> The town center designation allows for higher residential densities than mixed use land designations.</p> <p><b>Policy:</b> Mixed use residential with some medium-high residential uses shall be located in the village core on two or more sides of mixed-use areas.</p> <p><b>Policy:</b> Town center, mixed use and medium-high residential uses shall be characterized by higher density multi-story mixed use shopkeeper and live/work row homes, townhouses, and stacked flat residential buildings where appropriate.</p>	<p><b>Consistent.</b> Implementation of the SPA Plan would allow high-density residential uses to be located within the Urban Center and Town Center, and the Urban Neighborhood and Neighborhood Center Zones, which surround the proposed Urban Center and Town Center. Attached single-family development, such as townhomes, would also be allowed in the Neighborhood Center Zone. Lot sizes and set-backs would transition from higher density development with little setback in the Urban Center and Town Center, to larger lot homes with more set-back in the Neighborhood Center Zone.</p>
<p><b>1e. Secondary Areas Policies</b></p> <p><b>Policy:</b> Secondary areas shall be areas outside of the village core, predominately comprising residential uses.</p> <p><b>Policy:</b> Outside the village core, densities shall generally decrease with distance from the transit stop or station.</p> <p><b>Policy:</b> Limited convenience commercial may be located outside the village core or town center. These areas will be delineated at the SPA level.</p>	<p><b>Consistent.</b> The lower density residential land uses proposed in the SPA Plan would remain connected to the Town Center through pedestrian and bicycle systems, transit availability and general design measures. The SPA Plan includes reduced density residential land uses in areas adjacent to the core area. Allowable residential density decreases with distance from the Town Center. The lowest density, single-family homes would be located at the southern edge of the project site.</p>
<b>Part II, Chapter 5 – Capital Facilities, Section B – Goals, Objectives, Policies</b>	
<p><b>Goal:</b> Assure the efficient and timely provision of public services and facilities of developable areas of Otay Ranch concurrent with need.</p> <p><b>Objective:</b> Ensure that the pace and pattern of residential, commercial and other non-residential development are coordinated with the provision of adequate public facilities and services.</p> <p><b>Objective:</b> Permit development only through a process that phases construction with the provision of necessary infrastructure prior to or concurrent with need.</p> <p><b>Objective:</b> Development projects shall be required to provide or fund their fair share of all public facilities needed by the development.</p> <p><b>Objective:</b> Monitor the impacts of growth and development on critical facilities and services to ensure that necessary infrastructure is provided prior to or concurrent with need.</p> <p><b>Policy:</b> Require SPAs to prepare a fiscal impact report discussing a project's individual and cumulative effects on the fiscal wellbeing of impacted public entities and discussing a project's impacts on service/capacity levels of existing facilities.</p>	<p><b>Consistent.</b> The SPA Plan meets this goal and objectives through implementation of the PFFP that phases development with infrastructure improvements. This plan determined the project's fiscal impacts on public entities and identified the development's fair share of improvements and funding. The applicant would also participate in fair-share funding of facilities and services. According to the Chula Vista GMO, building permits would not be issued if public services would not be available to serve development.</p>

Table 5.1-3 Comparison of the Village 9 SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section D – Social Facilities</b>	
<p><b>Goal:</b> Plan sites for facilities dedicated to the enhancement of the arts at the community level that can contain indoor and outdoor facilities capable of supporting community theater, training and exhibition of art and sculpture, musical training and concerts, film and cultural festivals, public meetings, and other community events.</p>	<p><b>Consistent.</b> The SPA Plan and TM provides areas for indoor and outdoor facilities including a neighborhood park, pedestrian parks, town squares, and CPF sites. These facilities would be able to accommodate art and cultural events. In addition, the Town Center permits art galleries, studios, and similar uses.</p>
<p><b>Goal:</b> Provide adequate child care facilities and services to serve the Otay Ranch project area.</p> <p><b>Objective:</b> Identify sites for child care and pre-school facilities adjacent to or part of public and private schools, religious assembly uses, employment areas, and other locations deemed appropriate.</p>	<p><b>Consistent.</b> Childcare facilities are an allowable use in or adjacent to the mixed use, commercial, elementary school, CPF, and neighborhood park land use areas. Small family day care is also a permitted use within residential areas, provided adequate outdoor play area and other design guideline and development regulations criteria can be met. Large family day care would be allowable subject to a large family daycare permit.</p>
<p><b>Goal:</b> Ensure provision of and access to facilities which meet the health care needs of Otay Ranch residents.</p> <p><b>Objective:</b> Identify a general location within Otay Ranch for public and private health service organizations, charities, and private adult care and mental care facilities.</p>	<p><b>Consistent.</b> Senior care and health care offices and clinics are permitted uses throughout the site.</p>
<p><b>Goal:</b> Designate areas within the Otay Ranch project area for religious, ancillary private educational, day care, benevolent, fraternal, health, social and senior services, charitable, youth recreation facilities, and other county regional services.</p> <p><b>Policy:</b> Each SPA shall specifically designate land and/or space for community purpose facilities and regional purpose facilities, sufficient to satisfy community purpose facility requirements.</p>	<p><b>Consistent.</b> The mixed-use areas and the CPF will provide potential locations for these uses. Parks may also be available to share facilities with community-serving organizations. A CPF zone is proposed for two planning areas in Village 9.</p>
<p><b>Goal:</b> Ensure that Otay Ranch project area residents have adequate access to sources of governmental and private social and senior service programs.</p> <p><b>Objective:</b> Social and senior service facilities should be sited within Otay Ranch to either provide direct service access or to provide community service information to each village to educate the public regarding available services.</p> <p><b>Objective:</b> Siting of new facilities and expansion of existing social or senior services facilities will be planned to most effectively serve the clients of each social and senior service activity as part of a comprehensive social and senior delivery system.</p>	<p><b>Consistent.</b> Social and senior service needs can be met within allowable Village 9 uses throughout project site. This includes mixed use commercial, CPF sites, recreation facilities, and park land uses. Shared use may also be available with the schools.</p>
<b>Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans</b>	
<p><b>Goal:</b> Ensure that the community of Otay Ranch is served by an effective animal control program that provides for the care and protection of the domestic animal population, safety of people from domestic animals, and the education of the public regarding responsible animal ownership.</p> <p><b>Objective:</b> Participate in programs to provide animal control facilities sufficient to provide adequate shelter space per Otay Ranch dwelling unit.</p>	<p><b>Consistent.</b> Development of Village 9 would participate in city programs for provision of animal control. Private and public animal control facilities could be accommodated in the mixed-use Urban Center or Town Center.</p>



Table 5.1-3 Comparison of the Village 9 SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Goal:</b> Assure the efficient and timely provision of public services and facilities to developable areas of the Otay Ranch project area concurrent with need, while preserving environmental resources of the site and ensuring compatibility with the existing character of surrounding communities. Integrate different types of public facilities where such facilities are compatible and complementary.</p>	<p><b>Consistent.</b> This goal would be met through implementation of the PFFP, discussed in greater detail in Sections 5.9, Public Services, and 5.15, Public Utilities.</p>
<b>Part II, Chapter 8 – Safety</b>	
<p><b>Objective:</b> Provide for the continuity of government and public order.</p> <p><b>Objective:</b> Maintain public services and ensure the rapid resolution of emergencies.</p> <p><b>Objective:</b> Minimize social and economic dislocations resulting from injuries, loss of life and property damage.</p>	<p><b>Consistent.</b> Future applications for development within Village 9 would be required to utilize the recommendations of technical studies, City codes and ordinances, and other policies and regulations to plan for development that will promote the protection of life and property. Implementation of the PFFP and the GMO would ensure that public services are available to serve the development during emergencies.</p>
<p><b>Objective:</b> Prevent property damage and loss of life due to fire, crime or hazardous substances.</p> <p><b>Policy:</b> Fire protection, law enforcement and emergency services facilities shall be available prior to or concurrent with need.</p> <p><b>Policy:</b> Arrange land uses in a manner consistent with recognized health, fire, crime prevention and protection practices.</p>	<p><b>Consistent.</b> Village 9 is planned to reduce potential effects of fire through adequate water supply, street design that facilitates emergency vehicle access, fuel-modification landscape techniques, adequate location of fire facilities, and implementation of a fire protection plan. Crime prevention is addressed through optimization of community interaction and street activity and a minimization of secluded areas that could foster crime. Federal, state, and City codes and policies will be implemented and enforced to minimize potential effects of hazardous substances.</p>
<b>Part II, Chapter 9 – Growth Management</b>	
<p><b>Goal:</b> Develop Otay Ranch villages to balance regional and local public needs, respond to market forces, and assure the efficient and timely provision of public services and facilities concurrent with need.</p> <p><b>Objective:</b> Coordinate the timing of the development of Otay Ranch villages to provide for the timely provision of public facilities, assure the efficient use of public fiscal resources and promote the viability of the existing and planned villages.</p>	<p><b>Consistent.</b> Village 9 would be developed in phases that balance market forces with implementation of the facilities, as identified by the PFFP and Fiscal Impact Report.</p>
<b>Part II, Chapter 10 – Resource Protection, Conservation and Management</b>	
<p><b>Objective:</b> Provide land use patterns and protect features which result in the conservation of non-renewable energy resources.</p> <p><b>Policy:</b> Reduce the reliance for project residents to utilize the automobile, thereby minimizing automobile trips and miles traveled.</p> <p><b>Policy:</b> Encourage the provision of regional mass transit facilities within the Otay Ranch.</p>	<p><b>Consistent.</b> The proposed land use pattern of Village 9 and its relationship to surrounding land uses promotes walking and cycling as alternatives to fuel consumptive automobile use. The WCP and landscape design proposed in the SPA Plan would promote efficient water use. The Non-renewable Energy Conservation Plan promotes efficient energy use and use of renewable energy resources.</p>

**Table 5.1-4 Comparison of the Village 9 SPA Plan to the Requirements of the P-C Zone (CVMC Section 19.48)**

Code Requirement	Village 9 SPA Plan Consistency
<p><b>Section 19.48.010 A.</b> Provide for the orderly preplanning and long-term development of large tracts of land which may contain a variety of land uses, but are under a unified ownership or development control, so that the entire tract will provide an environment of stable and desirable character.</p> <p><b>Section 19.48.010 B.</b> Give the developer reasonable assurance that sectional development plans prepared by him in accordance with an approved general development plan will be acceptable to the City. Sectional development plans may include subdivision plans and/or unit development plans.</p>	<p><b>Consistent.</b> The project would be developed in accordance with an approved SPA Plan for Village 9 in accordance with the GDP. Preplanning and proposed long-term development of the project would be implemented in accordance with the form based code that would be approved as part of the SPA Plan. The code would assure that long-term development results in an environment of stable and desirable character. Provisions of the code include architectural design, performance standards, parking standards, landscaping, and prohibited uses.</p>
<p><b>Section 19.48.020 A.</b> P-C zones may be established on parcels of land which are suitable for, and of sufficient size to be planned and developed in a manner consistent with the purpose of this title. No P-C zone shall include less than 50 acres of contiguous land.</p>	<p><b>Consistent.</b> Village 9 contains approximately 323 acres of contiguous land, which exceeds the minimum area for the planned community development.</p>
<p><b>Section 19.48.020 B.</b> All land in each P-C zone, or approved section thereof, shall be held in one ownership or other unified control unless otherwise authorized by the planning commission.</p>	<p><b>Consistent.</b> Village 9, which is held under the single ownership of the OLC, meets the ownership requirement.</p>
<p><b>Section 19.48.025 A.</b> All land in the P-C zone, or any section thereof, shall provide adequate land designated as “community purpose facilities” (CPF).</p>	<p><b>Consistent.</b> Implementation of the SPA Plan would provide 5.0 acres of CPF in two planning areas. The balance of the CPF requirements for Village 9 (10.2 acres) would be provided in the manner allowed by the CPF Ordinance by the terms of that certain Land Offer Agreement dated April 17, 2008.</p>
<p><b>Section 19.48.040 B.6.d.</b> Recreational facility land uses shall not utilize more than 35 percent of the overall CPF acreage required for CPF master plan area. Sites identified for recreational facilities in CPF land districts shall be a minimum one-half acre, and shall meet the minimum development criteria outlined in CVMC 19.48.025(H). Recreational facilities proposed for CPF credit will not receive park or open space credit.</p>	<p><b>Consistent.</b> Any recreational acreage proposed by the applicant for CPF credit would be required to meet this standard.</p>

### 5. Growth Management Ordinance

The GMO requires the provision of a PFFP, Fiscal Impact Report, AQIP, and WCP for every SPA Plan to ensure that existing public services and financing for new public facilities would keep pace with new development, adequate water supply would be available to serve new development, and that a project would meet local and state air quality standards. The SPA Plan for Village 9 includes a PFFP, AQIP and a WCP, which will be considered for approval concurrently with the SPA Plan and TM. The project could not move forward without an approved SPA Plan; therefore, the project would be consistent with this requirement of the GMO.

In addition, the GMO requires that a project meet GMO quality of life threshold standards related to traffic, police and fire services, parks, schools, libraries, sewers, storm drainage, air quality, and water. The proposed project would be consistent with GMO threshold standards with respect to police service, fire service, libraries, parks and recreation, water, wastewater, drainage, and traffic with the

implementation of the mitigation measures identified in the other sections of the EIR (see Sections 5.3 Transportation, 5.9 Public Services, 5.15 Public Utilities, and 5.11 Hydrology and Drainage of this EIR).

The City standard for air quality is an annual report from the SDACPD on the impact of growth on air quality. The project would not interfere with the SDACPD's ability to prepare its annual report. As discussed in Section 5.4, Air Quality, the project would reduce its construction and operational air quality emissions to the maximum extent feasible. The City standard for schools is an annual report to evaluate school district's ability to accommodate new growth. The project would not interfere with the City's or the school districts' ability to prepare this report. As discussed in Section 5.9.3, Schools, the project includes an elementary school to serve the project, and existing high schools and middle schools can accommodate growth from Village 9. As the project would be consistent with the standards, land use impacts with respect to this ordinance would be less than significant.

### **6. Park Land Dedication Ordinance**

The Park Land Dedication Ordinance, CVMC Section 17.10.040, requires the dedication of 460 square feet developed park land per each single-family unit and 341 square feet per each multi-family unit. Under this existing coefficient, the project's 4,000 residential units would generate need for 32 net creditable acres of parkland. As discussed in Section 5.9, Public Services, Village 9 would provide a total of 23 acres of parks, including 13.4 net-credible acres of neighborhood park, 3.4 net-credible acres of town squares, and 6.2 net-credible acres of pedestrian parks. The difference between 23 acres and 32 acres (9 acres) would be provided through excess park acreage planned for Village 8 West. Village 8 West is a separate project from Village 9; however, both are currently owned and controlled by the Village 9 project applicant. The applicant is proposing to meet a portion of the Village 9 park obligation (9 acres) within the boundaries of the Village 8 West project. The applicant is proposing to dedicate parkland acreage and pay applicable parkland development fees for the development of park sites located within the boundaries of Village 9 (a total of 23 acres) and dedicate 9 acres of parkland located within Village 8 West (and pay applicable parkland development fees) thereby meeting the overall Village 9 project park obligation. Parkland obligation dedication related to Village 9, located off site (9 acres) within Village 8 West, would need to occur prior to recordation of the first map for Village 9. Village 8 West is planned to provide an excess of 9.4 net creditable parkland acres that would be applied to Village 9 so that the overall the Park Land Dedication Ordinance park obligation will be met for these two villages combined. Alternatively, the 9 acre off-site park obligation could be provided for through the dedication of parkland acreage in an alternate location acceptable to the Development Services Director.

In concert with the Park Land Dedication Ordinance (CVMC 17.10) , the City of Chula Vista Parks and Recreation Master Plan (PRMP) recognizes the practice of aggregating park acreage obligation, from various development areas, to create and site community parks (typically 30 acres and larger in size). The PRMP establishes goals for the creation of a comprehensive parks and recreation system that meets the needs of the public by effectively distributing park types and associated recreation facilities and programs throughout the city. Consistent with PRMP, the Otay Ranch GDP identifies a large scale Otay Ranch Community Park within the western sector of the Otay Ranch Otay Valley Parcel. Partially located within Villages Two, Four, and Eight West, the Otay Ranch community park represents the aggregation of park obligation from area Villages. The portion of the future community park currently located within Village Eight West represents aggregated park acreage obligation from Village 8 West and Village 9 and it is the intent of the Village 8 SPA Plan to obligate the dedication of such park acreage from Village 8 West to satisfy a portion of Village 9's park obligation as needed.

Without a mitigation measure ensuring the dedication of off-site parkland, there is a potential for impacts to parkland dedication regulations. Mitigation measure 5.9.5-6 in Section 5.9 ensures that 9.4 acres of off-site parkland would be dedicated to the satisfaction of the Director of Recreation and Development Services Director. Therefore, the project would be consistent with the Park Land Dedication Ordinance and land use impacts would be less than significant.

### **7. Parks and Recreation Master Plan**

The existing Chula Vista Parks and Recreation Master Plan does not identify any specific park facilities to serve the residents of Village 9. As discussed above, under the Park Land Dedication Ordinance, the SPA Plan includes several park facilities and would support the goals of the master plan to plan for and provide recreational facilities. Section 5.9, Public Services, includes a comparison of the SPA Plan to the applicable parks and recreation master plan policies in Table 5.9-16. The project would be consistent with all applicable policies. Therefore, the project is consistent with the adopted and proposed Master Plan. This land use impact would be less than significant.

### **8. Greenbelt Master Plan**

The segment of the Greenbelt Master Plan applicable to the SPA Plan and TM for Village 9 is the Otay Ranch Village Greenway segment. This segment presents an opportunity as a multi-use trail that would provide mobility for residents between several villages and connectivity between recreation areas in Village 9 and other future parks along the Greenbelt. The village greenway is intended to connect active and passive users and provide them with the opportunity to stop and enjoy an enhanced open space area. The greenway trail through Otay Ranch would provide a link along Wolf Canyon that would connect Salt Creek to the Otay Valley.

Under the proposed SPA Plan and TM, a multi-purpose recreational regional trail would traverse Village 9 along Otay Valley Road. The trail would also extend south along the western boundary of Village 9 to ultimately connect to the Greenbelt Trail and the Otay Valley Regional Park trail system. The trail would be open to bicycles, pedestrians, and other non-motorized modes of transportation. Connections to this trail would be provided by sidewalks throughout the project site and neighborhood trails in the single-family residential neighborhoods. These facilities connect the land uses within Village 9 as well as with the surrounding other villages. Section 5.9, Public Services, includes an analysis of the project's consistency with the Greenbelt Master Plan, including a comparison of the project to the applicable Master Plan goals and policies. As shown in this section, the project would be consistent with the standards of the Greenbelt Master Plan and would provide a greenbelt trail connecting Village 9 to the Greenbelt trail system. Therefore, land use impacts would be less than significant.

### **9. Tentative Map**

Title 18 of the CVMC requires the adoption of a TM for division and development of land into five or more parcels. Under CVMC Section 18.04.050, provisions need to be made in a TM to assure adequate access, light, air, and privacy on all parcels of property, regardless of the land use. CVMC Section 18.05.060 provides for necessary land for community facilities, including schools, parks, open space, playgrounds, and other required public facilities.

A TM is proposed in combination and concurrently with the proposed SPA Plan. The Village 9 TM provides detailed boundaries, lot lines, street cross sections, and layout, location of utilities and storm drains, and preliminary grading that will serve as the base for final maps and grading and improvement plans. The design guidelines and regulations in the SPA Plan would ensure quality development, including providing adequate access, light, air and privacy. The SPA Plan includes a multi-modal

transportation network to serve development and provide connections to the surrounding area. Lighting and privacy guidelines and regulations are included for all development areas. Public and private open spaces would be located throughout the project area to provide access to open air areas.

The SPA Plan and TM provides necessary land for community facilities, including schools, parks, open space, playgrounds, and other required public facilities. The TM is required to be reviewed by the Director of Public Works to assure compliance with regulations applicable to public and private utilities, streets, and respective rights-of-way and corridors. The TM is also required to be reviewed by the Development Services Director (or their designee) to assure compliance with regard to the number, size, and configuration of lots to be created and the alignment and width of streets and corridors. The project could not move forward without an approved TM; therefore, the project would be consistent with the TM requirements, and land use impacts would be less than significant.

#### **10. Brown Field Airport Land Use Compatibility Plan**

The project's consistency with the Brown Field ALUCP is described in detail in Section 5.5, Noise, and Section 5.13, Hazards and Hazardous Materials. As discussed in Section 5.5, Village 9 is not located within the 60 dBA CNEL noise level contour for Brown Field; therefore, the proposed land uses are compatible with the noise levels generated by the airport. As discussed in Section 5.13, Village 9 is located within the FAA height notification boundary, Part 77 Airspace Surfaces, and Airport Overflight Notification Area for residential development, and Review Area 2 of the Airport Influence Area, where development could potentially obstruct the flight approach paths for Brown Field. Due to the height limitations established in the SPA Plan, it is not anticipated that development of the tallest structures would result an obstruction to air traffic. However, because the project site is subject to overflights that are audible on the project site, and because Village 9 is located within the FAA Height Notification Boundary and Airport Overflight Notification Area, proper disclosure to future residents and notification in compliance with the Brown Field ALCUP is required to ensure land use compatibility. Mitigation measures 5.13-2 through 5.13-4 would ensure compliance with the Brown Field ALUCP and reduce potential land use compatibility impacts to a less than significant level.

#### **11. Otay Valley Regional Park Concept Plan**

Village 9 is located north of the "Heritage Road (Paseo Ranchero) to Otay Lake Vicinity" segment of the Otay Valley Regional Park Concept Plan. The concept plan encourages private development that occurs within or adjacent to the regional park to provide linkages with regional park trails and, as appropriate, to provide open space, recreational facilities, staging and viewing areas in conjunction with the park. Village 9 is not directly adjacent to the Otay Valley Regional Park; however, it does propose a trail that extends south from the project site and may eventually connect to the proposed regional trail system. Policies for the Heritage Road (Paseo Ranchero) to Otay Lake Vicinity segment include creation of the Otay Ranch Preserve and preservation of wildlife corridors between Poggi and Wolf Canyons and the Otay Valley Regional Park. As discussed in Section 5.6, Biological Resources, Village 9 would retain four acres of Preserve on the project site. The Otay River is the main east-west habitat linkage in the project vicinity. Implementation of Village 9 would not interfere with wildlife movement over the long-term. Therefore, implementation of the SPA Plan and TM would be compatible with the applicable portions of the concept plan, and land use impacts would be less than significant.



### **C. Threshold 3: Conflict with any applicable habitat conservation plan or natural community habitat conservation plan.**

The Chula Vista MSCP Subarea Plan and the Otay Ranch RMP are the habitat conservation and community habitat conservation plans applicable to Village 9. For development projects located within Otay Ranch, the MSCP Subarea Plan relies on the preserve design and policies contained in the Otay Ranch RMP as the framework for conservation and management of biological resources within Otay Ranch Preserve. The proposed SPA Plan is considered a covered project under the MSCP Subarea Plan. This means that the areas proposed to be preserved (100 percent conservation areas) would be dedicated to the city as a preserve, as part of the development approval process for covered projects. As it pertains to the project, lands will be conveyed to the Preserve in accordance with the RMP.

As discussed in greater detail in Section 5.6, Biological Resources, the design of Village 9 is consistent with the Chula Vista MSCP Subarea Plan and the Otay Ranch RMP through specific adherence to conditions of coverage and mitigation/conveyance requirements for covered projects, as defined in Section 7.6 of the Chula Vista MSCP, and the Otay Ranch RMP. The Otay Ranch RMP established performance standards for achieving an 11,375-acre Otay Ranch open space preserve. Compliance relies on progressive acquisition, or funding for acquisition, of the designated Otay Ranch preserve areas with each development approval. The project would have an indirect, long-term, potentially significant impact related to biological resources management unless the Otay Ranch regional open space is preserved proportionally and concurrently with development. Future final maps will be required to convey open space in accordance with the RMP at a rate of 1.188 acres for each acre of development area. The anticipated conveyance obligation for Village 9 is approximately 238 acres; however, final conveyance calculations shall be determined by the City Engineer based on final map design. All off-site facilities located within the preserve are designed to minimize impacts to covered habitats and species by following the MSCP Siting Criteria.

The development of Village 9 would be located within the area designated for development under the Otay Ranch RMP and the Chula Vista MSCP Subarea Plan, with the exception of the off-site improvement area, which would consist of construction of a sewer lateral and storm drain pipeline, and associated utility access road. Land uses within the Preserve (including access roads and infrastructure) would be considered compatible with the Chula Vista MSCP Subarea Plan if they would be compatible with the Facilities Siting Criteria contained in Section 6.3.3.4 of the Chula Vista MSCP Subarea Plan. Compliance with the Facilities Siting Criteria ensures that the facilities located within the Preserve have been located within the least environmentally sensitive areas and that impacts to the Preserve have been minimized to the maximum extent practical. The discussion in Section 5.6, Biological Resources, provides an analysis of the Facilities Siting Criteria relative to the MSCP Subarea Plan component of Village 9 and an analysis of the project's consistency with the Otay Ranch RMP.

The infrastructure that would traverse the Preserve is consistent with the requirements and criteria of the Chula Vista MSCP Subarea Plan and would not conflict with the adopted MSCP. The MSCP siting criteria were developed for the implementation of planned and future facilities within the Preserve, including infrastructure associated with Village 9. The proposed facilities would not significantly impact MSCP narrow endemic species with implementation of the mitigation measures 5.6-1 through 5.6-19 identified in Section 5.6, Biological Resources. These measures would implement the conservation strategies of the Chula Vista MSCP Subarea Plan. Additionally, implementation of the Preserve Edge Plan, Agricultural Plan, and Fire Protection Plan would ensure the development in Village 9 would be consistent with the Otay Ranch RMP. Therefore, potential land use impacts under this threshold would be considered less than significant.

## 5.1.4 Level of Significance Prior to Mitigation

### A. Land Use Compatibility

A significant land use compatibility impact would occur if the on-site City of San Diego water lines would not be relocated before development of Village 9.

### B. Conflicts with Land Use Plans, Policies, and Regulations

No significant impacts related to the conflicts with land use plans, policies, and regulations have been identified for implementation of the SPA Plan and TM for Village 9.

### C. Conflicts with HCPs or NCCPs

No significant impacts related to HCPs or NCCPs have been identified for implementation of the SPA Plan and TM for Village 9, other than significant impacts identified in Section 5.6, Biological Resources. Implementation of the mitigation measures identified in this section would reduce all potential land use impacts to a less than significant level.

## 5.1.5 Mitigation Measures

### A. Land Use Compatibility

5.1-1 **Waterline Agreement.** Prior to approval of the first final map, the applicant shall provide evidence, satisfactory to the City Engineer, that the:

- i. Applicant has entered into an agreement with the City of San Diego to relocate the City of San Diego waterlines within Village 9 to a location approved by both the City of San Diego and the City of Chula Vista.
- ii. City of San Diego has abandoned any water main easements not needed as a consequence of the relocation of the City of San Diego waterlines within Village 9.

5.1-2 **Waterline Relocation.** Prior to issuance of the first grading permit within Village 9, the Applicant shall relocate the City of San Diego waterlines to the satisfaction of the City of San Diego and the City of Chula Vista.

### B. Conflicts with Land Use Plans, Policies, and Regulations

No mitigation measures are required.

### C. Conflicts with HCPs or NCCPs

No additional mitigation measures are required other than those listed in Section 5.6 Biological Resources.

## **5.1.6 Level of Significance After Mitigation**

### **A. Land Use Compatibility**

Implementation of mitigation measures 5.1-1 and 5.1-2 would reduce land use compatibility issues to a less than significant level.

### **B. Conflicts with Land Use Plans, Policies, and Regulations**

Impacts would be less than significant without mitigation.

### **C. Conflicts with HCPs or NCCPs**

Provided that the mitigation measures listed in Section 5.6 Biological Resources are implemented, impacts related to HCPs and NCCPs would be less than significant after mitigation.

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## 5.2 Aesthetics/Landform Alteration

This section describes the visual setting of Village 9 and evaluates the potential for changes in aesthetic character due to implementation of the SPA Plan and TM. This section analyzes the potential loss of existing visual resources, effects on views, visual compatibility with surrounding land uses, landform alteration, and light and glare impacts. Potential indirect impacts of lighting on biological resources are discussed in Section 5.6, Biological Resources.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). Section 5.2, Landform Alteration/Visual Quality, of the SEIR analyzed the existing conditions, potential impacts, and mitigation measures related to the proposed land uses for the GPA/GDPA area, including Village 9. The SEIR identified a potentially significant impact related to visual character because the existing characteristic rolling hills would be altered. The SEIR concluded that the impact would remain significant until SPA plans are adopted to apply design specifications to promote protection of the visual character of the area. The analysis and discussion of aesthetics and landform alteration contained in the SEIR are incorporated by reference.

### 5.2.1 Existing Conditions

#### A. Regulatory Framework

##### 1. State

##### a. California Scenic Highway Law

The California Scenic Highway Law of 1963 created the California Scenic Highways Program to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of adjacent lands. The State Scenic Highway System includes a list of highways that are either officially designated as scenic highways by the California Department of Transportation (Caltrans) or eligible for designation. Scenic highway nominations are evaluated using the following criteria:

- The proposed scenic highway is principally within an unspoiled native habitat and showcases the unique aspects of the landscape, agriculture, or man-made water features;
- Existing visual intrusions do not significantly impact the scenic corridor;
- Strong local support for the proposed scenic highway designation is demonstrated; and
- The length of the proposed scenic highway is not short or segmented.

Once a scenic highway is designated, the responsibility lies with the local jurisdiction to regulate development within the scenic highway corridor. The Caltrans Scenic Highway Mapping System does not include any officially designated state scenic routes within the project area.

##### 2. Regional

##### a. County of San Diego Code of Regulatory Ordinances Sections 59.101-59.115, Light Pollution Code

The Light Pollution Code (LPC), or the Dark Sky Ordinance (Sections 59.101-59.115), was adopted “to minimize light pollution for the enjoyment and use of property and the night environment by the citizens of San Diego County and to protect the Palomar and Mount Laguna observatories from the effects of light pollution that have a detrimental effect on astronomical research by restricting the



permitted use of outdoor light fixtures on private property.” The LPC regulates outdoor light fixtures. The LPC designates all areas within a 15-mile radius of each observatory as Zone A, with all other areas designated as Zone B. Zone A has more stringent lighting restrictions due to its proximity to the observatories, including limits on decorative lighting. Village 9 is not located within Zone A. Village 9 is outside the jurisdiction of the County of San Diego; however, the GDP requires compliance with the LPC.

### **3. Local**

#### **a. City of Chula Vista General Plan**

The Chula Vista General Plan contains objectives and policies to preserve and enhance aesthetic resources. Specifically, the Land Use and Transportation Element includes policies that strive to protect the open space network and design policies for features such as views, entryways, gateways, streetscapes, buildings, parks and plazas. The General Plan identifies valued scenic vistas and open space throughout the City. Resources in the project vicinity include the Otay River Valley and the Chula Vista Greenbelt, which is the backbone of the City's open space and park system, which consists of a 28-mile open space system encircling the city.

The Chula Vista General Plan selects primary gateway locations throughout the city. See Figure 5-6 of the General Plan, Entryways and Greenways. Gateway areas are intended to be well-designed, attractive, and to exhibit a special character to enhance the city's image and pride. One of the gateway locations, the Main Street Gateway, is located within Village 9. The Main Street Gateway extends eastward from SR-125 to Eastlake Parkway, and would provide access to the University Campus Focus Area.

Scenic roadways, where views of unique natural features and roadway characteristics, including enhanced landscaping, adjoining natural slopes, or special design features make traveling a pleasant visual experience are also designated in the General Plan (see Figure 5-4 for the General Plan). Hunte Parkway is designated as a scenic roadway, including the portion that would extend westward through the project site (renamed Main Street). Hunte Parkway currently extends from East H Street north of the project site to the northeastern project boundary. General Plan Policy LUT 13.4 provides guidance for projects located adjacent to scenic routes.

#### **b. Otay Ranch General Development Plan**

According to the Otay Ranch GDP, the major Otay Ranch visual elements include the Otay Lakes, which are man-made reservoirs, canyons, and steep mountain peaks. Otay Mountain, Jamul Mountain, and San Miguel Mountain are prominent peaks located on and off site that are visible from the Otay Ranch Area. Otay Mountain and San Miguel Mountain are located outside of the Otay Ranch area. GDP policies mirror the aesthetic policies of the General Plan and require that activities should flow out from buildings onto public spaces to create vitality and excitement along the street front. In addition, GDP policies encourage the incorporation of public art into individual buildings or building clusters.

The GDP includes objectives to retain the natural character of landforms in Otay Ranch and the Otay Valley Regional Park, preserve steep slopes, relate development to topography and natural features, and preserve views of major physical features. The GDP includes design standards addressing architectural massing, grading, landscaping, and retaining walls to minimize adverse visual effects. The Otay Ranch GDP also includes a goal to preserve dark skies to allow for continued astronomical research and exploration to be carried out at the county's two observatories. Policies supporting this goal require

compliance with the City lighting standards and outdoor lighting fixtures to be shaded on top so that all light will shine downward.

### **c. Otay Ranch Phase II Resource Management Plan**

The GDP and Resource Management Plan (RMP) established a Ranch-wide standard that requires preservation of at least 83 percent of the steep slopes (slopes with gradients of 25 percent or greater) within Otay Ranch, including the Otay Valley Parcel (City of Chula Vista) and the Proctor Valley/San Ysidro Parcels (County of San Diego). As part of the Otay Ranch GDP PEIR, a Ranch-wide steep slope analysis was completed using then available USGS topography. The results of the original steep slope analysis (circa 1989) concluded that Otay Ranch contained 7,651 acres of land with gradients of 25 percent or greater, of which 6,350 acres (83 percent of 7,651 acres) shall be preserved, and not more than 1,301 acres could be impacted for the entire Otay Ranch.

The Phase 2 RMP requires that the Ranch-wide preservation standard be reviewed and monitored as additional Otay Ranch villages are processed to ensure that the 83 percent Ranch-wide goal of steep slopes preservation is maintained. While maintaining consistency with the Otay Ranch GDP standard for steep slopes, flexibility regarding the acreages cited in the RMP are allowed provided that each SPA Plan demonstrate that the project's actual impacts to steep slopes will not preclude subsequent entitlements from achieving the Ranch-wide preservation standard. As stated in RMP 2, deviations from the acreages cited in the RMP are permissible provided that "...the SPA demonstrates that the excess encroachment will not jeopardize the ability of all subsequent entitlements to achieve the Ranch-wide 83 percent preservation standard." (p. 160, Otay Ranch Phase 2 RMP, Ranch-wide Studies, Plans and Programs).

A subsequent Ranch-wide analysis was performed in 2012 to verify current conditions and the accuracy of the steep slope assumptions contained in the in the Otay Ranch GDP PEIR. Based on the updated modeling results, Otay Ranch contains 9,821 acres of land with gradients of 25 percent or greater. The difference between the current steep slope acreages and the original calculations is attributed to advancements in computer aided data collection and processing, and the availability of detailed topographic data.

To date, development entitlements approved within Otay Ranch have impacted approximately 255 acres of steep slopes (approximately 3 percent) within the Otay Valley Parcel; therefore, 9,566 acres (approximately 97 percent) of steep slopes remain in Otay Ranch. No impacts to steep slopes have occurred within the Proctor Valley/San Ysidro Parcels.

### **d. City of Chula Vista Municipal Code Chapter 17.28, Unnecessary Lights**

The Chula Vista Unnecessary Lights Ordinance outlines restrictions and limitations on the use of lighting in or near the residential zones to prevent lighting from creating a nuisance to residents. The ordinance recognizes that lighting is widely used in commercial or industrial zones for the purpose of advertising and security and that such lighting is essential to the conduct of many commercial or industrial enterprises. The ordinance requires light shielding on commercial and industrial lighting near residences; prohibits residential lighting that spills over to adjacent properties during nighttime hours; and requires multi-family residential, commercial, and industrial developments to submit lighting plans to the City. Lighting from any use which is unshielded or so directed as to focus the beams directly upon adjacent residential property is prohibited at all times.

**e. City of Chula Vista Municipal Code Section 19.66.100, Glare**

The City performance standard for glare prohibits direct and sky-reflected glare, whether from floodlights or from high-temperature processes (such as combustion or welding), that is visible at the lot line of the use producing the glare.

**B. Existing Aesthetic Character**

**1. Landform and Drainages**

The land within Village 9 is dominated by open rolling hills. The topography in the northern area of the site is generally flat, with a surface elevation of approximately 620 feet AMSL. The site slopes southward towards the Otay River Valley. Typical elevations in the southern portion of the site are around 320 feet AMSL; however, the southern area includes several natural drainage channels where runoff flows towards the Otay River.

Views of key landform features such as Rock Mountain to the west, Otay River Valley to the south, and the San Ysidro Mountains to the east are available from the site. The Otay River is located approximately 0.6 mile south of the site and is visible from within the project area.

The areas to the east and west consist of similar rolling hills and drainages. A steep canyon is located to the west of the site, and bluffs abutting the Otay River Valley are located to the south. The ground elevation reaches its lowest point in the river valley at around 250 feet AMSL, and then slopes back up across the valley to the Otay Mesa nearing 400 feet AMSL. North of the project site also consists of rolling hills with elevations up to 600 feet AMSL, but most have been graded and developed. Distant mountains are located to the south, east, and southwest of Village 9.

**2. Vegetation**

Non-native grassland, chaparral, coastal sage scrub, and maritime succulent scrub vegetation is found on the project site and in the surrounding areas. Along the river alignment, vegetation consists of larger shrubs and is more riparian in nature. North of Birch Road and northwest of the project site is developed. Vegetation in this area consists of landscaping, such as trees along roadways and lawns.

**3. Steep Slopes**

The GDP considers steep slopes to be visual resources. Approximately 57 acres of natural slopes with gradients greater than 25 percent exist on Village 9. The entire project slopes to the south; however, the steepest slopes are located in the southern portion of the site along the drainages, and manufactured slopes on site associated with the construction of SR-125.

**4. Development**

Partially developed areas are located to the northwest and northeast. SR-125 traverses the canyon immediately to the west of the project site. In accordance with the General Plan and Otay Ranch GDP, future development is planned in the west, north, and east. Plans include mixed-use and residential development in Village 8 East, mixed-use development in the EUC, the RTP, and a University development in Village 10. The area south of Village 9 will be preserved as open space.

## 5. Lighting and Glare

Two astronomical observatories are located within 50 miles of the project site: Mount Laguna Observatory, located approximately 20 miles from Village 9 and Palomar Mountain Observatory, located approximately 37 miles north. Both of these observatories use large telescopes and conduct astronomical and other related research. These observatories are located in the unincorporated County of San Diego. Light pollution within a 15-mile radius of these observatories is strictly controlled through implementation of the County of San Diego's Light Pollution Code (Title 5, Division 9), which includes less restrictive measures for areas outside of the 15-mile radius. Village 9 is outside the jurisdiction of the County of San Diego; however, the Chula Vista Unnecessary Lights Ordinance outlines restrictions and limitations on the use of lighting in or near the residential zones to prevent lighting from creating a nuisance to residents. These lighting restrictions also benefit the observatories.

Currently, Village 9 and the areas adjacent to the project site are undeveloped and not lit at night. Additionally, these areas do not contain expanses of material that would result in glare. Beyond the proposed EUC site is residential and commercial development that has nighttime lighting. The city of Chula Vista, including the Otay Ranch area, is urbanized and currently generates substantial night lighting. The buildings in the surrounding area include windows and other glass or metal expanses that can result in localized glare.

### C. Viewers

Viewer exposure is typically assessed by measuring the number of views exposed to the resource, type of viewer activity, duration of their view, the speed at which the viewer moves, and the position of the viewer. Viewers that are exposed to the visual resources on and around the project site include pedestrians, cyclists, and motorists.

The main group of off-site viewers includes residents of the Otay Ranch community. Due to intervening topography and structures, Village 9 is not visible from the residences to the north. A portion of the northern area of the project site is partially visible from the residential development to the northeast of the project site along Hunte Parkway to Olympic Parkway. Motorists along SR-125, Eastlake Parkway, and Hunte Parkway are able to partially view the site. Distant views of the project site are available looking north from Otay Mesa.

### D. Key Views

Because it is not feasible to analyze all the locations from which the project would be seen, it is necessary to select a number of key public view points (KVP) that would most clearly display the visual effects of the project. Figure 5.2-1 illustrates the locations of six representative views of Village 9. KVPs 1 to 4 are from within the project site and illustrate the existing on-site conditions. KVPs 5 and 6 are from off-site locations that depict views of the site from surrounding areas.

## 5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the 1993 Program EIR for the GDP (EIR 90-01), impacts regarding aesthetics and landform alteration would be significant if the project would:

- **Threshold 1:** Have a substantial adverse effect on a scenic vista.
- **Threshold 2:** Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic highway.

- **Threshold 3:** Substantially degrade the existing visual character or quality of the site and its surroundings.
- **Threshold 4:** Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
- **Threshold 5:** Alter areas of sensitive landforms and grade steep slopes that may be visible from future development and roadways that negatively detract from the prevailing aesthetic character of the site or surrounding area.
- **Threshold 6:** Be inconsistent with General Plan, GDP, or other objectives and policies regarding visual character, thereby resulting in a significant physical impact.

### 5.2.3 Impact Analysis

#### A. Threshold 1: Have a substantial adverse effect on a scenic vista.

The analysis of the project's potential impacts on views considers the changes in key views to and from Village 9, discussed below. The analysis includes anticipated changes to key views, including the existing and future views from the proposed Main Street alignments. Key views 1 through 4 represent on-site views within the project site. Key views 5 and 6 provide views of the site from existing off-site areas. The discussion of individual view points is followed by a general discussion of views from SR-125.

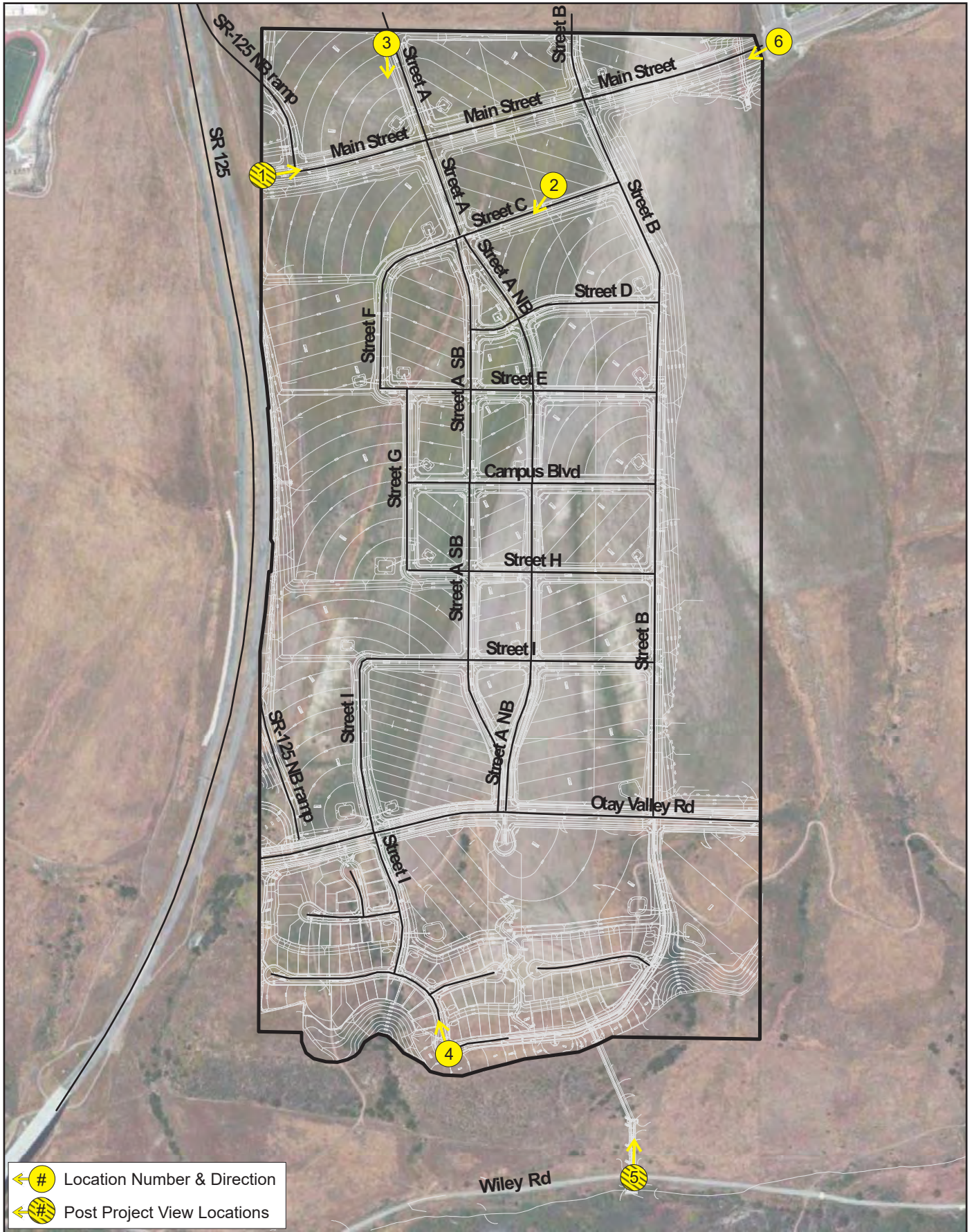
##### 1. On-site Views

###### a. Key View Point 1

KVP 1 depicts the view east from the northwestern portion of the site, at the future Main Street/SR-125 Interchange, along the future Main Street alignment. This location represents a Primary Gateway as designated in the General Plan. The existing view (see Figure 5.2-2) shows the rolling hills of the project site that continue to the east of the project site. Foreground views are characterized by vegetation and rolling terrain. Midground views include vegetation and a steeper hill. Vehicle tracks are visible on the hill. Distant mountains are visible from this vantage point, including the Jamul Mountains and San Ysidro Mountains.

The post-project view from location KVP 1 includes the western gateway entry into Village 9 from SR-125, as shown in Figure 5.2-3. The extension of Main Street would traverse the site through the EUC. In the near term (shown in the top photograph), the foreground of the view includes the three eastbound lanes of Main Street, including the landscape trees in the median and along the sidewalk. The steep slope south of Main Street is also visible. This slope is discussed in further detail under Threshold 5. The landscaping would screen views of the mid- to high-rise mixed-use buildings in the Urban Center. Buildings in the Urban Center would be a maximum of 215 feet tall, as defined in the zone standards for the Urban Center in Section 3.3.9 of the SPA Plan. The background views include additional mixed-use urban center development that is visible between buildings south of Main Street. Future development on the University site/RTP would likely be visible in the background of this view, and would obstruct views to the east. However, this development is not part of the project. Compared to the pre-project conditions shown on Figure 5.2-2, the view would be altered from a natural, undeveloped landscape to one that includes urbanized forms and vegetation. Long-term views (shown in the bottom photograph) would be similar to the near-term view, except landscaping would mature and provide additional screening. The alignment of Main Street preserves views of the peak of the distant San Jamul Mountains to the east, which are clearly visible in the center of the view.





**VIEWPOINT LOCATIONS**  
**FIGURE 5.2-1**





Key View 1: View northeast from the northwestern portion of the site, along the future Main Street alignment.



Key View 2: View southwest from the northeastern area of the site.

Source: Atkins 2011

**KEY VIEWS 1 AND 2**  
**FIGURE 5.2-2**



Key View 1 Near-term: Post-project northeast view from Main Street and the western boundary of Village 9.



Key View 1 Long-term: Post-project northeast view from Main Street and the western boundary of Village 9, including mature trees.

Source: Hale Engineering 2011

**POST PROJECT VIEW FROM KEY VIEW 1  
FIGURE 5.2-3**

The future alignment of Main Street is identified as a scenic roadway in the Chula Vista General Plan. Building frontages and overall design along Main Street in the Urban Center would be subject to the City design review process in addition to compliance with SPA guidelines. The Urban Center would include hardscaped and landscaped open space areas, pathways, and enhanced sidewalk features, which are considered to provide scenic views in the General Plan Land Use and Transportation Element.

The General Plan states that a Primary Gateway into the City from a freeway should appear visually inviting, provide adequate direction to key community places of interest, and have high quality architectural design. A landscaped median, landscaping on both sides of Main Street, and sidewalks would create a visually inviting roadway. Additionally, Section 4.2.1 of the SPA plan includes a plan for the entryways into Village 9, including the Main Street Gateway. Primary entry monuments would be provided at each corner of the intersection of Main Street and Street A to identify this roadway as an entrance to Village 9. The SPA Plan also encourages direction signage to be provided throughout the SPA, include the Urban Center. Therefore, development of Village 9 would include gateway elements to identify Main Street as an entrance to the City and would be developed with a high quality visual environment. A significant impact to scenic views would not occur from this KVP.

#### **b. Key View Point 2**

KVP 2 shows a view southwest from the northeastern area of the site. This location represents a typical view that pedestrians would see internal to the development near Street C in the EUC. Currently, this view is not accessible to the public. The existing foreground view (see Figure 5.2-2) from KVP 2 is characterized by flat topography at the highest elevation in the northeast area of the site. Grasses and a dirt access road are visible. Midground views show the steeply rolling hill to the dip in elevation along the western border of the project site. The rolling hills of the Village 8 East project site are seen in the midground view. The background is characterized by Otay Mesa and distant mountains. The peak of Rock Mountain, which is considered a scenic resource in the General Plan, is partially visible beyond the rolling hills in the Village 8 East area. A portion of SR-125 is partially visible in the background south of the project. Otay River Valley is indicated by the slopes that form Otay Mesa in the background view.

Once Village 9 is developed, the view from KVP 2 would also be dominated by the Urban Center. Street C and roadway landscaping would be visible in foreground and midground views. Views would include mixed-use development buildings up to 215 feet tall, hardscaped and landscaped open space areas, and variations in building massing. The plateau seen in the foreground of the existing view would be graded to slope to the southwest. The landscaping along Street C would screen views of the Urban Center development at the bottom of this slope. The steep slope south of Street C is discussed in greater detail under Threshold 5. The project site would be graded so that the ground level of the development south of Street C would be lower than the grade of the street, which would reduce the apparent scale of the buildings due to perspective.

Development in the Urban Neighborhood and Urban Center would obstruct views of the peak of Rock Mountain from KVP 2. However, due to the variations in topography and building massing, views of Rock Mountain would be partially visible through street corridors. Proposed future development of Village 8 West and Village 8 East consistent with the GDP would likely be visible in the background of this view, and would obstruct views of Rock Mountain. However, these areas are currently undeveloped. The location of the KVP 2 site is not a designated scenic public corridor, and is not currently accessible to the public. Although views of Rock Mountain would be obscured from some vantage points compared to existing conditions, views of this resource would be available from other vantage points. This would not be a significant impact.



### **c. Key View Point 3**

KVP 3 represents a view that would be seen by pedestrians and motorists entering Village 9 from the north along Street A in the EUC. The existing view from KVP 3 (see Figure 5.2-4) is characterized by grasses that show the tilled rolling hills across the project site that generally slope to the south. The background is characterized by the partial development within Otay Mesa. SR-125 is also visible in the background, as are the mountains in the distance behind Otay Mesa. Views from this location are not currently available to the public.

The view from KVP 3 would be similar to KVP 2 in that it would be dominated by the urban landscape proposed within the EUC. Views would include buildings up to 215 feet tall, roadways, sidewalks, and associated landscaping. Therefore, an alteration of the view would not result in a significant impact.

### **d. Key View Point 4**

KVP 4 shows the view from the southwest area of the site looking northwest toward Olympian High School. This view is not currently available to the public. This view represents what residents would see internal to the development in the low to medium density residential village near Planning Area EE. Existing views of KVP 4 (see Figure 5.2-4) are characterized by disturbed grasses and the flat area at the southern plateau. The midground view includes a sloped covered in tilled and untilled grasses. The slope blocks background views within Village 9, but the lights and the Olympian High Stadium are visible in the distance background. Rock Mountain is also visible above the slope to the west.

Post-project views from KVP 4 would include single-family development in the Neighborhood Edge zone. Residences would be visible in the foreground and on the slopes in the mid-ground of the view. Views of Rock Mountain would be obstructed by development. However, views of Rock Mountain are currently obstructed by existing topography. Views of Rock Mountain from public viewpoints such as roadways would continue to be available between buildings within Village 9. Future development of Village 8 West and Village 8 East would likely be visible in the background of this view, and would obstruct views of Rock Mountain. However, these areas are currently undeveloped. Therefore, the alteration of views of from this KVP would not be significant impact.

## **2. Off-site Views**

### **a. Key View Point 5**

KVP 5 shows an off-site view north from the access road south of the site in the Otay River Valley. This location represents what a typical pedestrian would see along the future trail within the Otay Valley Regional Park south of the site. The existing view (see Figure 5.2-5) consists of the gravel access road and vegetation within the valley. The midground view shows a slight increase in elevation out of the river valley and a continuation of the vegetation visible in the foreground. Utility poles are also visible. The western hill in the background (left side of photo) is located just south of the project site. The peak of the slope where the project site begins is just visible along the top of the vegetated off-site slope (middle of photo). The eastern slope (right side of photo) is part of Village 9. All slopes are characterized by patches of vegetation and bare dirt.





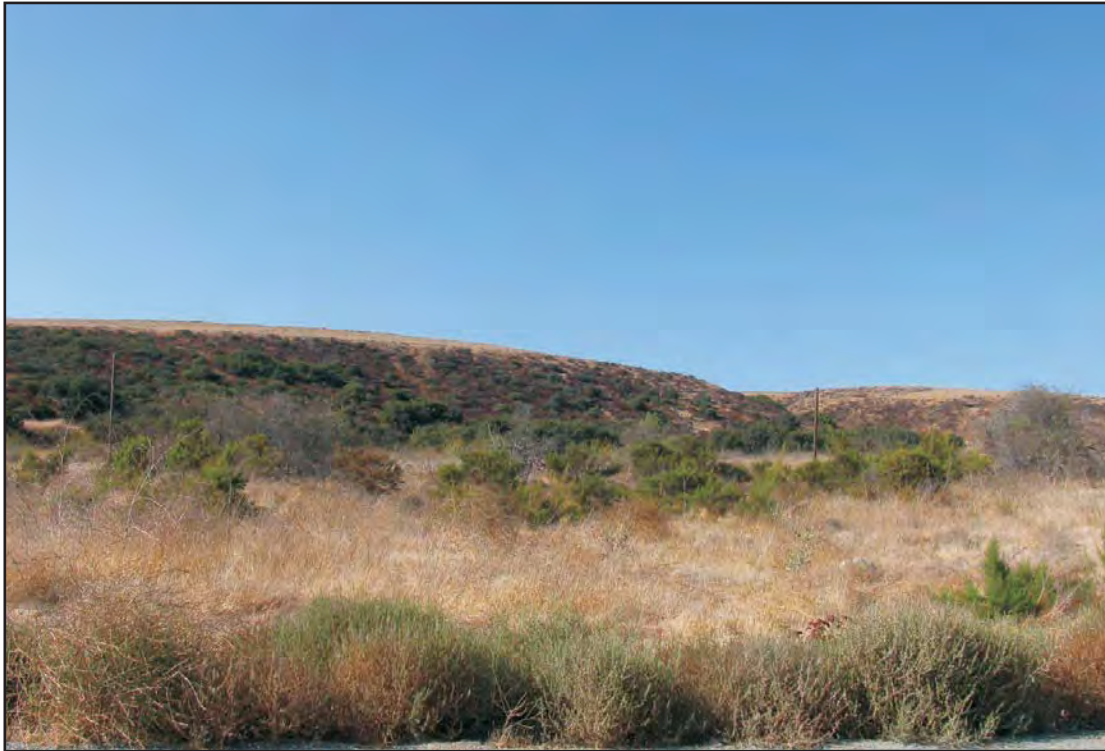
Key View 3: View south from the northern border of the site.



Key View 4: View northwest from the southern border of the site.

Source: Atkins 2011

**KEY VIEWS 3 AND 4**  
**FIGURE 5.2-4**



Key View 5: View north from the access road south of the site in the Otay River Valley.



Key View 6: View west from the easternmost edge of the project site.

Source: Hale Engineering 2011; Atkins 2011

**KEY VIEWS 5 AND 6**  
**FIGURE 5.2-5**

KVP 5 in Figure 5.2-6 shows the near-term post-project view of Village 9 from Otay River Valley following completion of the project. The proposed off-site utility corridor would be visible in the foreground and midground. The dirt portion of the easement in the midground shows a temporary scar from previous grading but would be visually compatible with the natural exposed dirt areas on the slope. The southern portion of the corridor would consist of a paved access road bordered by gravel. The existing gravel trail in the foreground would provide a transition to the paved portion of the trail. The proposed trail would include a metal gate that limits vehicle access to the corridor.

The western slope in the existing view would be graded so that only the very tops of the roofs of the single-family residential development in the Neighborhood Edge zone on the southwestern edge of development would be visible. The grading plan would raise the height of the eastern slope visible from this KVP. Consistent with Policy LUT 75.2 from the General Plan, the southern edge of development would have a well defined edge where it interfaces with the Otay Valley Regional Park, as seen in this view of the eastern slope. The manufactured slope would be landscaped consistent with the Preserve Edge Plan to be compatible with the surrounding natural vegetation.

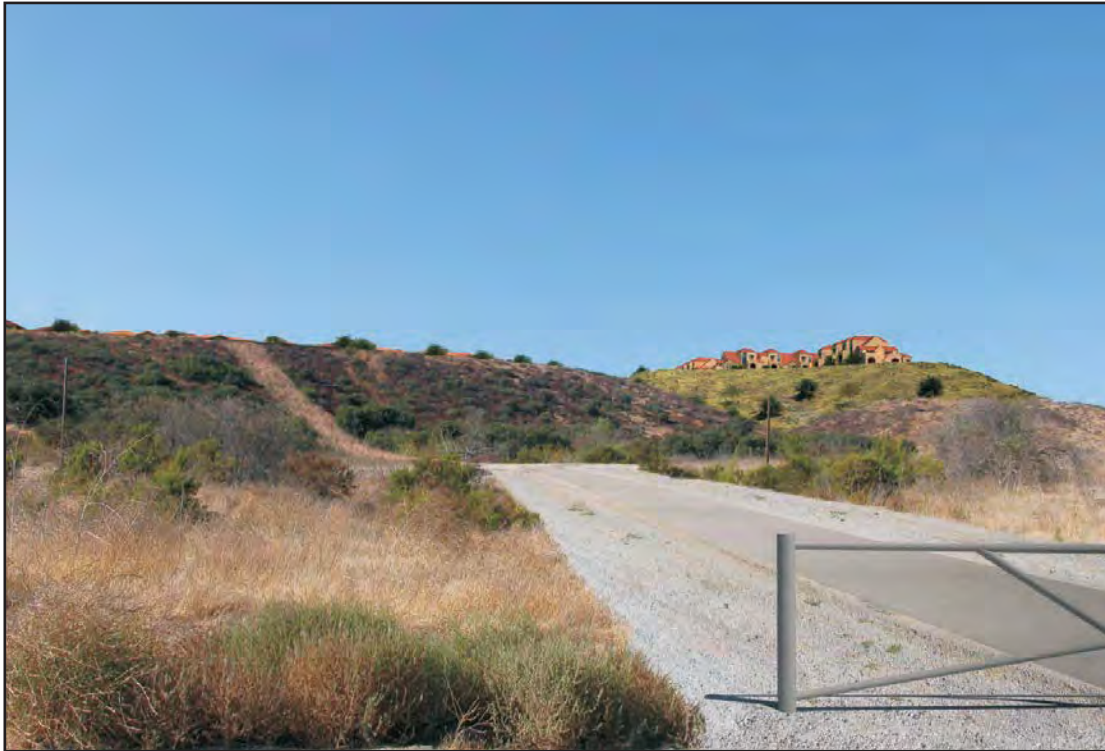
Figure 5.2-6 shows the long-term post-project view from KVP 5 after landscaping has matured. The upper (northern) portion of the utility corridor would be revegetated with native vegetation, similar to existing conditions. Mature trees on the edge of residential development would further obscure the views of the homes along the southwest project boundary. No significant public scenic views are currently available for this KVP. The proposed project would not result in a significant adverse impact to views from this KVP.

#### **b. Key View Point 6**

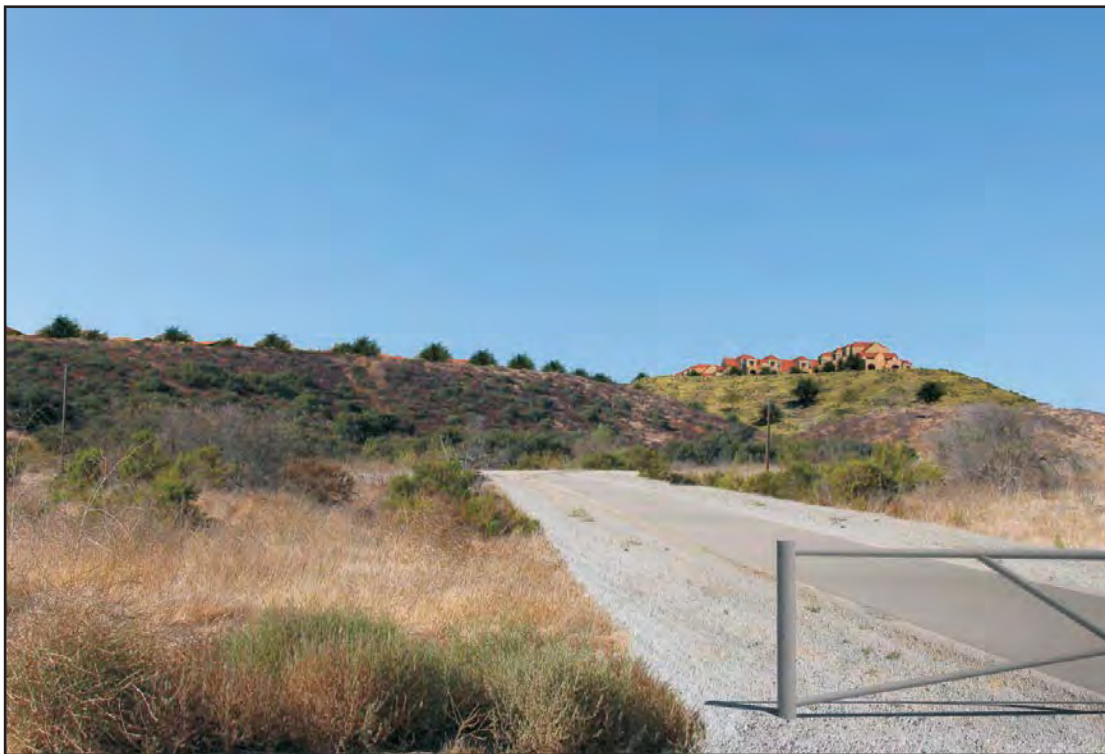
KVP 6 shows an off-site view west from the easternmost edge of the project site at the intersection of Hunte Parkway and Eastlake Parkway. This view represents the primary entry to Village 9 from the east where Hunte Parkway transitions to Main Street. The existing view from KVP 6 (see Figure 5.2-5) includes the fence at the end of Hunte Parkway that restricts access to the project site. Shrubs are visible on either side of the fence. The background view is a grassy slope on the Village 9 site that is partially graded on the south side.

Once the project is developed, Hunte Parkway would be extended into the project site as Main Street. Main Street would include a landscaped median and landscaping on either side of the roadway. The shoulders of the roadway would be graded to a steeper slope with a 2:1 grade. The steep slope south of Main Street is discussed in greater detail under Threshold 5. All manufactured slopes on the project site would be planted with large trees and shrubs. Plants would be clustered to partially screen or soften views of manufactured slope areas. The right (north) side of the view would include a Town Square park, and the left (south) side of the view would include development within the future University site. Beyond the Town Square, buildings within the Urban Center would be visible. The view from this location is currently limited to what is seen in Figure 5.2-5; public access to the site beyond the fence is restricted. Once the project is developed, the extension of Hunte Parkway westward as Main Street would open up the scenic view corridor for motorists and provide access to the public. The project would not result in a significant adverse impact to views from KVP 6, and may result in a beneficial effect to scenic views when the public is provided access to the site.





Key View 5 Near-term: Post-project view from Otay River Valley.



Key View 5 Long-term: Post-project view from Otay River Valley, including more mature trees.

Source: Hale Engineering 2011

**POST PROJECT VIEW FROM KEY VIEW 5  
FIGURE 5.2-6**

**c. Olympian High School**

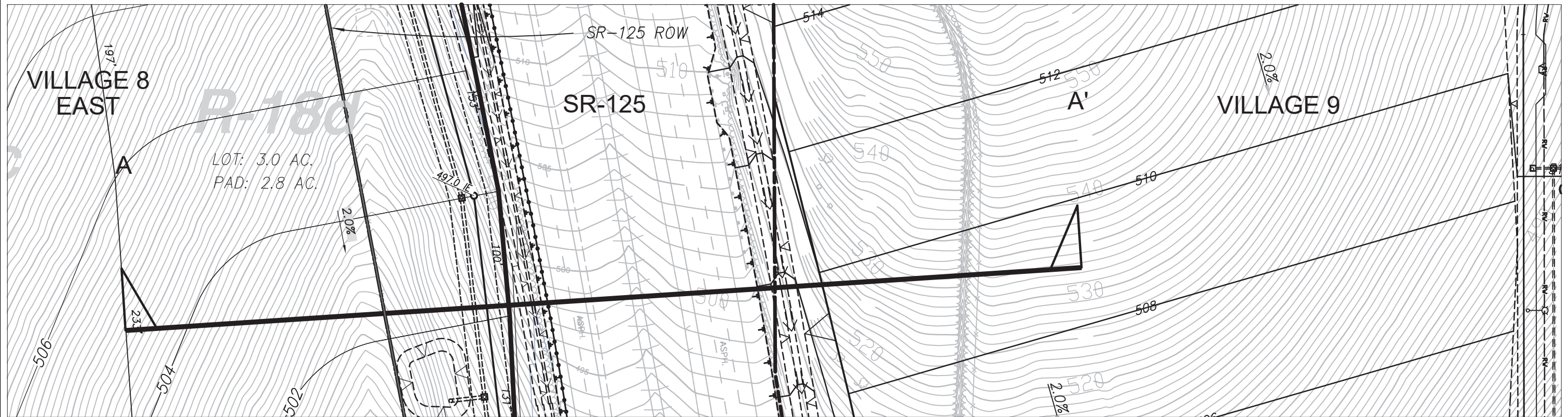
The future post-project view from Olympian High School would be similar to the view described in KVP 1, above, although views from the high school would be more distant. Operation of the high school is not considered a visually sensitive use because school activities generally take place indoors and potential viewers' attention would be directed toward classroom activities. However, views of Village 9 would be available from the outdoor recreation facilities between classes and during lunch. Views from the high school would primarily include the western gateway entry into the Village 9 Urban Center, including mid- to high-rise mixed-use buildings, the extension of Main Street, and landscape trees. As described for KVP 1, the view would be altered from a natural, undeveloped landscape to one that includes urbanized forms and vegetation. Views of the peak of the distant San Jamul Mountains to the east would continue to be visible between buildings. Additionally, the design guidelines and regulations in the SPA Plan would ensure a high quality visual environment. Therefore, a significant impact to scenic views from Village 9 would not occur.

**d. SR-125**

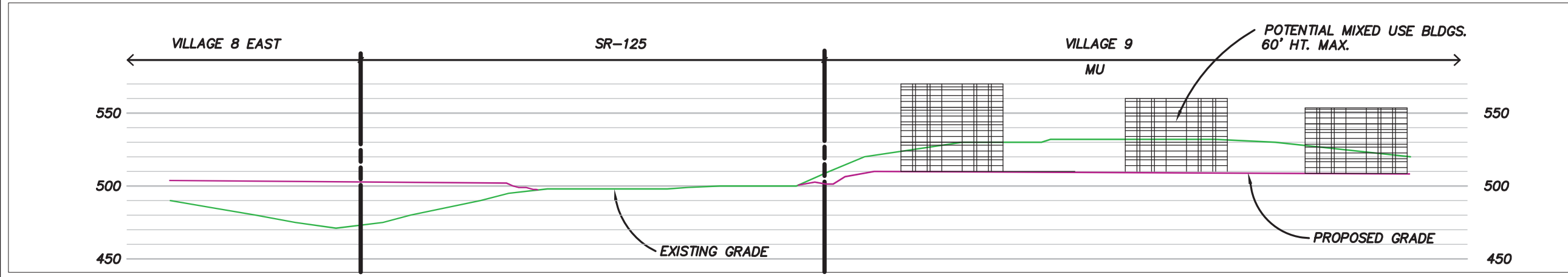
Development in Village 9 would be visible to motorists travelling north and south on SR-125. From the south, northbound motorists would be oriented towards Village 9 at the curve in SR-125 at the southern edge of the site. SR-125 is farther away from Village 9 at the southern end of the project site and views of the site are more expansive. Views for northbound motorists would transition from open space (Otay River Valley and OS-4), to increasing residential development heights and intensities, to the Urban Center and EUC. The lowest density development would be located adjacent to the open space in the Otay River Valley (Planning Area DD). Development just north of the park (Planning Area HH) would consist of one-story to two-story single-family residences in the Neighborhood Edge zone, followed by low-rise (up to three stories) mixed use residences (Planning Areas V and S-1). The Neighborhood Park (Planning Area L) to the north of this mixed-use area would provide visual relief to aid in the transition to high-density urban development by providing views of greenspaces and creating space between higher density developments. The buildings in the mixed-use Town Center (Planning Areas I and J) may be visible beyond the park to the east, but would be obstructed by the change in topography from SR-125 to the project site. The Main Street bridge over SR-125 ramps would provide the entryway into the high-density Village 9 Urban Center, located on either side of Main Street.

A cross section through SR-125 just north of the future pedestrian bridge is provided in Figure 5.2-7. The cross section shows maximum building heights in Planning Area F in the Urban Neighborhood Zone. As shown in Figure 5.2-7, the project site's elevation in relation to SR-125 would be reduced so that buildings would be closer to motorists' line of sight and prominent views. However, a slope would still separate the freeway from development and buildings would be setback from the freeway so that the increase in development density from the Town Center to Urban Neighborhood Zone would appear gradual. Additionally, the location of the mid-rise mixed use buildings in the Urban Neighborhood Zone closer to the freeway than the Town Center provides a transition to the high density Urban Center, where SR-125 is almost at grade with the project site. The Urban Center in Village 9 would be an extension of the EUC directly north of the project site and would not be significantly different from views of the urbanized areas north of the site. As described in greater detail under Threshold 3, Chapter 4 of the SPA, Community Design, establishes design guidelines for the project area as a whole to ensure consistent, cohesive development across Village 9.



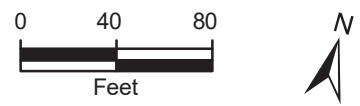


PARTIAL PLAN VIEW



PARTIAL SECTION A-A'

Source: Hunsaker & Associates 2013



CROSS-SECTION VIEW FROM SR-125 AT PLANNING AREA F  
FIGURE 5.2-7

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From the north, a motorist would first encounter views of the Urban Center, characterized by high-rise mixed use development. Similar to northbound motorists, the Main Street bridge over SR-125, as well as the SR-125 ramps would provide the entryway into the Village 9 Urban Center. Views would transition from high density development to open space, or the opposite of what is described above for northbound motorists. At the southern edge of the site, the SR-125 curves to the west so that southbound motorists would be oriented away from Village 9.

Freeway motorists are typically less sensitive to views because of the short time a particular sight is in view, and because the motorist's attention is generally oriented forward toward the roadway. As described above, development within Village 9 would be visible from SR-125; however, expansive views toward Otay River Valley and distant mountains would continue to be available with implementation of Village 9. Implementation of Village 9 would not substantially damage the scenic vistas available from SR-125. Additionally, development within Village 9 would provide a visual transition from development north of Village 9 to the open space to the south so that motorists would not experience an abrupt change in views. Therefore, impacts to views from SR-125 would be less than significant.

**B. Threshold 2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.**

Rock Mountain and Otay River Valley are scenic resources within the project area as identified in the Chula Vista General Plan. The project would not result in any physical impact to Rock Mountain. Therefore, the project would not substantially damage Rock Mountain as a visual resource. Similarly, the project would not physically change the Otay River Valley.

A portion of the Otay Ranch Preserve is located within Village 9. The MSCP Preserve area contributes to the scenic value of the Otay River Valley by maintaining natural open space. The four acres of MSCP Preserve within the project site would be retained in the Otay Ranch Preserve. This area would be managed in accordance with the RMP and the Preserve Edge Plan included in the SPA Plan.

Also, there are no historic buildings or state scenic highways located within Village 9. Impacts to views from scenic roadways designated in the General Plan are addressed above under Threshold 1. As discussed under Threshold 1, implementation of the project would not result in a substantial adverse effect to views from any designated scenic roadway. Therefore, implementation of Village 9 would not substantially damage any scenic resources.

**C. Threshold 3: Substantially degrade the existing visual character or quality of the site and its surroundings.**

The presence and use of heavy machinery (e.g., large trucks, cranes, bulldozers, etc.) during construction of the project is considered a short-term visual impact. As visual impacts during construction are temporary by their nature, short-term construction impacts are deemed less than significant. The focus of this analysis is on the long-term physical changes that are permanent in nature. The following discussion analyzes the nature and extent of the overall proposed development in relation to surrounding land uses, and consistency with applicable regulatory policies.

Analysis of the project's impacts on visual quality and character considers the changes in key views from and to Village 9. As discussed under Threshold 1, KVPs 1 to 4 present on-site views within the project site. KVPs 5 and 6 present views of the site from two off-site public vantage points. The development of the site would change the undeveloped, open and natural character of the on-site rolling hills to a higher

density, mixed-use Urban Center that would provide and transition from the future high-density EUC, and a mixed-use, transit-oriented Town Center centered on the future University site, surrounded by lower density residential uses and a neighborhood park.

As discussed in the 2013 SEIR for the GPA/GDPA, the 2005 GPU EIR determined that impacts to the visual character and quality on Village 9 would be a significant and unmitigated impact because of the lack of specific design standards for development in the GDP/GDPA area. The SEIR concluded that this impact would remain significant until SPA plans are developed that would implement design specifications.

The vision for Village 9 is defined in detail in Chapter 4 of the SPA, Community Design. A unified village identity would be established through the use of landscaping and various community elements. The location and design of these elements would provide the following:

- Village identification through the use of enhanced entry landscaping or monuments;
- Orientation within the community through corridor design and landform character; and
- A common design character expressed through the use of community elements with similar style such as lighting, walls, fences, and street furniture.

The SPA Plan and TM would create a new mixed-use community centered on a University-oriented Town Center. This Town Center would be organized to create a series of focal points that emulate a traditional downtown within a system of blocks or planning areas. Block sizes are carefully defined to maximize walkability and promote a vibrant and active Town Center. Uses are envisioned to include retail, residential, and services that support student and faculty life. Such uses might include restaurants, coffee shops, bookstores, and opportunities for shopping and entertainment. These interchangeable mixed-use components are centered on Campus Boulevard, located between a neighborhood park and the future proposed University/RTP to the east, and an urban couplet.

The form-based code proposed in the SPA Plan allows for a variety of architectural styles to avoid monotonous or repetitive designs and homogenous building typologies. This flexibility allows for a mix of styles within each block, potentially creating an interesting and eclectic design pattern while still maintaining strong urban form. Strong urban form in the Town Center, Urban Center, and Urban Neighborhood Zones requires buildings to be oriented toward all public streets, parks, and pedestrian spaces; Continuous facades that are placed near or at the back of sidewalk; and uses that support pedestrian activity such as dining, retail, entertainment, patios, plazas, and public art.

Transect based planning also allows for smooth transitions to surrounding uses. The Urban Center Zone serves as a transition from the Town Center to the future EUC to the north. The Urban Center Zone will include high to mid-rise buildings with a mix of uses including retail, hospitality, office, and multi-family residential opportunities that support the RTP and the EUC. The Urban Neighborhood Zone will be a residential extension of the Town Center. The Urban Neighborhood provides a transition to the Neighborhood Edge and Neighborhood General Zones, which are envisioned to have a predominately single-family residential character south of Otay Valley Road.

Residential neighborhoods south of Otay Valley Road provide an alternative living environment that is more single family in nature with larger, private yards and building setbacks. This environment provides a quiet, less urban lifestyle while establishing an appropriate relationship to the natural habitat in the adjacent Preserve. A variety of architectural styles are also envisioned to create eclectic, pedestrian friendly streetscapes.



The SPA Plan includes design guidelines for the community as whole, and well as specific design fundamentals and requirements for each specific zone. In order to ensure that the design intent would be carried throughout individual projects within the area, all building and landscape development proposals would be required to submit an architectural and site review application to the City of Chula Vista Planning Department. Nevertheless, the change from the existing broad open space to an urban and residential environment as a result of project implementation would represent a substantial change in the existing visual character and quality of the site.

The SEIR identified mitigation measure 5.2.5-1 from the 2005 GPU EIR to reduce impacts related to visual character, which requires building and grading plans to protect visual character to the extent feasible. The proposed SPA Plan for Village 9 would implement these requirements, including a grading plan in conformance with the City grading ordinance; grading standards that ensure manufactured slopes are contoured, blend with, and mimic adjacent natural slopes; and landscape performance standards and landscape plans that maintain views, are consistent with open space areas, and addresses streetscapes, provides landscape intensity zones, greenbelt edge treatments, and slope treatment for erosion control.

Development Codes in Chapter 3 of the SPA Plan specify development standards for the entire project area, specific transect zones, as well as individual development types. Chapter 4 of the SPA, Community Design, establishes design guidelines for the project area as a whole, as well for specific land uses and the Town Center. The project would implement development standards and community design guidelines to protect visual quality and comply with mitigation measure 5.2.5-1. However, consistent with the conclusion of the 2013 SEIR, because the project would permanently alter the character of the project site from open rolling hills development, impacts would be significant.

#### **D. Threshold 4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.**

##### **1. Lighting**

The project site is currently undeveloped and there are no on-site sources of light. The existing land uses near the project site include the Otay Ranch Town Center and a mix of uses within the developed area of Otay Ranch north of the project site. Surrounding roadways include Hunte Parkway, Eastlake Parkway, and SR-125. The development and roads in the project vicinity currently use artificial light sources for security, parking, architectural highlighting, incidental landscape lighting, and illuminated signage. Village 11 to the northwest of the project site is currently under construction and the University, EUC, and Village 8 East sites are planned for future development as part of the Otay Ranch GDP. The project would be part of an urban-lighted area particularly when viewed from a distance of 50 miles.

The project would include similar sources of interior and exterior lighting as the existing and planned surrounding uses. The SPA Plan includes lighting performance standards in the Community Lighting plan as part of its Village Identity Concept (Section 4.2 of the SPA Plan). The standards balance public safety with the need to minimize light pollution, energy use, and maintain appropriateness of fixture style and scale for the different uses. Light pollution would be reduced or eliminated by the use of low-glare, full cutoff, and shielded fixtures, lower wattage luminaires, and lighting controls. Also, misdirected, excessive, and unnecessary lighting would be eliminated. All street lighting needs would be required to meet or exceed the City standards and shall be approved by the City Engineer. Lighting for community facilities and recreation areas would be considered as an element of the site plan review. The SPA Plan requires any lighting that would illuminate a residential area past the hour of 10:00 p.m. to be clearly



identified on the site plan. The SPA Plan also requires the preparation of lighting plans, including the location, type and hooding devices to shield adjoining properties for approval. Lighting performance standards in the SPA Plan include the following:

- **Section 3.3.1, General Regulations Applying to all Zones.** Lighting shall be designed so as to minimize spillage onto adjacent properties.
- **Section 3.6, Performance Standards.** All light sources shall be shielded in such a manner to minimize light spillage onto adjacent properties.
- **Section 3.7, Sign Regulations.** Illumination of wall and projecting signs shall be limited to external (spot lights) or decorative (gooseneck, etc.) types.
- **Section 4.7, Community and Neighborhood Facility Design Guidelines.** When lighting would be provided for outdoor utilities and services activities, a time would be provided.
- **Section 7.2, Open Space.** No lighting would be permitted in areas designated open space. Lighting shall be designed to minimize light spillage onto neighboring properties in areas designated Neighborhood Park, Town Square, Pedestrian Park.
- **Appendix D, Preserve Edge Plan.** Public streets adjacent to the Preserve Edge shall be designed to minimize spillover lighting. Open space areas within the Preserve Edge will not have lighting. Prior to the approval of any improvement plans containing light standards adjacent to the Preserve, the applicant shall prepare a lighting plan and photometric analysis confirming the location and type of proposed lighting standards (including shielding measures) required to avoid spill over light into the Preserve.

In addition, compliance with City and state energy conservation measures, and the City Unnecessary Light Ordinance currently in place would limit the amount of unnecessary exterior illumination during evening and nighttime hours. Based on adherence to the lighting performance standards in the SPA Plan, it is anticipated that lighting would be prevented from casting illumination onto light-sensitive properties in adjacent developments (i.e., residences in Village 10).

The project site proposes pedestrian parks adjacent to the MSCP Preserve area along the southern boundary of project site. The pedestrian parks adjacent to the MSCP Preserve (Planning Areas OS-2 and OS-4) could include minimal nighttime lighting for security. The SPA Plan includes a Preserve Edge Plan that restricts active uses and lighting within 100 feet of the Preserve. As discussed in Section 5.6, Biological Resources, implementation of the Preserve Edge Plan would reduce indirect impacts to the Preserve to a less than significant level, including lighting.

Given the degree of ambient lighting that currently exists surrounding the project area, and the lighting controls included in the SPA Plan, minimal lighting for security in single-family neighborhoods would not substantially alter ambient night light levels. Development-specific photometric analyses are necessary for more light-intensive land uses (parks, mixed-use residential, commercial, multi-family residential, and CPF uses) in order to ensure that the project would comply with all applicable regulations and be compatible with surrounding land uses. Impacts related to nighttime lighting would be potentially significant.

## 2. Glare

The SPA Plan also includes requirements for buildings that would limit glare. Section 3.7, Sign Regulations, requires that metal or glass awnings shall have a matte finish. Residential and commercial development would also be required to incorporate variety into building facades, which would break up expanses of reflective materials and reduce glare. Any glare experienced by nearby commercial or

residential uses or the occupants of vehicles on nearby streets within Village 9 would be temporary, changing with the movement of the sun throughout the course of the day and the seasons of the year. Additionally, the City performance standard for glare prohibits glare beyond the lot line of the source. Therefore, the project would not create a substantial new source of glare that would adversely affect day or nighttime views in the area and as such, glare impacts would be less than significant.

### **3. *Shade, Shadow, and Wind***

The issue of shade and shadow pertains to the blockage of direct sunlight by on-site buildings that affects adjacent “shadow-sensitive” uses, such as residences, parks, outdoor gathering places, outdoor restaurants, and schools. Factors that influence the extent and range of shading include but may not be limited to season, time of day, weather, building height, bulk and scale, spacing between buildings, and tree cover.

Project development would be phased over multiple years. The SPA Plan focuses on land uses instead of building placement. Buildings can be up to 15 stories, or 215 feet, in height in the Urban Center; four stories, or 60 feet in height in the Urban Neighborhood and Town Center; and three stories, or 45 feet, in height in the Neighborhood Center Zone, as defined in Section 3.3 of the SPA Plan, Zone Standards. As such, there is a potential for streets, structures and public places in the Urban Center, Urban Neighborhood, Town Center, and Neighborhood Center Zones to be shadowed by an adjacent building or buildings depending on certain conditions.

Wind tunnel effects can manifest in the corridors between tall buildings. The potential impacts associated with shade, shadow, and wind cannot be fully assessed until the specific location, size, and orientation of future buildings are established. Therefore, a future analysis would be necessary to ensure that impacts associated with shade, shadow, and wind are less than significant.

## **E. Threshold 5: Alter areas of sensitive landforms and grade steep slopes that may be visible from future development and roadways.**

### **1. *Proposed Steep Slopes***

Sensitive landforms are natural landforms that are unique or contribute to the character of a site. The Land Use and Transportation Element of the Chula Vista General Plan states that the mesas, hilltops, and gently rolling topography in the Chula Vista area offer the best conditions for development. While Village 9 generally preserves the existing contours of the landforms where feasible for development, the project does include grading within steeply sloped areas that are unique to the Otay Ranch area and considered sensitive landforms in the GDP. Based on the Conceptual Grading Plan (Figure 3-16), several manufactured slopes would be created in highly visible locations, including the following:

1. Along Main Street through the Town Center
2. North and south of the Neighborhood Park
3. Northern boundary of Planning Area F, adjacent to Planning Area D
4. North and east sides of Planning Areas H-1 and H2
5. Along Street H and Street I
6. Northern edge of Planning Area V, adjacent to Planning Area S-1
7. Southern boundary of Planning Area AA, adjacent to Planning Area EE
8. Southern boundary of Planning Area BB, adjacent to Planning Area FF
9. East site of Street B, on the University site

Depending on the location of the viewer and intervening land uses and topography, these slopes may be visible from public viewing locations, including the Otay Valley Regional Park, the Community and Neighborhood Parks, on and off-site circulation element roads, and other public gathering places. Additional design considerations would be required for these slopes to ensure visual compatibility with the surrounding area.

The Otay Ranch GDP and Design Plan, the City's Subdivision Manual and the Village 9 SPA all have guidelines and requirements to implement grading techniques and landscaping that are sensitive to the existing environment. Specifically, Section 6, Grading, of the Village 9 SPA Plan includes Otay Ranch GDP criteria and Design Plan guidelines for sensitive grading within Otay Ranch. According to the GDP, final grading designs are required to incorporate criteria such as, but not limited to:

- naturalized buffering shall be provided as a transition between development and significant existing landforms;
- manufactured slope faces over 25 feet in height shall be varied to avoid excessive "flat planned" surfaces;
- variable slope ratios not exceeding 2:1 should be utilized when developing grading plans; and
- landform planting techniques to complement graded areas will be implemented.

Applicable Otay Ranch Overall Design Plan guidelines include:

- Excessively long, uniform slopes shall be avoided;
- Contours should be rounded and blended without sharp or unnatural corners where cut of fill slopes intersect a natural canyon or slope;
- Transitions between new cut and fill slopes and natural slopes should be made by rolling the top or bottom of the new slope to integrate the two conditions; and
- Graded slopes should be landscaped with native and indigenous plant materials to blend with existing planting when adjacent to new landscaping.

Furthermore, the SPA Plan requires the applicant to prepare grading and building plans that conform to landform grading guidelines contained in the grading ordinance, Otay Ranch GDP, and General Plan prior to approval of final grading plans. The SPA Plan specifies that the plans shall provide the following to reduce aesthetic impacts:

1. A landscape design that addresses streetscape and provides landscaping intensity zones, greenbelt edge treatments and slope treatments for erosion control;
2. Grading concepts that ensure manufactured slopes that are contoured, blend with and mimic adjacent natural slopes;
3. Landscaping concepts that provide for a transition from the manicured appearance of development areas to the natural landscape in open space areas;
4. Landscaping concepts that include plantings selected to frame and maintain views. Landscaping should not block views created through grading and /or site design; and
5. Grading Plans shall be designed in accordance with the Grading Ordinance #1797, CVMC 15.04, which includes slope rounding and blending standards.
6. Implement a landscape design that includes a varied plant palette capable of creating gradual transitions from naturalized landscape areas at project boundaries, to development areas within

the project, and incorporates the careful massing of groundcovers, shrubs and tree forms to soften the appearance of manufactured slopes when viewed from public areas.

Lastly, the Subdivision Manual requires the preparation of a Landscape Master Plan for the entire SPA Plan area. The Plan will include landscape techniques and methods, planting concepts and other design features that implement the grading ordinance, Otay Ranch GDP, General Plan and the SPA plans. Implementation of the final Landscape Master Plan that includes detailed landscape and irrigation construction plans would be required to ensure visual compatibility between the manufactured slope area and the native undisturbed peak of the mountain.

Chapter 6 of the SPA Plan outlines the grading concept for the Village 9 SPA Plan area. The grading concept includes the following objectives that would ensure slopes would not result in an adverse impact to the aesthetic character of the site, including rounding slopes to mimic the natural grade:

1. Create efficient man-made landforms that visually respond to natural terrain characteristics by including slope gradients that vary along the length of the slope and slopes that undulate horizontally (curvilinear).
2. Avoid slopes in excess of 2:1 gradient and slopes that do not utilize landform grading in areas that are clearly visible to the public where practical.
3. Create and maintain on and off-site views in areas where grading will not cause adverse visual, public safety, and environmental impacts.
4. When significant landforms are modified for project implementation, round the landform as much as possible to blend into the natural grade.
5. With the approval of the City Engineer, round the tops and toes of slopes to blend with adjacent topography. When slopes cannot be rounded, utilize vegetation to alleviate sharp angular appearances.
6. Create smooth transitions between the project area and surrounding properties and the existing San Diego Reservoir.
7. Create an area with minimal topographic variation for the Town Center that will accommodate mixed-use, community purpose facility, schools, parks, and multi-family residential development.
8. Create usable areas that provide for a variety of residential housing types.
9. Minimize, where feasible, impacts to sensitive areas adjacent to Wolf Canyon and the Otay River Valley.
10. Create usable park areas acceptable to the City of Chula Vista.

Landform grading would be applied to the extent possible across the project site, particularly in the southern area near the Preserve. Slopes would be landscaped to blend with adjacent land uses, including planting of non-invasive native species near the MSCP in accordance with the Edge Plan and landscaping consistent with development in neighboring planning areas.

The project is required to comply with a combination of development standards, including the landform grading and landscaping design requirements of the Otay Ranch GDP and Design Plan, Village 9 SPA Plan, Subdivision Manual and Grading Ordinance. Landform grading has been proposed as shown on the TM. The landscaping requirements include preparation of a Landscape Master Plan prior to approval of the first Final Map, and subsequent landscape and irrigation construction plans prior to construction

that would reduce the potential aesthetic impacts from visible manufactured slopes. However, until the Landscape Master Plan and subsequent landscape and irrigation construction plans have been approved, impacts would be potentially significant.

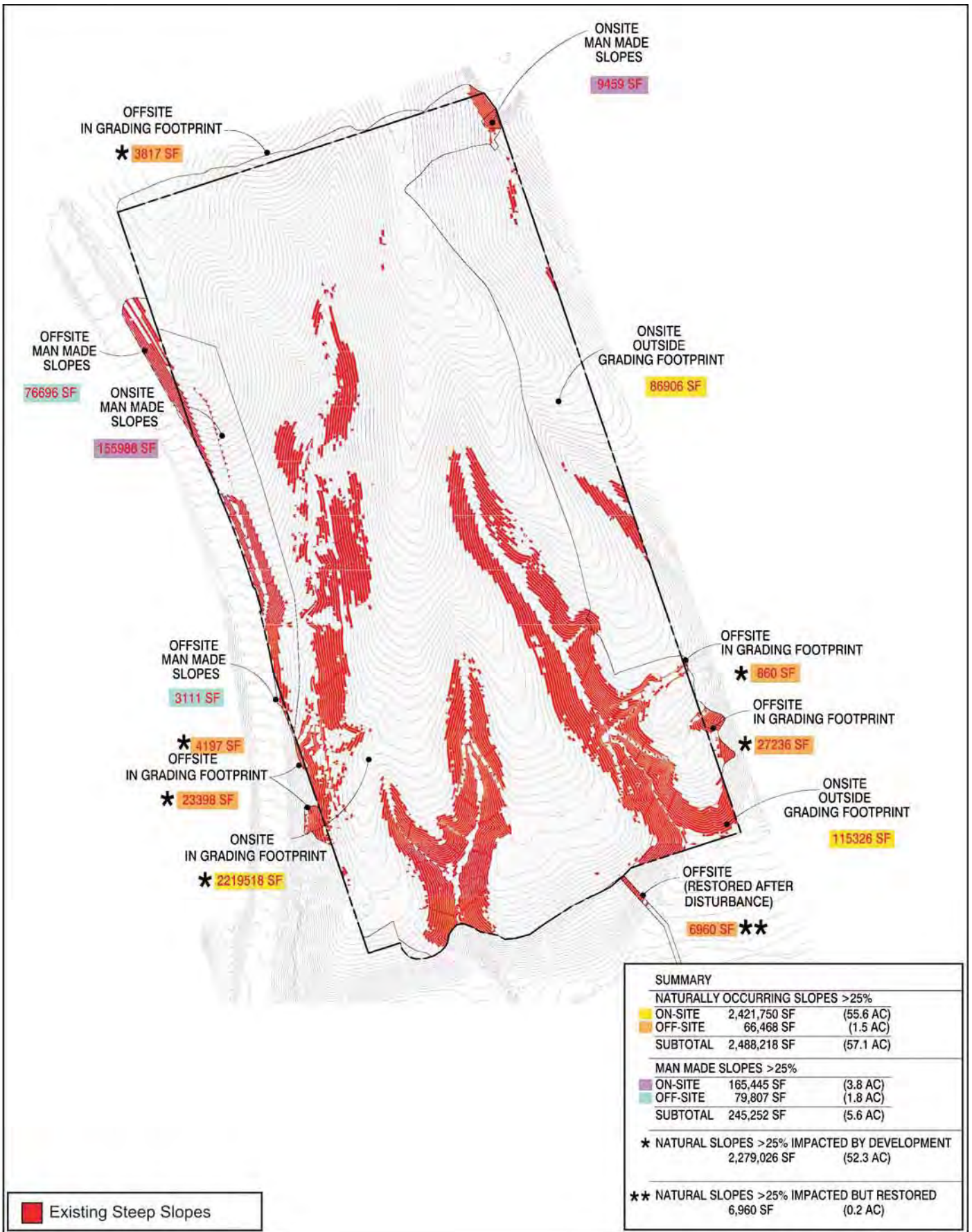
## 2. Ranch-wide Steep Slope Preservation

The GDP and RMP establish a Ranch-wide standard for landform modification that 83 percent of steep slopes (slopes with gradients of 25 percent or greater) shall be preserved within the Otay Ranch. Development of Village 9 would impact approximately 52 acres of steep slopes within the Otay Valley Parcel, as shown in Figure 5.2-8. Future build-out projections for the Otay Valley, Proctor Valley, and San Ysidro Parcels estimate that an additional 1,149 acres of steep slopes will be impacted Ranch-wide including the 52 acres within Village 9. Combined with existing steep slope impacts (i.e., 255 acres), Ranch-wide impacts are estimated at 1,403 acres. Table 5.2-1 provides a summary of the projected Ranch-wide impacts to steep slopes at buildout of Otay Ranch.

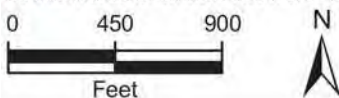
**Table 5.2-1 Otay Ranch Steep Slopes**

	Existing Steep Slopes (Slope Gradient $\geq$ 25%)	Steep Slope Impacts (City of Chula Vista)	Projected Steep Slope Impacts (County of San Diego)
<b>Otay Valley Parcel</b>			
<i>Approved SPA Plans:</i> Villages 1 and 1 West, 2, 4 (Park Portion), 5, 6, 7, 11, and Planning Area 12 (EUC and Freeway Commercial)	350.7	254.6	-
<i>Remaining SPA Plans:</i> Village 3, 4 (Remainder), 8 West, 8 East, 9, 10, University, and Planning Area 18	371.5	282.3 <sup>(1)</sup>	-
<b>Proctor Valley</b>			
<i>Remaining SPA Plans:</i> Village 13, 14, 16, and 19	486.3	-	378.3 <sup>(2a,3)</sup>
<b>San Ysidro Mountains</b>			
<i>Remaining SPA Plans:</i> Villages 15 and 17	560.1	-	488.0 <sup>(2b,3)</sup>
<b>Outside Development Areas</b>			
Ranch-wide Sub-totals	9,821.3	536.9	866.3
Ranch-wide Totals	9,821.3		1,403.2
<sup>(1)</sup> Slope impacts are based on best available data including currently proposed projects (SPA Plans/Tentative Maps) and current GDP/SRP development areas. <sup>(2)</sup> Excludes acreages associated with Wildlife Agency conservation acquisitions that would no longer be developable: a. 108 acres within Proctor Valley b. 72.1 acres within San Ysidro Mountains <sup>(3)</sup> Assumes development will impact 100% of steep slopes (slope gradient $\geq$ 25%) within current GDP/SRP development areas. Source: City of Chula Vista, September 2012.			





Source: Hunsaker & Associates Inc. 2013



**STEEP SLOPE ANALYSIS**  
**FIGURE 5.2-8**

Based on these results, future impacts to steep slopes would exceed the 1993 Otay Ranch GDP/RMP estimate of 1,301 acres (based on 83 percent of the originally estimated 7,651 acres of steep slopes Ranch-wide). As previously discussed, deviations from the RMP are permissible provided the project’s actual impact to steep slopes will not preclude subsequent entitlements from achieving the Ranch-wide preservation standard. In consideration of this, a current assessment of steep slopes using contemporary details topographic information and surveys indicates a total of 9,821 acres of steep slopes exist Ranch-wide. Applying the GDP/RMP requirement for 83 percent steep slope preservation equates to 1,670 acres that could be impacted. As shown in Table 5.2-1, current and projected impacts to steep slopes could amount to 1,403 acres, which is within the RMP allowances. The 1,403 acres impacted equates to approximately 86 percent preservation. Actual impacts to steep slopes may be less than projected as this analysis conservatively assumes that 100-percent of steep slopes within current GDP development areas would be affected. Impacts would be less than significant.

**F. Threshold 6: Be inconsistent with General Plan, GDP, or other objectives and policies regarding visual character thereby resulting in a significant physical impact.**

A consistency analysis of the proposed Village 9 SPA Plan and TM with applicable General Plan visual and landform policies is provided in Table 5.2-2 and a consistency analysis with the GDP is provided in Table 5.2-3. The analysis demonstrates that the project would be consistent with the applicable landform and visual policies in the General Plan and GDP.

**Table 5.2-2 Project Consistency with Applicable General Plan Landform and Visual Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective LUT 8:</b> Strengthen and sustain Chula Vista's image as a unique place by maintaining, enhancing, and creating physical features that distinguish Chula Vista's neighborhoods, communities, and public spaces, and enhance its image as a pedestrian-oriented and livable community.</p> <p><b>Policy LUT 8.1:</b> Develop a program to enhance the identity of special districts and neighborhoods to create variety and interest in the built environment, including such items as signage, monuments, landscaping, and street improvements.</p> <p><b>Policy LUT 8.2:</b> Emphasize certain land uses and activities, such as cultural arts; entertainment; specialty retail; or commercial recreation, to enhance or create the identity of specialized districts or Focus Areas in the City.</p> <p><b>Policy LUT 8.3:</b> Ensure that buildings are appropriate to their context and designed to be compatible with surrounding uses and enhance the desired character of their District.</p> <p><b>Policy LUT 8.4:</b> Encourage and require, where feasible, the incorporation of publicly accessible urban open spaces, including parks, courtyards, water features, gardens, passageways, and plazas into public improvements and private projects.</p> <p><b>Policy LUT 8.5:</b> Prepare urban design guidelines that help to create pedestrian-oriented development by providing: 1) Pedestrian circulation among parcels; uses; transit stops; and public or publicly accessible spaces; 2) human scale design elements; 3) varied and articulated building facades; 4) visual (first floor clear glass windows) and physical access for</p>	<p><b>Consistent.</b> The project is consistent with this objective and relevant policies. It would enhance Chula Vista’s image as a pedestrian-oriented and livable community. Community streets are designed as “complete” streets, considering all modes of transportation by providing vehicular travel lanes, bike lanes or bike routes, and sidewalks. Pedestrian circulation is further supported by the inclusion a two urban couplet through the Town Center and by providing trail connections to the open space areas south of the site. The SPA Plan creates a livable community by transitioning high-intensity land uses to lower density residential land uses, while maintaining accessibility to the Urban Center and Town Center by all modes of transportation from throughout Village 9. The Urban Center and Town Center would provide resident serving commercial uses and attractions to create a livable community. Parks and recreational opportunities would also be available throughout the project area.</p> <p>A program for landscaping is included in the SPA Plan in Section 4.7, Landscape Design Guidelines; for signage and monuments in Section 3.7, Sign Regulations; and streets design in Chapter 5, Circulation and Corridor Design.</p> <p>The SPA Plan contains provisions for cultural arts, entertainment, specialty retail, and commercial recreation uses. The uses are encouraged in the Town Center and Urban Center to create a 24-hour living environment for the community, which would be designed according to the SPA Plan to ensure a safe, healthy, and vibrant heart for the community.</p>

**Table 5.2-2 Project Consistency with Applicable General Plan Landform and Visual Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p>pedestrians; 5) ground floor residential and commercial entries that face and engage the street; and 6) pedestrian-oriented streetscape amenities.</p> <p><b>Policy LUT 8.6:</b> Develop a master plan for artwork in public places that would identify the types of art desired and establish appropriate settings for the display of art, including within public rights-of-way and landscape medians.</p> <p><b>Policy LUT 8.7:</b> Ensure that vacant parcels and parcels with unsightly storage uses, such as auto salvage yards, are appropriately screened from the street to reduce their negative visual effects.</p>	<p>The Development Code for the SPA, Chapter 3 of the SPA Plan, establishes the scale and type of development allowed in each zone of Village 9, and the Land Use plan developed for the project area ensures that compatibility uses are placed next to each other, as discussed in Section 5.1, Land Use and Planning. The SPA Plan encourages urban open spaces. A town square is proposed within the Town Center and Urban Center. Chapter 4 of the SPA Plan, Community Design, encourages buildings to be oriented to create public open space. Parks, courtyards, water features, gardens, and plazas are encouraged in the project area.</p> <p>The SPA Plan proposes sidewalks and/or trails throughout the project area to connect all uses. The SPA Plan encourages pedestrian oriented development. A design guideline for the Urban Center and Town Center is the use of façades that include variety and spontaneity to activate the pedestrian experience. Design techniques include “eyes on the street” orientation of commercial, mixed use and residential uses towards the street and placement of parks and paths as focal points in the community. Amenities are encouraged such as landscaping, enhanced pavement, seating areas, water features, or similar features. Public art is encouraged to be used as a focal element in the Urban Center, Town Center and in public open spaces.</p> <p>Performance standards are provided within Chapter 3 the SPA Plan, Development Code, ensure screening of unsightly uses, such as ground-mounted equipment, service areas, and trash receptacles.</p>
<p><b>Objective LUT 10:</b> Create attractive street environments that complement private and public properties, create attractive public rights-of-way, and provide visual interest for residents and visitors.</p> <p><b>Policy LUT 10.2:</b> Landscape designs and standards shall include a coordinated street furniture palette, including waste containers and benches, to be implemented throughout the community at appropriate locations.</p> <p><b>Policy LUT 10.3:</b> Provide well-designed, comfortable bus stops throughout the City.</p> <p><b>Policy LUT 10.4</b> Prior to the approval of projects that include walls that back onto roadways, the city shall require that the design achieves a uniform appearance from the street. The walls shall be uniform in height, use of materials, and color, but also incorporate elements, such as pilasters, that add visual interest.</p> <p><b>Policy LUT 10.5</b> Require under grounding of utilities on private property and develop a priority based program of utility under grounding along public rights-of-way.</p> <p><b>Policy LUT 10.6:</b> Study the locational requirements of utility, traffic control, and other cabinets and hardware located in the public rights-of-way to determine alternative locations for these items in less obtrusive areas of the street environment.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and relevant policies. Chapter 5 of the SPA Plan, Circulation and Corridor Design, creates an attractive street environment. A key part of the design theme of the project area is circulation corridors, which would be defined through the landscape palette and design themes identified by the roadway and trail standards described in Chapter 5 of the SPA Plan. Each corridor would have an identifiable landscape theme consistent with its location within the project area. All of the design elements would work together to create superior streetscenes that encourage pedestrian activity and a strong community identity. Landscape designs for medians are included. The SPA Plan includes guidelines for street furniture in Section 4.2.6, Street Furniture, to reduce visual clutter, eliminate location conflicts, and enhance the community theme. Chapter 5 encourages transit stops in convenient locations and to include adequate lighting and well-designed shelters.</p> <p>The SPA contains guidelines for utilities in Chapter 3, Development Code, that ensure utilities would fit within the context of their surroundings and would not cause negative visual impacts. For example, all utility connections would be designed to coordinate with the architectural elements of the site, pad mounted transformers and/or meter box locations would include appropriate screening treatment, and power lines and cables would be installed underground.</p>



**Table 5.2-2 Project Consistency with Applicable General Plan Landform and Visual Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy LUT 10.7:</b> Work with utility providers to coordinate the design of utility facilities (e.g., substations, pump stations, switching buildings, etc.) to ensure that the facilities fit within the context of their surroundings and do not cause negative visual impacts.</p>	<p>The applicant will also work with utility providers to ensure that the guidelines would be implemented.</p>
<p><b>Objective LUT 11:</b> Ensure that buildings and related site improvements for public and private development are well-designed and compatible with surrounding properties and districts.</p> <p><b>Policy LUT 11.1:</b> Promote development that creates and enhances positive spatial attributes of major public streets, open spaces, cityscape, mountain and bay sight lines, and important gateways into the City.</p> <p><b>Policy LUT 11.2:</b> Promote and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista, and create a vital and attractive environment for businesses, residents, and visitors.</p> <p><b>Policy LUT 11.4:</b> Actively promote architectural and design excellence in buildings, open space, and urban design.</p> <p><b>Policy LUT 11.5:</b> Require a design review process for all public and private discretionary projects (which includes architectural, site plan, landscape and signage design) to review and evaluate projects prior to issuance of building permits to determine their compliance with the objectives and specific requirements of the City's Design Manual, General Plan, and appropriate zone or Area Development Plans.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and relevant policies. The SPA Plan contains regulations and requirements for the project review process, including administrative procedures for all design review applications. All building and landscape development proposals would be required to submit an architectural and site review application to the Chula Vista Planning Department. As discussed in Section 5.1, Land Use and Planning, development would be compatible with surrounding land uses within and outside of the project area. As discussed under Thresholds 1 and 2, implementation of the SPA Plan would maintain scenic views from the project area and increase public accessibility to these views. Chapter 4, Community Design, and Chapter 5, Circulation Corridor and Design of the SPA Plan include design regulations that would create attractive streets, buildings, open spaces, and entryways. Design regulations include quality architecture and landscaping for all uses in Village 9, including individual buildings, open space, and design of the project area as a whole, such as building placement considerations. In order to ensure that the design intent would be carried throughout individual projects within the SPA, all building and landscape development proposals would be required to submit an architectural and site plan review application to the Chula Vista Planning Department.</p>
<p><b>Objective LUT 75:</b> Preserve and protect Otay Ranch's significant natural resources and open space lands with environmentally sensitive development.</p> <p><b>Policy LUT 75.1:</b> Create and maintain a comprehensive open space system throughout the Otay Ranch villages that, through environmental stewardship, restores and preserves nature's resources for generations to come.</p> <p><b>Policy LUT 75.2:</b> Design villages that have well defined edges such as the Chula Vista Greenbelt, open spaces, or wildlife corridors.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and relevant policy. The southwestern and southeastern edges of Village 9 adjacent to the Otay Ranch Preserve and MSCP are designated as Open Space Preserve. This land will be dedicated to the MSCP subarea as part of the Otay Valley Regional Park. This area would remain relatively unimproved with uses restricted to passive recreation, habitat restoration and scientific research. Vegetation will consist of native plants that already occur on site. The Preserve Edge Zone would occur along the southern edge of development. The Preserve Edge refers to the area between residential development and the MSCP Preserve. The Intent of this edge is to create a buffer zone between proposed development and the Otay Ranch Preserve, thereby protecting the preserve from human activities and non-native species. A Pedestrian Park would provide green space and a trail connecting the residences in the southern portion of the site to the Otay River Valley. The park would be landscaped to be consistent with surrounding vegetation.</p>

**Table 5.2-3 Project Consistency with Applicable GDP Landform and Visual Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 1 – Section B: Goals, Objectives, and Policies</b>	
<p><b>Goal:</b> Organize land uses based upon the village/town center concept to produce a cohesive, pedestrian friendly community. Encourage non-vehicular trips and foster interaction amongst residents.</p> <p><b>Policy:</b> Establish a unique character and sense of place within each village.</p>	<p><b>Consistent.</b> The SPA Plan includes design guidelines and regulations for consistent and cohesive development across Village 9. Compatible development heights, massing, and styles across the project area would create a sense of place because development would be unified by common elements. The design guidelines establish a unique character for the village. Development would be organized based on the Urban Center and Town Center, which would be accessible to pedestrians from all areas. Sidewalks and pedestrian trail would connect all areas of the project area. Public gathering spaces would also be provided through the Urban Center and Town Center. These amenities would encourage non-vehicular trips and foster interaction between residents in all neighborhoods to create a sense of place within the village.</p>
<b>Part II, Chapter 10 – Resource Protection, Conservation and Management</b>	
<p><b>Goal:</b> Reduce impacts to environmentally sensitive and potential geologically hazardous areas associated with steep slopes.</p> <p><b>Objective:</b> Relate development to topography and natural features, and strive to retain the character of the landforms to the extent feasible.</p> <p><b>Policy:</b> 83% of the steep slopes (steeper than 25%) shall be preserved.</p>	<p><b>Consistent.</b> The project would grade 52 acres of steep slopes in on-site and off-site areas. However, as discussed under Threshold 5, grading associated with the development of Village 9 has been taken into account in the calculations for steep slope impacts throughout Otay Ranch.</p>
<p><b>Goal:</b> Prevent degradation of the visual resources</p> <p><b>Objective:</b> Blend development harmoniously with significant natural features of the land.</p> <p><b>Policy:</b> Develop a comprehensive signage program.</p> <p><b>Policy:</b> Design development to protect the visual value of scenic highways and open spaces.</p> <p><b>Policy:</b> Underground visually disruptive utilities to the extent feasible.</p> <p><b>Policy:</b> Conduct additional analysis of conceptual grading plans for all development at the SPA level to protect and preserve significant visual resources.</p> <p><b>Policy:</b> Preserve significant views of major physical features such as Lower Otay Lake and the San Ysidro foothills and mountains, as well as the Jamul Mountains, San Miguel Mountain and the Otay River Valley and its major canyons.</p>	<p><b>Consistent.</b> Part II, Chapter 1, Section F of the Otay Ranch GDP contains village descriptions and policies identifying specific visual resources and characteristics for each village. Visual resources identified for the project area are Rock Mountain and Otay River Valley. Hunte Parkway/Main Street is a designated scenic roadways in the General Plan. As discussed under Thresholds 1 and 2, implementation of the SPA Plan would not result in adverse impacts to views of these resources from with the project area or from the surrounding area. The SPA Plan would ensure a cohesive design of development along scenic roadways that meet the aesthetic standards established for the project area and would improve public access to views of designated scenic resources. Additionally, contoured grading is required throughout the project area, and landform-grading guidelines are required to be developed as part of the overall ranch design plan and refined in the Village Design Plan at the SPA level. As discussed under Threshold 5, Chapter 6 of the SPA Plan includes a grading plan for Village 9 that includes landform-grading objectives that incorporated contoured grading the other grading requirements listed in the GDP. The SPA Plan includes comprehensive guidelines for signage in the project area and a requirement for utilities to be placed underground.</p>



**Table 5.2-3 Project Consistency with Applicable GDP Landform and Visual Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Objective:</b> Relate development to topography and natural features, and strive to retain the character of the landforms to the extent feasible.</p> <p><b>Policy:</b> Roadways shall be designed to follow the natural contours of hillsides and minimize visibility of road cuts and manufactured slopes.</p> <p><b>Policy:</b> Excessive use of manufactured slopes in the Otay River Valley, Jamul and San Ysidro Mountains, and the area around Otay Lakes shall not be permitted.</p> <p><b>Policy:</b> Variable slope ratios not exceeding 2:1 shall be utilized when developing grading plans.</p> <p><b>Policy:</b> As development occurs on steep lands, as defined by the governing jurisdictions, contour grade to reflect the natural hillside forms as much as possible, and round the top and toe of slopes to simulate natural contours.</p> <p><b>Policy:</b> Grade and rehabilitate graded areas in conformance with grading regulations of the governing jurisdiction. Ensure proper drainage, slope stability and ground cover revegetation in conformance with applicable land use regulations.</p>	<p><b>Consistent.</b> Contoured grading is required throughout the project area, and landform-grading guidelines are required to be developed as part of the overall ranch design plan and refined in the Village Design Plan at the SPA level. As discussed under Threshold 5, Chapter 6 of the SPA Plan includes a grading plan for Village 9 that includes landform-grading objectives that incorporated contoured grading the other grading requirements listed in the GDP.</p>
<p><b>Goal:</b> Preserve dark-night skies to allow for continued astronomical research and exploration to be carried out at the County’s two observatories, Palomar Mountain and Mount Laguna.</p> <p><b>Objective:</b> Provide lighting in heavily urbanized areas of the Otay Valley Parcel which ensures a high degree of public safety.</p> <p><b>Objective:</b> Provide lighting in less urbanized areas, which helps to preserve county-wide dark-night skies, and is consistent with more rural lighting standards prevalent in non-urbanized areas of San Diego County.</p> <p><b>Policy:</b> The Otay Valley Parcel shall conform to the Chula Vista Municipal lighting standards.</p> <p><b>Policy:</b> All outdoor lighting fixtures shall be shaded on top so that all light will shine downward.</p>	<p><b>Consistent.</b> As discussed under Threshold 4, lighting within Village 9 would adhere to City ordinances and standards, including shaded light fixtures. The SPA Plan includes a community lighting plan as part of its village identity concept (Section 4.2 of the SPA Plan) that balances public safety with the need to minimize light pollution, minimize energy use, and maintain appropriateness of fixture style and scale for the different uses within the project area.</p>

## 5.2.4 Level of Significance Prior to Mitigation

### A. Scenic Vistas

No significant impacts to scenic vistas have been identified; impacts would be less than significant.

### B. Scenic Resources

No scenic resources would be damaged by the project; impacts would be less than significant.

### C. Visual Character or Quality

The project would permanently alter the character of the project site from open, rolling topography to urban development. This impact would be significant.

### **D. Lighting, Glare, Shadow, and Wind**

New sources of nighttime lighting may be incompatible with surrounding development and inconsistent with applicable regulations. Potential impacts associated with light, shadow, and wind cannot be determined until the location, size, and orientation of future buildings are established. These impacts would be potentially significant.

### **E. Landform Alteration**

The project would not significantly impact steep slopes because it would be consistent with the GDP/RMP requirement for 83 percent steep slope preservation. However, until the Landscape Master Plan and subsequent landscape and irrigation construction plans have been approved, impacts related to the mass grading plan for the project site would be potentially significant.

### **F. Consistency with Visual Character Policies**

The project would be consistent with all applicable visual character policies. Impacts would be less than significant.

## **5.2.5 Mitigation Measures**

### **A. Scenic Vistas**

No mitigation measures are required.

### **B. Scenic Resources**

No mitigation measures are required.

### **C. Visual Character or Quality**

The project would implement mitigation measure 5.2.5-1 identified in the SEIR to reduce impacts related to visual character. However, because the project would result in development on the site, it would permanently alter the character of the existing site from open, rolling hills to urban development. No mitigation is available to maintain the undeveloped character of the site. Impacts would be significant and unavoidable.

### **D. Lighting, Glare, Shadow, and Wind**

**5.2-1 Lighting Plan and Photometric Analysis - Parks.** Concurrent with the preparation of site-specific plan(s) for park sites, including the town squares (Planning Areas C and I), Neighborhood Park (Planning Area L), and Pedestrian Parks (Planning Areas GG, HH, and II), and prior to issuance of a building permit for any park, the applicant shall prepare, or in the case of the City being the lead on the preparation of the site specific plan, the applicant shall fund the preparation of a lighting plan and photometric analysis. The plan shall be prepared to the satisfaction of the Development Services Director and evaluate the proposed height, location, and intensity of all exterior lighting for compliance with the City's performance standards for light, and glare (Chula Vista Municipal Code 19.66.100).

**5.2-2 Lighting Plan and Photometric Analysis – New Structures.** Concurrent with design review and prior to the issuance of building permits for mixed-use residential, commercial, Community Purpose Facility and multi-family residential, the applicant shall prepare a lighting plan and

photometric analysis. The plan shall be prepared to the satisfaction of the Development Services Director (or their designee) and evaluate the proposed height, location, and intensity of all exterior lighting for compliance with the City's performance standards for light, and glare (Chula Vista Municipal Code 19.66.100).

- 5.2-3 **Shadow and Wind Pattern Analysis.** Prior to design review approval for any structure three stories and above, the applicant shall prepare to the satisfaction of the Development Services Director (or their designee), a shadow and wind pattern analysis demonstrating that adjacent shadow-sensitive uses are not permanently shadowed, and/or any other approved City-standard in place at the time the shadow and wind pattern analysis is performed.

## **E. Landform Alteration**

- 5.2-4 **Landscape Master Plan.** Prior to issuance of the first final map for Village 9, the applicant shall prepare to the satisfaction of the Development Services Director (or their designee), a Landscape Master Plan. The Landscape Master Plan shall demonstrate compliance with GDP Policies pertaining to softening manufactured slopes, particularly on visible manufactured slopes greater than 25 feet in height, through plant selection, placement, and density, etc.

## **F. Consistency with Visual Character Policies**

No mitigation measures are required.

### **5.2.6 Level of Significance After Mitigation**

#### **A. Scenic Vistas**

Impacts would be less than significant without mitigation.

#### **B. Scenic Resources**

Impacts would be less than significant without mitigation.

#### **C. Visual Character or Quality**

No mitigation is available to maintain the undeveloped character of the site. Impacts would be significant and unavoidable.

#### **D. Lighting, Glare, Shadow, and Wind**

Implementation of mitigation measures 5.2-1, 5.2-2, and 5.2-3 would reduce impacts related to lighting, shadow, and wind to a less than significant level.

#### **E. Landform Alteration**

Implementation of mitigation measure 5.2-4 would reduce Impacts related to mass grading of the project site to a less than significant level. Impacts related to steep slope preservation would be less than significant without mitigation.

#### **F. Consistency with Visual Character Policies**

Impacts would be less than significant without mitigation.

## 5.3 Transportation/Traffic

This section describes existing traffic conditions and evaluates potential impacts to transportation and traffic due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR identified significant but mitigable impacts to roadway and freeway segments in the City of Chula Vista. The traffic analysis contained in this section is primarily based on the Otay Ranch Village 9 Traffic Impact Analysis Report prepared by RBF Consulting in March 2013, which is included as Appendix B to this EIR. This report updates the applicable information contained in the SEIR. The traffic analysis includes both project-generated traffic and traffic that would be generated by cumulative growth through buildout of the SPA Plan and TM. Therefore, the project's direct and cumulative traffic impacts are addressed in this section. The name of Rock Mountain Road was changed to Main Street as part of the GPA/GDPA. References to the existing portion of Main Street in this analysis refer to the roadway formerly named Rock Mountain Road, from Magdalena Avenue to its eastern terminus.

### 5.3.1 Existing Conditions

#### A. Regulatory Framework

##### 1. State

##### a. Statewide Transportation Improvement Program

The California 2010 Statewide Transportation Improvement Program (STIP), approved by the U.S. Department of Transportation in October 2009, is a multi-year, statewide, intermodal program of transportation projects that is consistent with the statewide transportation plan and planning processes, metropolitan plans, and Title 23 of the CFR. The STIP is prepared by Caltrans in cooperation with the metropolitan planning organizations and the regional transportation planning agencies. The STIP contains all capital and non-capital transportation projects or identified phases of transportation projects for funding under the Federal Transit Act and Title 23 of the CFR, including federally funded projects.

##### b. Congestion Management Program

State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a congestion management program, which is a part of SANDAG's Regional Transportation Plan. The purpose of the management program is to monitor the performance of the region's transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. The San Diego region has elected to be exempt from the California congestion management program. As a result, existing monitoring, threshold levels, guidelines and mitigation strategies are incorporated into other SANDAG plans and/or programs.

##### 2. Regional

SANDAG serves as the forum for decision-making on regional issues such as growth, transportation, land use, economy, environment, and criminal justice. SANDAG builds consensus, makes strategic plans, obtains and allocates resources, and provides information on a broad range of topics pertinent to the region's quality of life. SANDAG is governed by a Board of Directors composed of mayors, council members, and supervisors from each of the San Diego region's 19 local governments.

As the metropolitan planning organization and regional transportation planning agency for the San Diego region, SANDAG has produced the following documents that identify transportation plans and policies in the San Diego area.

**a. 2050 Regional Transportation Plan**

SANDAG adopted the 2050 Regional Transportation Plan and Sustainable Communities Strategy (SCS) on October 28, 2011. The 2050 Regional Transportation Plan maps out a system designed to maximize transit enhancements, integrate biking and walking elements, and promote programs to reduce demand and increase efficiency. The Regional Transportation Plan also identifies the plan for investing in local, state and federal transportation facilities in the region over the next 40 years. The SCS integrates land use and housing planning within the transportation plan. The SCS also addresses how the transportation system will be developed in such a way that the region is able to reduce per-capita GHG emissions to state-mandated levels.

**b. 2010 Regional Transportation Improvement Program**

The Regional Transportation Improvement Program (RTIP) is a multi-year program of proposed major highway, arterial, transit, and bikeway projects. The 2010 RTIP is a prioritized program designed to implement the region's overall strategy for providing mobility and improving the efficiency and safety of efforts to attain federal and state air quality standards for the region. The 2010 RTIP also incrementally implements the latest update to the Regional Transportation Plan. The 2010 RTIP covers fiscal years 2011 to 2015. The 2010 RTIP, including an air quality emissions analysis for all regionally significant projects, was adopted on December 14, 2010.

**3. Local**

**a. City of Chula Vista General Plan**

The Chula Vista General Plan, known as Vision 2020, was adopted by the City of Chula Vista on December 13, 2005. The Chula Vista General Plan contains objectives and policies in the Land Use and Transportation Element that support transit (Objective LUT 17), encourage alternative transportation measures (Objectives LUT 18 and LUT 23), encourage regional transportation coordination (Objective LUT 19), develop transit-friendly roads (Objective LUT 20), support parking management policies (Objectives LUT 30 through LUT 33), and ensure pedestrian-oriented environments (Objective LUT 63). The 2013 GPA included changes to the adopted Circulation Plan, including road reclassifications, renaming of Rock Mountain Road, elimination of the southerly extension of La Media Road, and establishing an acceptable level of service for town centers.

**b. Otay Ranch General Development Plan**

The Otay Ranch GDP includes goals, objectives and policies to guide development of a circulation system in Otay Ranch. The GDP envisions a safe, efficient, multi-modal transportation network that reduces reliance on the automobile. The GDP encourages development that integrates residential and commercial uses with a mobility system that accommodates alternative modes of transportation, and is organized to create a pedestrian friendly community. The GDP includes policies related to transit, street systems within town centers, and parking.



### c. City of Chula Vista's Guidelines for Traffic Impact Studies in the City of Chula Vista

The Chula Vista General Plan and the City of Chula Vista's *Guidelines for Traffic Impact Studies in the City of Chula Vista* (February 2001) establish the acceptable level of service standards for intersections, roadway segments, and Caltrans facilities, as described below.

#### Intersections

In accordance with City requirements, the 2000 Highway Capacity Manual methodology for signalized and unsignalized intersections is used to determine the operating level of service of intersections. The methodology in the manual describes the operation of an intersection using a range of LOS A (free-flow conditions) to LOS F (severely congested conditions), based on corresponding average stopped delay per vehicle, as shown in Table 5.3-1.

**Table 5.3-1 Intersection Level of Service Thresholds and Delay Ranges**

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: RBF 2013

#### Roadway Segments

Roadway segment analyses are based upon roadway classifications and capacity thresholds as defined in the Chula Vista Transportation Element. Roadway segment level of service criteria are shown in Table 5.3-2.

**Table 5.3-2 Level of Service Thresholds for Roadway Segments**

Classification (# Lanes)	Level of Service (percent of capacity)				
	A (60%)	B (70%)	C (80%)	D (90%)	E (100%)
Expressway (8)	52,500	61,300	70,000	78,800	87,500
Prime Arterial (6) <sup>(1)</sup>	37,500	43,800	50,000	56,300	62,500
Major Street (6)	30,000	35,000	40,000	45,000	50,000
Major Street (4)	22,500	26,300	30,000	33,800	37,500
Class I Collector (4)	16,500	19,300	22,000	24,800	27,500
Class II Collector (2)	9,000	10,500	12,000	13,500	15,000
Class III Collector (2)	5,600	6,600	7,500	8,400	9,400
Town Center Arterial (6)	37,500	43,800	50,000	56,300	62,500
Gateway Arterial (6)	40,500	47,500	54,500	61,200	68,000

<sup>(1)</sup> For Village 9, the technical analysis includes the evaluation of augmented arterials near the freeway on and off ramps. The augmented arterials include auxiliary lanes in advance of the freeway ramps to serve the higher traffic volumes that typically occur. When auxiliary lanes are provided, the capacity of the segment is increased by the equivalent single lane capacity (10,500 vpd per lane for LOS E) to account for the benefit in overall operations that is achieved with the construction of auxiliary lanes near the ramps.

Source: City of Chula Vista 2005a

### Caltrans Facilities

Caltrans facilities analyses are based on the 2000 Highway Capacity Manual, Caltrans Highway Design Manual, and the SANTEC/ITE Traffic Impact Study Guidelines. The Intersection Lane Volume Analysis (ILV) methodology for Caltrans facilities evaluates the traffic demand at an intersection to the available capacity at the intersection. Combining traffic signal phasing and intersection geometry with peak hour traffic volumes, the ILV methodology determines if a ramp is either “stable,” “unstable” or at “capacity.” The thresholds for operating conditions using the ILV methodology are summarized in Table 5.3-3.

**Table 5.3-3 Intersection Lane Volume Operational Thresholds**

ILV/hr	Description
<1,200 “Stable”	Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free midblock operations.
1,200 to 1,500 “Unstable”	Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs on some approaches.
>1,500 “Capacity”	Stop-and-go operation with severe delay and heavy congestion. Traffic volume is limited by maximum discharge rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.
Source: RBF 2013	

#### d. Growth Management Ordinance

The Chula Vista GMO (Municipal Code Section 19.09) prohibits new development unless adequate public facilities are available concurrently with development. Regarding traffic, the GMO states that future large-scale developments planned for the area east of I-805 will require the provision of major facilities including facilities within the SR-125 corridor to accommodate projected traffic and other needs of development in accordance with the City-adopted traffic threshold standards. The GMO establishes a City-wide standard to maintain LOS C or better as measured by observed average travel speed on all signalized arterial segments, except during peak hours, when an LOS D can occur for no more than two hours of the day.

## B. Existing Traffic and Circulation Conditions

Intersections and roadway segments throughout the project vicinity were evaluated as part of the Traffic Impact Analysis Report for Village 9. The following discussion provides a description of the existing conditions for these roadway segments and intersections, and where applicable, future improvements planned for these roadways or intersections.

### 1. Roadway Segments

A description of existing and future roadways for Village 9 is provided below. Future roadway conditions are provided in this section to provide context for the analysis of project impacts under future conditions. Existing intersection geometry is provided in Appendix B.

**Interstate 805** currently provides regional access through the South San Diego County area as a major freeway facility and is oriented in a north-south direction. Regional project access is provided at Olympic Parkway and Main Street. I-805 is generally an eight-lane freeway between I-5 and SR-54. By Horizon Year 2030, I-805 is planned to include eight lanes plus four managed lanes north of East Palomar Street.

**State Route 125** is currently a combination freeway/tollway that provides north-south access through eastern Chula Vista, east of I-805. SR-125 is a four-lane freeway facility that extends from SR-52 in Santee to SR-54. The southern portion of SR-125 from SR-54 to SR-905 is a toll road, also known as the South Bay Expressway.

**Olympic Parkway** is currently constructed as a six-lane prime arterial from I-805 to Hunte Parkway and as a four-lane major road east of Hunte Parkway. To serve high traffic volumes in the vicinity of SR-125, Olympic Parkway is classified as an 8-lane Expressway from SR-125 to Eastlake Parkway. Olympic Parkway provides local access to and from I-805 and east-west connections through the surrounding areas to Otay Ranch. Bike lanes are provided and on-street parking is prohibited. The posted speed limit is 45 miles per hour (mph).

**Main Street (formerly Rock Mountain Road)** is currently constructed as a six-lane prime arterial from I-805 to its existing terminus at Heritage Road. The extension of Main Street is identified in the Transportation Element to extend from the existing terminus to connect with Hunte Parkway. The extension of Main Street will provide an additional east-west route between I-805 and SR-125, parallel to Olympic Parkway. Main Street would be constructed through the project site as a six-lane gateway with three lanes eastbound and three lanes westbound. Sidewalks and bicycle lanes would be provided along Main Street.

**Brandywine Avenue** is currently a four-lane Class I collector road and narrows to two lanes with a two-way left-turn lane north of Main Street. Brandywine Avenue is oriented in a north-south direction and provides connections to Telegraph Canyon Road, East Palomar Street, Olympic Parkway, and Main Street. Bike lanes are provided along Brandywine Avenue. The posted speed limit is 25 mph. On-street parking is prohibited except along the two-lane section of Brandywine Avenue.

**Heritage Road** is currently constructed as a six-lane prime arterial north of Olympic Parkway and is generally oriented in a north-south direction, providing access from Olympic Parkway north to Telegraph Canyon Road where the road turns into Paseo Ranchero. There is currently a gap in Heritage Road between Olympic Parkway and Main Street. Currently, Heritage Road south of Main Street is striped as a two- to four-lane collector with a posted speed limit of 40 mph. Bike lanes and sidewalks are provided; on-street parking is prohibited. A future extension of Heritage Road is planned and would be constructed as a six-lane prime arterial from Olympic Parkway to Main Street and would be the only roadway connection from Chula Vista to the Otay Mesa in the city of San Diego between I-805 and SR-125.

**La Media Road** is currently constructed as a six-lane prime arterial road and is oriented in a north-south direction, providing access between Telegraph Canyon Road, the northerly property line of Village 8 West, and south of Birch Road. The posted speed limit is 40 mph. On-street parking is prohibited to accommodate bike lanes. The Transportation Element identifies an extension of La Media south into the future Village 8 West as a six-lane prime arterial. La Media Road would be constructed as a four-lane couplet through Village 8 West with two lanes southbound and two lanes northbound. The couplet speeds would be set between 25 and 35 mph to complement the pedestrian oriented development and to support the proposed on-street parking within Village 8 West. Sidewalks would also be provided both within the couplet and along the six-lane sections of La Media Road. La Media Road becomes Otay Valley Road south of the couplet in Village 8 West.

**Eastlake Parkway** is currently constructed as a six-lane major arterial between Hunte Parkway and Olympic Parkway and is oriented in a north-south direction immediately east of SR-125. Bike lanes are provided and on-street parking is prohibited. Eastlake Parkway is a six-lane prime arterial north of Olympic Parkway to Otay Lakes Road. Eastlake Parkway provides access from its southern terminus at Hunte Parkway to north of Otay Lakes Road. The Chula Vista Transportation Element includes the extension of Eastlake Parkway south of Hunte Parkway into the future University site.

**Hunte Parkway** is currently constructed as a six-lane prime arterial from Eastlake Parkway to Olympic Parkway. Bike lanes and sidewalks are provided. A greenbelt trail is located along the south side of Hunte Parkway. The posted speed limit is 45 mph.

**Birch Road** is currently constructed as a six-lane road from La Media Road to Eastlake Parkway and is oriented in an east-west direction, providing access to La Media Road, SR-125, and Eastlake Parkway. Birch Road is classified as a six-lane major arterial from La Media Road to SR-125. From SR-125 to Eastlake Parkway, Birch Road is classified as a six-lane prime arterial.

**Magdalena Avenue** is currently constructed as a two to four lane local road that connects Main Street to Birch Road through Village 7. It provides access to the local high school and residential areas on the west side of SR-125. Although local roads are typically not subject to the level of service requirements established for Circulation Element roads, the segment of Magdalena Avenue from Birch Road to Main Street is included in the analysis because of its close proximity to the project site and because a relatively high percentage of Village 9 project trips destined to the Village 8 West site are forecast to use Magdalena Avenue.

**Santa Victoria** is currently partially constructed. At buildout (Year 2030), the roadway will be a two-lane road that will extend west from the Birch Road/La Media Road intersection and extend northwesterly to connect with Olympic Parkway. The road is planned as part of the Village 2 roadway network.

**Otay Valley Road** is a future four-lane major road that would be connected to the southern terminus of the La Media Road in Village 8 West and would continue southeasterly across SR-125 into Village 9 to the future extension of Eastlake Parkway. San Diego Metropolitan Transit System plans to use the Otay Valley Road as part of the Bus Rapid Transit (BRT) route.

## **2. Existing Roadway Segment Operations**

Existing roadway segment level of service was calculated based on established capacity thresholds defined by roadway classification and Average Daily Trip (ADT) volumes. Table 5.3-4 presents the results of the existing conditions roadway segment level of service analysis for Village 9. As shown in this table, all roadway segments currently operate at acceptable levels of service, except for the Olympic Parkway segment from Heritage Road to La Media Road.

**Table 5.3-4 Existing Roadway Segment Level of Service**

Roadway	Segment	Existing Conditions				
		Classification (# Lanes)	LOS C Capacity	ADT	V/C	LOS
Olympic Parkway	I-805 to Brandywine	Prime Arterial (6)	50,000	47,000	0.75	C
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	48,721	0.78	C
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	50,538	0.81	D
	La Media Road to SR-125 Ramps	Prime Arterial (6)	50,000	43,563	0.70	C
	SR-125 Ramps to Eastlake Parkway	Prime Arterial (8)	70,000	40,478	0.46	A
	Eastlake Parkway to Hunte Parkway	Prime Arterial (6)	50,000	13,926	0.22	A
	East of Hunte Parkway	Major Street (4)	30,000	7,846	0.21	A
Birch Road	La Media Road to SR-125	Major Arterial (6)	40,000	11,084	0.22	A
	SR-125 to Eastlake Parkway	Major Arterial (6)	40,000	10,250	0.16	A
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,500	26,896	0.37	A
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	18,729	0.30	A
	Heritage Road to Couplet	Does Not Exist				
	Couplet to Magdalena Avenue	Does Not Exist				
	Magdalena Avenue to SR-125 Ramps	Does Not Exist				
	SR-125 Ramps to Village 9 Access Road	Does Not Exist				
	Village 9 Access Road to Eastlake Parkway	Does Not Exist				
Hunte Parkway	Eastlake Parkway to Olympic Parkway	Prime Arterial (6)	50,000	1,406	0.02	A
	Olympic Parkway to Otay Lakes Road	Major Street (4)	30,000	9,580	0.26	A
Heritage Road	Telegraph Canyon Rd to Olympic Parkway	Prime Arterial (6)	50,000	12,383	0.20	A
	Olympic Parkway to Main Street	Does Not Exist				
	Main Street to Entertainment Circle	Class I Collector (2A)	12,000	10,035	0.67	B
	Entertainment Circle to Avenida de Las Vistas (City of SD)	Class I Collector (2A)	12,000	9,846	0.66	B
La Media Road	Telegraph Canyon Rd to Olympic Parkway	Prime Arterial (6)	50,000	12,658	0.20	A
	Olympic Parkway to Birch Road	Prime Arterial (6)	50,000	11,037	0.18	A
	Birch Road to Couplet	Does Not Exist				
Magdalena Ave	Birch Road to Main Street	Class II Collector (2)	12,000	9,122	0.61	B
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	Prime Arterial (6)	50,000	18,945	0.30	A
	Olympic Parkway to Birch Road	Major Arterial (6)	40,000	9,199	0.18	A
	Birch Road to Hunte Parkway/Main Street	Major Arterial (6)	40,000	1,310	0.03	A
	Main Street to Otay Valley Road	Does Not Exist				
Otay Valley Road	Couplet to Village 9 Access Road	Does Not Exist				
	Village 9 Access Road to SR-125	Does Not Exist				
	SR-125 Ramps to University	Does Not Exist				

Note: 6A = 6 lane augmented arterial. Augmented arterials include additional turn lanes that provide the necessary capacity in advance of key intersections such as freeway ramps. The additional lanes improve the overall performance of the link nearest the intersection where the greatest delay typically occurs. The performance of the segment benefits from this additional capacity; therefore, the overall capacity of the link is increased by the equivalent single lane volume for this classification (10,500 vpd per lane).

Source: RBF 2013



### 3. Intersections

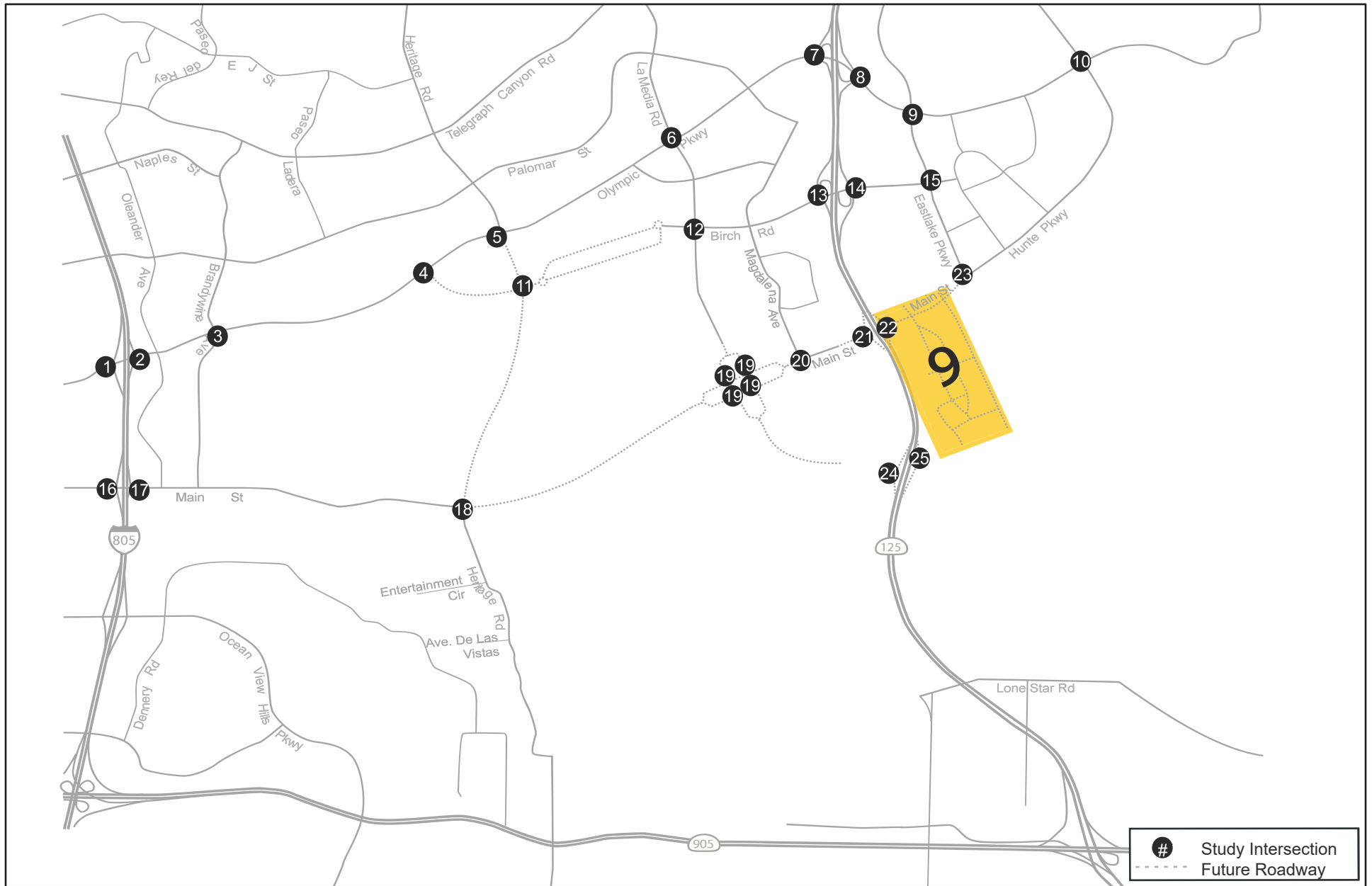
The following 25 intersections were evaluated as part of the traffic analysis for Village 9, and are shown in Figure 5.3-1:

- |  |  |
|--|--|
| 1. Olympic Parkway/I-805 southbound ramps  | 14. Birch Road/SR-125 northbound ramps       |
| 2. Olympic Parkway/I-805 northbound ramps  | 15. Birch Road/Eastlake Parkway              |
| 3. Olympic Parkway/Brandywine Avenue       | 16. Main Street/I-805 southbound ramps       |
| 4. Olympic Parkway/Santa Victoria          | 17. Main Street/I-805 northbound ramps       |
| 5. Olympic Parkway/Heritage Road           | 18. Main Street/Heritage Road                |
| 6. Olympic Parkway/La Media Road           | 19. Main Street/La Media Road (Couplet)      |
| 7. Olympic Parkway/SR-125 southbound ramps | 20. Main Street/Magdalena Avenue             |
| 8. Olympic Parkway/SR-125 northbound ramps | 21. Main Street/SR-125 southbound ramps      |
| 9. Olympic Parkway/Eastlake Parkway        | 22. Main Street/SR-125 northbound ramps      |
| 10. Olympic Parkway/Hunte Parkway          | 23. Main Street/Eastlake Parkway             |
| 11. Santa Victoria/Heritage Road           | 24. Otay Valley Road/SR-125 southbound ramps |
| 12. Birch Road/La Media Road               | 25. Otay Valley Road/SR-125 northbound ramps |
| 13. Birch Road/SR-125 southbound ramps     |  |

To determine the existing conditions at the 25 study area intersections, turning movement counts were taken on a typical weekday during the AM (7:00 to 9:00 a.m.) and PM (4:00 to 6:00 p.m.) peak hour periods. ADT volumes were also collected along most roadway segments over a 24-hour period. Table 5.3-5 summarizes the existing AM and PM peak hour level of service of the study intersections based on the existing peak hour intersection volumes and existing intersection geometry. As shown in this table, all intersections are currently operating at an acceptable level of service (LOS D or better) during the AM and PM peak hours, with the exception of the Olympic Parkway/I-805 northbound ramps intersection, which operates at LOS F during the AM peak hour.

### 4. Alternative Transportation

Under existing conditions, public transportation is currently provided by Chula Vista Transit, a component of the San Diego Metropolitan Transit System. Routes 712 and 709 serve the Otay Ranch area. However, neither route currently provides service to Village 9. Currently, the nearest public transportation stop to Village 9 is located approximately 0.75 mile north of the project area at the intersection of Olympic Parkway and Eastlake Parkway. The proposed South Bay BRT line would traverse Village 9 and would provide a regional transit connection. The BRT would connect Village 9 to cities to the north via I-805, and to Mexico via SR-125. The BRT line is expected to be in service in late 2014 (SANDAG 2012).



Source: RBF 2013

Not to Scale



**STUDY AREA  
FIGURE 5.3-1**

**Table 5.3-5 Existing Intersection Level of Service**

Study Intersection	Control	AM Peak Hour Delay-LOS		PM Peak Hour Delay-LOS	
		Delay	LOS	Delay	LOS
1. Olympic Parkway/I-805 southbound ramps	Signalized	41.7	D	41.6	D
2. Olympic Parkway/I-805 northbound ramps	Signalized	<b>118.4</b>	<b>F</b>	37.8	D
3. Olympic Parkway/Brandywine Avenue	Signalized	30.2	C	31.6	C
4. Olympic Parkway/Santa Victoria Road	Does Not Exist				
5. Olympic Parkway/Heritage Road	Signalized	18.5	B	15.6	B
6. Olympic Parkway/La Media Road	Signalized	37.6	D	25.4	C
7. Olympic Parkway/SR-125 southbound ramps	Signalized	2.8	A	4.7	A
8. Olympic Parkway/SR-125 northbound ramps	Signalized	1.3	A	2.4	A
9. Olympic Parkway/Eastlake Parkway	Signalized	29.2	C	31.5	C
10. Olympic Parkway/Hunte Parkway	Signalized	33.4	C	34.2	C
11. Santa Victoria Road/Heritage Road	Does Not Exist				
12. Birch Road/La Media Road	Signalized	27.0	C	22.6	C
13. Birch Road/SR-125 southbound ramps	Signalized	11.8	B	11.2	B
14. Birch Road/SR-125 northbound ramps	Signalized	1.6	A	5.7	A
15. Birch Road/Eastlake Parkway	Signalized	35.2	D	32.7	C
16. Main Street/I-805 southbound ramps	Signalized	27.8	C	29.7	C
17. Main Street/I-805 northbound ramps	Signalized	27.7	C	28.9	C
18. Main Street/Heritage Street	Signalized	2.8	A	0.9	A
19. Main Street/La Media Road (Couplet)	Does Not Exist				
20. Main Street (Rock Mtn Road)/Magdalena Avenue	Uncontrolled	2.8	A	0.9	A
21. Main Street/SR-125 southbound ramps	Does Not Exist				
22. Main Street/SR-125 northbound ramps	Does Not Exist				
23. Main Street/Eastlake Parkway	Signalized	13.6	B	12.9	B
24. Otay Valley Road/SR-125 southbound ramps	Does Not Exist				
25. Otay Valley Road/SR-125 northbound ramps	Does Not Exist				
Note: Deficient intersection operation shown in <b>bold</b> and shading.					
Source: RBF 2013					

### 5.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts regarding traffic and circulation would be significant if the project would:

- **Threshold 1:** Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit.
- **Threshold 2:** Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- **Threshold 3:** Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- **Threshold 4:** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- **Threshold 5:** Result in inadequate emergency access.
- **Threshold 6:** Conflict with adopted policies, plans or programs regarding the circulation network, public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Project impacts are defined as either project specific or cumulative. Project specific impacts are those impacts for which the addition of project trips results in an identifiable degradation in level of service, triggering the need for specific project-related improvements. Cumulative impacts are those in which project trips contribute to an unacceptable level of service. Both direct and cumulative impacts are addressed below under Threshold 1. The City of Chula Vista's goal for acceptable operating conditions is LOS D or better for signalized and unsignalized intersections and LOS C or better for roadway segments. For urban core arterials (town center and gateway classifications), the threshold for acceptable level of service is LOS D along roadway segments. For intersections, roadway segments and freeway sections, impacts are defined when the acceptable level of service is breached either by the project or as a cumulative effect of multiple projects. The criteria for determining whether the project results in either a project specific or cumulative impact are defined both for short-term and long-term conditions, as defined below:

#### **A. Short-term Impacts (0-4 Years)**

For purposes of the short-term analysis, roadway sections are defined as either links or segments. A link is typically that section of roadway between two adjacent circulation element intersections and a segment is defined as that combination of contiguous links used in the GMO Traffic Monitoring Program. Analysis of roadway links under short-term conditions may require a more detailed analysis using the GMOC methodology if the typical planning analysis using volume to capacity ratios on an individual link indicates a potential impact to that link. The GMOC analysis uses the Highway Capacity Manual methodology of average travel speed based on actual measurements on the segments as listed in the GMO Traffic Monitoring Program.

##### ***Intersections***

1. Project specific impact if both the following criteria are met:
  - i. Level of service is LOS E or F.
  - ii. Project trips comprise 5 percent or more of entering volume.
2. Cumulative impact if only 1.i above is met.

##### ***Street Links/Segments***

If the planning analysis using the volume to capacity ratio indicates LOS C or better, there is no impact. If the planning analysis indicates LOS D, E or F, the GMOC method should be utilized. The following criteria would then be utilized:

1. Project specific impact if all the following criteria are met:
  - i. Level of service is LOS D for more than 2 hours or LOS E/F for 1 hour
  - ii. Project trips comprise 5 percent or more of segment volume
  - iii. Project adds greater than 800 ADT to the segment.
2. Cumulative impact if only 1.i above is met.

**Freeways**

1. Project specific impact if both the following criteria are met:
  - i. Freeway segment is LOS E or LOS F
  - ii. Project comprises 5 percent or more of the total forecasted ADT on that freeway segment
2. Cumulative impact is only 1.i above is met.

**B. Long-term Impacts (5 or more Years)****Intersections**

1. Project specific impact if both the following criteria are met:
  - i. Level of service is LOS E or LOS F
  - ii. Project trips comprise 5 percent or more of entering volume
2. Cumulative impact if only 1.i above is met.

**Street Segments**

Use the planning analysis using the volume to capacity ratio methodology only. The GMOC analysis methodology is not applicable beyond a four-year horizon.

1. Project specific impact if all three of the following criteria are met:
  - i. Level of service is LOS D, LOS E, or LOS F
  - ii. Project trips comprise 5 percent or more of segment volume
  - iii. Project adds greater than 800 ADT to the segment.
2. Cumulative impact if only 1.i is met. However, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is considered not significant since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If a segment is LOS F, an impact is significant regardless of intersection level of service.
3. Notwithstanding the foregoing, if the impact identified in paragraph 1 above occurs at study horizon year 10 or later, and is off the site and not adjacent to the project, the impact is considered cumulative. Study year 10 may be that typical SANDAG model year which is between 8 and 13 years in the future. In this case of a traffic study being performed in the period of 2000 to 2002, because the typical model will only evaluate traffic at years divisible by 5 (i.e., 2005, 2010, 2015 and 2020) study horizon year 10 would correspond to the SANDAG model for year 2010 and would be 8 years in the future. If the model year is less than 7 years in the future, study horizon year 10 would be 13 years in the future.
4. In the event a direct identified project specific impact in paragraph 1 above occurs at study horizon year 5 or earlier and the impact is off site and not adjacent to this project, but the property immediately adjacent to the identified project specific impact is also proposed to be developed in approximately the same time frame, an additional analysis may be required to determine whether or not the identified project specific impact would still occur if the development of the adjacent property does not take place. If the additional analysis concludes that the identified project specific impact is no longer a direct impact, then the impact shall be considered cumulative.



**Freeways**

1. Project specific impact if both the following criteria are met
  - i. Freeway segment is LOS E or LOS F
  - ii. Project comprises 5 percent or more of the total forecasted ADT on that freeway segment.
2. Cumulative impact if only item 1.i above is met.

**5.3.3 Impact Analysis**

**A. Threshold 1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit.**

Potential traffic impacts that would result from construction and operation of the project are discussed below. The construction traffic analysis incorporates the operation analysis; therefore, the operation analysis is discussed first, followed by potential construction impacts.

**1. Operation**

The traffic impact analysis for operation of Village 9 (included as Appendix B to this EIR) evaluated traffic impacts that would occur upon implementation of the project under the following scenarios: Year 2020, Year 2025, and Year 2030. Additionally, an "Existing Plus Project" scenario was evaluated. The following discussion summarizes the results of the traffic impact analysis for Village 9. The operational analysis includes traffic that would potentially be generated by all proposed uses in the SPA Plan and TM, including residential units, commercial development, schools, parks, and community purpose facilities. The assumed phasing of these facilities is described in each scenario below.

**a. Traffic Impact Scenarios**

Each of the following scenarios includes certain roadway system assumptions that are discussed in each impact section, as well as on-site access and frontage improvements required by Municipal Code Section 12.24.

**Existing Plus Project**

The Existing Plus Project scenario includes all project-generated trips associated with buildout of Village 9 added to the existing roadway network. However, the project is planned to be constructed in a series of phases over a period of up to 20 years. This phasing would not require construction of all circulation improvement at once because the increase in trips as a result of the project would be phased along with development. Rather, such improvements would be constructed as is needed to mitigate impacts of phased development, as discussed in the Year 2020, Year 2025, and Year 2030 scenarios. A Year 2015 scenario was not included in the analysis because no development is anticipated to be completed in Village 9 by Year 2015; therefore, the project would not be generating operational traffic. Development in each interim scenario is based on the development phasing forecast in the Village 9 PFFP.

**Year 2020**

The Year 2020 scenario includes project-generated trips associated with the construction of 114 single-family residential dwelling units, 1,634 multi-family residential dwelling units, 250,000 square feet of commercial use, and 14.8 acres of park space within Village 9.

**Year 2025**

The Year 2025 scenario includes the development assumed to occur by Year 2020, in addition to project-generated trips associated with the construction of 131 single-family dwelling units, 1,877 multi-family dwelling units, an elementary school, an additional 625,000 square feet of commercial and office space, and 12.7 acres of park space.

**Year 2030**

The scenario for Year 2030 includes the development assumed to occur by Year 2025, in addition to the construction of 21 single-family residential dwelling units, 223 multi-family residential dwelling units, an elementary school, an additional 625,000 square feet of commercial space, and 5.0 acres of CPF.

**b. Traffic Model Methodology**

For the Village 9 traffic analysis, future year traffic volumes were forecast using the Series 11 South Bay Sub Area traffic model developed by SANDAG. In collaboration with the City of Chula Vista and SANDAG, RBF Consulting provided the land use and network designations for each scenario year. Interim forecast data was determined for each study year beginning in Year 2020 with the model providing ADT for roadway segments.

Traffic model runs accounted for the construction of future roads, in order to understand how future traffic patterns may change when new capacity is added to the roadway network. The traffic analysis also assumed that the existing roadway network exists until mitigation measures are determined to be necessary, which may include the addition of links modeled with the SANDAG traffic model. In each scenario, manual adjustments were made to the model volumes to remove the future links. The future link volumes were reassigned to existing roadways in order to forecast traffic volumes on the existing roadway network. Manual adjustments and forecast traffic patterns for the future year conditions were compared to existing traffic patterns and volumes to ensure reasonable growth and traffic flow.

Peak hour intersection turning volumes were post-processed for each scenario year based on the model ADT and the relationship between existing peak hour volumes to existing ADT as well as anticipated growth in the surrounding area. For new intersections, peak hour volumes were post processed based on the distribution of ADT volumes on the network. Relationships between links, understanding of proposed land and traffic trends on existing, similar roadways were used to refine the peak hour volumes.

The SANDAG model assigned limited volumes to the ramps along SR-125. The post-processing of ramp volumes were refined to equalize the use of ramps through each of the interchanges to reflect existing traffic patterns at existing ramps along the SR-125 corridor. Further refinements to the distribution of traffic during the peak hour were made around the ramps to reflect peak period demand and turning movement volumes.

For the basic freeway segment analysis, segments of northbound and southbound I-805 between Telegraph Canyon Road and Main Street were analyzed under 2030 with and without the project peak hour conditions using the 2000 Highway Capacity Software (HCS) Basic Freeway Segment analysis

methodology. A four percent heavy truck factor was applied in addition to a measured free-flow speed of 65 mph was used in the HCS calculations for multi-lane segments.

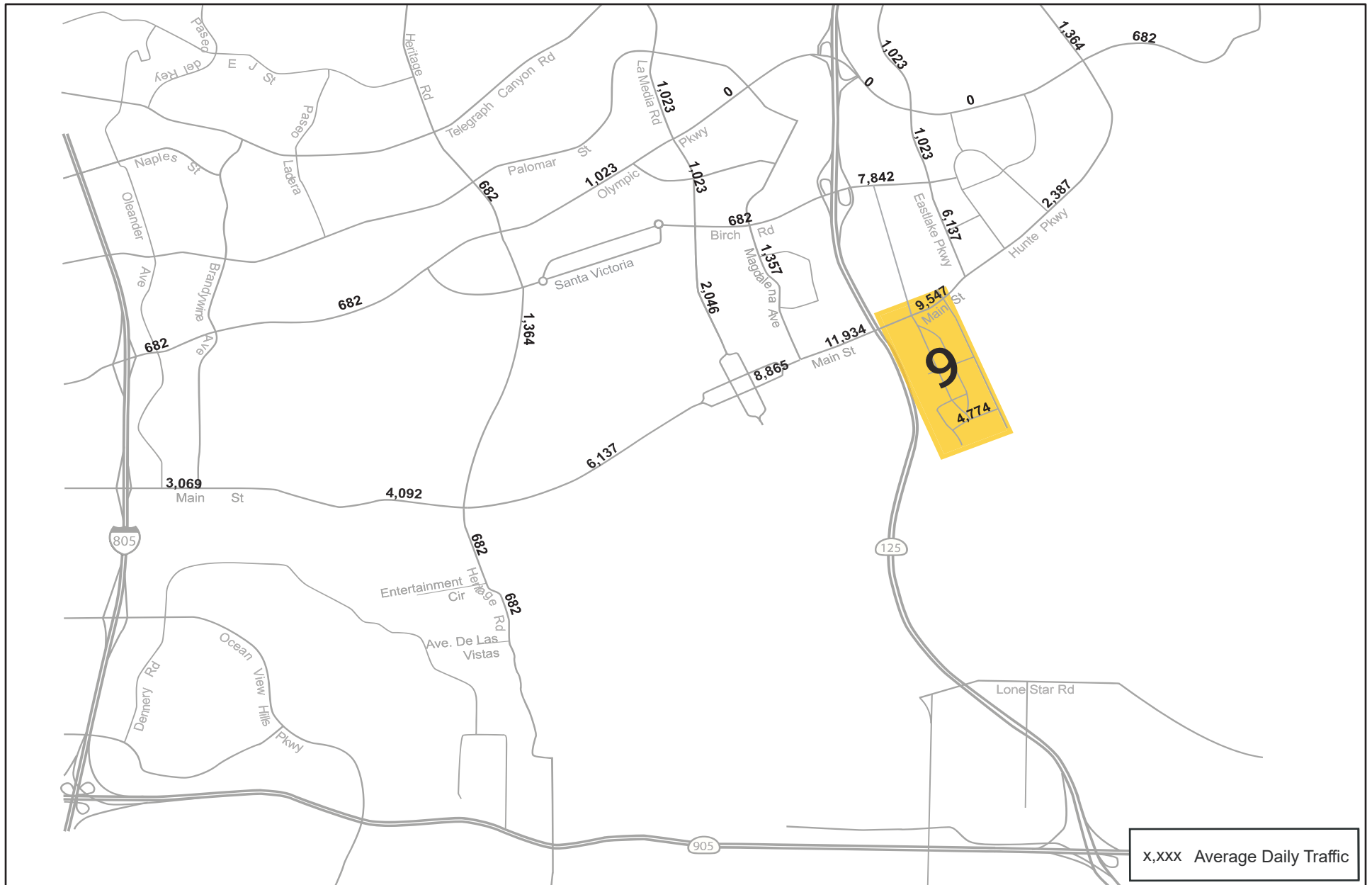
### c. Trip Generation and Trip Distribution

The SANDAG trip generation rates were utilized to determine daily and peak hour trips to be generated by the project. Trip reduction factors were applied to the forecasted trip generation for the project to reflect internally captured trips (trips that do not leave the village), non-motorized trips (pedestrian and bike trips), and transit trips. In addition, a five percent reduction was applied for transit uses for study years 2020 and 2025, and 15 percent was applied for Year 2030 based on SANDAG transit reduction rates. Distribution of project-generated traffic was determined using the SANDAG Series 11 South Bay Sub Area Select Zone analysis for each scenario year.

Table 5.3-6 identifies the forecasted project-generated daily and peak hour trips, including internal capture and transit reductions, for buildout of the project. As shown in this table, at buildout the proposed project is forecast to generate a total of approximately 53,732 daily trips, including 5,003 AM peak hour trips and 5,556 PM peak hour trips (before internal capture and transit reductions). With internal capture and transit reductions, the project is forecast to generate approximately 34,067 trips per day, including 2,130 AM and 3,509 PM peak hour trips. Due to the lack of existing transit service and the isolated nature of the project in the existing condition, neither internal capture nor transit reductions was applied in the Existing Plus Project scenario. The distribution of these trips is shown in Figure 5.3-2. The phased daily trips generated by project development assumed for each scenario year is shown in Table 5.3-7.

**Table 5.3-6 Project-Generated Average Daily Trips at Project Buildout (Year 2030)**

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	Inbound	Outbound	Total	Inbound	Outbound
Urban/Neighborhood Park	27.5 acres	138	6	3	3	11	6	5
Single-family Residential	266 du	2,660	213	64	149	266	186	80
Multi-family Residential	3,734 du	22,404	1,792	358	1,434	2,016	1,411	605
Elementary School	19.8 acres	1,980	633	379	254	178	74	107
Office (> 400 ksf)	1,200 ksf	14,400	1,872	1,685	187	1,872	374	1,498
Commercial Retail	300 ksf	12,000	480	288	192	1,200	600	600
Community Purpose Facility	5 acres	150	8	5	3	12	6	6
<b>Subtotal</b>		<b>53,732</b>	<b>5,003</b>	<b>2,781</b>	<b>2,222</b>	<b>5,556</b>	<b>2,655</b>	<b>2,901</b>
Internal Capture <sup>(1)</sup>		-11,606	-469	-234	-234	-1,214	-607	-607
Transit Reduction <sup>(2)</sup>		-8,059	-750	-417	-333	-833	-398	-435
<b>Total</b>		<b>34,067</b>	<b>3,784</b>	<b>2,130</b>	<b>1,655</b>	<b>3,509</b>	<b>1,650</b>	<b>1,859</b>
<p>Note: based on SANDAG, Not So Brief Guide, April 2002.            du = dwelling units, ksf = thousand square feet  <sup>(1)</sup> Internal Capture Rates provided from ITE Trip Generation Handbook.            Internal capture rates vary by each combination of land uses.  <sup>(2)</sup> Transit Reduction Rates provided from SANDAG; a transit reduction of 5% is assumed by project buildout.            Source: RBF 2013</p>								



x,xxx Average Daily Traffic

Source: RBF 2013

Not to Scale



**PROJECTED GENERATED TRIPS (YEAR 2030)**  
**FIGURE 5.3-2**

**Table 5.3-7 Phased Project Trip Generation**

Scenario	Daily Trips	AM Peak Hour			PM Peak Hour		
		Total	Inbound	Outbound	Total	Inbound	Outbound
Year 2020	13,124	1,197	506	691	1,306	731	575
Year 2025	30,737	3,049	1,429	1,620	3,008	1,645	1,363
Year 2030	34,067	3,784	2,130	1,655	3,509	1,650	1,859
Source: RBF 2013							

**Existing Plus Project**

CEQA mandates the assessment of existing conditions with project buildout conditions. The Existing Plus Project scenario assumes the existing street network with existing traffic count data as the baseline in order to analyze impacts from the project at buildout. Under buildout conditions, the project is forecast to generate 53,732 trips per day. Because of the lack of existing transit service and the isolated nature of the project in this study scenario, neither internal capture nor transit reductions were applied to the Existing Plus Project analysis. As shown in Table 5.3-8, the following intersections would operate at deficient level of service under the Existing Plus Project scenario:

- Olympic Parkway/I-805 northbound ramps (AM – LOS F)
- Olympic Parkway/Brandywine Avenue (PM – LOS E)
- Olympic Parkway/La Media Road (AM – LOS E)
- Birch Road/La Media Road (AM – LOS F, PM – LOS F)
- Birch Road/Eastlake Parkway (AM – LOS F, PM – LOS F)
- Main Street/Eastlake Parkway (AM – LOS F, PM – LOS F)

More than five percent of segment volume would be attributable to the project for all intersections. Therefore, the project would result in a significant direct impact to these six intersections.

Table 5.3-9 presents the results of the Existing Plus Project conditions roadway segment level of service. As shown in this table, the following roadway segments would operate at deficient level of service:

- Olympic Parkway from I-805 to Brandywine Avenue (LOS D)
- Olympic Parkway from Brandywine Avenue to Heritage Road (LOS E)
- Olympic Parkway from Heritage Road to La Media Road (LOS F)
- Magdalena Avenue from Birch Road to Main Street (LOS F)
- Eastlake Parkway from Birch Road to Main Street (LOS D)

The project trips added to these deficient segments would exceed the City of Chula Vista's five percent threshold of significance. Therefore, all five segments would be directly impacted by the project. Existing ADT volumes without the project are shown in Exhibit 7 of Appendix B, Existing Conditions ADT Volumes, and the Existing Plus Project ADT volumes are shown in Exhibit 21 in Appendix B, Existing Plus Project ADT Volumes.



**Table 5.3-8 Existing Plus Project Intersection Level of Service**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Parkway/I-805 southbound ramps	41.0	D	47.2	D
2. Olympic Parkway/I-805 northbound ramps	<b>120.6</b>	<b>F</b>	46.3	D
3. Olympic Parkway/Brandywine Avenue	51.3	D	<b>70.0</b>	<b>E</b>
4. Olympic Parkway/Santa Victoria	Does Not Exist			
5. Olympic Parkway/Heritage Road	28.4	C	22.7	C
6. Olympic Parkway/La Media Road	<b>76.5</b>	<b>E</b>	43.2	D
7. Olympic Parkway/SR-125 southbound ramps	2.6	A	4.2	A
8. Olympic Parkway/SR-125 northbound ramps	1.3	A	2.4	A
9. Olympic Parkway/Eastlake Parkway	31.4	C	34.7	C
10. Olympic Parkway/Hunte Parkway	29.7	C	32.3	C
11. Santa Victoria/Heritage Road	Does Not Exist			
12. Birch Road/La Media Road	<b>220.7</b>	<b>F</b>	<b>267.3</b>	<b>F</b>
13. Birch Road/SR-125 southbound ramps	7.1	A	7.1	A
14. Birch Road/SR-125 northbound ramps	5.4	A	7.2	A
15. Birch Road/Eastlake Parkway	<b>356.7</b>	<b>F</b>	<b>357.1</b>	<b>F</b>
16. Main Street/I-805 southbound ramps	27.6	C	32.0	C
17. Main Street/I-805 northbound ramps	26.7	C	28.9	C
18. Main Street/Heritage Street	2.8	A	0.9	A
19. Main Street/La Media Road (Couplet)	Does Not Exist			
20. Main Street/Magdalena Avenue	Does Not Exist			
21. Main Street/SR-125 southbound ramps	Does Not Exist			
22. Main Street/SR-125 northbound ramps	Does Not Exist			
23. Main Street/Eastlake Parkway	<b>815.0</b>	<b>F</b>	<b>890.8</b>	<b>F</b>
24. Otay Valley Road/SR-125 southbound ramps	Does Not Exist			
25. Otay Valley Road/SR-125 northbound ramps	Does Not Exist			

Note: Deficient intersection operation shown in **bold** and shading.  
Source: RBF 2013

**Table 5.3-9 Existing Plus Project Roadway Segment Level of Service**

Roadway	Segment	Classification (# Lanes)	LOS C Capacity	ADT	LOS
Olympic Parkway	I-805 to Brandywine	Prime Arterial (6)	50,000	<b>53,959</b>	<b>D</b>
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	<b>59,428</b>	<b>E</b>
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	<b>69,275</b>	<b>F</b>
	La Media Road to SR-125 Ramps	Prime Arterial (6)	50,000	48,916	C
	SR-125 Ramps to Eastlake Parkway	Expressway (8)	70,000	45,831	A
	Eastlake Parkway to Hunte Parkway	Prime Arterial (6)	50,000	16,603	A
	East of Hunte Parkway	Major Street (4)	30,000	11,593	A
Birch Road	La Media Road to SR-125	Major Arterial (6)	40,000	35,710	C
	SR-125 to Eastlake Parkway	Major Arterial (6)	40,000	40,229	B
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,500	29,573	A
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	18,729	A
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	Does Not Exist	
	La Media Road to SR-125 Ramps	Prime Arterial (6)	50,000	Does Not Exist	
	SR-125 Ramps to Village 9 Access Road	Gateway (6)	68,700	Does Not Exist	
	Village 9 Access Road to Eastlake Parkway	Gateway (6)	61,200 <sup>1</sup>	53,534	C
Hunte Parkway	Eastlake Parkway to Olympic Parkway	Prime Arterial (6)	50,000	12,113	A
	Olympic Parkway to Otay Lakes Road	Major Street (4)	30,000	17,610	A
Heritage Road	Telegraph Canyon Road to Olympic Parkway	Prime Arterial (6)	50,000	20,413	A
	Olympic Parkway to Main Street	Prime Arterial (6)	50,000	Does Not Exist	
	Main Street to Entertainment Circle	Class I Collector (2A)	15,000	10,035	B
	Entertainment Circle to Avenida de Las Vistas (City of SD)	Class I Collector (2A)	15,000	9,846	B
La Media Road	Telegraph Canyon Road to Olympic Parkway	Prime Arterial (6)	50,000	18,011	A
	Olympic Parkway to Birch Road	Prime Arterial (6)	50,000	29,774	A
	Birch Road to Main Street	Prime Arterial (6)	50,000	Does Not Exist	
Magdalena Avenue	Birch Road to Main Street	Class II Collector (20)	12,000	<b>15,011</b>	<b>F</b>
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	Prime Arterial (6)	50,000	21,622	A
	Olympic Parkway to Birch Road	Major Arterial (6)	40,000	19,906	A
	Birch Road to Hunte Parkway/Main Street	Major Arterial (6)	40,000	<b>44,137</b>	<b>D</b>
	Main Street to Otay Valley Road	Prime Arterial (6)	50,000	Does Not Exist	
Otay Valley Road	Couplet to Street A	Major Street (4)	30,000	Does Not Exist	
	Street A to SR-125 Ramps	Major Street (4)	30,000	Does Not Exist	
	SR-125 Ramps to Village 9 Access	Major Street (4)	30,000	Does Not Exist	

<sup>(1)</sup> Town Center and gateway arterials are “urban core” classifications. Urban Core facilities are evaluated against a LOS D or better standard. Note: Deficient classifications are shown in **bold**. Source: RBF 2013

### *Growth Management Ordinance*

Olympic Parkway is forecast to operate at a deficient level of service by Year 2015 based on the standard volume to capacity ratio methodology. As a part of the City growth management program, an expanded traffic analysis was prepared to determine if GMO thresholds for Olympic Parkway are projected to be reached or exceeded, and whether mitigation measures are necessary to remain compliant with the requirements of the growth management program.

Recent GMOC traffic studies have indicated that the segment of westbound Olympic Parkway between Heritage Road and Oleander Avenue during the AM peak hours would be the first to fall below City growth management traffic threshold standards as traffic volumes increase over time with this project and other projects east of I-805. In conformance with the requirements of the growth management program, a peak-hour arterial analysis was conducted on the segment of westbound Olympic Parkway between Heritage Road and Oleander Avenue under near-term conditions based on the City of Chula Vista's traffic management plan methodology. The Chula Vista traffic management plan is used to assess the operating performance of the City's arterial street system in order to determine compliance with the threshold standards of the growth management program.

The GMO threshold of 2,463 equivalent dwelling units is likely to be reached during implementation of the SPA Plan and TM. Buildout of Village 9 would result in development of 4,000 units east of I-805. Once the GMO threshold of 2,463 equivalent dwelling units is reached, the project would contribute to a significant cumulative impact to traffic on Olympic Parkway.

### **Year 2020**

#### *Average Daily Trips*

By the Year 2020, Village 9 would include up to 114 single-family residential dwelling units, 1,634 multi-family residential dwelling units, 250,000 square feet of office/commercial use, and 14.8 acres of park space. Table 5.3-7 summarizes project trip generation for Village 9 under the Year 2020 scenario. As shown in this table, by Year 2020 Village 9 is anticipated to result in 13,124 ADT.

Section 12.24 of the City municipal code requires access and frontage improvements to be provided concurrently with the development; therefore as part of the project, the following on-site roadway improvements are required by the Year 2020 to provide access and frontage improvements to the initial phases of development within Village 9: 1) Main Street, from Street A to Eastlake Parkway; 2) Street A, from Main Street to Otay Valley Road; 3) installation of a traffic signal at intersection of Main Street/Street A; 4) Otay Valley Road from Street I to Street A; and 5) construction of Street I south of Otay Valley Road. A potentially significant impact would occur if these on-site access and frontage improvements are not developed concurrent with need.

In addition, a portion of Village 8 West is assumed to be under development by year 2020. As such, the off-site extension of La Media Road south from its existing terminus to Main Street is assumed by year 2020 in order to provide access to Village 8 West. The Year 2020 scenario also assumes that the Main Street/La Media Road intersection, Main Street/Magdalena Avenue intersection, and Otay Valley Road from Village 9 Street A to the University Site would be constructed by Year 2020 (See Tables 9, 10, 12, and 13 of Appendix B). The Year 2020 roadway system and ADT volumes are shown in Exhibit 25 of Appendix B, 2020 Conditions ADT Volumes. If the assumed off-site improvements are not constructed prior to the year 2025, significant impacts would occur.

#### *Traffic Impacts*

**Intersections.** Table 5.3-10 summarizes the AM and PM peak hour intersection level of service for the Year 2020. The following intersections would operate at a deficient level of service upon implementation of the project under the Year 2020 scenario:

- Olympic Parkway/I-805 northbound ramps (AM – LOS F)
- Olympic Parkway/Brandywine Avenue (PM – LOS F)

**Table 5.3-10 Year 2020 Intersection Level of Service**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Parkway/I-805 southbound ramps	51.9	D	54.0	D
2. Olympic Parkway/I-805 northbound ramps	<b>117.7</b>	<b>F</b>	50.5	D
3. Olympic Parkway/Brandywine Avenue	42.9	D	<b>80.4</b>	<b>F</b>
4. Olympic Parkway/Santa Victoria	Does Not Exist			
5. Olympic Parkway/Heritage Road	46.7	D	54.6	D
6. Olympic Parkway/La Media Road	40.0	D	35.1	D
7. Olympic Parkway/SR-125 southbound ramps	5.3	A	5.6	A
8. Olympic Parkway/SR-125 northbound ramps	4.3	A	5.0	A
9. Olympic Parkway/Eastlake Parkway	33.5	C	32.6	C
10. Olympic Parkway/Hunte Parkway	35.4	D	35.9	D
11. Santa Victoria/Heritage Road	Does Not Exist			
12. Birch Road/La Media Road	45.9	D	51.1	D
13. Birch Road/SR-125 southbound ramps	5.1	A	5.2	A
14. Birch Road/SR-125 northbound ramps	13.4	B	14.3	B
15. Birch Road/Eastlake Parkway	40.4	D	47.3	D
16. Main Street/I-805 southbound ramps	30.6	C	43.6	D
17. Main Street/I-805 northbound ramps	29.8	C	35.7	D
18. Main Street/Heritage Street	4.0	A	5.8	A
19. Main Street/La Media Road	11.2	B	10.2	B
20. Main Street/Magdalena Avenue	22.5	C	24.3	C
21. Main Street/SR-125 southbound ramps	Does Not Exist			
22. Main Street/SR-125 northbound ramps	Does Not Exist			
23. Main Street/Eastlake Parkway	22.5	C	24.1	C
24. Otay Valley Road/SR-125 southbound ramps	Does Not Exist			
25. Otay Valley Road/SR-125 northbound ramps	Does Not Exist			
Note: Deficient intersection operation shown in <b>bold</b> and <b>shading</b> . Source: RBF 2013				

Olympic Parkway/I-805 Northbound Ramps. The percentage of segment trips attributable to the project in the Year 2020 would be less than five percent at the Olympic Parkway/I-805 northbound ramps intersection. Therefore, no direct impact to this intersection would occur. However, a cumulative impact would occur.

Olympic Parkway/Brandywine Avenue. The percentage of segment trips attributable to the project in Year 2020 would be less than five percent at the Olympic Parkway/Brandywine Avenue intersection. Therefore, no direct impact to this intersection would occur. However, a cumulative impact would occur.

**Roadway Segments.** Table 5.3-11 presents the results of the Year 2020 roadway segment level of service analysis under implementation of the project. The following segments were calculated to operate at deficient level of service under the Year 2020 scenario:

- Olympic Parkway from I-805 to Brandywine Avenue (LOS D)
- Olympic Parkway from Brandywine Avenue to Heritage Road (LOS E)
- Olympic Parkway from Heritage Road to La Media Road (LOS E)

- Olympic Parkway from La Media Road to SR-125 Ramps (LOS E)
- Heritage Road from Main Street to Entertainment Circle (LOS F)
- Heritage Road from Entertainment Circle to Avenida de Las Vistas (LOS F)
- Magdalena Avenue from Main Street to Birch Road (LOS D)

**Table 5.3-11 Year 2020 Roadway Segment Level of Service**

Roadway	Segment	Classification (# Lanes)	LOS C Capacity	ADT	LOS
Olympic Parkway	I-805 to Brandywine	Prime Arterial (6)	50,000	<b>54,600</b>	<b>D</b>
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	<b>58,200</b>	<b>E</b>
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	<b>60,800</b>	<b>E</b>
	La Media Road to SR-125 Ramps	Prime Arterial (6)	50,000	<b>58,700</b>	<b>E</b>
	SR-125 Ramps to Eastlake Parkway	Expressway (8)	70,000	46,700	A
	Eastlake Parkway to Hunte Parkway	Prime Arterial (6)	50,000	33,600	A
	East of Hunte Parkway	Major Street (4)	30,000	14,700	A
Birch Road	La Media Road to SR-125	Major Street (6)	40,000	37,000	C
	SR-125 to Eastlake Parkway	Major Street (6)	40,000	37,200	B
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,500	39,400	A
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	27,700	A
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	Does Not Exist	
	La Media Road to SR-125	Prime Arterial (6)	50,000	Does Not Exist	
	SR-125 Ramps to Village 9 Street A	Gateway (6)	68,700	Does Not Exist	
	Village 9 Street A to Eastlake Parkway	Gateway (6)	61,200	17,900	A
Hunte Parkway	Eastlake Parkway to Olympic Parkway	Prime Arterial (6)	50,000	11,700	A
	Olympic Parkway to Otay Lakes Road	Major Street (4)	30,000	12,800	A
Heritage Road	Telegraph Canyon to Olympic Parkway	Prime Arterial (6)	50,000	40,500	B
	Olympic Parkway to Main Street	Prime Arterial (6)	50,000	Does Not Exist	
	Main Street to Entertainment Circle	Class I Collector(2A)	12,000	<b>17,300</b>	<b>F</b>
	Entertainment Circle to Avenida de Las Vistas (City of SD)	Class I Collector(2A)	12,000	<b>16,300</b>	<b>F</b>
La Media Road	Telegraph Canyon to Olympic Parkway	Prime Arterial (6)	50,000	19,500	A
	Olympic Parkway to Birch Road	Prime Arterial (6)	50,000	34,600	A
	Birch Road to Couplet	Prime Arterial (6)	50,000	33,700	A
Magdalena Avenue	Birch Road to Main Street	Class II Collector (2)	12,000	<b>12,500</b>	<b>D</b>
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	Prime Arterial (6)	50,000	20,700	A
	Olympic Parkway to Birch Road	Major Arterial (6)	40,000	23,200	A
	Birch Road to Main Street	Major Arterial (6)	40,000	31,400	B
	Main Street to Otay Valley Road	Prime Arterial (6)	50,000	Does Not Exist	
Otay Valley Road	Main Street to SR-125 Ramps	Major Street (4)	30,000	Does Not Exist	
	SR-125 Ramps to Village 9 Street A	Major Street (4)	30,000	Does Not Exist	
	Village 9 Street A to University	Major Street (4)	30,000	1,600	A

Note: Deficient intersection operation shown in **bold** and **shading**.  
Source: RBF 2013



Olympic Parkway from I-805 to Brandywine Avenue. Implementation of the project would contribute 806 daily trips to this roadway segment, which accounts for 1.5 percent of traffic on this segment and falls below the threshold of significance for a direct impact. However, a cumulative impact would occur.

Olympic Parkway from Brandywine Avenue to Heritage Road. Implementation of the project would add 1,036 trips to this roadway segment, which accounts for 1.8 percent of traffic and falls below the thresholds of significance for a direct impact. However, a cumulative impact would occur.

Olympic Parkway from Heritage Road to La Media Road. Implementation of the project would add 1,842 trips to this roadway segment, which accounts for 3.0 percent of traffic and falls below the threshold of significance for a direct impact. However, a cumulative impact would occur.

Olympic Parkway from La Media Road to SR-125 Ramps. Although this roadway segment is forecast to operate at LOS E, all intersections along the segment were calculated to operate at LOS D or better. Therefore, impacts would be less than significant.

Heritage Road from Main Street to Avenida de Las Vistas. Implementation of the project would not add any project trips to either deficient segment of Heritage Road. Therefore, a direct impact to Heritage Road would not occur. However, a cumulative impact would occur.

Magdalena Avenue from Main Street to Birch Road. Magdalena Avenue is not a circulation element road and is not subject to the GDP level of service standards. A LOS D operating condition indicates that the forecast ADT volume in the year 2020 is approximately 70 to 80 percent of the overall capacity of the road and acceptable traffic flow will occur. Therefore, LOS D is an acceptable level of service for this roadway segment and a potentially significant impact would not occur.

## **Year 2025**

### *Average Daily Trips*

In addition to the development assumed in the Year 2020 scenario, an additional 131 single-family residential dwelling units, 1,877 multi-family residential dwelling units, an elementary school, 12.7 acres of park space, 325,000 square feet of office, and 300,000 square feet of commercial retail would be constructed in Village 9 by Year 2025. Table 5.3-7 summarizes the forecasted Village 9 project trip generation for the Year 2025 scenario.

Section 12.24 of the City municipal code requires access and frontage improvements to be provided concurrently with the development; therefore as part of the project, the following on-site roadway improvements are required by the Year 2025 to provide access to the applicable phases of development within Village 9: 1) construction of Otay Valley Road from Street "A" to Street "B", and installation of traffic signal at the Otay Valley Road/Village 9 Street A intersection when warranted; 2) construction of two additional lanes of Street "A" to form a couplet; 3) re-stripe of Street "A" as two one-way segments; 4) construction the south end of the couplet to Otay Valley road as a four-lane roadway and installation traffic signals or stop control at internal intersections where appropriate; 5) construction of Campus Boulevard from Street "G" to Street "B"; 6) construction of Street "B" from Campus Boulevard to terminus south of Otay Valley Road; and 7) construction of Street "I" from Street "A" to Otay Valley Road. A potentially significant impact would occur if these on-site access and frontage improvements are not developed concurrent with need.

In addition, the Year 2025 scenario assumes that the mitigation measures identified for the year 2020 scenario (see Section 5.3.5) would be implemented plus the following off-site improvements: 1) construction of Heritage Road (from Olympic Parkway to Main Street); 2) re-stripe southbound

Heritage Road to include dual left turn lanes, three through lanes and one right turn lane; 3) widening of Heritage Road from Main Street to Avenida de Las Vistas from a Class II Collector to a six-lane prime; 4) construction of Main Street between La Media Road and Magdalena Avenue; 5) construction of Santa Victoria Road from Heritage Road to La Media Road (constructed by Village 2 as project access); 6) construction of the Olympic Parkway/Santa Victoria Road intersection; and 7) construction of the Santa Victoria Road/Heritage Road intersection (see Table 12, 2020 Peak Hour Study Intersection LOS, and Table 16, 2025 Conditions Peak Hour Study Intersection LOS, of Appendix B). The Year 2025 roadway system and ADT volumes are shown in Exhibit 28 of Appendix B, 2025 Condition ADT Volumes. If the mitigation measures from the year 2020 scenario and the assumed off-site improvements are not constructed prior to the Year 2025, significant impacts would occur.

### *Traffic Impacts*

**Intersections.** Table 5.3-12 summarizes the Year 2025 scenario peak hour intersection level of service. The following intersections were calculated to operate at deficient conditions under the Year 2025 scenario:

- Birch Road/La Media Road (AM – LOS F, PM – LOS F)
- Birch Road/Eastlake Parkway (AM – LOS F, PM – LOS F)
- Main Street/Eastlake Parkway (AM – LOS F, PM – LOS F)

Birch Road/La Media Road, Birch Road/Eastlake Parkway, and Main Street/Eastlake Parkway. Implementation of the project would exceed the City thresholds of significance for all three of these intersections because project traffic would account for more than five percent of traffic volume. Therefore, the project would result in a direct impact to all three of these intersections.

**Roadway Segments.** Table 5.3-13 presents the calculated Year 2025 roadway segment level of service. The following segments were calculated to operate at deficient levels of service under the Year 2025 scenario:

- Olympic Parkway from Heritage Road to La Media Road (LOS F)
- Olympic Parkway from La Media Road to SR-125 Ramps (LOS E)
- Birch Road from La Media Road to SR-125 (LOS F)
- Magdalena Avenue from Birch Road to Main Street (LOS F)
- Eastlake Parkway from Birch Road to Main Street (LOS F)

Olympic Parkway from Heritage Road to La Media Road. Implementation of the project would add 2,144 trips to this roadway segment, which accounts for 3.4 percent of total traffic and does not exceed the City thresholds of significance. Therefore, the project would not result in a direct significant impact to this roadway segment. However, a cumulative impact would occur.

Olympic Parkway from La Media Road to SR-125 Ramps. Although this roadway segment is forecast to operate at LOS D, all intersections along the segment are forecast to operate at an acceptable level of service. Therefore, impacts would be less than significant.

Birch Road from La Media Road to SR-125. Implementation of the project would add 9,811 trips to this roadway segment, which accounts for 19.2 percent of total traffic and exceeds the City thresholds of significance. Therefore, the project would result in a direct impact to this roadway segment. Because the project would result in a significant direct impact, it would also result in a cumulative impact to this roadway segment.

**Table 5.3-12 Year 2025 Intersection Level of Service**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Parkway/I-805 southbound ramps	43.3	D	46.2	D
2. Olympic Parkway/I-805 northbound ramps	43.5	D	34.3	C
3. Olympic Parkway/Brandywine Avenue	30.0	C	36.8	D
4. Olympic Parkway/Santa Victoria	26.6	C	37.8	D
5. Olympic Parkway/Heritage Road	37.8	D	50.5	D
6. Olympic Parkway/La Media Road	45.7	D	47.9	D
7. Olympic Parkway/SR-125 southbound ramps	5.4	A	5.8	A
8. Olympic Parkway/SR-125 northbound ramps	4.1	A	4.9	A
9. Olympic Parkway/Eastlake Parkway	34.9	C	36.8	D
10. Olympic Parkway/Hunte Parkway	36.9	D	36.6	D
11. Santa Victoria/Heritage Road	37.5	D	39.5	D
12. Birch Road/La Media Road	<b>234.8</b>	<b>F</b>	<b>190.5</b>	<b>F</b>
13. Birch Road/SR-125 southbound ramps	10.6	B	11.4	B
14. Birch Road/SR-125 northbound ramps	46.7	D	46.1	D
15. Birch Road/Eastlake Parkway	<b>443.0</b>	<b>F</b>	<b>454.5</b>	<b>F</b>
16. Main Street/I-805 southbound ramps	32.6	C	53.0	D
17. Main Street/I-805 northbound ramps	39.0	D	48.3	D
18. Main Street/Heritage Street	21.2	C	16.5	B
19. Main Street/La Media Road (Couplet):				
Westbound Main Street/southbound La Media Road	10.4	B	12.3	B
Westbound Main Street/northbound La Media Road	18.7	B	17.3	B
Eastbound Main Street/southbound La Media Road	0.1	A	0.1	A
Eastbound Main Street/northbound La Media Road	9.5	A	14.2	B
20. Main Street/Magdalena Avenue	26.2	C	41.4	D
21. Main Street/SR-125 southbound ramps	Does Not Exist			
22. Main Street/SR-125 northbound ramps	Does Not Exist			
23. Main Street/Eastlake Parkway	<b>274.4</b>	<b>F</b>	<b>242.8</b>	<b>F</b>
24. Otay Valley Road/SR-125 southbound ramps	Does Not Exist			
25. Otay Valley Road/SR-125 northbound ramps	Does Not Exist			
Note: Deficient intersection operation shown in <b>bold</b> and shading.				
Source: RBF 2013				

**Table 5.3-13 Year 2025 Roadway Segment Level of Service**

Roadway	Segment	Classification (# Lanes)	LOS C Capacity	ADT	LOS
Olympic Parkway	I-805 to Brandywine	Prime Arterial (6)	50,000	43,300	C
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	42,600	B
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	<b>62,900</b>	<b>F</b>
	La Media Road to SR-125 Ramps	Prime Arterial (6)	50,000	<b>56,200</b>	<b>E</b>
	SR-125 Ramps to Eastlake Parkway	Expressway (8)	70,000	49,700	A
	Eastlake Parkway to Hunte Parkway	Prime Arterial (6)	50,000	35,300	A
	East of Hunte Parkway	Major Street (4)	30,000	18,400	A
Birch Road	La Media Road to SR-125	Major Street (6)	40,000	<b>51,100</b>	<b>F</b>
	SR-125 to Eastlake Parkway	Major Street (6)	40,000	47,000	C
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,500	41,600	A
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	31,200	A
	Heritage Road to Couplet	Prime Arterial (6)	50,000	Does Not Exist	
	Couplet to Magdalena Avenue	Prime Arterial (6)	50,000	5,200	A
	Magdalena Avenue to SR-125 Ramps	Prime Arterial (6)	50,000	Does Not Exist	
	SR-125 Ramps to Village 9 Street A	Gateway (6)	68,700	Does Not Exist	
	Village 9 Street A to Eastlake Parkway	Gateway (6)	61,200	22,600	A
Hunte Parkway	Eastlake Parkway to Olympic Parkway	Prime Arterial (6)	50,000	24,800	A
	Olympic Parkway to Otay Lakes Road	Major Street (4)	30,000	16,000	A
Heritage Road	Telegraph Canyon to Olympic Parkway	Prime Arterial (6)	50,000	43,100	B
	Olympic Parkway to Main Street	Prime Arterial (6)	50,000	32,500	A
	Main Street to Entertainment Circle	Prime Arterial (6)	50,000	19,500	A
	Entertainment Circle to Avenida de Las Vistas (City of SD)	Prime Arterial (6)	50,000	19,500	A
La Media Road	Telegraph Canyon to Olympic Parkway	Prime Arterial (6)	50,000	19,600	A
	Olympic Parkway to Birch Road	Prime Arterial (6)	50,000	35,900	A
	Birch Road to Couplet	Prime Arterial (6)	50,000	35,000	A
Magdalena Avenue	Birch Road Main Street	Class II Collector (2)	12,000	<b>20,100</b>	<b>F</b>
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	Prime Arterial (6)	50,000	21,200	A
	Olympic Parkway to Birch Road	Major Arterial (6)	40,000	24,700	A
	Birch Road to Main Street	Major Arterial (6)	40,000	<b>54,600</b>	<b>F</b>
	Main Street to Otay Valley Road	Prime Arterial (6)	50,000	Does Not Exist	
Otay Valley Road	Main Street to SR-125 Ramps	Major Street (4)	30,000	Does Not Exist	
	SR-125 Ramps to Village 9	Major Street (4)	30,000	Does Not Exist	
	Village 9 Access Road to University	Major Street (4)	30,000	9,700	A

Note: Deficient intersection operation shown in **bold** and **shading**.  
Source: RBF 2013

Magdalena Avenue from Birch Road to Main Street. The project would add 2,756 trips to this roadway segment, which accounts for 13.7 percent of total traffic and exceeds the City thresholds of significance. Therefore, the project would result in a direct impact to this roadway segment. Because the project would result in a significant direct impact, it would also result in a cumulative impact to this roadway segment.

Eastlake Parkway from Birch Road to Main Street. The project would add 17,783 trips to this roadway segment, which accounts for 32.6 percent of total traffic and exceeds the City's thresholds of significance. Therefore, the project would result in a direct impact to this roadway segment. Because the project would result in a significant direct impact, it would also result in a cumulative impact to this roadway segment.

### **Year 2030**

#### *Average Daily Trips*

In addition to the development assumed through the Year 2025 scenario, the Year 2030 scenario accounts for the remainder of the buildout of Village 9, including the construction of 21 single-family residential dwelling units, 223 multi-family residential dwelling units, an elementary school, an additional 625,000 square feet of commercial space, and 5.0 acres of CPF. Table 5.3-7 summarizes the forecasted Village 9 project trip generation under the Year 2030 scenario. The distribution of project traffic in Year 2030 is shown in Figure 5.3-2.

Section 12.24 of the City municipal code requires access and frontage improvements to be provided concurrently with the development; therefore as part of the project, the following on-site roadway improvements are required by the Year 2030 to provide access to the applicable phases of development within Village 9: 1) construction of Street "A" from Village 9 northern boundary to Main Street; 2) construction of Street "B" from Village 9 northern boundary to Campus Boulevard; and 3) installation of traffic signal at Main Street/Street "B". A potentially significant impact would occur if these on-site access and frontage improvements are not developed concurrent with need.

In addition, the Year 2030 scenario assumes that the mitigation measures identified for the year 2025 scenario (see Section 5.3.5) would be implemented plus the following off-site improvements: 1) construction of Main Street from Heritage Road to La Media Road; and 2) construction of the Village Path pedestrian/bicycle bridge over SR-125 to provide non-motorized access between Village 9 and Village 8 East. The Year 2030 roadway system and ADT volumes are shown in Exhibit 31 of Appendix B, 2030 Conditions ADT Volumes. If the mitigation measures from the year 2025 scenario and the assumed off-site improvements are not constructed prior to the year 2030, significant impacts would occur.

#### *Traffic Impacts*

**Intersections.** Table 5.3-14 summarizes the Year 2030 scenario AM and PM peak hour intersection level of service. As shown in this table, the following intersections were calculated to operate at deficient levels of service (LOS E or F) under the Year 2030 scenario:

- Birch Road/La Media Road (AM – LOS F, PM – LOS F)
- Birch Road/SR-125 northbound ramps (AM – LOS F)
- Birch Road/Eastlake Parkway (AM – LOS F, PM – LOS E)
- Main Street/I-805 southbound ramps (PM – LOS E)
- Main Street/I-805 northbound ramps (PM – LOS E)
- Main Street/La Media Road Couplet



- Westbound Main Street/northbound La Media (AM – LOS F)
- Eastbound Main Street/southbound La Media (AM – LOS F, PM – LOS F)
- Eastbound Main Street/northbound La Media (AM – LOS F)
- Main Street/Magdalena (AM – LOS F, PM – LOS F)
- Main Street/Eastlake Parkway (AM – LOS F)

**Table 5.3-14 Year 2030 Intersection Level of Service**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Parkway/I-805 southbound ramps	29.1	C	34.8	C
2. Olympic Parkway/I-805 northbound ramps	23.7	C	23.2	C
3. Olympic Parkway/Brandywine Avenue	27.9	C	39.2	C
4. Olympic Parkway/Santa Victoria	12.7	B	13.3	B
5. Olympic Parkway/Heritage Road	37.4	D	54.4	D
6. Olympic Parkway/La Media Road	37.6	D	39.2	D
7. Olympic Parkway/SR-125 southbound ramps	6.6	A	7.8	A
8. Olympic Parkway/SR-125 northbound ramps	2.6	A	3.0	A
9. Olympic Parkway/Eastlake Parkway	33.8	C	36.5	D
10. Olympic Parkway/Hunte Parkway	38.9	D	39.2	D
11. Santa Victoria/Heritage Road	37.0	D	42.3	D
12. Birch Road/La Media Road	<b>91.0</b>	<b>F</b>	<b>116.2</b>	<b>F</b>
13. Birch Road/SR-125 southbound ramps	7.8	A	6.1	A
14. Birch Road/SR-125 northbound ramps	<b>112.4</b>	<b>F</b>	31.8	C
15. Birch Road/Eastlake Parkway	<b>117.2</b>	<b>F</b>	<b>65.8</b>	<b>E</b>
16. Main Street/I-805 southbound ramps	46.2	D	<b>55.9</b>	<b>E</b>
17. Main Street/I-805 northbound ramps	39.6	D	<b>57.8</b>	<b>E</b>
18. Main Street/Heritage Street	32.2	C	42.0	D
19. Main Street/La Media Road (Couplet):				
Westbound Main Street/southbound La Media Road	26.9	C	23.3	C
Westbound Main Street/northbound La Media Road	<b>103.2</b>	<b>F</b>	48.0	D
Eastbound Main Street/southbound La Media Road	<b>140.3</b>	<b>F</b>	<b>95.2</b>	<b>F</b>
Eastbound Main Street/northbound La Media Road	<b>80.9</b>	<b>F</b>	42.5	D
20. Main Street/Magdalena Avenue	<b>131.3</b>	<b>F</b>	<b>143.8</b>	<b>F</b>
21. Main Street/SR-125 southbound ramps	Does Not Exist			
22. Main Street/SR-125 northbound ramps	Does Not Exist			
23. Main Street/Eastlake Parkway	<b>141.9</b>	<b>F</b>	52.1	D
24. Otay Valley Road/SR-125 southbound ramps	Does Not Exist			
25. Otay Valley Road/SR-125 northbound ramps	Does Not Exist			
Note: Deficient intersection operation shown in <b>bold</b> and <b>shading</b> .				
Source: RBF 2013				

Birch Road Intersections. Implementation of the project would account for more than five percent of traffic at the intersections of Birch Road with the SR-125 northbound ramps and Eastlake Parkway which would exceed the City's thresholds of significance. Therefore, the project would result in a direct impact to the intersections of Birch Road with the SR-125 northbound ramps and Eastlake Parkway. Because the project would result in significant direct impacts, it would also result in a cumulative impact to these intersections. Project traffic would account for 3.8 percent of traffic at the intersection of Birch Road with La Media Road and does not exceed the City's thresholds of significance. Therefore, the project would not result in a direct significant impact to the Birch Road/La Media Road intersection. However, a cumulative impact would occur.

Main Street Intersections. Implementation of the project would account for more than five percent of traffic on all of the identified Main Street intersections, with the exception of the intersections with the I-805 southbound ramps and Eastlake Parkway. Thus, the project would result in a direct impact to three Main Street intersections. Because the project would result in a significant direct impact, it would also result in a cumulative impact to these intersections. The Main Street/I-805 southbound ramp intersection and Main Street/Eastlake Parkway intersections would experience a cumulative impact; however, the project would not result in a direct impact to these intersections.

**Roadway Segments.** Table 5.3-15 and Figure 5.3-3 presents the results of the Year 2030 scenario roadway segment level of service. The following segments were calculated to operate at deficient levels of service:

- Olympic Parkway from east of Hunte Parkway (LOS D)
- Birch Road from La Media Road to SR-125 (LOS F)
- Birch Road from SR-125 to Eastlake Parkway (LOS F)
- Main Street from I-805 to Brandywine Avenue (LOS D)
- Main Street from Brandywine to Heritage Road (LOS D)
- Heritage Road from Telegraph Canyon to Olympic Parkway (LOS D)
- Heritage Road from Main Street to Entertainment Circle (LOS E)
- Heritage Road from Entertainment Circle to Avenida de Las Vistas (LOS D)
- Magdalena Avenue from Birch Road to Main Street (LOS D)
- Eastlake Parkway from Birch Road to Main Street (LOS D)

Olympic Parkway from east of Hunte Parkway. Although this roadway segment is forecast to operate at LOS D, all intersections along the segment operate at LOS D or better. Therefore, direct and cumulative impacts would be less than significant.

Birch Road from La Media Road to SR-125. The project would add 682 trips to this roadway segment, which accounts for 1.3 percent of traffic volume and does not exceed the City thresholds of significance. Therefore, the project would not result in a direct impact to this roadway segment. However, a cumulative impact would occur.

Birch Road from SR-125 to Eastlake Parkway. The project would add 7,842 trips to this roadway segment, which accounts for 12 percent of traffic volume and would exceed the City thresholds of significance. Therefore, the project would result in a direct significant impact to this roadway segment. Because the project would result in a significant direct impact, it would also result in a cumulative impact to this roadway segment.

**Table 5.3-15 Year 2030 Roadway Segment Level of Service**

Roadway	Segment	Classification (# Lanes)	LOS C Capacity	ADT	LOS
Olympic Parkway	I-805 to Brandywine Avenue	Prime Arterial (6)	50,000	51,300	C
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	34,800	A
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	33,300	A
	La Media Road to SR-125 Ramps	Prime Arterial (6)	50,000	43,900	C
	SR-125 Ramps to Eastlake Parkway	Expressway (8)	70,000	49,400	A
	Eastlake Parkway to Hunte Parkway	Prime Arterial (6)	50,000	34,200	A
	East of Hunte Parkway	Major Street (4)	30,000	<b>30,100</b>	<b>D</b>
Birch Road	La Media Road to SR-125	Major Street (6)	40,000	<b>54,200</b>	<b>F</b>
	SR-125 to Eastlake Parkway	Major Street (6)	40,000	<b>65,200</b>	<b>F</b>
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,000	<b>61,300</b>	<b>D</b>
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	<b>52,200</b>	<b>D</b>
	Heritage Road to Couplet	Prime Arterial (6)	50,000	44,900	C
	Couplet to Magdalena Avenue	Prime Arterial (6)	50,000	25,100	A
	Magdalena Avenue to SR-125 Ramps	Prime Arterial (6)	50,000	33,100	A
	SR-125 to Village 9 Street A	Gateway (6)	61,200	35,400	A
	Village 9 Street A to Eastlake Parkway	Gateway (6)	61,200	24,500	A
Hunte Parkway	Eastlake Parkway to Olympic Parkway	Prime (6)	50,000	40,000	B
	Olympic Parkway to Otay Lakes Road	Major Street (4)	30,000	20,700	A
Heritage Road	Telegraph Canyon to Olympic Parkway	Prime Arterial (6)	50,000	<b>50,700</b>	<b>D</b>
	Olympic Parkway to Main Street	Prime Arterial (6)	50,000	42,300	B
	Main Street to Entertainment Circle	Prime Arterial (6)	50,000	<b>61,400</b>	<b>E</b>
	Entertainment Circle to Avenida de Las Vistas (City of SD)	Prime Arterial (6)	50,000	<b>52,600</b>	<b>D</b>
La Media Road	Telegraph Canyon to Olympic Parkway	Prime Arterial (6)	50,000	29,900	A
	Olympic Parkway to Birch Road	Prime Arterial (6)	50,000	28,300	A
	Birch Road to Couplet	Prime Arterial (6)	50,000	38,000	B
Magdalena Avenue	Birch Road to Main Street	Class II Collector (2)	12,000	<b>12,700</b>	<b>D</b>
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	Prime Arterial (6)	50,000	24,000	A
	Olympic Parkway to Birch Road	Major Arterial (6)	40,000	27,600	A
	Birch Road to Main Street	Major Arterial (6)	40,000	<b>41,300</b>	<b>D</b>
	Main Street to Otay Valley Road	Prime Arterial (6)	50,000	Does Not Exist	
Otay Valley Road	Main Street to SR-125 Ramps	Major Street (4)	30,000	Does Not Exist	
	SR-125 Ramps to Village 9	Major Street (4)	30,000	Does Not Exist	
	Village 9 Access Road to University	Major Street (4)	30,000	9,500	A

Note: Deficient intersection operation shown in **bold** and **shading**.  
Source: RBF 2013



Main Street from I-805 to Brandywine Avenue. The project would add 3,069 trips to this roadway segment, which accounts for 5 percent of traffic volume and exceeds the City thresholds of significance. Therefore, the project would result in a direct impact to this roadway segment. Because the project would result in a significant direct impact, it would also result in a cumulative impact to this roadway segment.

Main Street from Brandywine to Heritage Road. The project would add 4,092 trips to this roadway segment, which accounts for 7.8 percent of traffic volume and would exceed the City thresholds of significance. Therefore, the project would result in a direct impact to this roadway segment. Because the project would result in a significant direct impact, it would also result in a cumulative impact to this roadway segment.

Heritage Road from Telegraph Canyon Road to Olympic Parkway. Although this roadway segment is forecast to operate at LOS D, all intersections along the segment operate at LOS D or better. Therefore, impacts would be less than significant.

Heritage Road from Main Street to Entertainment Circle. The project would add 682 trips to this roadway segment, which accounts for 1.1 percent of traffic volume and does not exceed the City thresholds of significance. Therefore, the project would not result in a direct impact to this roadway segment. However, a cumulative impact would occur.

Heritage Road from Entertainment Circle to Avenida de Las Vistas. The project would add 682 trips to this roadway segment, which accounts for 1.3 percent of traffic volume and does not exceed the City thresholds of significance. Therefore, the project would not result in a direct impact to this roadway segment. However, a cumulative impact would occur.

Magdalena Avenue from Main Street to Birch Road. Magdalena Avenue is not a circulation element road and is not subject to the GDP level of service standards. Therefore, LOS D is an acceptable level of service for this roadway segment. The intersection of Main Street/Magdalena Avenue is forecast to operate at an acceptable level of service with the project. Therefore, the project would not result in a significant direct or cumulative impact on Magdalena Avenue.

Eastlake Parkway from Birch Road to Main Street. The project would add 6,137 trips to this roadway segment, which accounts for 14.8 percent of traffic volume and would exceed the City thresholds of significance. Therefore, the project would result in a direct impact to this roadway segment. Because the project would result in a significant direct impact, it would also result in a cumulative impact to this roadway segment.

**Freeway Mainline Segment Analysis.** Segments of northbound and southbound I-805 between Telegraph Canyon Road and Main Street were analyzed under the Year 2030 scenario, both with and without implementation of the project. The results of the freeway segment level of service are shown in Table 5.3-16.

The acceptable level of service for freeways is LOS D. The freeway mainline segments would operate at an acceptable level of service (LOS D or better) under 2030 with and without implementation of the project; except for I-805 northbound between Main Street and Telegraph Canyon Road, which is forecast to operate at LOS E during the PM peak hour. According to the City of Chula Vista Traffic Study Guidelines, a significant impact would occur if a project adds a 1 mile per hour (mph) speed delay or greater to a segment operating at LOS D, E, or F. The results of the 2030 With Project mainline segment analysis identify a change in delay of less than 1 mph for each study segment. Therefore, impacts would be less than significant.



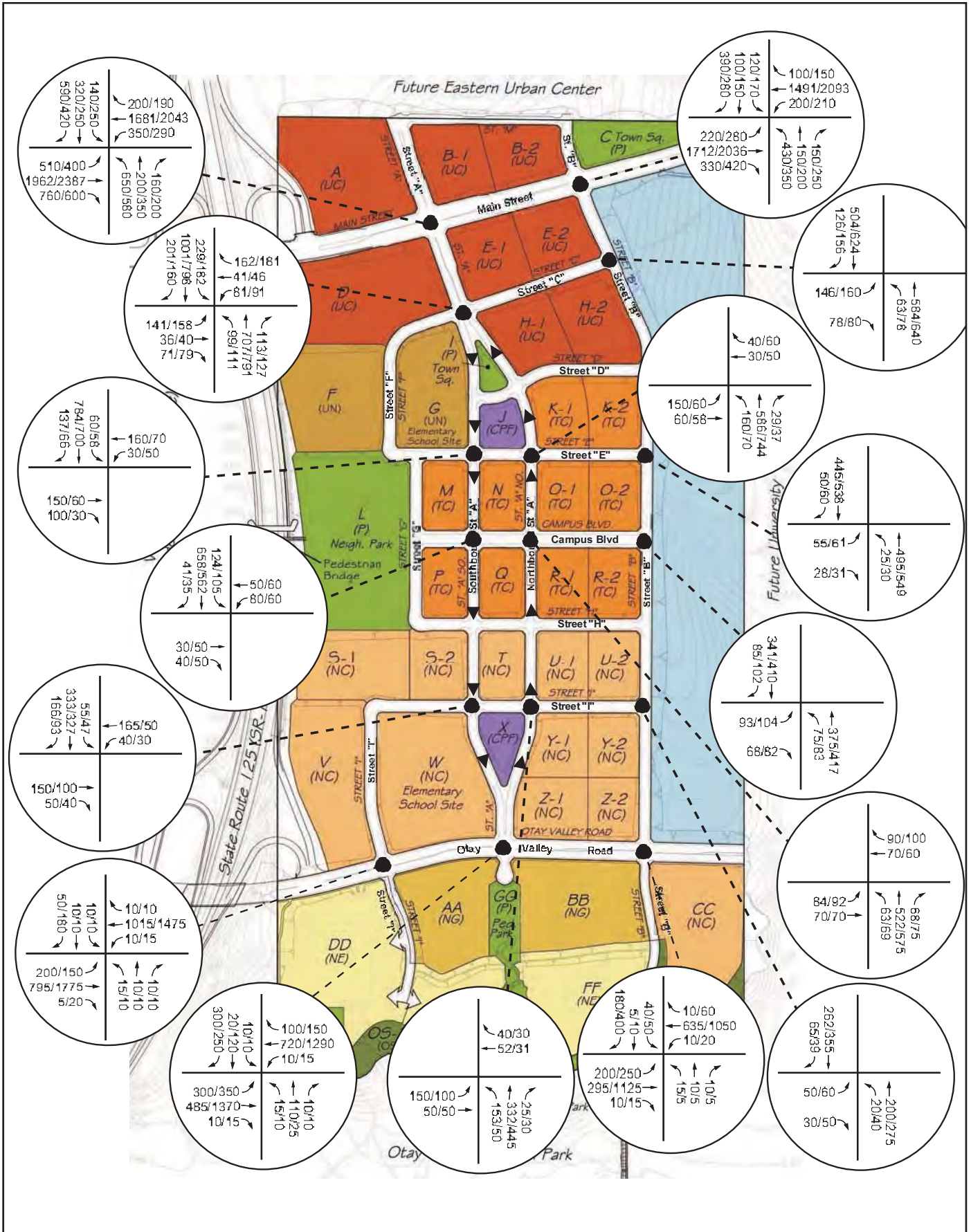
**Table 5.3-16 2030 Conditions Freeway Mainline Segment Level of Service Analysis (I-805)**

	AM Peak Hour				PM Peak Hour			
	Volume	LOS	APCS	D	Volume	LOS	APCS	D
<b>2030 Without Project Conditions</b>								
<b>2030 Conditions (Northbound)</b>								
From Main Street to Olympic Parkway	7,810	C	64.6	25.9	<b>10,113</b>	E	57.8	37.6
From Olympic Parkway to Telegraph Canyon Road	7,738	C	64.7	25.7	<b>10,020</b>	E	58.3	36.9
<b>2030 Conditions (Southbound)</b>								
From Telegraph Canyon Road to Olympic Parkway	9,544	D	60.6	33.8	9,261	D	61.6	32.3
From Olympic Parkway to Main Street	9,633	D	60.2	34.4	9,347	D	61.3	32.7
<b>2030 With Project Conditions</b>								
<b>2030 Conditions (Northbound)</b>								
From Main Street to Olympic Parkway	7,886	D	64.6	26.2	<b>10,172</b>	E	57.5	38.0
From Olympic Parkway to Telegraph Canyon Road	7,839	D	64.6	26.0	<b>10,099</b>	E	57.9	37.5
<b>2030 Conditions (Southbound)</b>								
From Telegraph Canyon Road to Olympic Parkway	9,628	D	60.2	34.3	9,377	D	61.2	32.9
From Olympic Parkway to Main Street	9,696	D	59.9	34.8	9,434	D	61.0	33.2
Note: Deficient intersection operation shown in <b>bold</b> and shading. APCS = Average Passenger Car Speed (mph) D = Density, Passenger Cars per Mile per Lane Source: RBF 2013								

**Intersection Lane Volume Analysis.** Caltrans requires that an ILV analysis be conducted for all state-owned facilities that may be affected by a proposed project. Due to the fact that Village 9 is located near the ramp to I-805, the ILV method was conducted for the interchanges within the project study area.

Table 5.3-17 summarizes the results of the ILV analysis. The results of the analysis for 2030 with and without project scenarios show that the peak hour volumes during the AM and PM peak hours exceed the threshold for the “unstable” flow classification at Olympic Parkway/I-805 northbound ramps under both scenarios. The Olympic Parkway/I-805 southbound ramps are also forecasted to exceed the threshold for “unstable” conditions with and without the project. The Main Street/I-805 southbound ramps would exceed the threshold for unstable conditions with implementation of the project. Traffic conditions that experience “unstable” flow usually experience considerable delays during the morning and evening peak hours. Therefore, a direct impact would occur as a result of the project. I-805 northbound ramps at Main Street were calculated to operate at “Capacity” conditions, according to the Caltrans ILV thresholds. The “Capacity” condition consists of stop-and-go operations with severe delay and heavy congestion. This condition would occur with or without implementation of the project; therefore, a cumulative impact would occur, but the project would not result in a significant direct impact.

**On-site Intersection Analysis.** An operational analysis of all internal intersections where the project would connect to the roadway network was conducted for the buildout of the proposed project (Year 2030), which is the worst-case scenario for project and cumulative traffic volumes. Warrant analyses for the intersections for the interim scenarios were not conducted because not all on-site intersections are assumed to be constructed in the interim year traffic scenarios. Forecast Year 2030 traffic volumes for the on-site project intersections are illustrated in Figure 5.3-4. Table 5.3-18 summarizes the results of the operational analysis of the key internal project intersections. All intersections were calculated to operate at an acceptable level of service. Therefore, impacts would be less than significant.



Source: RBF 2012

Not to Scale



**ON-SITE TRAFFIC VOLUMES (YEAR 2030)**  
**FIGURE 5.3-4**

**Table 5.3-17 2030 Intersection Lane Volume Analysis**

Intersection		2030 Without Project	2030 With Project
Olympic Parkway/I-805 southbound ramps	AM	Stable	Stable
	PM	Unstable	Unstable
Olympic Parkway/I-805 northbound ramps	AM	Unstable	Unstable
	PM	Unstable	Unstable
Main Street/I-805 southbound ramps	AM	Stable	Unstable
	PM	<b>Capacity</b>	<b>Capacity</b>
Main Street/I-805 northbound ramps	AM	<b>Capacity</b>	<b>Capacity</b>
	PM	<b>Capacity</b>	<b>Capacity</b>

Note: Deficient intersection operation shown in **bold** and shading.

Source: RBF 2013

**Table 5.3-18 Year 2030 Internal Intersection Operational Analysis**

Internal Intersection	AM		PM	
	Delay	LOS	Delay	LOS
Main Street/Street A	50.6	D	52.8	D
Main Street/Street B	53.1	D	53.2	D
Street C/Street A	39.1	D	38.9	D
Street C/Street B	11.1	B	11.6	B
Street E/southbound Street A	13.4	B	9.3	A
Street E/northbound Street A	13.0	B	9.6	A
Street E/Street B	20.0	C	26.1	D
Campus Boulevard/southbound Street A	8.7	A	9.9	A
Campus Boulevard/northbound Street A	12.3	B	12.0	B
Campus Boulevard/Street B	7.6	A	7.7	A
Street I/southbound Street A	14.2	B	12.2	B
Street I/northbound Street B	14.4	B	12.4	B
Street I/Street B	12.3	B	14.8	B
Otay Valley Road/Street I	16.0	B	18.5	B
Otay Valley Road/Street A	31.0	C	44.0	D
Otay Valley Road/Street B	23.6	C	27.4	C

Source: RBF 2013

For each of the proposed signalized intersections, a preliminary traffic signal warrant analysis was conducted to demonstrate that by Year 2030 these traffic signals would be warranted. Because signals have already been proposed for these intersections by the applicant, the purpose of this analysis is not to determine whether traffic signals are required. Rather it is to confirm that a traffic signal is an appropriate control system for buildout (worst-case) conditions. Traffic signals that are required to maintain acceptable level of service are identified as mitigation where appropriate for impacts identified in the intersection and roadway analyses for Year 2020, Year 2025, and Year 2030 above. The traffic signal warrant analysis was conducted based on the California Manual on Uniform Traffic Control Devices (MUTCD) planning level warrant which uses daily traffic volume as a threshold for analysis. Table 5.3-19 provides the forecast daily traffic volume for the intersections where traffic signals are warranted along with the thresholds established in the MUTCD. The volumes used in this analysis are

the Year 2030 mitigated conditions, which include the Otay Valley Road connection over SR-125 and the Main Street interchange at SR-125 because these assumptions represent the worst-case scenario for traffic volumes at the onsite intersections. All proposed traffic signal locations were calculated to meet the minimum traffic signal warrants by Year 2030. Therefore, traffic signals are appropriate for these intersections.

It should be noted that during interim years, the traffic signals may not be warranted. As an interim traffic control measure stop signs may be a more appropriate traffic control device until the traffic on the side street or along the major street approaches the thresholds identified in Table 5.3-19. The appropriate traffic control device would be determined during each phase of construction based on traffic volume, connections to the overall circulation system and other factors.

**Table 5.3-19 2030 Traffic Signal Warrants and Daily Traffic Volumes**

Intersection	Street (Major or Minor)	Year 2030 ADT	ADT Thresholds <sup>(1)</sup>		Signal Warranted?
			Condition A: Minimum Volume	Condition B: Interruption of Continuous Traffic	
Main Street/ Street A	Major: Main Street	53,400	9,600	14,400	Yes (Condition A)
	Minor: Street A	11,300	2,400	1,200	
Main Street/ Street B	Major: Main Street	53,400	9,600	14,000	Yes (Condition A)
	Minor: Street B	8,000	2,400	1,200	
Otay Valley Road/ Street I	Major: Otay Valley Road	11,400	9,600	14,000	Yes (Combination)
	Minor: Street I	2,000	2,400	1,200	
Otay Valley Road/ Street A	Major: Otay Valley Road	11,400	9,600	14,000	Yes (Condition A)
	Minor: Street A	3,800	2,400	1,200	
Otay Valley Road/ Street B	Major: Otay Valley Road	11,400	9,600	14,000	Yes (Condition A)
	Minor: Street B	4,600	2,400	1,200	

<sup>(1)</sup> California MUTCD minimum estimated average daily traffic thresholds for major and minor streets. Daily traffic volume on the major street is two-way volume and ADT volume on the minor street is the highest one-way approach volume. Volumes are based upon the Year 2030 with Mitigation conditions. When either Condition A or Condition B is not met, then the Combination of Warrants should be considered. The Combination of Warrants is met if both Condition A and Condition B are fulfilled 80% or more.

Source: RBF 2013

## 2. Construction

Construction of the project would have the potential to generate traffic from worker trips, and building material and equipment deliveries. During grading of the site, cut and fill would be balanced on site; therefore, there will be limited need to haul material to or from the site. If any trench backfill materials are required, material would most likely be provided from the existing quarry located within Village 4.

Materials for road construction would also be provided from the quarry. Therefore, the sphere of potential construction impacts from haul trips is limited to the Otay Ranch area. Up to 140 workers would be required on site for construction within Village 9. Assuming each worker drives to and from the jobsite in their own personal vehicle, and approximately 50 percent of them leave the site once a day, the trip generation rate per construction worker is approximately 3 trips per day with one trip occurring the AM peak hour and one trip occurring in the PM peak hour. The ADT generation would be 420 trips per day with 140 trips occurring in the AM peak hour and 140 occurring during the PM peak hour.



Construction traffic is not anticipated to generate enough traffic on its own to result in a significant impact; however, construction of Village 9 would occur in phases. Therefore, construction traffic would result in a temporary addition to operational traffic generated by the project. As discussed previously, operation of the project would have the potential to generate substantial traffic during each phase of buildout (Year 2020, Year 2025, and Year 2030). Construction traffic would incrementally contribute to these impacts; therefore, impacts from construction traffic are potentially significant.

**B. Threshold 2: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.**

The City level of service standards are the applicable standard to determine if the project would result in traffic that would conflict with regional congestion management plans, such as the 2050 Regional Transportation Plan. Additionally, the SPA Plan and TM would result in a conflict with the 2050 Regional Transportation Plan if it would not encourage uses of alternative forms of transportation and overall reductions in vehicle miles traveled.

Village 9 would be accessible by bus service, including BRT. Additionally, Class II bicycle facilities are planned along all circulation element roadways through Village 9. Sidewalks would also be provided throughout Village 9 and would include bulb-outs at key locations to reduce pedestrian crossing distances. As discussed under Threshold 1, the proposed transit facilities would reduce total vehicle trips by approximately 15 percent compared to a similarly-sized project that doesn't include these features. Additionally, as discussed in Section 5.10, Global Climate Change, these facilities would reduce the ADT length for Village 9 to 5.08 miles compared to the regional average daily vehicle trip length of 5.8 miles. Therefore, the project would not result in any conflicts with the 2050 Regional Transportation Plan goals to reduce vehicle trips and vehicle miles traveled.

However, as discussed under Threshold 1, implementation of the SPA Plan and TM would have the potential to exceed the City level of service standards for intersections and roadways under the Existing Plus Project, Year 2020, Year 2025, and buildout (Year 2030) scenarios. Therefore, the project would contribute to regional congestion and a potentially significant impact would occur related to level of service standards.

**C. Threshold 3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.**

Village 9 is located approximately 1.5 miles to the northeast of Brown Field airport, a City of San Diego municipal airport. Village 9 is located with the approach area for Brown Field subject to over flights from both Brown Field and the Tijuana Airport, a commercial facility, just over one mile to the south of Brown Field. Aircraft operations at Brown Field would be required to comply with all applicable Federal Aviation Administration (FAA) regulations that are intended to ensure safe operation of aircraft. Flights to and from the Tijuana Airport in U.S. airspace over the site would be required to coordinate with FAA traffic controllers. Additionally, Mexico is rated Category 1, the top category, in FAA's International Aviation Safety Assessment Program (Aviation Safety Network 2011). This program focuses on a country's ability to adhere to international standards and recommended practices for aircraft operations and maintenance established by the United Nation's technical agency for aviation, the International Civil Aviation Organization (ICAO) (FAA 2010). With continued compliance with safety regulations and



standards, it is not reasonably foreseeable that continued operations at Brown Field or the Tijuana Airport would result in a safety hazard to Village 9.

However, as discussed in greater detail in Section 5.13, Hazards and Hazardous Materials, project area is located within the FAA Height Notification Boundary, Part 77 Airspace Surfaces, Airport Overflight Notification Area for residential development, and Review Area 2 of the Airport Influence Area. Due to the height limits proposed in the Village 9 SPA plan, it is not anticipated that development of even the tallest structures would result an obstruction to air traffic. However, because the SPA is located within the FAA Height Notification Boundary and Airport Overflight Notification Area, proper notification in compliance with the Brown Field ALUCP is required to reduce this impact to a less than significant level.

**D. Threshold 4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

The circulation design for the project provides roadways within Village 9 and connecting to the surrounding roads. As part of the design review process, site access and circulation for Village 9 would be reviewed by the City of Chula Vista's Public Works and Engineering Departments. Roadways through the pedestrian-oriented Town Center would include traffic calming measures to increase safety. Reduced street width, shade trees, minimized setbacks, and urban uses would be required along the couplet to create a visual street frame and a pedestrian-friendly atmosphere. The one-way street system through the Street A couplet would reduce left turn delays and create safer turning movements at each intersection, which benefits automobile drivers, bicyclists, and pedestrians. Traffic calming measures would also promote pedestrian and bicycle safety as well as vehicle safety by controlling the speed and distribution of vehicles travelling throughout Village 9. The streets would also include intersection bulb outs to narrow the through travel way at intersections; narrow, multi-modal streets to slow vehicular traffic; and multiple connections to evenly distribute traffic. Thus, the project would not result in significant impacts related to hazards due to a design feature.

As discussed in Section 5.1, Land Use and Planning, implementation of the project would not result in any land use incompatibilities. Currently, vacant land surrounds the project site on three sides and SR-125 borders the site to the west. Future land uses planned for the areas surrounding the project would be similar to those proposed for Village 9 and would generate similar types of traffic. As discussed in Section 5.12, Agricultural Resources, potential agriculture use in Village 9 would be phased out and would not be allowed following development of the project. Therefore, hazard impacts due to incompatible uses would be less than significant.

**E. Threshold 5: Result in inadequate emergency access.**

As discussed under Threshold 7 in Section 5.13, Hazards and Hazardous Materials, implementation of the project would not interfere with the city emergency response plans because it does not interfere with any existing roadways or evacuation routes. Evacuation from and emergency response within Village 9 would be enhanced by the proposed circulation system, which provides multiple points of access within the site and to the surrounding regional circulation system. Individual developments within Village 9 would be required to demonstrate adequate emergency access as part of the City design review process, including review by the Chula Vista Fire Department. In addition, construction activities including staging would occur in accordance with City requirements, which would ensure that adequate emergency access would be provided during construction of the project. Therefore, impacts related to emergency access would be less than significant.

**F. Threshold 6: Conflict with adopted policies, plans or programs regarding the circulation network, public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.**

A consistency analysis of the SPA Plan with applicable General Plan transportation and transit policies is provided in Table 5.3-20, and a consistency analysis with the GDP is provided in Table 5.3-21. The project would not conflict with any General Plan or GDP policies; therefore, impacts would be less than significant.

**Table 5.3-20 Project Consistency with Applicable General Plan Transportation Policies**

Policy	Project Consistency
<p><b>Objective LUT 14:</b> Coordinate with appropriate regional and local agencies to create an effective regional transportation network that links Chula Vista to the surrounding region and Mexico.</p> <p><b>Policy LUT 14.8:</b> In order to provide direct access to the University/RTP, Village 9 Town Center, and to provide regional transit service across the Otay Valley, support the construction of the Rock Mountain and Otay Valley Road interchanges with SR-125, as warranted in accordance with the City of Chula Vista Toll Road Agreement with San Diego Expressway Limited Partnership and Agreement Affecting Real Property, as amended.</p> <p><b>Policy LUT 16.3:</b> Provide direct and convenient access to public transit stops within residential, commercial, and industrial areas.</p> <p><b>Policy LUT 16.4:</b> Develop plans, policies, and standards for enhancing interchanges and bridge crossings along (or over/under) the I-5, I-805, SR-54, and SR-125 corridors to support transit, vehicular, non-motorized, and pedestrian connections.</p>	<p><b>Consistent.</b> The circulation system proposed for Village 9 in Chapter 5 of the SPA Plan, Circulation and Corridor Design, would connect to the regional transportation network and effectively link the project area to the region. The circulation system proposed for Village 9 is consistent with the City’s General Plan circulation network, which has been developed in coordination with surrounding jurisdictions. Otay Valley Road and Main Street are major streets proposed in the SPA Plan and TM that would connect the project area to surrounding villages and to the SR-125 freeway. The proposed circulation network includes sidewalks and trails, bicycle routes, transit routes, a transit station, and transit stops to connect to regional alternative transportation systems. Construction of Main Street (Rock Mountain Road) and Otay Valley Road are required as mitigation measures 5.3-3, 5.3-5, 5.3-7, 5.3-14, 5.3-16, 5.3-18, and 5.3-20.</p> <p><b>Consistent.</b> The SPA Plan includes a transit station in the Town Center on Campus Boulevard, which is centrally located to residential and commercial development in Village 9. Transit stops may also be provided on Main Street and Otay Valley Road.</p> <p><b>Consistent.</b> Village 9 supports implementation of the overpasses and ramp systems at SR-125 and Main Street and at Otay Valley Road when the need for these facilities is demonstrated. See mitigation measures 5.3-14, 5.3-15, and 5.3-16.</p>
<p><b>Objective LUT 17:</b> Plan and coordinate development to be compatible and supportive of planned transit.</p> <p><b>Policy LUT 17.1:</b> Designate sufficient land at appropriate densities to support planned transit and require that development be transit-oriented, as appropriate to its proximity to transit facilities.</p> <p><b>Policy LUT 17.2:</b> Direct higher intensity and mixed use developments to areas within walking distance of transit, including San Diego Trolley stations along E, H, and Palomar Streets, and new stations along future transit lines, including BRT.</p>	<p><b>Consistent.</b> The project is consistent with these relevant policies because the inclusion of a couplet system within the Town Center would create a transit oriented center which would include a transit route, transit station, and transit stops. The SPA Plan would also reflect the density approved in the GPA/GDPA and is designed to be transit-oriented. The OLC has been coordinating with SANDAG regarding the location and design of the BRT route and transit stations/stops.</p>

Table 5.3-20 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p><b>Policy LUT 17.3:</b> Establish new town centers in the East Planning Area to be transit-oriented and include a transit stop or station.</p> <p><b>Policy LUT 17.4:</b> Require developers to consult and coordinate with SANDAG and the City to ensure that development is compatible with and supports the planned implementation of public transit.</p>	
<p><b>Objective LUT 18:</b> Reduce traffic demand through Transportation Demand Management (TDM) strategies, increased use of transit, bicycles, walking, and other trip reduction measures.</p> <p><b>Policy LUT 18.1:</b> Support and encourage the use of public transit.</p> <p><b>Policy LUT 18.2:</b> Provide an efficient and effective paratransit service for elderly and handicapped persons unable to use conventional transit service.</p> <p><b>Policy LUT 18.3:</b> Provide and enhance all feasible alternatives to the automobile, such as bicycling and walking, and encourage public transit ridership on existing and future transit routes.</p> <p><b>Policy LUT 18.4:</b> Use master planning techniques in new development and redevelopment projects to enable effective use of public transit.</p> <p><b>Policy LUT 18.5:</b> Implement TDM strategies, such as carpooling, vanpooling, and flexible work hours that encourage alternatives to driving alone during peak hours.</p> <p><b>Policy LUT 18.6:</b> Encourage employer-based TDM strategies, such as employee transportation allowances; preferential parking for rideshare vehicles; workplace-based carpool programs; and shuttle services.</p> <p><b>Policy LUT 18.7:</b> Support the location of private "telework" centers.</p> <p><b>Policy LUT 18.8:</b> Encourage establishment of park-and-ride facilities near or at transit stations, as appropriate to the area's character and surrounding land uses.</p>	<p><b>Consistent.</b> Village 9 would reduce traffic demand and support the use of public transit by providing a central mixed-use Urban Center and Town Center with commercial development that would provide jobs and resident-serving retail in close proximity to all homes within Village 9. All areas of the project would be accessible to pedestrians and cyclists, including the proposed transit station in the Town Center. Location of the transit station in the mixed-use Town Center, and stops potentially located along Main Street and Otay Valley Road, would encourage the use of public transit by providing a destination for transit users outside of the area, and making access to public transit centrally-located and convenient for Village 9 residents. The project would create an accessible transit network that would connect the planning areas within Otay Ranch, and to connect Otay Ranch to the region.</p> <p>All sidewalks would be ADA compliant; therefore transit service would be accessible to handicapped persons. Transit service that would serve Village 9 is anticipated to consist of bus service, including BRT. The front of every Chula Vista Transit bus has priority seating for Senior and Disabled riders. All buses have lift or ramp mechanisms to assist customers in wheelchairs or with other mobility impairments to board.</p> <p>Many buses also have a "kneeling" feature that allows the front of the bus to lower towards the curb, easing the first step into the bus. "Kneeling" buses are designated at the front door. The Metropolitan Transit System operates a paratransit service that currently services the city of Chula Vista. Provision of a transit station in the Town Center would encourage extension of this service to Village 9.</p> <p>The SPA Plan cannot implement carpooling, van pooling, flexible work hours, or other employer-based strategies on behalf of the employers; however, as discussed above, Village 9 provides opportunities for alternative transportation that would reduce vehicle trips.</p> <p>The SPA Plan states in Sections 4.3.7 and 4.4.7, Parking Lots and Structure, that a pedestrian-friendly Urban Center and Town Center must provide adequate parking. Parking would be provided in surface lots, parking structures, below grade parking garages or any combination of these. The SPA Plan includes design guidelines to ensure that parking areas would be compatible with the surrounding character and land use. A proposed transit station would also be located in the Town Center; therefore, parking would be available near the transit center. However, the on-site transit station is expected to serve walk-up riders and a specific park-and-ride facility is not proposed.</p>

Table 5.3-20 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p><b>Objective LUT 20:</b> Make transit-friendly roads a top consideration in land use and development design.</p> <p><b>Policy LUT 20.1:</b> Incorporate transit-friendly and pedestrian-friendly elements into roadway design standards, such as signal priority for transit and adequate sidewalk widths for pedestrians.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these relevant policies because it would incorporate transit and pedestrian friendly roadway design. Within the project area, each road would accommodate pedestrians and bicycles, including sidewalks, trails and striped bike lanes. Reduced street width, parallel parking, shade trees, minimized setbacks, and urban uses would be required along the couplet to create a visual street frame and a pedestrian friendly atmosphere. This one-way street system would reduce left turn delays and create safer turning movements at each intersection, which benefits automobile drivers, bicyclists, and pedestrians.</p> <p>Traffic calming measures would also promote pedestrian and bicycle safety as well as vehicle safety by controlling the speed and distribution of vehicles travelling through the project area. In addition to an urban couplet, roadways would include intersection bulb-outs to narrow the through travel way at intersections, narrow, multi-modal streets to slow vehicular traffic, and multiple connections to evenly distribute traffic.</p>
<p><b>Objective LUT 23:</b> Promote the use of non-polluting and renewable alternatives for mobility through a system of bicycle and pedestrian paths and trails that are safe, attractive and convenient forms of transportation.</p> <p><b>Policy LUT 23.1:</b> Encourage the use of bicycles and walking as alternatives to driving.</p> <p><b>Policy LUT 23.2:</b> Foster the development of a system of inter-connecting bicycle routes throughout the City and region.</p> <p><b>Policy LUT 23.3:</b> Preserve, restore, or provide the opportunity for a cyclist to ride a bicycle to virtually any chosen destination, in order to make the bicycle a viable transportation alternative.</p> <p><b>Policy LUT 23.4:</b> Link major residential areas with principal trip destinations, such as schools; parks; community centers; and shopping centers.</p> <p><b>Policy LUT 23.5:</b> Provide linkages between bicycle facilities that utilize circulation element alignments and open space corridors.</p> <p><b>Policy LUT 23.6:</b> In addition to using open space corridors, off-street bicycle trails should use flood control and utility easements. The trails shall be designed to minimize interaction with automobile cross traffic.</p> <p><b>Policy LUT 23.7:</b> Provide bicycle support facilities at all major bicycle usage locations.</p> <p><b>Policy LUT 23.10:</b> Promote the system of trails envisioned within the Chula Vista Greenbelt.</p> <p><b>Policy LUT 23.11:</b> Implement recommendations of the City's Bikeway Master Plan and Greenbelt Master Plan.</p> <p><b>Policy LUT 23.12:</b> Provide opportunities for use of personal mobility devices.</p> <p><b>Policy LUT 23.13:</b> New overpasses and interchanges should be designed to accommodate bicycles and pedestrians.</p> <p><b>Policy LUT 23.14:</b> Require new development projects to provide internal bikeway systems with connections to the citywide bicycle networks.</p>	<p><b>Consistent.</b> The project is consistent with these relevant policies because it would provide bicycle and walking facilities. Within the Urban Center and Town Center, with the exception of Campus Boulevard, on-street bike lanes would be provided so that bicycles do not conflict with the high levels of pedestrian activity. The 10-foot wide, paved trails would run parallel to public roadways and are shown on the cross section of the adjacent street. Main vehicular thoroughfares would include dedicated, striped, on-street Class II bike lanes.</p> <p>Local streets would not provide dedicated lanes for bicycles; however, the traffic volumes on parkway residential streets would be low enough to accommodate bicycles as well as vehicles. The SPA Plan also includes requirements for bicycle parking in all development zones.</p> <p>The pedestrian circulation network would include an interconnected system of village pathways, sidewalks, and rural trails. A Village Pathway would be extended through the site along Campus Boulevard. The Village Pathways in Otay Ranch would provide an off-street, interconnected multi-use trail that allows bicycles and pedestrians to travel between various village cores and Town Centers. A Regional Trail would extend along Otay Valley Road and would also provide a connection to the Otay Valley Regional Park trail system. This trail would be open to bicycles as well as pedestrians and non-motorized vehicles. Some park pathways would be designed to accommodate bicycles subject to City of Chula Vista approval. The alignment of these pathways would be determined by the individual park site master plan.</p> <p>All streets in Village 9 would also include a sidewalk or trail, providing connections between destinations including residential neighborhoods, the Town Center, parks, schools, and rural trails through open space. Neighborhood trails would include off-street trails that would provide pedestrian connections between neighborhoods. The intent of Village 9 would be to promote walkability by providing more direct pedestrian connections than would otherwise occur along public roadways.</p>

Table 5.3-20 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p><b>Objective LUT 30:</b> Use parking management to better utilize parking facilities and implement policies to reduce parking demand before considering public expenditures for additional parking facilities.</p> <p><b>Policy LUT 30.1:</b> Consider limiting parking in appropriate areas to discourage single occupant vehicle commuting and to reinforce non-auto travel modes, but not so limiting as to adversely affect the viability and vitality of the area.</p> <p><b>Policy LUT 30.2:</b> Consider establishment of maximum allowances for off-street parking spaces in mixed use zones where parking demand could be offset by close proximity of uses or availability of transit.</p> <p><b>Policy LUT 30.3:</b> Emphasize the provision of short-term parking (e.g., parking duration limits, time-of-day, restricted parking zones) over long-term parking in commercial areas.</p>	<p><b>Consistent.</b> Village 9 is consistent with this relevant policy because within the mixed-use areas, building configurations are limited to those that provide limited or no setbacks, strong pedestrian-scaled frontages, and opportunities to de-emphasize parking. Additionally, on-street parking and off-street parking would be provided at the minimum level necessary, to reduce the impact of parking lots and structures on the streetscape and promote the use of bicycles, transit, and alternative modes of travel.</p>
<p><b>Objective LUT 31:</b> Provide parking facilities that are appropriately integrated with land uses, maximize efficiency, accommodate alternative vehicles, and reduce parking impacts.</p> <p><b>Policy LUT 31.1:</b> Strategically locate parking structures to serve commercial and employment centers, and to provide park and ride opportunities for use of express shuttle, trolley service, and other transit.</p> <p><b>Policy LUT 31.2:</b> Encourage consolidation of surface parking lots into structured parking facilities where appropriately located and well-designed.</p> <p><b>Policy LUT 31.3:</b> Provide parking and recharging facilities for alternative vehicles such as bicycles and electric and low-emission vehicles.</p>	<p><b>Consistent.</b> Village 9 is consistent with these relevant policies because the project would provide extensive bicycle facilities and parking. Within Village 9, bicycle parking facilities would be located in highly visible areas to the greatest extent feasible in order to minimize theft and vandalism and encourage use. Bicycle parking would also be located to prevent parked bicycles from blocking sidewalks and other pedestrian corridors, maintaining a minimum of 4 feet for pedestrians to pass.</p> <p>Streets within Village 9 would be designed as 'Complete Streets' which consider all modes of travel including automobiles, bicycles, pedestrians, transit, low speed electric vehicles, and alternative vehicles. Large parking facilities such as parking structures would only be allowed in the Urban Center and Town Center to support commercial and office development, and to provide parking close to the proposed transit station. Parking in all zones would be required to comply with design requirements to ensure that parking is well designed and does not interfere with the public right-of-way.</p>
<p><b>Objective LUT 32:</b> Evaluate the use and applicability of various strategies to provide parking.</p> <p><b>Policy LUT 32.1:</b> Consider the joint use of parking facilities in mixed use areas where peak parking occurs at different times of the day or week and the parking facility is within one quarter mile of the uses it will serve.</p> <p><b>Policy LUT 32.2:</b> Consider the establishment of parking districts that may include a variety of public parking facilities, including surface lots and parking structures, to provide parking for a bounded geographical area.</p> <p><b>Policy LUT 32.3:</b> Consider the use of parking credits for developers in exchange for transit facility placement, bicycle facilities, and/or monetary contribution toward public parking.</p> <p><b>Policy LUT 32.4:</b> Consider the use of in-lieu fees, whereby a specified amount is submitted to the City for each parking space not provided on site, which the City shall subsequently use for the construction of public parking facilities.</p>	<p><b>Consistent.</b> Village 9 is consistent with these policies because parking requirements for uses within the Town Center would be shared between uses pursuant to the implementation of a parking district or shared parking agreements approved by the City of Chula Vista. Additionally, Village 9 would establish a shared parking district for commercial uses that would: 1) allow required parking to be provided off site; 2) consider shared parking for uses with different peak periods; and 3) account for available on-street parking in order to reduce the parking footprint within the Urban Center and Town Center. The SPA Plan includes parking requirements to ensure that adequate parking is provided for the proposed land uses.</p>



Table 5.3-20 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p><b>Objective LUT 33:</b> Ensure that parking facilities are appropriately sited and well-designed in order to minimize adverse effects on the pedestrian-oriented environment, and to enhance aesthetic qualities.</p> <p><b>Policy LUT 33.1:</b> Off-street surface parking areas should be located and designed in a manner that supports and does not conflict with pedestrian activity, such as to the side or rear of buildings, wherever feasible. In pedestrian-oriented areas, locate surface parking lots to the rear or side of buildings, wherever feasible.</p> <p><b>Policy LUT 33.2:</b> Establish design guidelines for the siting and creation of parking structures, including the requirement that parking structures adjacent to street frontage have ground floor commercial uses along the frontage and that their facades incorporate design features that enhance the street frontage.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these relevant policies because the project would provide parking facilities in a manner that would enhance aesthetic qualities and minimize adverse effects on the pedestrian-oriented environment. Section 4.3.7 of the SPA Plan establishes design guidelines for parking lots and structures.</p> <p>Off-street parking lots are required to be located behind or to the side of buildings and to be set back from public rights-of-way. Guidelines for parking structures include providing a pedestrian interface, such a retail spaces on the ground floor, attractive design elements, and a pedestrian entry space.</p>
<p><b>Objective LUT 63:</b> Provide efficient multi-modal access and connections to and between activity centers.</p> <p><b>Policy LUT 63.1:</b> Provide roads, transit service, bike routes, and pedestrian pathways that connect activity centers to their surrounding neighborhoods, adjacent villages, and each other, such that access is safe and convenient for residents and visitors.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this relevant policy because the project would provide roads, transit service, bike routes, and pedestrian pathways to connect activity centers. Village 9 has been designed to be transit ready for future extension of transit service into the area. Transit service would be provided by BRT or Rapid Bus Service. A pedestrian circulation system would be constructed and would include an interconnected system of village pathways, sidewalks, and rural trails. Additionally, main vehicular thoroughfares would include dedicated, striped, on-street Class II bike lanes.</p>
<p><b>Objective LUT 73:</b> Promote alternative modes of transportation, which are intended to encourage a healthy lifestyle and reduce reliance on the automobile, and support the viability of transit through land use distribution and design.</p> <p><b>Policy LUT 73.1:</b> Provide for walking and biking on streets designed to link neighborhoods, activity centers, and community destinations.</p> <p><b>Policy LUT 73.2:</b> Town centers and village cores should include a transit station that is appropriately sited to increase commuter ridership and promote activity and viability of nearby commercial and office developments.</p> <p><b>Policy LUT 73.3:</b> Higher residential densities in town centers and village cores should be located within a one-quarter mile radius of transit stations.</p> <p><b>Policy LUT 73.4:</b> Locate High to Medium-High density residential within ¼-mile radius to the village core(s), town center(s) or transit.</p> <p><b>Policy LUT 73.5:</b> Locate activity centers adjacent to transit stations, which should be designed with inviting pedestrian access and public spaces.</p> <p><b>Policy LUT 73.6:</b> Promote pedestrian travel within the villages and town centers and the use of bicycles and BRT for trips outside the villages.</p> <p><b>Policy LUT 73.7:</b> Incorporate pedestrian-oriented design features on streets that move vehicular traffic through the town center's pedestrian environment, including potential use of a town center arterial couplet design.</p>	<p><b>Consistent.</b> The proposed circulation network is designed to be multi-modal, including a safe and efficient network for pedestrians, bicycles, transit, and low-speed vehicles with connections to the Greenbelt trail system.</p> <p>Streets within Village 9 would be designed as 'Complete Streets' which consider all modes of travel including automobiles, bicycles, pedestrians, transit, low-speed vehicles, and alternative vehicles.</p> <p>Bicycle lanes and sidewalks are proposed on all major roadways, as well as on the off-street village pathway, greenbelt trail, and regional pathway.</p> <p>Transit stops for bus service are proposed in the Town Center, within ¼-mile of residential and commercial development.</p> <p>The Urban Center and Town Center are proposed to be a 24-hour activity centers and would include town squares and other public spaces.</p> <p>Village 9 would be designed to be pedestrian oriented, including the use of an urban couplet and traffic-calming measures. As described above, bicycles facilities would be provided throughout Village 9, and a transit station is proposed in the Town Center.</p>

**Table 5.3-21 Project Consistency with Applicable GDP Transportation Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 1, Section B: Goals, Objectives, and Policies</b>	
<p><b>Goal:</b> Reduce reliance on the automobile and promote alternative modes of transportation.</p> <p><b>Objective:</b> Develop villages and town centers which integrate residential and commercial uses with a mobility system that accommodates alternative modes of transportation, including pedestrian, bicycle, low-speed/neighborhood electric vehicle, bus, rapid transit, and other modes of transportation.</p> <p><b>Objective:</b> Develop residential land uses which encourage the use of alternative modes of transportation through the provision of bus and rapid transit right-of-way, and the inclusion of a bicycle and pedestrian network.</p> <p><b>Objective:</b> Commercial uses should be sized to meet the needs of the immediate and adjacent villages and town centers. Village and commercial land uses preempt large regional commercial opportunities within villages and town centers and relegate them to the EUC or freeway commercial areas.</p> <p><b>Objective:</b> Develop the EUC to promote alternative modes of transportation. Specifically, through the provision of light rail right-of-way and the incorporation of multi-model access from residential neighborhoods and villages.</p>	<p><b>Consistent.</b> Land uses within Village 9 are designed to provide for the daily needs of the residents by including uses such as mixed use, community purpose facilities, parks and schools. The project provides for a land use mix that minimizes the need for automobile travel coupled with the pedestrian oriented design of the villages. Village 9 incorporates transit routes through the project area and would accommodate BRT. The SPA Plan provides for future dedicated transit lanes along Main Street, Otay Valley Road and Street B. A transit station with access to each direction of travel is proposed within the Town Center. Additional potential stops are identified along Main Street and Otay Valley Road.</p>
<b>Part II, Chapter 1, Section D: Land Use Design, Character, and Policies</b>	
<p><b>1a. Village/Town Center Land Use Policies</b></p> <p><b>Goal:</b> Organize land uses based upon the village/town center concept to produce a cohesive, pedestrian friendly community. Encourage non-vehicular trips and foster interaction amongst residents.</p> <p><b>Policy:</b> Connect open spaces, schools, parks and neighborhoods with convenient and safe pedestrian walkways and bikeways.</p> <p><b>Policy:</b> Pedestrian and bicycle routes shall connect the more distant portions of a village to the village core. Generally, such routes shall be co-located with streets, although connections may be provided along transit corridors or within greenbelts.</p> <p><b>Policy:</b> Promenade Streets shall extend from secondary areas into the village core or town center to accommodate pedestrian and bike access.</p> <p><b>Policy:</b> Non-auto circulation systems, such as pedestrian walkways and bike ways, shall be provided between villages and town centers. Where appropriate and feasible, a grade separated arterial crossings should be provided to encourage pedestrian activity between villages/town centers.</p>	<p><b>Consistent.</b> The project incorporates the village concept, in an intensified land use pattern. All areas of the plan would be connected by an extensive sidewalk and bikeway system. These pedestrian and bicycle routes reinforce a pedestrian friendly concept as well as promote the use of alternative modes of transportation. A regional trail would directly connect secondary areas to Village 9. The location of medium and high-density residential, elementary school, shopping, work, entertainment and neighborhood park uses near the Urban Center and Town Center would also encourage non-vehicular trips.</p>

**Table 5.3-21 Project Consistency with Applicable GDP Transportation Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>1f. Transit Policies</b></p> <p><b>Policy:</b> Transit stops and/or stations shall be approximately located at the SPA level and will be conditioned for dedication at the Tentative Map level in village core/town center areas.</p> <p><b>Policy:</b> Villages and town centers shall provide for a variety of modes of transportation, including walking, automobiles, low-speed neighborhood electric vehicles, bus, rail, specialized transit and bicycles.</p> <p><b>Policy:</b> Transportation components, such as park-and-ride facilities, bus stops, pedestrian bridges and pedestrian walkways and bike ways, shall be sited and designed to facilitate connections between transportation modes.</p> <p><b>Policy:</b> Provide adequate space for bus service or a feeder network to support transit within each village core or town center.</p> <p><b>Policy:</b> Locate commercial uses close to primary village transit stops.</p> <p><b>Policy:</b> Small park-and-ride lots for village/town center residents may be provided within the village core or town center. Regional surface park-and-ride lots shall be located outside of villages and town centers, with feeder bus service to the transit station.</p> <p><b>Policy:</b> A transit right-of-way shall be identified at the SPA level and will be conditioned for dedication at the Tentative Map level within town center arterials and/or village entry streets designated as transit routes.</p> <p><b>Policy:</b> Bicycle parking shall be provided at transit stations and, in general, activity nodes throughout the village core or town center.</p> <p><b>Policy:</b> The design of transit facilities should complement the surrounding architecture.</p>	<p><b>Consistent.</b> The project proposes a transit station, with access to each direction of travel, on Street B. Pedestrian, bicycle, low speed vehicles, and transit facilities are also proposed throughout the project area. All areas of the project are connected by pedestrian and bicycle facilities and low speed streets, including connections to transit routes. The off-street village pathway for bicycles and pedestrians along Campus Boulevard would connect to a pedestrian bridge over SR-125 that would provide access to Village 8 East and other development west of SR-125. The SPA Plan provides for future dedicated transit lanes along Main Street, Street B, and Otay Valley Road to support future bus service, including BRT. Proposed transit stops are located along Main Street and Otay Valley Road. Parking for transit would be allowed in the Town Center, but a regional park and ride lot is not proposed. Bicycle parking would be provided throughout the area. The SPA Plan includes design guidelines for buildings as well as bus stops and streetscapes to ensure compatible design.</p>
<p><b>1g. Village/Town Center Street System Policies</b></p> <p><b>Policy:</b> Access from villages to prime arterials roads should be limited to maintain prime arterials as high-capacity regional connections.</p> <p><b>Policy:</b> Provide four-lane road connections for pedestrian, automobile and buses between villages, reflective of topographic conditions.</p> <p><b>Policy:</b> Reduce through traffic within villages by utilizing two-lane roads and couplets within villages (except for Village Entry Streets), and permitting levels of service less than LOS C within villages. Level of service for roads outside of villages is LOS C, pursuant to GDP/SRP facility thresholds.</p> <p><b>Policy:</b> With the exception of town centers, prohibit direct routes through villages to discourage through traffic.</p> <p><b>Policy:</b> Cul-de-sacs shall be permitted if, at the end of the cul-de-sacs, pedestrians are provided access to the village core or other desired destinations. Dead end cul-de-sacs are permitted only in perimeter locations.</p>	<p><b>Consistent.</b> Access to prime arterial roadways is limited to Main Street and Otay Valley Road. Pedestrian and bicycle facilities would be provided along all circulation network roads. The project includes a grid system of streets, including an urban couplet within the proposed Town Center to provide pedestrian-friendly access throughout the core area. The off-street village pathway for bicycles and pedestrians along Campus Boulevard would connect to a pedestrian bridge over SR-125 that would provide access to Village 8 East and other development west of SR-125. Other than the major arterial roads, roads in the area would generally consist of two lanes. Cul-de-sacs would only be developed in residential neighborhoods. Pedestrian access and facilities would also be required through neighborhoods. Alleys would be permitted in the Urban Center and Town Center to serve commercial development, and would be required to comply with building and design regulations. The project proposes complete streets that balance the needs of pedestrians, bicyclists, transit, and vehicles. Reduced vehicle speeds would be encouraged through the Urban Center and Town Center to promote pedestrian activity.</p>

**Table 5.3-21 Project Consistency with Applicable GDP Transportation Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy:</b> Streets shall balance the needs of pedestrians, buses, and automobiles. Intersections shall encourage pedestrian movement, reduce the number of turning lanes (where feasible), reduce auto speed while ensuring public safety, and provide for emergency vehicle access.</p> <p><b>Policy:</b> Alleys within the village core may serve residential and commercial areas and encourage service access at the rear of buildings.</p> <p><b>Policy:</b> Town center arterials serve the town centers by bringing arterial traffic into the town centers with a pedestrian-oriented grid system of streets. These arterials provide for pedestrians, vehicles and transit in a walkable environment. Town center arterials are typically a pair of two lane one-way streets (couplets) that provide the equivalent capacity as a four lane arterial. Couplets allow for integration of pedestrians by providing slower travel speeds and narrower street width without reducing overall travel time through the town center. These pairs of one-way streets allow for better integration of pedestrian traffic by allowing for slower automobile speeds and minimizing street crossing widths without reducing road carrying capacity. This arterial design allows for comfortable pedestrian movement through the high activity of a town center. The grid-like pattern of the town center arterial in the town center also offer more frequent block intersections promoting more store-front businesses among other mixed-uses. Shorter block lengths are a feature in the town centers, which increase the vitality of commercial service areas, and at the same time avoid “strip commercial” development. The one-way town center arterial resolves problems experienced on traditional high volume traffic arterials requiring a wider roadway.</p>	
<p><b>1h. Parking Policies</b></p> <p><b>Policy:</b> Parking facilities shall allow for easy pedestrian access.</p> <p><b>Policy:</b> Parking facilities shall be segmented into reasonably sized areas to prevent vast expanses of asphalt.</p> <p><b>Policy:</b> Parking facilities shall be located and designed for visual accessibility to the driving public.</p> <p><b>Policy:</b> Parking lots should be designed to accommodate future redevelopment into buildings with integrated parking structures.</p> <p><b>Policy:</b> Parking structures are permitted. Encourage ground floor retail use.</p> <p><b>Policy:</b> On-street parallel or diagonal parking adjacent to sidewalks is encouraged. On-street parking may be allowed on the same side of the street as village greens and/or parks.</p> <p><b>Policy:</b> Encourage joint use of parking facilities by uses which have differing peak hours. A reduction of required parking spaces may be permitted for shared parking programs and implemented with a joint use agreement.</p>	<p><b>Consistent.</b> The SPA Plan includes guidelines and regulations for parking facilities. Street parking would be allowed throughout the area to promote pedestrian friendly sidewalks. Parking structures would be permitted in the Urban Center and Town Center to avoid large lots. Surface parking lots would be located behind or to the side of buildings to reduce their frontage on the public street. Parking lots more than 100 feet in length would be avoided. Above-ground structures would provide a pedestrian interface, including ground floor retail and pedestrian entry spaces. Shared parking is encouraged for uses with different peak periods. Primary building entrances are required to be located on the main street whenever possible.</p>

**Table 5.3-21 Project Consistency with Applicable GDP Transportation Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy:</b> Within the village core or town center, parking shall be located on-street, to encourage pedestrian accessibility, and in locations which minimize large expanses of asphalt. Parking may be visually accessible from main thoroughfares, but shall minimize visibility by locating lots to the rear of buildings wherever possible.</p> <p><b>Policy:</b> Primary building entrances shall be located on the main street whenever possible. Secondary entrances for large anchor buildings may be provided from parking lots located at the rear.</p> <p><b>Policy:</b> Parking may be provided in structures with potential for use of the ground level for retail space.</p>	
<b>Part II, Chapter 2 – Mobility</b>	
<p><b>Goal:</b> Provide a safe and efficient transportation system within Otay Ranch with convenient linkages to regional transportation elements abutting the Otay Ranch.</p> <p><b>Objective:</b> Ensure timely provision of adequate local circulation system capacity to respond to planned growth, maintaining acceptable levels of service.</p> <p><b>Objective:</b> Plan and implement a circulation system such that the operational goal of Level of Service “C” for circulation element arterial and major roads and intersections can be achieved and maintained outside village cores and town centers. Sections of Main Streets and internal village streets/roads are not expected to meet this standard.</p> <p><b>Objective:</b> Encourage other transportation modes through street/road design standards within the village, while accommodating the automobile. Design standards are not focused on achieving level of service standards or providing auto convenience.</p> <p><b>Objective:</b> Provide an efficient circulation system that minimizes impacts on residential neighborhood and environmentally sensitive areas.</p> <p><b>Policy:</b> Otay Ranch shall contribute its fair share toward financing the transportation facilities necessary to serve the demand created by the development of Otay Ranch.</p> <p><b>Policy:</b> Support the design and construction of a regional circulation system that will have the capacity to carry the forecasted regional demand volumes through the area.</p>	<p><b>Consistent.</b> Streets surrounding and internal to Village 9 are designed in compliance with the goals and objectives of the GDP. Street design and phasing strive to provide balanced, efficient, and appropriate levels of service for all modes of transportation. The proposed circulation system provides for accommodation of public transportation. Internal streets would be designed to accommodate bicycles, and a series of pedestrian paths are provided throughout the village to provide alternatives to automobile travel. The off-street village pathway for bicycles and pedestrians along Campus Boulevard would connect to a pedestrian bridge over SR-125 that would provide access to Village 8 East and other development west of SR-125. The Village 9 plan utilizes various circulation elements such as couplets and bulb-outs to promote pedestrian safety and comfort. Mitigation measures 5.3-1 through 5.3-21 require the applicant to implement traffic improvements and to pay the development’s fair share of regional circulation improvements.</p>
<p><b>Goal:</b> Achieve a balanced transportation system which emphasizes alternatives to automobile use and is responsive to the needs of residents.</p> <p><b>Objective:</b> Study, identify, and designate corridors, if appropriate, for transit facilities.</p> <p><b>Policy:</b> Support and encourage the use of alternative forms of transportation such as public transit and car/van pools to reduce both roadway congestion and pollution.</p>	<p><b>Consistent.</b> The land plan for Village 9 is intended to de-emphasize automobile use and promote transit opportunities with a balanced transportation system and a mixed-use town center. Pedestrian and bicycle circulation would be provided to all areas. The Village 9 station provides future dedicated transit lanes and a transit stop on Street B, through the Town Center to implement these objectives.</p>



Table 5.3-21 Project Consistency with Applicable GDP Transportation Policies (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Objective:</b> Promote alternative forms of transportation, such as bicycle and low-speed electric vehicle paths, riding and hiking trails, and pedestrian walkways as an integral part of the circulation system.</p> <p><b>Policy:</b> Promote alternative forms of transportation, such as bicycle and low-speed electric vehicle paths, riding and hiking trails, and pedestrian walkways as an integral part of the circulation system.</p> <p><b>Policy:</b> Provide a thorough and comprehensive bicycle circulation system, emphasizing bicycle paths segregated from vehicular traffic between major destinations within and adjacent to the Otay Ranch Project Area.</p> <p><b>Policy:</b> Develop patterns of land use which will allow the elimination of automobile trips and encourage pedestrian movement through pedestrian-friendly environments and proper land use mix.</p>	
<b>Part II, Chapter 6 – Air Quality</b>	
<p><b>Goal:</b> Create a safe and efficient multi-modal transportation network which minimizes the number and length of single passenger vehicle trips.</p> <p><b>Objective:</b> Minimize the number and length of single passenger vehicle trips to and from employment and commercial centers to achieve an average of 1.5 persons per passenger vehicle during weekday commute hours.</p> <p><b>Policy:</b> Encourage, as appropriate, alternative transportation incentives offered to employees, alternative work hour programs, alternative transportation promotional materials, information on car pool and van pool matching services, transit pass information, space for car pool and van pool riders-wanted advertisements, information about transit and rail service, as well as information about bicycle facilities, routes, storage, and location of nearby shower and locker facilities.</p> <p><b>Policy:</b> Promote telecommuting and teleconferencing programs and policies in employment centers.</p> <p><b>Policy:</b> Establish or participate in education based commute programs, which minimize the number and length of single passenger vehicle trips.</p> <p><b>Policy:</b> Provide on-site amenities in commercial and employment centers, to include: childcare facilities, post offices, banking services, cafeterias/delis/ restaurants, etc.</p> <p><b>Policy:</b> Should Otay Ranch include a college or university, the facility should comply with RAQS TDM strategies relating to such uses.</p>	<p><b>Consistent.</b> The SPA Plan incorporates a planned regional transit-corridor, accommodating a bus line and stops with an extensive system of pedestrian and bike paths. Employment and commercial centers would be located within the Urban Center and Town Center. Close proximity between work, shopping, and public facilities within the Urban Center, Town Center and surrounding area would reduce long trips out of the community for these needs and higher density development would reduce trips altogether by making walking and transit a viable alternative.</p>
<p><b>Objective:</b> Expand the capacity of both the highway and transit components of the regional transportation system to minimize congestion and facilitate the movement of people and goods.</p>	<p><b>Consistent.</b> Development of Village 9 would contribute to highway and transit improvements through contribution of its fair share to regional circulation improvements Transportation Development Impact Fee (TDIF) as well as construction of on- and off-site improvements, as required as mitigation for significant impacts to the regional circulation system (see mitigation measures 5.3-1 through 5.3-21).</p>

**Table 5.3-21 Project Consistency with Applicable GDP Transportation Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Objective:</b> Provide a safe, thorough and comprehensive bicycle network which includes bicycle paths between major destinations within, and adjacent to, Otay Ranch.</p>	<p><b>Consistent.</b> The SPA Plan requires bicycle access to all internal streets. A network of bicycle lanes along major perimeter roads offers routes to destinations outside of the villages.</p>
<p><b>Objective:</b> Design arterial and major roads and their traffic signals to minimize travel time, stops and delays.</p> <p><b>Policy:</b> Bicycle facilities should be designated for bicycle use, and pedestrian facilities for pedestrian use to the extent necessary to provide safe, accessible facilities.</p> <p><b>Policy:</b> Bicycling shall be promoted through bicycle lane maps and bicycle destination signage.</p> <p><b>Policy:</b> Provide secure bicycle storage facilities at transit stops, and employment and retail centers.</p> <p><b>Policy:</b> Convenient bicycle access shall be provided to transit nodes.</p>	<p><b>Consistent.</b> The major roads internal to Village 9 have been designed in accordance with City standards. Traffic signals would be located as determined by the traffic impact analysis (Table 5.3-19) to facilitate traffic flow and to provide access to neighboring land uses.</p>
<p><b>Objective:</b> Design arterial and major roads and their traffic signals to minimize travel time, stops and delays.</p> <p><b>Policy:</b> Optimize traffic signals control systems at all activity centers to minimize travel time, stops and delays. Consider providing priority signal treatment for transit systems.</p> <p><b>Policy:</b> Minimize the number of ingress and egress to major arterial roads.</p> <p><b>Policy:</b> Traffic signals at the street end of freeway on and off-ramps shall be coordinated and integrated with the surrounding street systems.</p> <p><b>Policy:</b> Promote street design to give first priority to transit vehicles.</p>	<p><b>Consistent.</b> The traffic impact analysis determined which intersections in the project area would require a traffic signal. See Table 5.3-19.</p>
<p><b>Objective:</b> Facilitate access to public transit</p> <p><b>Policy:</b> Bus facilities, park-and-ride lots and other ridesharing facilities should be addressed early in the design of villages.</p> <p><b>Policy:</b> Bus shelters and sidewalks should be designed for transit rider and pedestrian safety, by being well-lit, secure and free of physical barriers.</p> <p><b>Policy:</b> Streets and intersections used by transit vehicles should be built to accommodate the weight and size of these larger vehicles.</p> <p><b>Policy:</b> Streets should consider transit circulation patterns, minimizing turning movements between stops.</p> <p><b>Policy:</b> Bicycle lanes, and secure bike racks/storage areas should be located near transit stops.</p>	<p><b>Consistent.</b> Pedestrian and bicycle paths would link all uses in Village 9 to public transit lines. A transit station would be located in the Town Center and additional bus stops will be provided around and/or within the surrounding villages to offer residents and area employees an alternative mode of transportation.</p>
<p><b>Objective:</b> Encourage pedestrian traffic as an alternative to single vehicle passenger travel.</p> <p><b>Policy:</b> Sidewalks should directly connect schools, parks, open spaces and transit facilities and village core areas.</p> <p><b>Policy:</b> Distances between higher density residential areas and bus stops should reflect the average walking distances of pedestrians (approximately 1/4 mile).</p> <p><b>Policy:</b> Provide multiple pedestrian area walkways to residential areas to reduce walking distances.</p>	<p><b>Consistent.</b> The extensive system of trails and pathways throughout Village 9 would provide pedestrian and bicycle access to destinations such as the Urban Center, Town Center, schools and parks, and neighboring land uses. The mixed-use town center concept encourages pedestrian activity through design by combining uses within walking distance.</p>

Table 5.3-21 Project Consistency with Applicable GDP Transportation Policies (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Policy:</b> Access between a transit stop and the entrance to a building or cluster of buildings should be clearly visible and as direct as possible.</p> <p><b>Policy:</b> Buildings should be connected to abutting land uses with paved walkways.</p> <p><b>Policy:</b> Buffer walkways with landscaping such as berms, trees and other vegetation.</p> <p><b>Policy:</b> Scale the size of facilities, including walkways, to correspond to anticipated pedestrian volumes and include signs, benches and trash receptacles.</p> <p><b>Policy:</b> Provide well-equipped pedestrian facilities at transit stops, including shelters to protect patrons from the weather, benches with seat backs, lighting, landscaping and community information.</p>	
<p><b>Objective:</b> Locate and design buildings within cores to facilitate transit and pedestrian access.</p>	<p><b>Consistent.</b> Buildings within Village 9 would be clustered to minimize walking distances and oriented to the street to encourage pedestrian access. Paths within the Town Center would provide links to future public transit stations.</p>
<p><b>Objective:</b> Manage parking facilities transit, ridesharing and pedestrian access.</p> <p><b>Objective:</b> Manage parking facilities to encourage a reduction in the number of single vehicle trips.</p> <p><b>Policy:</b> Locate parking to the sides and backs of buildings so that access from public transportation does not require walking through large parking lots to reach building entrances.</p> <p><b>Policy:</b> Allow preferential (free or reduced fee parking) parking for carpools and vanpools, near entrances to activity centers.</p> <p><b>Policy:</b> Joint parking is strongly encouraged for proximate uses. Retail, office, entertainment, and some housing could share parking areas and quantities.</p>	<p><b>Consistent.</b> Parking areas within Village 9 would be located to maintain a pedestrian-oriented village streetscape and direct access. Preferential parking (free or reduced fee parking for carpools and vanpools) would be allowed. Parallel parking will be provided on public streets and within parking lots and/or structures. Joint parking use may be proposed in the Urban Center and Town Center.</p>
<p><b>Objective:</b> Configure internal village streets to give pedestrian traffic a priority.</p> <p><b>Policy:</b> Arterials should not traverse village cores.</p> <p><b>Policy:</b> Provide multiple routes to village core areas.</p> <p><b>Policy:</b> Encourage the extensive planting of street trees, while remaining consistent with water conservation goals.</p>	<p><b>Consistent.</b> Village streets would be designed for direct access and pedestrian comfort with sidewalks, landscaping, and street furnishings. Streets may be narrowed to slow traffic and de-emphasize the automobile. Bulb-outs at intersections would reduce vehicle speeds and improve pedestrian visibility.</p>

### 5.3.4 Level of Significance Prior to Mitigation

#### A. Traffic and Level of Service Standards

##### 1. Access and Frontage

According to Section 12.24 of the City's municipal code, access related impacts would occur if access and frontage improvements are not provided concurrent with development. Therefore, a potentially significant impact would occur.

##### 2. Intersections

###### a. Existing Plus Project

Under the Existing Plus Project scenario, the following intersections would experience a direct impact from implementation of the project:

- Olympic Parkway/I-805 northbound ramps (AM – LOS F)
- Olympic Parkway/Brandywine Avenue (PM – LOS E)
- Olympic Parkway/La Media Road (AM – LOS E)
- Birch Road/La Media Road (AM – LOS F, PM – LOS F)
- Birch Road/Eastlake Parkway (AM – LOS F, PM – LOS F)
- Main Street/Eastlake Parkway (AM – LOS F, PM – LOS F)

However, the project is planned to be constructed in a series of phases over a period of up to 20 years. This phasing would not require construction of all circulation improvements to address these impacts at once because the increase in trips as a result of the project would be phased along with development. Rather, such improvements would be constructed as is needed to mitigate impact of phased development, as discussed in the Year 2020, Year 2025, and Year 2030 scenarios.

###### b. Year 2020

Under the Year 2020 scenario, the following intersections would experience a cumulative impact:

- Olympic Parkway/I-805 northbound ramps (AM – LOS F)
- Olympic Parkway/Brandywine Avenue (PM – LOS F)

###### c. Year 2025

Under the Year 2025 scenario, the following intersections would experience a direct impact from implementation of the project:

- Birch Road/La Media Road (AM – LOS F, PM – LOS F)
- Birch Road/Eastlake Parkway (AM – LOS F, PM – LOS F)
- Main Street/Eastlake Parkway (AM – LOS F, PM – LOS F)

###### d. Year 2030

Under the Year 2030 scenario, the following intersections would experience a direct impact from implementation of the project:

- Birch Road/SR-125 northbound ramps (LOS F – AM Peak Hour)
- Birch Road/Eastlake Parkway (AM – LOS F, PM – LOS E)

- Main Street/I-805 northbound ramps (PM – LOS E)
- Main Street/La Media Couplet (AM – LOS F, PM – LOS F)
- Main Street/Magdalena Avenue (AM – LOS F, PM – LOS F)

Under the Year 2030 scenario, the following intersection would experience a cumulative impact:

- Birch Road/La Media Road (AM – LOS F, PM – LOS F)
- Main Street/I-805 southbound ramps (PM – LOS E)
- Main Street/Eastlake Parkway (AM – LOS F)

Based on the ILV Analysis, a cumulative impact would occur to the I-805 southbound ramps and I-805 northbound ramps at Main Street.

### **3. Roadway Segments**

#### **a. Existing Plus Project**

Under the Existing Plus Project scenario, the following roadway segments would experience a direct impact from implementation of the project:

- Olympic Parkway from I-805 to Brandywine Avenue (LOS D)
- Olympic Parkway from Brandywine Avenue to Heritage Road (LOS E)
- Olympic Parkway from Heritage Road to La Media Road (LOS F)
- Magdalena Avenue from Birch Road to Main Street (LOS F)
- Eastlake Parkway from Birch Road to Main Street (LOS D)

However, the project is planned to be constructed in a series of phases over a period of up to 20 years. This phasing would not require construction of all circulation improvements to address these impacts at once because the increase in trips as a result of the project would be phased along with development. Rather, such improvements would be constructed as is needed to mitigate impact of phased development, as discussed in the Year 2020, Year 2025, and Year 2030 scenarios.

#### **b. Year 2020**

Under the Year 2020 scenario, the following roadway segments would experience a cumulative impact:

- Olympic Parkway from I-805 northbound ramps to Brandywine Avenue (LOS D)
- Olympic Parkway from Brandywine Avenue to Heritage Road (LOS E)
- Olympic Parkway from Heritage Road to La Media Road (LOS E)
- Heritage Road from Main Street to Avenida de La Vistas (LOS F)

#### **c. Year 2025**

Under the Year 2025 scenario, the following roadway segments would experience a direct impact from implementation of the project:

- Birch Road from La Media Road to SR-125 (LOS F)
- Magdalena Avenue from Birch Road to Main Street (LOS F)
- Eastlake Parkway from Birch Road to Main Street (LOS F)

Under the Year 2025 scenario, the following roadway segment would experience a cumulative impact:

- Olympic Parkway from Heritage Road to La Media Road (LOS F)



**d. Year 2030**

Under the Year 2030 scenario, the following roadway segments would experience a direct impact from implementation of the project:

- Birch Road from SR-125 to Eastlake Parkway (LOS F)
- Main Street from I-805 to Brandywine Avenue (LOS D)
- Main Street from Brandywine to Heritage Road (LOS D)
- Eastlake Parkway from Birch Road to Main Street (LOS D)

Under the Year 2030 scenario, the following roadway segments would experience a cumulative impact:

- Birch Road from La Media Road to SR-125 (LOS F)
- Heritage Road from Main Street to Entertainment Circle (LOS E)
- Heritage Road from Entertainment Circle to Avenida de Las Vistas (LOS D)

**4. Circulation System Assumptions**

The traffic analysis assumed certain roadway improvements to be in place prior to commencement of each study scenario. These assumed roadways were taken into account due to other Otay Ranch communities planned for development in the project's study area. If these improvements are not in place prior to each of the respective scenarios, as assumed, additional traffic impacts would occur, resulting in a potentially significant impact.

**5. Traffic Signal Warrants**

A potentially significant impact would occur if traffic signals are not provided at the following intersections prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit: Main Street/Street A, Main Street/Street B, Otay Valley Road/Street I, Otay Valley Road/Street A, and Otay Valley Road/Street B.

**B. Congestion Management**

The project would have the potential to exceed the City level of service standards under the Existing Plus Project, Year 2020, Year 2025, and Year 2030 scenarios. Impacts related to congestion management would be significant.

**C. Air Traffic Patterns**

Potentially significant impacts could result from the location of structures proposed in Village 9 within a FAA notification area.

**D. Road Safety**

Implementation of the project would not result in a significant direct impact related to road safety. Cumulative impacts are addressed in Chapter 6, Cumulative Impacts.

**E. Emergency Access**

Implementation of the project would not result in a significant direct impact related emergency access. Cumulative impacts are addressed in Chapter 6, Cumulative Impacts.

## F. Consistency with Transportation Policies

Implementation of the project would not result in a significant direct impact related consistency with transportation policies. Cumulative impacts are addressed in Chapter 6, Cumulative Impacts.

### 5.3.5 Mitigation Measures

#### A. Traffic and Level of Service Standards

The following mitigation measures have been identified to reduce intersection, roadway, and ILV impacts associated with construction and operation of the land uses proposed in the SPA Plan and TM to below a level of significance.

##### *Existing Plus Project*

The project is planned to be constructed in a series of phases over a period of up to 20 years. This phasing would not require construction of all circulation improvements to address these impacts at once because the increase in trips as a result of the project would be phased along with development. Such improvements would be constructed as is needed to mitigate impact of phased development, as discussed in the Year 2020, Year 2025, and Year 2030 scenarios. Therefore, the mitigation measures identified for the Year 2020, Year 2025, and Year 2030 scenarios would mitigate intersection and roadway segment impacts that would occur under the Existing Plus Project scenario.

#### **Growth Management Ordinance Compliance (Section 19.09 of the CVMC)**

5.3-1 **Olympic Parkway: Heritage Road to Oleander Avenue:** Prior to the issuance of the building permit for the 2,463<sup>rd</sup> dwelling unit for development east of I-805 (commencing from April 4, 2011), the applicant may:

- i. Prepare a traffic study that demonstrates, to the satisfaction of the City Engineer, that the circulation system has additional capacity without exceeding the Growth Management Ordinance traffic threshold standards; or
- ii. Demonstrate that other improvements are constructed which provide the additional necessary capacity to comply with the Growth Management Ordinance traffic threshold to the satisfaction of the City Engineer; or
- iii. Agree to the City Engineer's selection of an alternative method of maintaining Growth Management Ordinance traffic threshold compliance; or
- iv. Enter into agreement, approved by the City, with other Otay Ranch applicants that alleviates congestion and achieves Growth Management Ordinance traffic threshold compliance for Olympic Parkway. The agreement will identify the deficiencies in transportation infrastructure that will need to be constructed, the parties that will construct said needed infrastructure, a timeline for such construction, and provide assurances for construction, in accordance with the City's customary requirements, for said infrastructure.

If Growth Management Ordinance compliance cannot be achieved through i, ii, iii, or iv above, then the City may, in its sole discretion, stop issuing new building permits within the project area, after building permits for 2,463 dwelling units have been issued for any development east of I-805 after April 4, 2011, until such time that Growth Management Ordinance traffic threshold standard compliance can be assured to the satisfaction of the City Manager.

These measures shall constitute full compliance with growth management objectives and policies in accordance with the requirements of the General Plan, Chapter 10 with regard to traffic thresholds set forth in the Growth Management Ordinance.

### Access and Frontage Mitigation

- 5.3-2 **Main Street/Village 9 Street A.** Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or install a traffic signal at the intersection of Main Street/Village 9 Street A.
- 5.3-3 **Main Street:** Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Main Street from Village 9 Street A to Eastlake Parkway as a six-lane gateway.
- 5.3-4 **Village 9 Street A:** Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Village 9 Street A from Main Street to Village 9 Street C as four-lane roadway, and from Village 9 Street C to Otay Valley Road as a two-lane, two-way roadway.
- 5.3-5 **Otay Valley Road:** Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from Village 9 Street I to Village 9 Street A as four-lane major roadway.
- 5.3-6 **Village 9 Street I:** Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Village 9 Street I south of Otay Valley Road as a two-lane roadway.
- 5.3-7 **Otay Valley Road:** Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road as a four-lane major roadway from Village 9 Street A to Village 9 Street B and install a traffic signal at the Otay Valley Road/Village 9 Street A intersection when warranted, or construct the improvements at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever comes first.
- 5.3-8 **Village 9 Street A:** Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct two lanes to form a couplet and restripe Street A as two one-way segments (two northbound and two southbound lanes) and construct the south end of the couplet to Otay Valley road as a four-lane roadway and install traffic signals or stop control at internal intersections where appropriate, or construct the improvements at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.
- 5.3-9 **Campus Boulevard:** Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Campus Boulevard from Village 9 Street G to Village 9 Street B as a two-lane roadway, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.
- 5.3-10 **Village 9 Street B:** Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Street B from Campus Boulevard to its terminus south of Otay Valley Road as a two-lane roadway, with dedicated transit lanes from

Campus Boulevard to Otay Valley Road, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.

- 5.3-11 **Village 9 Street I:** Prior to issuance of the final map that contains the 1,312<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Street I from Village 9 Street A to Otay Valley Road as a two-lane roadway, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.
- 5.3-12 **Village 9 Street A:** Prior to issuance of the final map that contains the 3,074<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Village 9 Street A from the northern boundary of Village 9 to Main Street as a four-lane roadway and modify the traffic signal at the Main Street/Village 9 Street A intersection, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.
- 5.3-13 **Village 9 Street B:** Prior to issuance of the final map that contains the 3,074<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Village 9 Street B from the northern boundary of Village 9 to Campus Boulevard as a two-lane roadway with dedicated transit lanes and install a traffic signal at the Main Street/Village 9 Street B intersection, or construct the improvement at the first final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.

#### Direct Impact Mitigation

- 5.3-14 **Birch Road/La Media Road, Birch Road/Eastlake Parkway, and Main Street/Eastlake Parkway Intersections; Birch Road from La Media Road to SR-125; Magdalena Avenue from Birch Road to Main Street; and Eastlake Parkway from Birch Road to Main Street:** Prior to issuance of the final map that contains the 3,074<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Main Street from La Media Road to Village 9 Street A, including the construction of an overcrossing at SR-125.
- 5.3-15 **Birch Road/SR-125 Northbound Ramps, Birch Road/Eastlake Parkway, and Main Street/I-805 Northbound Ramps Intersections; Birch Road, SR-125 to Eastlake Parkway; Main Street, I-805 to Brandywine Avenue; Main Street, Brandywine Avenue to Heritage Road:** Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct SR-125 northbound and southbound ramps at Main Street.
- 5.3-16 **Main Street/La Media Road Couplet and Main Street/Magdalena Avenue Intersections; and Eastlake Parkway, Birch Road to Main Street:** Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from the Main Street to Village 9 Street I, including the construction of an overcrossing at SR-125.

#### Cumulative Impact Mitigation

- 5.3-17 To mitigate the project's cumulative impact on the following roadway segments and intersections, prior to issuance of each building permit, the applicant shall pay the Chula Vista Transportation Development Impact Fee:
- i. Olympic Parkway/Brandywine Avenue intersection
  - ii. Olympic Parkway from I-805 to Brandywine

- iii. Olympic Parkway from Brandywine Avenue to Heritage Road
- iv. Olympic Parkway from Heritage Road to La Media Road
- v. Birch Road from La Media Road to SR-125
- vi. Birch Road/La Media Road intersection
- vii. Main Street/I-805 southbound ramps intersection
- viii. Heritage Road from Main Street to Avenida de Las Vistas
- ix. Main Street/Eastlake Parkway intersection

### **Circulation System Assumptions**

5.3-18 The Year 2020 scenario assumes the following intersection and roadway improvements:

- i. Construction of Main Street/La Media Road intersection
- ii. Construction of Main Street/Magdalena Avenue intersection
- iii. La Media Road from Birch Road to Main Street roadway segment.
- iv. Construction of Otay Valley Road from Village 9 Street A to University site

If the first final map containing the first equivalent dwelling unit is submitted for approval prior to these improvements being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:

- i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or
- ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or
- iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance.
- v. All to the satisfaction of the City Engineer.

5.3-19 The Year 2025 scenario assumes the following intersection and roadway improvements:

- i. Construction of Heritage Road from Olympic Parkway to Main Street; re-stripe southbound Heritage Road from Olympic Parkway to Main Street to include dual left turn lanes, three through lanes, and one right turn lane
- ii. Widening of Heritage Road from Main Street to Avenida de Las Vistas from a Class II Collector to a six-lane prime
- iii. Construction of Santa Victoria Road from Heritage Road to La Media Road
- iv. Construction of Main Street from La Media Road to Magdalena Avenue
- v. Construction of Olympic Parkway/Santa Victoria Road intersection
- vi. Construction of Santa Victoria/Heritage Road intersection

If the project equivalent dwelling unit limit for study Year 2020 (1,312 equivalent dwelling units) is exceeded prior to these roadway segments being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:



- i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or
- ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or
- iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance.
- v. All to the satisfaction of the City Engineer.

5.3-20 The Year 2030 scenario assumes the following roadway improvements:

- i. Construction of Main Street from Heritage Road to La Media Road
- ii. Construction of Village Path pedestrian/bicycle bridge over SR-125 to provide non-motorized access between Village 9 and Village 8 East

If the project equivalent dwelling unit limit for study Year 2025 (3,074 equivalent dwelling units) is exceeded prior to these intersections or roadway segments being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:

- i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or
- ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or
- iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance.
- v. All to the satisfaction of the City Engineer.

### **Traffic Signal Warrants**

In addition to mitigation measures 5.3-2, 5.3-7, and 5.3-13, the following measure would mitigate impacts related to installation of traffic signals.

5.3-21 Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall install traffic signals at the Otay Valley Road/Street I and Otay Valley Road/Street B intersections.

## **B. Congestion Management**

The project would have the potential to exceed the City level of service standards under the Existing Plus Project, Year 2020, Year 2025, and Year 2030 scenarios. Impacts related to congestion management would be significant. Direct and cumulative congestion management impacts would be mitigated with measures 5.3-1 through 5.3-21.

## **C. Air Traffic Patterns**

Mitigation measures 5.13-2 through 5.13-4 in Section 5.13, Hazards and Hazardous Materials, would reduce impacts related to air traffic patterns.

## **D. Road Safety**

No mitigation measures are required.

## **E. Emergency Access**

No mitigation measures are required.

## **F. Consistency with Transportation Policies**

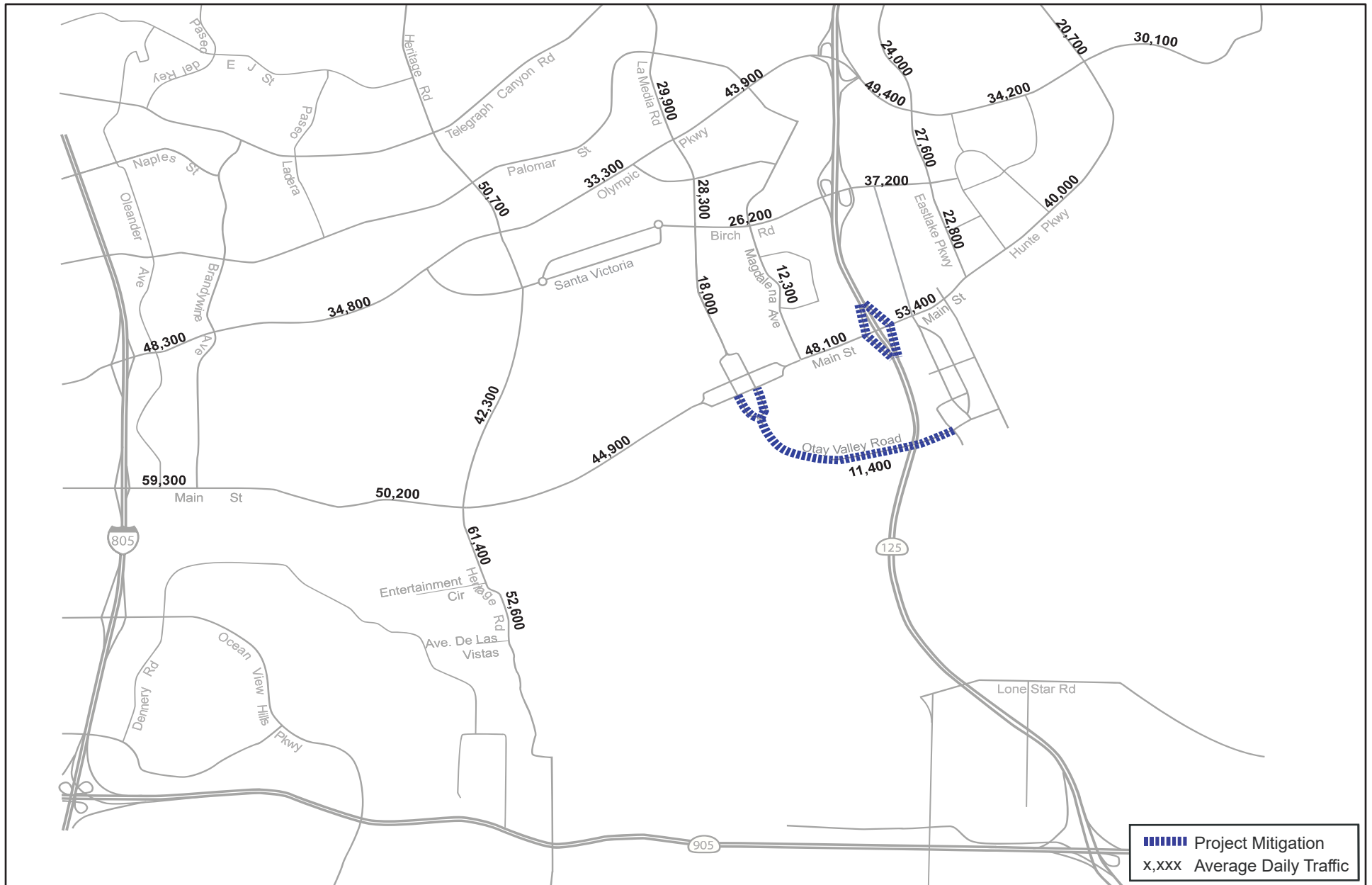
No mitigation measures are required.

### **5.3.6 Level of Significance After Mitigation**

#### **A. Traffic and Level of Service Standards**

Table 5.3-22 compares the calculated level of service at the directly impacted intersections with and without mitigation. Table 5.3-23 compares the calculated level of service at the impacted roadway segments with and without mitigation. TDIF fees paid by the project would not directly result in a change in delay or level of service at an intersection or roadway; therefore, mitigation measures requiring TDIF payment are not included in Tables 5.3-22 and 5.3-23. The mitigated roadway network is shown in Figure 5.3-5. Table 23, 2030 Study Intersections LOS With Mitigation, and Table 24, 2030 Study Roadway Segment LOS With Mitigation, in Appendix B provide the level of service for all study area intersections and roadway segments following mitigation. With implementation of mitigation measures 5.3-1 through 5.3-21, roadway and intersection impacts related to the implementation of the SPA Plan and TM would be reduced to below a level of significance, with the exception of cumulative impacts to the Olympic Parkway/I-805 northbound ramps intersection in Year 2020.

The Village 9 Traffic Impact Analysis (Appendix B) acknowledges that the I-805 northbound ramps at Olympic Parkway are within the Caltrans right-of-way and are not within the City's TDIF program. However, there are a number of improvements in the surrounding areas that are within the TDIF program, such as the construction of Heritage Road from Main Street to Olympic Parkway, extension of Main Street, and the Palomar Street DAR, as well as planned improvements by Caltrans for the I-805 corridor, that would reduce the traffic volumes through the Olympic Parkway/I-805 interchange. While the payment of TDIF as required by mitigation measure 5.3-17 would reduce cumulative impacts to the Olympic Parkway/I-805 northbound ramps intersection, no TDIF improvement has been identified for the interchange; therefore, it cannot be determined that impacts would be reduced to a less than significant level. Any improvements to the I-805 northbound ramps would be within the Caltrans ROW and would be outside of the jurisdiction of the City. Therefore, the City cannot ensure implementation of improvements to reduce impacts to a less than significant level. Impacts to the Olympic Parkway/I-805 northbound ramps intersection would remain significant and unavoidable.



Source: RBF 2013

Not to Scale



**MITIGATED YEAR 2030 AVERAGE DAILY TRAFFIC**  
**FIGURE 5.3-5**

**Table 5.3-22 Recommended Mitigation Measures – Intersections**

Intersection Location	Study Year LOS		Impact	Recommended Mitigation	LOS with Mitigation	
	AM Delay - LOS	PM Delay - LOS			AM Delay - LOS	PM Delay - LOS
<b>2020 (1,312 Equivalent Dwelling Units)</b>						
The cumulative impacts to Olympic Parkway/I-805 northbound ramps and Olympic Parkway/Brandywine Avenue would be mitigated by the TDIF fee.						
<b>2025 (3,074 Equivalent Dwelling Units)</b>						
Birch Road/La Media Road	234.8 – F	190.5 – F	Direct	Mitigation measure 5.3-14: Construct Main Street from La Media Road to Village 9 Street A including an overcrossing at SR-125	37.9 – D	37.1 – D
Birch Road/Eastlake Parkway	443.0 – F	454.5 – F	Direct		39.0 – D	40.3 – D
Main Street/Eastlake Parkway	274.4 – F	242.8 – F	Direct		24.6 – C	24.1 – C
<b>2030 (3,407 Equivalent Dwelling Units)</b>						
Birch Road/SR-125 NB Ramps	112.4 – F	31.8 – C	Direct	Mitigation measure 5.3-15: Construct SR-125 northbound and southbound ramps at Main Street	13.0 – B	6.2 – A
Birch Road/Eastlake Parkway	117.2 – F	65.8 – E	Direct		37.2 – D	38.7 – D
Main Street/I-805 NB Ramps	39.6 – D	57.8 – E	Direct		39.2 – C	54.7 – D
<b>Main Street/La Media Road Couplet</b>						
WB Main Street/NB La Media	103.2 – F	48.0 – D	Direct	Mitigation measure 5.3-16: Construct Otay Valley Road from Main Street to Village 9 Street I including SR-125 overcrossing	47.8 – D	37.1 – D
EB Main Street/SB La Media	140.3 – F	95.2 – F	Direct		49.0 – D	34.5 – C
EB Main Street/NB La Media	80.9 – F	42.5 – D	Direct		28.1 – C	25.3 – C
Main Street /Magdalena Avenue	131.3 – F	143.8 – F	Direct		32.1 – C	35.7 – D
The cumulative impacts to Birch Road/La Media Road, Main Street/I-805 southbound ramps, and Main Street/Eastlake Parkway would be mitigated by the TDIF fee.						
NB = northbound; SB = southbound; WB = westbound; EB = eastbound Source: RBF 2013						

**Table 5.3-23 Recommended Mitigation Measures – Roadway Segments**

Study Roadway Segment	Study Year LOS			Impact	Recommended Mitigation	LOS With Mitigation	
	LOS C Capacity	ADT	LOS			ADT	LOS
<b>2020 (1,312 Equivalent Dwelling Units)</b>							
The cumulative impacts to Olympic Parkway from I-805 to La Media Road and Heritage Road from Main Street to Avenida de Las Vistas would be mitigated by the TDIF fee.							
<b>2025 (3,074 Equivalent Dwelling Units)</b>							
Birch Road from La Media Road to SR-125	40,000	51,100	F	Direct	Mitigation measure 5.3-14: Construct Main Street from La Media Road to Village 9 Street A including bridge over SR-125	23,200	A
Magdalena Avenue from Birch Road to Main Street	12,000	20,100	F	Direct		11,500	C
Eastlake Parkway from Birch Road to Main Street	40,000	54,600	F	Direct		35,400	C
The cumulative impact to Olympic Parkway from Heritage Road to La Media Road would be mitigated by the TDIF fee.							

**Table 5.3-23 Recommended Mitigation Measures – Roadway Segments (continued)**

Study Roadway Segment	Study Year LOS			Impact	Recommended Mitigation	LOS With Mitigation	
	LOS C Capacity	ADT	LOS			ADT	LOS
<b>2030 (3,407 Equivalent Dwelling Units)</b>							
Birch Road from SR-125 to Eastlake Parkway	50,000	65,200	F	Direct	Mitigation measure 5.3-15: Construct SR-125 northbound and southbound ramps at Main Street	37,200	B
Main Street from I-805 to Brandywine Avenue	58,000	61,300	D	Direct		59,300	D
Main Street from Brandywine to Heritage Road	50,000	52,200	D	Direct		50,200	D
Eastlake Parkway from Birch Road to Main Street	40,000	41,300	D	Direct	Construct Otay Valley Road from Main Street to Village 9 Street "I" including SR-125 overcrossing.	22,800	A
The cumulative impacts to Birch Road from La Media Road to SR-125 and Heritage Road from Main Street to Avenida de Las Vistas and Eastlake Parkway from Birch Road to Main Street would be mitigated by the TDIF fee.							
Source: RBF 2013							

## B. Congestion Management

Mitigation measures 5.3-1 through 5.3-21 would reduce impacts related to congestion management to a less than significant level, with the exception of cumulative impacts to the Olympic Parkway/I-805 northbound ramps intersection in Year 2020. Impacts to this intersection would be significant and unavoidable.

## C. Air Traffic Patterns

With the implementation of mitigation measures 5.13-2 through 5.13-4 in Section 5.13, Hazards and Hazardous Materials, impacts related to the air traffic patterns would be reduced to below a level of significance.

## D. Road Safety

Impacts would be less than significant without mitigation.

## E. Emergency Access

Impacts would be less than significant without mitigation.

## F. Consistency with Transportation Policies

Impacts would be less than significant without mitigation.

### 5.3.7 Off-Site Mitigation Impacts

As discussed in Chapter 2, Introduction, this EIR includes a summary of impacts that may occur as a result of construction and operations of roadway improvements required as direct mitigation for the proposed project in mitigation measures 5.3-14 through 5.3-16. As listed above, these measures include the following off-site roadway improvements:



- Construct Main Street from La Media Road to Village 9 Street A, including the construction of an overcrossing at SR-125.
- Construct SR-125 northbound and southbound ramps at Main Street.
- Construct Otay Valley Road from the Main Street to Village 9 Street I, including the construction of an overcrossing at SR-125.

These measures include both on- and off-site improvements. The portion of Main Street and Otay Valley Road and the portion of the SR-125 ramps west of SR-125 are off-site. The roadway improvements identified in mitigation measures 5.3-14 through 5.3-16 are anticipated to be required for the proposed project in Year 2025 (measure 5.3-14) and Year 2030 (measures 5.3-15 and 5.3-16). At this time, design of the roadways is conceptual and based on the planned circulation network for Otay Ranch to serve projected growth. Location, design, and need for these improvements are subject to change as a result of actual future development conditions. Based on the roadway widths proposed for these roadways in Village 8 West and Village 9, it is assumed that Main Street would have a width of approximately 120 feet and follow the alignment described in the General Plan. Main Street would extend from its existing terminus to the SR-125 right-of-way, approximately 1,200 feet, for a footprint of approximately three acres. Otay Valley Road would extend across Otay Valley Road, approximately 2,300 feet and would have a width of approximately 110 feet, for a total footprint of approximately six acres. The total impact area would be nine acres over the approximately 300 acres of currently undeveloped property on the University Village site. These impact area estimates include the at-grade connections on the west side of the SR-125 overcrossings to Main Street and Otay Valley Road, which are the development footprints of these overcrossings.

According to the Notice of Preparation (NOP) for the University Villages project dated July 19, 2013, these improvements are located within the University Villages project area (specifically Village 8 East). It is anticipated that these improvements will be addressed with more specificity in the University Villages EIR. However, because the University Villages EIR has not been released for public review, this EIR conservatively includes a summary of impacts of mitigation measures 5.3-14 through 5.3-16 on the Village 8 East property and the SR-125 ramps west of SR-125 Village 8 East not be developed. The overcrossings at SR-125 are also off-site and are part of the General Plan Circulation Element and, although not part of the proposed SR-125 project, were identified as future improvements and are within the right of way addressed in the EIS for SR-125 (January 2000). The portions of the Main Street, Otay Valley Road, and ramps east of SR-125 included in mitigation measures 5.3-14 through 5.3-16 are on-site and are therefore addressed as part of the proposed project and are not included in the analysis below. A summary for each environmental issue topic addressed in this EIR is provided below:

## **A. Land Use**

The extension of Main Street, construction of Otay Valley Road across Village 8 East, construction of the SR-125 overcrossings, and the construction of the SR-125 ramps at Main Street, as required in mitigation measures 5.13-14 through 5.3-16, are part of the planned circulation network in the GDP and Chula Vista General Plan. Refer to Figure 3-2, Existing and Planned Land Uses in the Project Vicinity, and Exhibit 4 in Appendix B to this EIR, City of Chula Vista Circulation Plan. Therefore, construction of these improvements is consistent with applicable land use plans. The extension of Main Street and the construction of the SR-125 ramps and SR-125 overcrossing at Main Street are improvements to existing facilities. The extension of Main Street would be adjacent to existing development, but would not bisect or divide any existing development. Village 8 East is currently undeveloped; therefore, construction of Otay Valley Road would not divide an established community or result in incompatible land uses. The overcrossing of SR-125 at Otay Valley Road would also not divide an established community but would

provide a connection between planned development east and west of the freeway. Therefore, implementation of mitigation measures 5.3-14 through 5.3-16 in Village 8 East would result in less than significant land use impacts.

As shown in Figure 3-2, the proposed roadway improvements would not be located within the Chula Vista Open Space Preserve. The roadway improvements would be located in a planned development area in the GDP, Otay Ranch Resource Management Plan, and Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan, and would not interfere with acquisition or management of the Preserve. Biological impacts are further addressed in Section 5.3.7.6, Biological Resources. Therefore, implementation of mitigation measures 5.3-14 through 5.3-16 in Village 8 East would not conflict with applicable habitat plans.

Mitigation measures 5.1-1 and 5.1-2 in Section 5.1 require the relocation of City of San Diego waterlines in Village 9 prior to development of Village 9. City of San Diego waterlines are also located in Village 8 East; however, construction of Main Street and Otay Valley Road would not require relocation of the City of San Diego pipelines. The roadways would not make the City of San Diego pipelines inaccessible and would not necessitate the construction of any pipelines that would potentially conflict with the City of San Diego pipeline alignments. Therefore, the mitigation measures identified in Section 5.1 for the proposed project would not be required for the off-site roadway improvements.

## **B. Aesthetics**

There are no existing on-site viewers in Village 8 East that would be affected by extension of Main Street, construction of Otay Valley Road, or the SR-125 ramps at Main Street. Similar to Village 9, Village 8 East consists of rolling hills, and the property slopes south toward the Otay River Valley. The extension of Main Street would be located adjacent to Olympian High School; however, construction would extend an existing roadway by less than one-quarter mile to connect to the existing SR-125 and would not substantially alter views. Construction of the SR-125 ramps would make improvements to the existing SR-125 freeway in an area planned for development and would be visually compatible with existing development. The ramps would not change the existing visual character of the land adjacent to the freeway and would not block views of scenic resources or corridors. Otay Valley Road would traverse undeveloped Village 8 East. Due to differences in topography, Otay Valley Road would generally not be visible to existing viewers north of Village 8 East, which would generally include existing Otay Ranch residents and students and faculty at Olympian High School. Although the Main Street and Otay Valley Road overcrossings have not yet been designed or engineered, it is anticipated that they would be similar to other overcrossings along the SR-125 corridor. The overcrossings would be visually compatible with the roadways on either side of the overcrossing and SR-125. The view of the SR-125 corridor is dominated by SR-125 under existing conditions, and the addition of additional roadway features would not substantially change the character or quality of views of the corridor. Overall visual impacts of the roadway improvements to viewers across Otay Mesa to the south of Village 8 East would also be minimal due to the limited footprint of the roadways, distance (approximately one mile south of Otay Valley Road), and varying topography.

The roadway improvements would not directly impact any scenic resources. Construction of the roadways alone would not require substantial landform alteration due to the limited footprint required for these improvements. Similar to the portion of Main Street and Otay Valley Road proposed in Village 8 West and Village 9, it is assumed these Main Street would have a width of approximately 120 feet and Otay Valley Road would have a width of approximately 110 feet. Main Street would extend from its existing terminus to the SR-125 right-of-way, approximately 1,200 feet, for a footprint of approximately three acres. Otay Valley Road would extend across Otay Valley Road, approximately 2,300 feet, for a

total footprint of approximately six acres. Total impact would be nine acres over the approximately 300 acre undeveloped property. Additionally, the extension of Main Street and the SR-125 ramps would make improvements to existing infrastructure. There is no natural topography adjacent to existing Main Street and SR-125 as the topography has been altered to construct the existing roadways. The construction of approximately 0.4 mile of Otay Valley Road through Village 8 East would affect the existing topography in the road corridor; however, due to the limited footprint of disturbance, landform alteration for this roadway segment would not be significant.

Although Village 8 East is currently undeveloped, the roadway would be visually consistent with roadway development north of Otay Valley Road along Main Street. Additionally, due to intervening topography, Otay Valley Road would generally only be visible to viewers to the south. Viewers to the south would be across the Otay River Valley on Otay Mesa, approximately one mile south of Otay Valley Road, and limited viewers in the Otay River Valley. Due to a steep change in topography at the edge of the OVRP, the roadway would not be expected to be visible from northern OVRP trails. This steep slope and other changes in topography and vegetation would provide screening from other trails in the OVRP. Due to distance from Otay Mesa, the limited footprint of the roadway of Otay Valley Road would not be expected to be visually prominent in views south of OVRP. Therefore, the addition of vehicles across Village 8 East on Otay Valley Road would not significantly degrade the undeveloped visual character and quality of Village 8 East.

Minimal street lighting would be required for safety on the roadway improvements and lighting would be designed for compliance with the City's performance standards for light, including wattage maximums (Section CVCS-6 of the Chula Vista Construction Standards). Street lightings on the extension of Main Street, SR-125 overcrossings, and SR-125 ramps would locate new street lighting adjacent to existing urban and street lighting and would generally not be discernable from existing conditions. Street lighting on Otay Valley Road would result in new lighting across an undeveloped portion of Village 8 East. However, as previously stated, lighting would comply with City standards to minimize lighting impacts. Additionally, nighttime views would be dominated by urban lighting north of Village 8 East, and development in Village 9. Development is also planned to be underway in Village 8 West prior to construction of these roadway improvements. New lighting along Otay Valley Road would not be substantial compared to surrounding light sources. Therefore, implementation of mitigation measures 5.3-14 through 5.3-16 in Village 8 East would result in less than significant aesthetic/landform alteration impacts. The mitigation measures required for the proposed project in Section 5.2 would not be required for the off-site roadway improvements.

### **C. Transportation/Traffic**

As addressed in the 2013 GPA/GDPA, mitigation measures 5.3-14 through 5.3-16 are part of the planned Otay Ranch circulation network and are required to reduce impacts associated with implementation of the proposed Village 9 SPA Plan, as well as cumulative development. These mitigation measures would improve levels of service in the traffic study area. The measures themselves would not generate any new vehicular trips. As planned circulation network improvements in the General Plan and GDP, these measures would not conflict with any transportation plans or policies. The measures would have no impact on air traffic patterns. Similar to the proposed on-site Village 9 roadway network, these measures would improve off-site emergency access and would be reviewed as part of the design review process by the City of Chula Vista's Public Works and Engineering Departments to ensure the roadways would not create a traffic hazard. A land use incompatibility would not occur because the extension of Main Street and SR-125 ramps propose improvements to existing facilities and are part of the planned circulation network in the GDP and Chula Vista General Plan. The segment of Otay Valley Road would

traverse undeveloped Village 8 East and would not conflict with any existing land use. Therefore, off-site mitigation impacts related to transportation and traffic would be less than significant. The mitigation measures required for the proposed project in Section 5.3 would not be required for the off-site roadway improvements.

#### **D. Air Quality**

Construction of the proposed off-site roadway improvements associated with mitigation measures 5.3-14 through 5.3-16 would require additional grading and paving. As shown in Table 5.4-6, Maximum Daily Emissions Per Construction Activity, significant emissions of nitrogen oxides (NO<sub>x</sub>) would occur during grading and paving activities associated with the proposed project, and significant respirable and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) impacts would result from project grading activities. It is conservatively assumed that a maximum of 20 acres per day would be required for grading associated with the Village 9 SPA Plan and Tentative Map. Grading for the off-site roads would be accommodated within this maximum daily grading limit. Therefore, total maximum daily emissions, as reported in Section 5.4, would remain the same, although total grading required would be increased. The additional paving required for the off-site roadway improvements would incrementally contribute to paving emissions. Mitigation measures 5.4-1 through 5.4-3 would be implemented during construction of the off-site roadway improvements; however, as shown in Table 5.4-12, even with this mitigation in place, impacts during construction would remain significant and unavoidable. Following construction, the roadways themselves would not generate any vehicle trips and would not result in any operational emissions of criteria pollutants. Air quality violation impacts would be less than significant during operation.

Operation of the off-site roadway improvements would not result in emissions of criteria pollutants; therefore, implementation of mitigation measures 5.3-14 and 5.3-16 would not conflict with the Regional Air Quality Strategy or State Implementation Plan, or air quality policies. The mitigation measures do not include any land uses that are typical sources of toxic air contaminants (TACs) and do not include development of any habitable structures near an existing source of TACs. Surface roadways are not a typical source of odors. Therefore, implementation of mitigation measures 5.3-14 and 5.3-16 would have less than significant impacts related to sensitive receptors, objectionable odors, and consistency with air quality plans and policies.

#### **E. Noise**

Noise impacts associated with the off-site roadway improvements are included in the analysis of future traffic noise impacts in Section 5.5, Noise, under Threshold 3 in the Mitigated Year 2030 Scenario. The roadways themselves do not generate noise; rather, vehicle trips on the roadways generate noise. As shown in Table 5.5-11, Mitigated Year 2030 Traffic Noise Levels, the completion of Main Street from Magdalena Avenue to SR-125 would have the potential to generate noise levels that exceed 65 dBA CNEL at 50 feet from the roadway centerline as a result of cumulative development through Year 2030, assuming buildout of Village 9 as well as cumulative growth in the surrounding area. However, as shown in Table 5.5-11, implementation of Village 9 would not contribute a noticeable increase in noise levels on this roadway (less than 3 dBA CNEL). Also shown in Table 5.5-11, noise levels on Otay Valley Road are not anticipated to exceed 65 dBA CNEL under the worst-case buildout scenario. As concluded under Threshold 3 in Section 5.5, implementation of the proposed project would not result in a significant permanent increase in noise levels, including on the off-site roadway improvements. The planned roadways improvements would not generate vehicle trips. Noise impacts from development of Village 9 related to implementation of mitigation measures 5.3-14 and 5.3-16 would be less than significant. The

mitigation measures required for the proposed project in Section 5.5 would not be required for the off-site roadway improvements.

## **F. Biological Resources**

Surveys to determine the potential biological impacts of the extension of Main Street, construction of the SR-125 ramps and Main Street, and construction of Otay Valley Road across Village 8 East have been conducted as part of the technical analysis for the forthcoming EIR for Village 8 East. Surveys were conducted by Dudek from 2008 to 2011 and updated in 2013. A biological resources technical report is currently in progress for Village 8 East. The relevant results from the biological analysis have been made available by Dudek for the purposes of this analysis (Hayworth 2013). This analysis is included as Appendix M1 to this EIR. The development area of the roadway improvements, including Main Street and the SR-125 ramps, and most of Otay Valley Road, consists of agriculture and disturbed vegetation habitats, which are not covered habitats in the Chula Vista MSCP Subarea Plan. However, a total of 0.15 acres of coastal sage scrub is located within the Otay Valley Road alignment. The site of the coastal sage scrub is also the site of an intermittent, unvegetated stream channel considered to be a Water of U.S. and under the jurisdiction of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. A northern harrier and white-tailed kite were also identified along the Otay Valley Road alignment. As such, the off-site roadway improvements would have the potential to impact sensitive species (raptors), sensitive habitat covered by the Chula Vista MSCP Subarea Plan (coastal sage scrub), and Waters of the U.S. These impacts would be potentially significant and are similar to the impacts to these resources that would occur as a result of implementation the SPA Plan and Tentative Map within Village 9. Mitigation measures 5.6-2 through 5.6-4, 5.6-7 through 5.6-12, 5.6-15, and 5.6-16 identified in Section 5.6 for Village 9 would also mitigate impacts associated with the off-site roadway improvements to a less than significant level.

The off-site roadway improvements (mitigation measures 5.3-14 through 5.3-16) are part of the planned Otay Ranch circulation network. As discussed in Section 5.6, Otay Ranch is a "covered project" in the Chula Vista MSCP Subarea Plan. Any portions of covered projects that are located within 100 percent conservation areas must demonstrate consistency with the siting criteria outlined in the Chula Vista MSCP Subarea Plan. The roadway improvements are located in planned development areas and are outside of the MSCP Preserve and planned Preserve conveyance areas. Therefore, implementation of mitigation measures 5.3-14 through 5.3-16 would not conflict with the Chula Vista MSCP Subarea Plan or Otay Ranch Resource Management Plan.

## **G. Cultural Resources**

Surveys and records searches to determine the potential cultural resources impacts of the extension of Main Street, construction of the SR-125 ramps at Main Street, and construction of Otay Valley Road across Village 8 East have been conducted as part of the technical analysis for the forthcoming EIR for Village 8 East. The studies are being conducted by Brian F. Smith and Associates, Inc. (BFSA). The BFSA cultural resources study of Village 8 East was initiated in September 2007 and ended in November 2010, although the entire Village 8 East development area was resurveyed in May 2012 to update site information and confirm the findings of the previous surveys. A cultural resources technical report is currently in progress for Village 8 East. The relevant results from the cultural resources analysis have been made available by BFSA for the purposes of this analysis (Smith 2013). This analysis is included as Appendix M2 to this EIR.

One cultural resource (CA-SDI-12,272/H) was identified by BFSA within the Otay Valley Road impact area. BFSA conducted a testing program at SDI-12,272/H in November 2007 in order to establish the



site boundaries and determine resource significance. The testing demonstrated that SDI-12,272/H is a dual component site that consists of a large, dispersed surface scatter of both historic and prehistoric artifacts with limited, shallow, and disturbed subsurface prehistoric and historic materials. The overlapping and dispersed recovery of historic and prehistoric materials is indicative of the degree of disturbance to cultural resources. BFSa determined that no cultural affiliation could be assigned to the resource, that it is unlikely that further excavation would produce additional data that would allow such a determination, and that the site exhibits no features or unique elements and is unlikely to contribute important information to San Diego prehistory beyond this recordation and collection of artifacts. BFSa also determined that little information can be gleaned from the dispersed and shallow nature of the historic artifacts recovered. BFSa concluded that the site does not qualify as a significant historic or archaeological resource under CEQA. No further archaeological investigations are recommended for Site SDI-12,272/H. No other known resources were identified in the off-site roadway impact areas required by mitigation measures 5.3-14 through 5.3-16. Therefore, implementation of the off-site roadway improvements would not result in a significant impact to a known historic or archaeological resource. However, similar to the proposed project, given the presence of archeological resources on the site, construction would have the potential to impact unknown archaeological resources or human remains during earth-disturbing construction activities. Mitigation measures 5.7-1 through 5.7-3 identified in Section 5.7 for the proposed project would be required for construction of the off-site roadway improvements to reduce potential impacts to unknown archaeological resources and human remains to a less than significant level.

The project site is underlain by the Otay Formation and San Diego Formation, both of which are likely to yield terrestrial vertebrate fossils, and marine invertebrate, vertebrate, and plant fossils, respectively. The off-site roadway improvements would have the potential to significantly impact irreplaceable and nonrenewable paleontological resources during construction. Mitigation measures 5.7-4 through 5.7-7 identified in Section 5.7 for the proposed project would be required for construction of the off-site roadway improvements to reduce impacts related to paleontological resources to a less than significant level.

## **H. Geology and Soils**

Implementation of off-site roadway improvements required by mitigation measures 5.3-14 through 5.3-16 do not include impacts or alterations to any habitable structures. Therefore, the implementation of these mitigation measures would not result in the substantial exposure of people or structures to seismic hazards. As discussed in Section 5.11, Hydrology and Water Quality, compliance with existing regulations would reduce impacts related to erosion to a less than significant level during construction and operation. According to the 1993 GDP EIR, the project area, including the location of the off-site roadway improvements, is underlain by the Otay Formation, which may be encountered during grading and is susceptible to landslides, lateral spreading, or collapse. Based on the 1993 GDP EIR, the main soil type in the off-site improvement areas is the Diablo soils series, which has a slight to moderate susceptibility to erosion and a high potential for expansion. Therefore, unstable or expansive soils may be encountered during grading of the off-site roadway improvements. Mitigation measures 5.8-1 and 5.8-2 identified in Section 5.8 would be implemented during construction of the off-site roadway improvements to reduce impacts to a less than significant level.

## **I. Public Services**

Implementation of off-site roadway improvements required by mitigation measures 5.3-14 through 5.3-16 would not increase the demand for police, fire, emergency medical, school, library, or park

services. The off-site roadway improvements would improve access for police, fire, and emergency management services. Therefore, impacts to public services would not occur. The mitigation measures required for the proposed project in Section 5.9 would not be required for the off-site roadway improvements.

## **J. Global Climate Change**

Implementation of off-site roadway improvements required by mitigation measures 5.3-14 through 5.3-16 would not result in any permanent increase in GHG emissions because the roadways themselves would not generate GHG emissions. Project vehicle trips that would utilize the roadways are addressed in the analysis in Section 5.10 for the Village 9 SPA Plan. Some additional GHG emissions would occur during construction of the roadways but emissions would cease once construction is completed. Emissions that would result from grading and paving the roadways would be a fraction of total emissions required for construction of Village 9 and would not impact the project's ability to meet the reduction target. Regarding risks related to climate change, operation of the roadway improvements would not exacerbate air quality or water supply concerns because they would not result in criteria pollutant emissions or an increase in water demand. The proposed roadways would not be located in an area of concern for sea level rise, and would not include habitable structures where people may be exposed to vector-borne illness or extreme heat. With implementation of the mitigation measures listed in Section 5.6, Biological Resources, impacts related to biological resources would be less than significant. Therefore, impacts related to global climate change would be less than significant. Similar to the proposed project, no mitigation measures would be required.

## **K. Hydrology and Water Quality**

No structures are proposed as part of the off-site roadway improvements required by mitigation measures 5.3-14 through 5.3-16; therefore, no impact related to the placement of structures within a flood hazard area would occur. However, implementation of the extension of Main Street, construction of the SR-125 ramps and overcrossings, and construction of Otay Valley Road through Village 8 East and across SR-125 would result in new impervious surfaces and would have a potential impact on hydrology and water quality during construction and operation as a result of increased storm water runoff.

Similar to the proposed project, construction of the proposed off-site roadway improvements would be required to comply with the NPDES General Construction Permit program, which requires preparation of a SWPPP, and the Chula Vista Development Storm Water Manual, which requires proper inspection, monitoring, and maintenance of construction BMPs during dry and wet weather conditions. A qualified person who is trained and competent in the use of BMPs is required to be on site daily to evaluate the conditions of the site with respect to storm water pollution prevention. Following construction, implementation of the roadway improvements would minimize impacts on receiving water quality by incorporating post-construction BMPs into project design, as outlined in Section 3.6.2 of the Development Storm Water Manual. As a priority project (roads which would create a new paved surface that is 5,000 square feet or greater), the proposed off-site roadway improvements would be required to comply with the Hydromodification Control BMPs outlined in the Development Storm Water Manual, which would control peak runoff flow and duration. Therefore, these storm water requirements would minimize impacts related to changes in drainage patterns, including erosion and flooding, associated with the proposed off-site roadway improvements. Compliance with existing regulations (mitigation measures 5.11-1 through 5.11-5 in Section 5.11) would reduce impacts to drainage and hydrology associated with the proposed off-site roadway improvements during construction and operation to a less than significant level.

## **L. Agricultural Resources**

Similar to the proposed project site, Village 8 East contains Farmland of Local Importance (DOC 2008). While it is not currently in use for agricultural activities, portions of Village 8 East may be used for grazing or dry farming while adjacent uses are developed. According to the 1993 GDP EIR, similar to Village 9, agricultural use on the Village 8 East project site is currently constrained, in part because of the lack of a reliable and affordable source of water. The off-site roadway improvements required by mitigation measures 5.3-14 through 5.3-16 would not be incompatible with agricultural use because roadways are not a sensitive land use and do not preclude agricultural use in Village 8 East. The minimal footprint required for the roadway improvements would not fragment Village 8 East so that agricultural operations would be precluded, although the smaller land areas may not be as viable for agricultural use. Construction of the off-site roadway improvements would contribute to an incremental loss of grazing land. The incremental loss of agricultural lands, which was considered a significant impact in the 1993 Otay Ranch GDP Program EIR and the 2013 GPA/GDPA EIR, would remain significant. Similar to the proposed project, construction of the off-site roadway improvements would incrementally contribute to a significant and unavoidable impact related to the loss of agricultural land. Mitigation measure 5.12-1 would not be required for the off-site improvements because agricultural operations would not be incompatible with operation of the roadways.

## **M. Hazards and Hazardous Materials**

Implementation of off-site roadway improvements required by mitigation measures 5.3-14 through 5.3-16 do not include development of any habitable structures that would expose people or structures to hazards from wildland fire or airports. Additionally, operation of the proposed off-site roadway improvements would not require the routine use, transport, or disposal of hazardous materials, although these types of materials may be transported along the roadways for other uses. Similar to the proposed project, construction of the roadway improvements in Village 8 East may result in the accidental release of hazardous materials from the exposure pesticide residue occurring in soils on the project site. Mitigation measure 5.13-1 identified in Section 5.13 for the proposed project would be implemented to reduce impacts related to mitigation measures 5.3-14 through 5.3-16 to a less than significant level. All improvements, including roadways, ramps, and overcrossings, would be built to current California Building Code and Chula Vista Construction Standard requirements. A new structural hazard would not occur.

## **N. Housing and Population**

Off-site roadway improvements required by mitigation measures 5.3-14 through 5.3-16 do not include the development of housing units or other land uses that would directly induce population growth. The off-site roadway network improvements would implement a portion of the planned Otay Ranch roadway network. These improvements would support planned development as identified in the Chula Vista General Plan and GDP and would not induce population growth by providing unplanned infrastructure. Therefore, impacts related to population growth would be less than significant. The Village 8 East project site is currently undeveloped; therefore, implementation of off-site roadway improvements would not displace any people or housing. No impact would occur. Similar to the proposed project, no mitigation measures are required.

## **O. Public Utilities**

The off-site roadway network improvements required by mitigation measures 5.3-14 through 5.3-16 would not result in an increase in demand for potable or recycled water, wastewater facilities, or solid

waste disposal. A minor amount of solid waste disposal may temporarily be required for exported soil during the construction phase of grading. However, it is anticipated that cut and fill would be balanced on site due to varying topography, similar to construction within Village 9. No impact would occur related to these utilities and services. The mitigation measures required for the proposed project in Section 5.15 would not be required for the off-site roadway improvements. However, the roadway improvements would be incorporated in the Subarea Master Plan required for the proposed project's impact to water supply in mitigation measure 5.15.1-3. A small amount of energy may be required for streetlight operation along the roadway improvement areas. As discussed under Threshold 1 in Section 5.15.5.3, future energy supply cannot be guaranteed; therefore, any increase in energy demand is considered significant and unavoidable. Implementation of mitigation measures 5.3-14 through 5.3-16 would incrementally contribute to the project's significant and unavoidable impact related to energy demand.

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## 5.4 Air Quality

This section describes existing air quality conditions of the project site and surrounding region and evaluates the potential impacts to air quality due to the project.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). Section 5.5, Air Quality, of the final SEIR for the GPA/GDPA (SEIR 09-01) analyzed the existing conditions, potential impacts, and mitigation measures related to the proposed land uses for the GDA/GDPA area, including Village 9. The GPA/GDPA SEIR identified a potentially significant and unavoidable impact related to consistency with the Regional Air Quality Strategy (RAQS) because growth assumptions for the GPA/GDPA would exceed the growth projection in the RAQS. A significant impact was also identified related to criteria air pollutant emissions from construction and operations of the proposed land uses. The SEIR determined that compliance with BMPs would reduce construction impacts to a less than significant level, but additional mitigation would be required at the project level for operational impacts. The analysis and discussion of air quality contained in the GPA/GDPA SEIR are incorporated by reference.

Information contained in this section is based on the Otay Ranch Village 9 SPA Project Air Quality Technical Report and Otay Ranch Village 9 SPA Project Health Risk Assessment (HRA), both prepared by Atkins in May 2013. The Air Quality Technical Report is included as Appendix C1 of this EIR, and the HRA is included as Appendix C2. The analysis in the air quality technical report also provides the basis for the Village 9 AQIP, included as part of the Village 9 SPA Plan, as it relates to criteria air pollutant emissions. The report updates the applicable information contained in the SEIR.

### 5.4.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Federal

##### a. Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) with states retaining the option to adopt more stringent standards or to include other specific pollutants. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those sensitive receptors most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Current NAAQS are listed in Table 5.4-1. Areas that meet the ambient air quality standards are classified as “attainment” areas while areas that do not meet these standards are classified as “non-attainment” areas.

**Table 5.4-1 National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards <sup>(1)</sup>	Federal Standards <sup>(2)</sup>	
		Concentration <sup>(3)</sup>	Primary <sup>(3, 4)</sup>	Secondary <sup>(3, 5)</sup>
Ozone (O <sub>3</sub> )	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	--	Same as Primary Standards
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.075 ppm (147 µg/m <sup>3</sup> )	
Respirable Particulate Matter (PM <sub>10</sub> )	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary Standards
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	--	
Fine Particulate Matter (PM <sub>2.5</sub> )	24 Hour	No Separate State Standard	35 µg/m <sup>3</sup>	Same as Primary Standards
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	None
	1-hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	53 ppm (100 µg/m <sup>3</sup> ) <sup>6</sup>	Same as Primary Standard
	1-hour	0.18 ppm (470 µg/m <sup>3</sup> )	100 ppb (188 µg/m <sup>3</sup> ) <sup>6</sup>	None
Sulfur Dioxide (SO <sub>2</sub> )	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	--	--
	3 Hour	--	--	0.5 ppm (1300 µg/m <sup>3</sup> ) <sup>7</sup>
	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	75 ppb (196 µg/m <sup>3</sup> ) <sup>7</sup>	--
Lead <sup>(8)</sup>	30 Day Average	1.5 µg/m <sup>3</sup>	--	--
	Calendar Quarter	--	1.5 µg/m <sup>3</sup>	Same as Primary Standard
	Rolling 3-Month Average <sup>(9)</sup>	--	0.15 µg/m <sup>3</sup>	
Visibility Reducing Particles	8-hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more due to particles.	No Federal Standards	
Sulfates	24 Hour	25 µg/m <sup>3</sup>	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m <sup>3</sup> )	No Federal Standards	
Vinyl Chloride <sup>(8)</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )	No Federal Standards	

ppm = parts per million; ppb = parts per billion

<sup>(1)</sup> California standards for ozone, CO, SO<sub>2</sub> (1-hour and 24-hour), NO<sub>2</sub>, PM<sub>10</sub>, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride standards are not to be equaled or exceeded.

<sup>(2)</sup> National standards, other than 1-hour ozone, 8-hour ozone, 24-hour PM<sub>10</sub>, 24-hour PM<sub>2.5</sub>, and those based on annual averages, are not to be exceeded more than once a year. The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the annual fourth-highest daily maximum 8-hour concentrations is below 0.08 ppm. The 24-hour PM<sub>10</sub> standard is attained when the 3-year average of the 99<sup>th</sup> percentile 24-hour concentrations is below 150 µg/m<sup>3</sup>. The 24-hour PM<sub>2.5</sub> standard is attained when the 3-year average of the 98<sup>th</sup> percentile 24-hour concentrations is below 65 µg/m<sup>3</sup>.

<sup>(3)</sup> Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based on a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar). All measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

<sup>(4)</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

<sup>(5)</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>(6)</sup> To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the EPA standards are in units of ppb. California standards are in units of ppm. To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

<sup>(7)</sup> On June 2, 2010, the EPA established a new 1-hour SO<sub>2</sub> standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM have adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO<sub>2</sub> standard of 0.14 ppm and the annual primary SO<sub>2</sub> standard of 0.030 ppm, effective August 23, 2010. The secondary SO<sub>2</sub> standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of ppb. California standards are in units of ppm. To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

<sup>(8)</sup> The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

<sup>(9)</sup> National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Source: CARB 2010a.

The CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The SIP is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

## **2. State**

### **a. California Clean Air Act**

The federal CAA allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. The California CAA was adopted in 1988 and establishes the state's air quality goals, planning mechanisms, regulatory strategies, and standards of progress. CARB, a part of the California EPA (CalEPA) is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the California ambient air quality standards (CAAQS). CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs.

The CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. The CARB also has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts.

In addition to standards set for the criteria pollutants, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles (see Table 5.4-1); however, these are not pollutants of concern for Village 9 because construction and operation of the proposed land uses would not result in emissions of these pollutants. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Further, in addition to primary and secondary CAAQS, the state has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health.

### **b. Toxic Air Contaminants**

The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (AB 1807: Health and Safety Code Sections 39650-39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

Diesel-exhaust particulate matter emissions have since been established as TACs. Following the identification of diesel particulate matter as an air toxic in 1998, the CARB has worked on developing strategies and regulations aimed at reducing the risk from diesel particulate matter. The overall strategy for achieving these reductions is found in the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel Fueled Engines and Vehicles (CARB 2000). A stated goal of the plan is to reduce the cancer risk statewide arising from exposure to diesel particulate matter by 85 percent by 2020. A

number of programs and strategies to reduce diesel particulate matter that have been or are in the process of being developed include:

**The Carl Moyer Program:** This program, administered by the CARB, was initially approved in February 1999 and is regularly updated. The most recent program guidelines are the 2011 Carl Moyer Program Guidelines, approved in April 2011 and released in January 2012. It provides grants to private companies, public agencies, or individuals operating heavy-duty diesel engines to cover an incremental portion of the cost of cleaner on-road, off-road, marine, locomotive, and agricultural irrigation pump engines.

**California Diesel Fuel Regulations:** The California Diesel Fuel Regulations (California Code of Regulations [CCR] Title 13, Sections 2281-2285 and CCR Title 17, Section 93114) set limits on the aromatic hydrocarbon and sulfur content for diesel fuel marketed in California. Under these rules, starting in June 2006 in accordance with the phase-in schedule, vehicular diesel fuel must not have a sulfur content that exceeds 15 parts per million (ppm) by weight. The regulations also specify that on or after October 1, 1993, the aromatic hydrocarbon content of vehicular diesel fuel must not exceed 10 percent by volume.

**On-Road Heavy-Duty Diesel New Engine Program:** This program develops strategies and regulations to reduce diesel emissions from new on-road diesel-powered equipment. Emission control regulations have been coordinated with the EPA and require that new engines manufactured in and subsequent to 2004 meet new emissions requirements for particulates and other pollutants.

**Heavy-Duty Diesel In-Use Strategies Program:** The goal of this program is to develop and implement strategies for reducing diesel emissions from existing on and off-road diesel engines. The Retrofit Assessment section is responsible for the development and implementation of procedures for assessing, recommending, and approving emission control devices. The Retrofit Implementation section is responsible for developing plans for retrofitting on- and off-road engines with emission reducing technologies. To date plans being developed or implemented have targeted solid waste collection vehicles, on-road heavy-duty public fleet vehicles, and fuel delivery trucks. Generally, these plans require that a percentage of the fleet, based on age of the vehicles, be retrofitted on a predetermined schedule.

Other programs include:

**Off-Road Mobile Sources Emission Reduction Program:** The goal of this program is to develop regulations to control emissions from diesel, gasoline, and alternative-fueled off-road mobile engines. These sources include a range of equipment from lawn mowers to construction equipment to locomotives.

**Heavy-Duty Vehicle Inspection and Periodic Smoke Inspection Program:** This program provides periodic inspections to ensure that truck and bus fleets do not emit excessive amounts of smoke.

**Lower-Emission School Bus Program:** Under this program, and in coordination with the California Energy Commission, the CARB is developing guidelines to provide criteria for the purchase of new school buses and the retrofit of existing school buses to reduce particulate matter emissions.

As an ongoing process, the CARB continues to establish new programs and regulations for the control of diesel particulate emissions as appropriate. The continued development and implementation of these programs and policies ensures that public exposure to diesel particulate matter will continue to decline.

### **c. California Health and Safety Code Section 41700**

This section of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This regulation applies to sources of objectionable odors.

### **d. California Building Standards Code Title 24, Part 6**

Title 24, Part 6 of the California Building Standards Code regulates energy uses including space heating and cooling, hot water heating, and ventilation. The energy code allows new buildings to meet a performance standard that allows a builder to choose the most cost effective energy saving measures to meet the standard from a variety of measures including added insulation, improved HVAC systems, and more efficient water heating and lighting systems. New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission. The Code is updated periodically to incorporate and consider new energy efficiency technologies and methodologies as they become available. The most recent amendments to the Code, known as Title 24 2008, or the 2008 Energy Code, became effective January 1, 2010. At a minimum, residential buildings must achieve a 15 percent reduction in their combined space heating, cooling and water heating energy compared to the Title 24 2005 standards.

## **3. Local**

### **a. San Diego County Regional Air Quality Strategy and State Implementation Plan**

The San Diego Air Pollution Control District (SDAPCD) is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County. The SDAPCD regulates most air pollutant sources, except for motor vehicles, marine vessels, aircrafts, and agricultural equipment, which are regulated by the CARB or the EPA. State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the SDAPCD. Additionally, the SDAPCD, along with the CARB, maintains and operates ambient air quality monitoring stations at numerous locations throughout San Diego County. These stations are used to measure and monitor criteria and toxic air pollutant levels in the ambient air.

The SDAPCD and the SANDAG are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the San Diego Air Basin (SDAB). The San Diego County RAQS was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, and most recently in April 2009. The RAQS outlines the SDAPCD's plans and control measures designed to attain the state air quality standards for ozone. The SDAPCD has also developed the SDAB's input to the SIP, which is required under the Federal CAA for pollutants that are designated as being in non-attainment of national air quality standards for the basin.

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the county, to project future emissions and then establish the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County of San Diego as part of the development of the County's General Plan. As such, projects that propose development that is



consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for ozone.

**b. City of Chula Vista General Plan and Growth Management Ordinance**

Included in the Chula Vista General Plan is the Growth Management Ordinance. Air quality is identified as an important part of the quality of life in Chula Vista and one of the stated policies of the element (Policy GM 4.4) adapts City regulations to meet federal and state air quality standards. In addition, the Growth Management Ordinance (Municipal Code Section 19.09.050B) requires an AQIP be prepared for all major development projects (50 dwelling units or greater) as part of the SPA Plan process. The AQIP for the project must comply with the City AQIP guidelines. Copies of the AQIP Guidelines are available at the City of Chula Vista Planning and Building Department.

**c. City of Chula Vista General Plan**

The Environmental Element of the Chula Vista General Plan contains Objective E 6 and its multiple supporting policies to improve local air quality by minimizing the production and emission of air pollutants and TACs, and limit the exposure of people to such pollutants. Specifically, Objective E 6 is to improve local air quality by minimizing the production and emissions of air pollutants and toxic air contaminants and limit the exposure of people to such pollutants. Supporting policies include encouraging compact development (E 6.1), facilitating transit (E 6.2), avoiding siting sensitive receptors near major toxic sources (E 6.4 and E 6.10), developing strategies to minimize carbon monoxide hot spots that address all modes of transportation (E 6.11); and siting industries in a way that minimizes the potential impacts of poor air quality on homes, schools, hospitals, and other land uses where people congregate (E 6.15). Policy E 6.10 requires an HRA for new sensitive receptors proposed to be located within 500 feet of a highway.

**d. City of Chula Vista Green Building Ordinance**

The City of Chula Vista has adopted Green Building Standards (CVMC Chapter 15.12) and Energy Efficiency Standards (CVMC Section 15.26.030) that require increased energy efficiency of 15 percent beyond the 2008 Title 24, Part 6 energy requirements. No building permit shall be issued for any project subject to City requirements until the Building Official has determined that the plans and specifications submitted for the building permit are in compliance with the green building and energy efficiency standards.

**e. Otay Ranch General Development Plan**

Part II, Chapter 6, Section C of the GDP establishes goals to minimize the adverse impacts of development on air quality including creating a safe and efficient multi-modal transportation network which minimizes the number and length of single passenger vehicle trips.

- **Objective:** Minimize the number and length of single passenger vehicle trips to and from employment and commercial centers to achieve an average of 1.5 persons per passenger vehicle during weekday commute hours.
- **Policies:**
  - Encourage, as appropriate, alternative transportation incentives offered to employees, alternative work hour programs, alternative transportation promotional materials, information on car pool and van pool matching services, transit pass information, space for car-pool and van-pool-riders-wanted advertisements, information about transit and rail service, as well as information about bicycle facilities, routes, storage, and location of nearby shower and locker facilities.
  - Promote telecommuting and teleconferencing programs and policies in employment centers.
  - Establish or participate in education-based commute programs, which minimize the number and length of single passenger vehicle trips.
  - Provide on-site amenities in commercial and employment centers to include childcare facilities, post offices, banking services, cafeterias/delis/restaurants, etc.

#### **f. SDAPCD Particulate Matter Reduction Measures**

In addition to the RAQS and SIP, the SDAPCD adopted the “Measures to Reduce Particulate Matter in San Diego County” report in December 2005. This report is based on particulate matter reduction measures adopted by CARB. The SDAPCD evaluated CARB's list of measures and found that the majority were already being implemented in San Diego County. As a result of the evaluation, SDAPCD proposed measures for further evaluation to reduce particulate emissions from residential wood combustion and from fugitive dust from construction sites and unpaved roads. The SDAPCD requires that construction activities implement the measures listed in Rule 55 to minimize fugitive dust emissions. Rule 55 requires the following:

1. No person shall engage in construction or demolition activity in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.
2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall be minimized by the use of any of the equally effective trackout/carry-out and erosion control measures listed in Rule 55 that apply to the project or operation. These measures include track-out grates or gravel beds at each egress point; wheel-washing at each egress during muddy conditions; soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; watering for dust control; and using secured tarps or cargo covering, watering, or treating of transported material for outbound transport trucks. Visible roadway dust must be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations.

#### **g. Other APCD Rules and Regulations**

The SDAPCD adopted Rule 67, Architectural Coatings, in December 2001, which establishes volatile organic compounds (VOC) content limits for architectural coatings. Additionally, APCD Rule 1210 implements the public notification and risk reduction requirements of the State Air Toxics “Hot Spots” Act, and requires facilities to reduce risks to acceptable levels within five years. Rule 1200 establishes

acceptable risk levels, and emission control requirements for new and modified facilities that may emit additional TACs. Rule 51 also prohibits nuisances, including objectionable odors.

## 5.4.2 Existing Air Quality

### A. Climate

Regional climate and local meteorological conditions influence ambient air quality. Village 9 is located in the SDAB. The climate of the SDAB is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. It also drives the dominant onshore circulation and helps create two types of temperature inversions, subsidence and radiation, that contribute to local air quality degradation.

Subsidence inversions occur during warmer months, as descending air associated with the Pacific high-pressure cell comes into contact with cool marine air. The boundary between the two layers of air represents a temperature inversion that traps pollutants below it. Radiation inversions typically develop on winter nights with low wind speeds, when air near the ground cools by radiation, and the air aloft remain warm. A shallow inversion layer that can trap pollutants is formed between the two layers.

In the vicinity of the project area, the nearest climatological monitoring station that provides precipitation data is located at the lower Otay Reservoir, approximately three miles east of the project site. The normal precipitation in the lower Otay Reservoir area is 11 inches annually, occurring primarily from December through March (WRCC 2011a). Temperature is recorded at the monitoring station located in the community of Bonita, north of the Otay Ranch area. The normal daily maximum temperature in Bonita is 81°F in August, and the normal daily minimum temperature is 40°F in December and January (WRCC 2011b).

### B. Health Effects Related to Air Pollutants

Federal and state laws regulate the air pollutants emitted into the ambient air by stationary and mobile sources. These regulated air pollutants are known as “criteria air pollutants” and are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide, VOC, nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and most fine particulate matter including lead and fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) are primary air pollutants. Of these, carbon monoxide, sulfur dioxide, PM<sub>10</sub>, and PM<sub>2.5</sub> are criteria pollutants. VOCs and nitrogen oxides are criteria pollutant precursors that go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone and nitrogen dioxide are the principal secondary pollutants. Diesel particulate matter is a mixture of particles and is a component of diesel exhaust. The EPA lists diesel exhaust as a mobile source air toxic due to the cancer and non-cancer health effects associated with exposure to whole diesel exhaust.

The following is a description of each of the primary and secondary criteria air pollutants and their known health effects.

**Carbon Monoxide (CO)** is an odorless, colorless, and toxic gas. Because it is impossible to see, taste, or smell the toxic fumes, carbon monoxide can kill people before they are aware that it is in their homes. At lower levels of exposure, carbon monoxide causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea, and fatigue. The effects of carbon monoxide exposure can vary greatly from person to person depending on age, overall health,

and the concentration and length of exposure (EPA 2010a). The major sources of carbon monoxide in the SDAB are on-road vehicles, aircraft, and off-road vehicles and equipment.

**Volatile Organic Compounds (VOCs)** are defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. VOCs consist of non-methane hydrocarbons and oxygenated hydrocarbons. Hydrocarbons are organic compounds that contain only hydrogen and carbon atoms. Non-methane hydrocarbons are hydrocarbons that do not contain the un-reactive hydrocarbon, methane. Oxygenated hydrocarbons are hydrocarbons with oxygenated functional groups attached.

It should be noted that there are no CAAQS or NAAQS for VOCs because they are not classified as criteria pollutants. They are regulated, however, because a reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, which contribute to higher PM<sub>10</sub> levels and lower visibility. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, higher concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, kidneys, and central nervous system (EPA 1999).

The major sources of VOCs in the SDAB are on-road motor vehicles and solvent evaporation. Benzene, a VOC and known carcinogen, is emitted into the air from gasoline service stations (fuel evaporation), motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is also sometimes used as a solvent for paints, inks, oils, waxes, plastic, and rubber. It is used in the extraction of oils from seeds and nuts. It is also used in the manufacture of detergents, explosives, dyestuffs, and pharmaceuticals. Short-term (acute) exposure of high doses of benzene from inhalation may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation. At higher levels, unconsciousness can occur. Long-term (chronic) occupational exposure of high doses by inhalation has caused blood disorders, including aplastic anemia and lower levels of red blood cells (EPA 1999).

**Nitrogen Oxides (NO<sub>x</sub>)** are a byproduct of fuel combustion and serve as integral components in the process of photochemical smog production. The two major forms of nitrogen oxides are nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). Nitric oxide is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. Nitrogen dioxide is a reddish-brown, irritating gas formed by the combination of nitric oxide and oxygen. Nitrogen oxides act as an acute respiratory irritant and increases susceptibility to respiratory pathogens. Nitrogen oxides are also an ozone precursor. A precursor is a directly emitted air contaminant that, when released into the atmosphere, forms, causes to be formed, or contributes to the formation of a secondary air contaminant for which a NAAQS has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more NAAQS. When nitrogen oxide and VOCs are released in the atmosphere, they chemically react with one another in the presence of sunlight to form ozone. While the EPA's NAAQS covers this entire family, nitrogen dioxide is the component of greatest interest and the indicator for the larger group of nitrogen oxides.

**Ozone** is one of a number of substances called photochemical oxidants that are formed when VOCs and nitrogen oxides (both byproducts of the internal combustion engine) react with sunlight. Ozone is present in relatively high concentrations in the SDAB, and the damaging effects of photochemical smog are generally related to ozone concentrations. Ozone may pose a health threat to those who already suffer from respiratory diseases as well as healthy people. Additionally, ozone has been tied to crop

damage, typically in the form of stunted growth and pre-mature death. Ozone can also act as a corrosive, resulting in property damage such as the embitterment of rubber products.

**Lead (Pb)** is a solid heavy metal that can exist in air pollution as an aerosol particle component. An aerosol is a collection of solid, liquid, or mixed-phase particles suspended in the air. Lead was first regulated as an air pollutant in 1976. Leaded gasoline was first marketed in 1923 and was used in motor vehicles until around 1970. The exclusion of lead from gasoline helped to decrease emissions of lead in the United States from 219,000 to 4,000 tons per year between 1970 and 1997. Even though leaded gasoline has been phased out in most countries, some, such as Egypt and Iraq, still use at least some leaded gasoline (United Nations Environment Programme 2010). Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and physical weathering of surfaces containing lead. The mechanisms by which lead can be removed from the atmosphere (sinks) include deposition to soils, ice caps, oceans, and inhalation.

Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. The more serious effects of lead poisoning include behavioral disorders, mental retardation, and neurological impairment. Low levels of lead in fetuses and young children can result in nervous system damage, which can cause learning deficiencies and low intelligence quotients. Lead may also contribute to high blood pressure and heart disease. Lead concentrations once exceeded the state and national air quality standards by a wide margin but have not exceeded these standards at any regular monitoring station since 1982. Lead is no longer an additive to normal gasoline, which is the main reason that concentration of lead in the air is now much lower. The project would not emit lead; therefore, lead has been eliminated from further review in this analysis.

**Sulfur Dioxide** is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfuric acid is formed from sulfur dioxide and is an aerosol particle component that may lead to acid deposition. Acid deposition into water, vegetation, soil, or other materials can harm natural resources and materials. Sulfur oxides include sulfur dioxide and sulfur trioxide. Although sulfur dioxide concentrations have been reduced to levels well below state and national standards, further reductions are desirable because sulfur dioxide is a precursor to sulfates. Sulfates are a particulate formed through the photochemical oxidation of sulfur dioxide. Long-term exposure to high levels of sulfur dioxide can cause irritation of existing cardiovascular disease, respiratory illness, and changes in the defenses in the lungs. When people with asthma are exposed to high levels of sulfur dioxide for short periods of time during moderate activity, effects may include wheezing, chest tightness, or shortness of breath.

**Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulate, also known as fugitive dust, are now recognized. Course particles (PM<sub>10</sub>) include that portion of the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 one-millionths of a meter or 0.0004 inch) or less. Fine particles (PM<sub>2.5</sub>) have an aerodynamic diameter of 2.5 microns, that is 2.5 one-millionths of a meter or 0.0001 inch or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities; however, wind action on the arid landscape also contributes substantially to the local particulate loading. Both PM<sub>10</sub> and PM<sub>2.5</sub> may adversely affect the human respiratory system, especially in those people who are naturally sensitive or susceptible to breathing problems.

Fugitive dust poses primarily two public health and safety concerns. The first concern is that of respiratory problems attributable to the suspended particulates in the air. The second concern is that of



motor vehicle accidents caused by reduced visibility during severe wind conditions. Fugitive dust may also cause significant property damage during strong windstorms by acting as an abrasive material agent (similar to sandblasting activities). Finally, fugitive dust can result in a nuisance factor due to the soiling of proximate structures and vehicles.

Diesel particulate matter is a mixture of many exhaust particles and gases that is produced when an engine burns diesel fuel. Many compounds found in diesel exhaust are carcinogenic, including 16 that are classified as possibly carcinogenic by the International Agency for Research on Cancer. Diesel particulate matter includes the particle-phase constituents in diesel exhaust. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation and exposure can cause coughs, headaches, light-headedness, and nausea. Diesel exhaust is a major source of ambient fugitive dust pollution as well, and numerous studies have linked elevated fugitive dust levels in the air to increased hospital admission, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems (OEHHA 2001). Diesel particulate matter in the SDAB poses the greatest cancer risk of all the toxic air pollutants.

### **C. Ambient Air Pollutant Levels**

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of air pollutants and determine whether the ambient air quality meets the NAAQS and the CAAQS. The closest ambient monitoring station is the Otay Mesa Station, approximately four miles from Village 8 West. However, this station is located in a heavy industrial area that does not accurately reflect the existing conditions in the project area. The next closest station is the Chula Vista station, located approximately five miles from the project site, which better represents the development in surrounding areas. Table 5.4-2 presents a summary of the ambient pollutant concentrations monitored at the Chula Vista station during 2009 through 2011.

As shown in Table 5.4-2, the 1-hour ozone concentration exceeded the state standard once per year in 2009 and 2010, and was not exceeded in 2011. The 8-hour ozone concentration exceeded the state standard in 2009 and 2010, and the federal standard in 2010. The daily PM<sub>10</sub> concentration exceeded the state standard in 2009, but not in 2010 or 2011. The federal standard was not exceeded during this period. The federal 24-hour PM<sub>2.5</sub> standard was violated once in 2009 but not in 2010 or 2011.

Neither the state nor federal standards for carbon monoxide, nitrogen dioxide, or sulfur dioxide were exceeded at any time during the years 2009 through 2011. The federal annual average nitrogen dioxide standard has not been exceeded since 1978 and the California 1-hour standard has not been exceeded since 1988 (SDAPCD 2007a). With one exception during October 2003, the SDAB has not violated the state or federal standards for carbon monoxide since 1990 (SDAPCD 2007a).

### **D. Attainment Status**

The classifications for ozone non-attainment range in magnitude from marginal, moderate, serious, severe, and extreme. A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment. The SDAB federal and state attainment status is shown in Table 5.4-3. The SDAB is currently designated as a non-attainment area for the state standard for PM<sub>10</sub>, PM<sub>2.5</sub>, 1-Hour and 8-Hour ozone, and the Federal 8-Hour Standard for ozone.

**Table 5.4-2 Air Quality Monitoring Data**

Pollutant	Monitoring Station	2009	2010	2011
<b>Carbon Monoxide (CO)</b>				
Maximum 8-hour concentration (ppm)	Chula Vista	1.43	1.56	-- <sup>(1)</sup>
Days above state or federal standard (>9.0 ppm)		0	0	-- <sup>(1)</sup>
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>				
Peak 1-hour concentration (ppm)	Chula Vista	0.065	0.050	0.057
Days above state 1-hour standard (0.18 ppm)		0	0	0
<b>Ozone (O<sub>3</sub>)</b>				
Maximum 1-hour concentration (ppm)	Chula Vista	0.098	0.107	0.083
Days above 1-hour state standard (>0.09 ppm)		1	1	0
Maximum 8-hour concentration (ppm)		0.075	0.083	0.057
Days above 8-hour state standard (>0.07 ppm)		3	3	0
Days above 8-hour federal standard (>0.075 ppm)		0	2	0
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>				
Maximum 24-hour concentration (ppm)	Chula Vista	0.003	0.002	0.002
Days above 24-hour state standard (>0.04 ppm)		0	0	0
Days above 24-hour federal standard (>0.14 ppm)		0	0	0
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>				
Peak 24-hour concentration (µg/m <sup>3</sup> )	Chula Vista	58	45	46
Days above state standard (>50 µg/m <sup>3</sup> )		2	0	0
Days above federal standard (>150 µg/m <sup>3</sup> )		0	0	0
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>				
Peak 24-hour concentration (µg/m <sup>3</sup> )	Chula Vista	43.7	22.7	27.9
Days above federal standard (>35 µg/m <sup>3</sup> )		1	0	0
<sup>(1)</sup> Insufficient data was available to CARB to determine the value. ppm = parts per million, µg/m <sup>3</sup> = micrograms per cubic meter Source: CARB 2012				

**Table 5.4-3 Attainment Status for the San Diego Air Basin**

Pollutant	State Status	Federal Status
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment	Attainment
Ozone (1-hour)	Serious Non-attainment	-- <sup>(1)</sup>
Ozone (8-hour)	Serious Non-Attainment	Non-attainment
Lead (Pb)	Attainment	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Respirable Particulate Matter (PM <sub>10</sub> )	Non-attainment	Unclassified
Fine Particulate Matter (PM <sub>2.5</sub> )	Non-attainment	Attainment\Unclassified
<sup>(1)</sup> The federal 1-hour ozone standard was revoked in 2005 and is no longer in effect for California. Source: CARB 2011, EPA 2011		

## E. Sensitive Receptors and Locations

CARB defines sensitive receptors as residences, schools, day care centers, playgrounds, and medical facilities, or other facilities that may house individuals with health conditions that would be adversely affected by changes in air quality. The project site is currently undeveloped and no sensitive receptors are located on site. The sensitive receptors closest to the project area include the following:

1. Olympian High School, approximately 0.2 mile (1,056 feet) west of the northwest corner of the project site;
2. Wolf Canyon Elementary school, approximately 0.25 mile (1,320 feet) northwest of the project site;
3. Residences located approximately 0.3 mile (1,584 feet) northeast of the project site near Discovery Falls Drive; and
4. Residences located 0.6 mile (3,168 feet) north of the project site off Birch Road.

### 5.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the City of Chula Vista, implementation of the project would result in a significant adverse impact if it would:

- **Threshold 1:** Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The City of Chula Vista has not established specific numeric thresholds related to criteria air pollutants. The City relies on the significance thresholds established by the South Coast Air Quality Management District (SCAQMD). For this analysis, the calculated emissions of the project are compared to the SCAQMD thresholds of significance for criteria pollutants for individual projects, provided in Table 5.4-4. If the thresholds are exceeded by a proposed project, then the impact is considered significant.

- **Threshold 2:** Expose sensitive receptors to substantial pollutant concentrations.
- **Threshold 3:** Create objectionable odors affecting a substantial number of people.
- **Threshold 4:** Result in a conflict with, or obstruct implementation of, the RAQS or SIP.
- **Threshold 5:** Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding air quality thereby resulting in a significant physical impact.

**Table 5.4-4 SCAQMD Thresholds of Significance for Criteria Air Pollutants**

Pollutant	Construction Emissions (pounds/day)	Operation Emissions (pounds/day)
Carbon Monoxide (CO)	550	550
Reactive organic gases (ROG) <sup>(1)</sup>	75	55
Nitrogen Oxides (NO <sub>x</sub> )	100	55
Sulfur Oxides (SO <sub>x</sub> )	150	150
Respirable Particulate Matter (PM <sub>10</sub> )	150	150
Fine Particulate Matter (PM <sub>2.5</sub> )	55	55
<sup>(1)</sup> Reactive organic gases are also sometimes referred to as volatile organic compounds. Source: SCAQMD 2010		

## 5.4.4 Impact Analysis

### A. Threshold 1: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Construction and operational criteria air pollutant emissions that would be generated by implementation of the project are discussed below.

#### 1. Construction

The air quality technical report prepared for the 2013 GPA/GDPA determined that potential impacts related to construction under the GPA/GDPA would be less than significant because development would be required to comply with standard dust minimizing practices. However, construction emissions and estimated emission reductions from the BMPs were not quantified because the timing of future development and the specific construction details could not have been known at the programmatic level. For these reasons, the 2013 GPA/GDPA air quality report does not quantify the potential impacts of construction of the Village 9 SPA Plan and TM. Additionally, the report does not provide the construction assumptions used to determine the potential impacts of construction of the project. Therefore, the project-specific analysis was conducted (Atkins 2013) to estimate the criteria pollutant emissions that would result from construction of the project.

Air pollutant emission sources during project construction would include exhaust and particulate emissions generated from construction equipment; fugitive dust from soil disturbance during site preparation, grading, and excavation activities; and volatile compounds that evaporate during site paving and painting of the structures. Village 9 is approximately 323 acres, including 50 acres of the University site that is not part of the project. A total of 274.3 acres would be disturbed for construction of Village 9, including 263.5 acres of the site, 1.1 acres off site for the construction of the sewer and storm drain corridor and access road, and 9.7 acres for grading required due to topography, fuel modification, and drainage requirements.

Development on the project site would include single-family residences, multi-family residences, mixed-use commercial development, a community purpose facility, two elementary schools, and parks. Construction would occur in sequential development phases, and take a minimum of eight years to complete, although full buildout of the project is not expected until 2030. For the purposes of modeling the worst-case daily construction scenario for one phase, the analysis years used for construction were 2013-2015. This is conservative because increasingly stringent air quality regulations on construction equipment would result in fewer emissions in later years. As shown in Figure 5, Village 9 would be constructed in four development phases:

- The **Orange** phase would develop a maximum of 308 multi-family residential units, 145 single-family units, a town square, two CPFs, two elementary schools, a pedestrian park, and 194,000 square feet of commercial space in primarily the central and southwest portion of the project site.
- The **Blue** phase would develop a maximum of 1,239 multi-family residential units, 494,000 square feet of commercial space, and a neighborhood park in the northwestern area of the project site.
- The **Yellow** phase would include a maximum of 614 multi-family units, 121 single-family units, a second pedestrian park, and 58,000 square feet of commercial land use in the southeastern portion of the project site.

- The **Purple** phase would develop a maximum of 1,573 multi-family residential units, a town square, and 754,000 square feet of commercial space in the northeast portion of the project site.

Each phase of project development would include the following construction activities: mass grading, trenching for utilities and underground improvements, paving and surface improvement, building construction, and exterior architectural coating, as shown in Table 5.4-5. The off-site utility corridor would also require grading, trenching, and paving. No blasting would be needed for construction within Village 9. For the purpose of isolating emissions from each type of construction activity, it is assumed that the construction activities within one development phase would occur consecutively, with no overlap. However, approximately nine months prior to completion of one development phase, grading could potentially begin for the next phase. Any of the construction activities in subsequent development phases would have the potential to overlap with the building construction of the previous phase.

**Table 5.4-5 Approximate Duration of Project Construction Activities Per Phase**

Construction Phase	Duration
Mass Grading	3 months
Trenching	2 months
Paving	2 months
Building Construction and Coating	2 years

Grading in each phase would occur over a three month period. The phases are generally similar in area; therefore, it assumed than the same amount of grading would occur in each phase. This analysis assumes that a limit of 20 acres per day would be disturbed and/or graded. A total of 6.7 million cubic yards would be graded as a result of the proposed project and replaced within the disturbance area, or 1.68 million cubic yards in each phase. It is assumed that a maximum of 35,000 cubic yards of material would be graded each day. All cut material would be used on site and no hauling of material off site would be required. Typical grading equipment that would be used for grading would include tractors, excavators, graders, and water trucks.

Approximately two months would be required for installation of the utilities in each phase. The most intensive utility installation activity that would require heavy equipment is trenching. Trenching activities would typically require excavators, dump trucks, dozers, backhoes, and water trucks. Paving and surface improvements would be required for approximately 12 percent of the project site (32 acres). About eight acres would be paved during each phase and would be accomplished in approximately two months. Paving would be required for a portion of the off-site improvements during one phase of development for the off-site access road. For the purposes of this analysis it is conservatively assumed that the entire access road, approximately 1.1 acres, would be paved. A maximum of approximately 9.1 acres would be paved during one phase. Typical construction equipment required for paving would include graders, pavers, and rollers.

Building construction on the project site would be completed by multiple developers, and as a result more than one area of the site may be under construction at one time. Building construction activities are estimated to last a minimum of approximately two years and would typically require dump trucks, concrete trucks, excavators, backhoes, and water trucks. It is assumed that the architectural coating phase would occur concurrently with the building construction activities; therefore, the coating activities would also last approximately two years.



The Purple phase is projected to require the most development, including the highest number of residential units and half of the proposed commercial development. Therefore, the land uses proposed in the Purple phase were used to determine maximum daily emissions from architectural coating and building construction. Construction of the off-site improvements and off-site grading is also included in the worst-case construction scenario. The URBEMIS 2007 model does not take into account the additional construction standards adopted by the CARB after 2007. For example, beginning in 2008, heavy-duty diesel engines were required to be shut down when idling more than five minutes at any location within California. Therefore, actual project emissions may be less than calculated by the URBEMIS 2007 model.

Table 5.4-6 summarizes the maximum daily emissions of grading (assuming a maximum of 20 acres per day), trenching, paving, construction, and coating in comparison with the thresholds of significance. As shown, when considering the typical scenario of each construction phase occurring consecutively with no overlap, project related emissions would be below the significance thresholds during the underground utility (trenching) and building construction and coating activities. Construction of the proposed project would exceed the significant thresholds for  $\text{NO}_x$ ,  $\text{PM}_{10}$ , and  $\text{PM}_{2.5}$  during grading, and the  $\text{NO}_x$  threshold during surface improvements (paving). Impacts to air quality resulting from grading and surface improvements activities during each development phase would be potentially significant.

Additionally, any of the construction activities of a subsequent development phase would have the potential to overlap with building construction activities in the previous development phase. For example, if the Blue phase is constructed after the Orange phase, the earlier construction activities, such as grading, in the Blue phase would potentially overlap with the later construction activities, such as building construction and architectural coating in the Orange phase. Although it is unlikely, it is possible that all four categories of construction activities could occur simultaneously on the site within different development phases. To estimate this worst-case scenario, Table 5.4-6 provides the total amount of emissions that would occur if all types of construction activities occur concurrently on one day. Since other development phases would be less intensive than the Purple phase, the total emissions shown in Table 5.4-6 represent a conservative estimate.

As indicated by the maximum combined daily emissions provided in Table 5.4-6, simultaneous construction activities would exceed the significance thresholds for VOCs, and increase the  $\text{NO}_x$ ,  $\text{PM}_{10}$ , and  $\text{PM}_{2.5}$  emissions. Therefore, concurrent construction activities between development phases would potentially worsen significant impacts during construction.

Dust from construction activities would also have the potential to impact sensitive biological resources in the MSCP Preserve area to the south of the project site. Dust has the potential to disrupt plant vitality in the short-term. Potential impacts to the MSCP Preserve would primarily result from construction of the off-site improvements and the single-family residences near the southern area of the project site. Impacts would cease once construction is complete. The Biological Resources Report prepared for Village 9 (URS 2012) determined that potential indirect impacts to biological resources, including dust from construction, would be potentially significant.

**Table 5.4-6 Maximum Daily Emissions Per Construction Activity**

Construction Activity	Pollutant Emissions (pounds/day)					
	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Mass Grading <sup>(1)</sup>	162	41	<b>353</b>	0	<b>4,344</b>	<b>917</b>
Trenching <sup>(2)</sup>	16	5	41	0	2	1
Surface Improvements (paving) <sup>(3)</sup>	52	15	<b>121</b>	0	5	4
Building Construction and Coating Phases <sup>(4)</sup>	192	37	96	0	5	4
<b>Combined Daily Total for all Construction Activities</b>	<b>422</b>	<b>98</b>	<b>611</b>	<b>0</b>	<b>4,356</b>	<b>926</b>
Significance Threshold	550	75	100	150	150	55
Significant Impact?	No	<b>Yes</b>	<b>Yes</b>	No	<b>Yes</b>	<b>Yes</b>

**Bold** = Exceeds significance threshold  
CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; VOC = volatile organic compound; SO<sub>x</sub> = sulfur oxides; PM<sub>10</sub> = respirable particulate matter; PM<sub>2.5</sub> = fine particulate matter  
Modeling assumptions: Emissions are based on assumptions for the Purple development phase. Worst-case construction activities for the Purple development phase were assumed to occur during 2013-2015. No blasting for construction would be required.

<sup>(1)</sup> Assumes a three-month period and a maximum land disturbance of 20 acres per day. A total of approximately 274.3 acres would be disturbed over four development phases. A total of 6.7 million cubic yards would be graded and replaced within the disturbance area, or 1.68 million cubic yards in each phase. All cut material would be used on site and no hauling of material off site would be required. Equipment list for grading includes an excavator, two graders, four heavy-duty trucks, five dozers, 12 scrapers, and two water trucks.

<sup>(2)</sup> Assumes a two-month period. Equipment list includes two excavators, two dump trucks, a dozer, two backhoes, and a water truck.

<sup>(3)</sup> Assumes a two-month period. Paving and surface improvements would be required for approximately 12 percent of the SPA area (32 acres), or eight acres per phase. Assumes an additional 1.1 acres for off-site improvements. Equipment list includes a grader, a paver, a roller, and 27 dump trucks and concrete trucks.

<sup>(4)</sup> Assumes a two-year period and architectural coating activities would occur simultaneously with the building construction activities. Assumes building construction would require a total of 11 dump trucks and concrete trucks, an excavator, a backhoe, and a water truck. Calculations are based on the Purple phase, which includes development of 1,573 multi-family units, 3.6-acre park, and 754,000 square feet of commercial land use. Assumes model defaults for low VOC coating emissions (250 grams of VOC per liter or less).

Source: URBEMIS 2007. See Appendix A for data sheets.

## 2. Operation

Operational impacts are also assessed using the URBEMIS 2007 model. The model estimates daily regional emissions from vehicle and stationary sources of pollutants that would result from implementation of the project at full buildout. Mobile sources emissions were calculated using an ADT estimate of 34,067 trips (provided by the project's traffic consultant) and the estimated vehicle trip length for Village 9 of 5.08 miles that was determined in conjunction with SANDAG (RBF 2013). Area sources of air emissions include natural gas, landscape equipment, consumer products, and architectural coatings. All emission calculation worksheets and air quality modeling output files are provided in Appendix C1.

To estimate the most conservative estimate for operational air quality emissions, the project assumptions for the full buildout year (2030) were used in the analysis. The full buildout condition represents the greatest amount of vehicle trips and land use development. The major source of long-term operational air quality impacts from the proposed project would be emissions produced from project-generated vehicle trips. Vehicle trip generation is based on the project traffic study, which was prepared by RBF Consulting (2013). The projected ADT rate for the proposed project is 34,067 trips. The vehicle trip emissions account for internal capture from mixed-use development and the reduction in vehicle trips compared to similar developments that do not provide access to transit. Potential bus

stops are proposed in Village 9 in the Town Center and along Otay Valley Road. The projected ADT and vehicle trip length also take into account the TDM program included in the Village 9 SPA Plan. The TDM includes strategies to reduce vehicle trips and miles traveled and to design a multi-modal transportation system, and establishes a Transportation Management Association to provide transportation services in a particular area to reduce vehicle miles and implement other TDM strategies. Pollutant emissions from vehicles were calculated using the EMFAC 2007 emission factors that are used in URBEMIS 2007.

In addition to vehicle trips, the proposed project would emit pollutants from on-site area sources, such as burning natural gas for space and water heating, including fireplaces; landscape maintenance equipment; consumer products; and periodic repainting of interior and exterior surfaces (architectural coatings). The area source assumptions include a 15 percent increased efficiency beyond the URBEMIS default Title 24 standards (2005) to reflect the 2008 Title 24 standards. This assumption is conservative because required compliance with the Chula Vista Green Building Standards (CVMC Chapter 15.12) and Energy Efficiency Standards (CVMC Section 15.26.030) would improve energy efficiency beyond the 2008 Title 24 standards.

The vehicular and area source emissions associated with operation of the project are summarized in Table 5.4-7. As shown in this table, the project would exceed the daily regional thresholds for carbon monoxide, VOCs, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> during operation of development in Village 9. Emissions are attributable primarily to vehicular trips, which would exceed the thresholds for VOCs, PM<sub>10</sub>, and PM<sub>2.5</sub>. However, area sources would also result in significant emissions of VOCs from consumer products and combine with vehicular emissions to exceed the thresholds for NO<sub>x</sub> and carbon monoxide. Therefore, a significant impact would occur. The air quality technical report for the 2013 GPA/GDPA SEIR estimated emissions that would result from the increase in building potential accommodated by the GPA/GDPA compared to the previous GDP, including the increase in building potential in Village 9. The findings in this report are consistent with the 2013 GPA/GDPA SEIR conclusion that significant impacts would occur.

## **B. Threshold 2: Expose sensitive receptors to substantial pollutant concentrations.**

CARB defines sensitive receptors as residences, schools, day care centers, playgrounds, and medical facilities, or other facilities that may house individuals with health conditions that would be adversely affected by changes in air quality. The two primary emissions of concern regarding health effects for sensitive receptors are carbon monoxide and diesel particulates.

### **1. Carbon Monoxide Hot Spots**

Areas with high vehicle density, such as congested intersections and parking garages, have the potential to create high concentrations of carbon monoxide, known as carbon monoxide hot spots. An air quality impact is considered significant if carbon monoxide emissions create a hot spot where either the California 1-hour standard of 20 ppm or the federal and California eight-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (LOS E or worse).

The air quality technical report for the 2013 GPA/GDPA SEIR determined that carbon monoxide hot spots would not occur because the SDAB is in attainment of both the federal and state carbon monoxide standards, background carbon monoxide concentrations are well below federal and state limits, and all studied intersections in the traffic report prepared for the GPA/GDPA SEIR are projected to operate at LOS D or better.

**Table 5.4-7 Operation Maximum Daily Emissions**

Emissions Source	Pollutant Emissions (pounds/ day)					
	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Vehicular Sources <sup>(1)</sup>	<b>537</b>	<b>59</b>	43	2	<b>285</b>	<b>56</b>
Area Sources						
Natural Gas <sup>(2)</sup>	31	4	54	0	0	0
Hearth <sup>(3)</sup>	1	0	3	0	0	0
Landscape	23	3	0	0	0	0
Consumer Products	0	<b>205</b>	0	0	0	0
Architectural Coatings <sup>(4)</sup>	0	20	0	0	0	0
<b>Total Emissions</b>	<b>592</b>	<b>291</b>	<b>100</b>	2	<b>285</b>	<b>56</b>
Significance Thresholds	550	55	55	150	150	55
Significant Impact?	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	No	<b>Yes</b>	<b>Yes</b>
<p><b>Bold</b> = Exceeds significance threshold  CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; VOC = volatile organic compounds; SO<sub>x</sub> = sulfur oxides  PM<sub>10</sub> = respirable particulate matter; PM<sub>2.5</sub> = fine particulate matter  Modeling assumptions: Calculations assume the full development of project at buildout (2030). Output is for summer emissions, with the exception of hearth emissions, where winter emissions were added to the daily emissions for a worst-case condition.</p> <p><sup>(1)</sup> Based on an ADT of 34,067 trips and an estimated vehicle trip length of 5.08 miles, which accounts for internal capture from mixed-use development, the reduction in vehicle trips compared to similar developments that do not provide access to transit, and the TDM program in the SPA Plan. A four percent vehicular emission reduction for VOC, NO<sub>x</sub>, CO, and PM<sub>10</sub> emissions was applied for traffic light synchronization based on the SCAQMD CEQA Air Quality Handbook (1993).</p> <p><sup>(2)</sup> Assumes buildings comply with 15% above 2008 Title 24 standards.</p> <p><sup>(3)</sup> Assumes 15 percent of homes would have fireplaces, consistent with assumptions of the GPA/GDPA. No wood burning fireplaces would be allowed.</p> <p><sup>(4)</sup> Includes the use of model defaults for low VOC coatings emissions (250 grams of VOC per liter or less).</p> <p>Source: URBEMIS 2007. See Appendix C1 for data sheets.</p>						

Localized carbon monoxide concentrations are evaluated by using the CALINE4 microscale dispersion model, in accordance with the Caltrans Transportation Project-Level Carbon Monoxide Protocol, in combination with EMFAC 2007 emission factors. CALINE4 modeling output files are provided in Appendix C1. The traffic study prepared for Village 9 (RBF 2013) used project-level trip generation analysis and distribution to evaluate the intersections in the project vicinity that would carry the majority of project traffic. The traffic study analyzed the Existing + Project scenario, as well as two interim scenarios (2020 and 2025) and full project buildout (2030). The traffic study concluded that within each analysis scenario, some intersections would operate at LOS E or F. Intersections that operate at an LOS E or F have the potential to generate carbon monoxide hot spots. In some locations, the interim scenario resulted in a more congested intersection than the full buildout scenario, due to differences in project trip distribution as roadway improvements are implemented. To estimate the most conservative conditions for the hot spot analysis, carbon monoxide concentrations were analyzed at the most congested intersection for each analysis scenario that would experience the longest delays:

- **Existing (2010) + Full Project Buildout:** Main Street/Eastlake Parkway – LOS F (PM Peak Hour), 891 second delay
- **2020 + Phased Project Buildout:** Olympic Boulevard/I-805 northbound on-ramp – LOS F (AM peak hour), 117 second delay
- **2025 + Phased Project Buildout:** Birch Road/Eastlake Boulevard – LOS F (PM peak hour), 454 second delay

- **2030 + Full Project Buildout:** Main Street/Magdalena Avenue – LOS F (PM Peak Hour), 144 second delay

The CALINE 4 model was used to estimate the potential carbon monoxide impact at the above intersections during the most congested peak hour. Receptor locations were set 30 feet from the roadway centerline at the intersection, although actual receptor locations are generally at a greater distance. Carbon monoxide emission factors were generated using the EMFAC 2007 model, using the carbon monoxide emission factor associated with the appropriate analysis year for the total vehicle mix during conditions in January at a temperature of 40 degrees Fahrenheit and 50 percent relative humidity. The assumed vehicle speed is 5 miles per hour. An ambient 1-hour carbon monoxide concentration of 2.0 ppm was used to reflect ambient conditions, based on the data reported at the Chula Vista air quality monitoring station. This concentration estimate is conservative for future years, since carbon monoxide ambient concentrations have been showing a generally downward trend based on historical data. Table 5.4-8 displays the estimated carbon monoxide concentrations at the nearest receptor from the affected intersections.

**Table 5.4-8 Estimated Carbon Monoxide Concentrations**

Analysis Scenario	Intersection	1-Hour CO Concentration (ppm)	8-Hour CO Concentration (ppm)	Impact?
Existing + Full Project Buildout	Main Street/Eastlake Parkway	3.1	2.2	No
2020 + Phased Project Buildout	Olympic Parkway/I-805 northbound on-ramp	3.1	2.2	No
2025 + Phased Project Buildout	Birch Road/Eastlake Parkway	3.0	2.1	No
2030 + Full Project Buildout	Main Street/Magdalena Avenue	2.9	2.1	No
	Significance Threshold	20.0 (State) / 35.0 (Federal)	9.0 (State and Federal)	

CO = carbon monoxide  
See Appendix C1 for model output sheets.  
Modeling assumptions: One-hour carbon monoxide concentrations were calculated using the worst-case wind angle scenario in the CALINE 4 model. Receptor locations were set 30 feet from the roadway centerline. Carbon monoxide emission factors were generated using the EMFAC 2007 model, using the carbon monoxide emission factor associated with the appropriate analysis year for the total vehicle mix during conditions in January at a temperature of 40 degrees Fahrenheit and 50 percent relative humidity. The assumed vehicle speed is 5 miles per hour. An ambient 1-hour carbon monoxide concentration of 2.0 ppm was used to reflect ambient conditions. The 8-Hour carbon monoxide concentration is based on a persistence factor of 0.7 for urban uses (Caltrans 1997).  
Source: CALINE 4 using EMFAC 2007 emission factors.

The highest estimated 1-hour carbon monoxide concentration would be 3.1 ppm at the Main Street/Eastlake Parkway intersection during the Existing + Full Project Buildout scenario, and at the Olympic Parkway/I-805 northbound on-ramp intersection during the 2020 + Phased Project Buildout scenario. This would not exceed the California 1-hour standard of 20 ppm or the federal 1-hour standard of 35 ppm. Based on an urban persistence factor of 0.7 (for an urban area), the maximum cumulative 8-hour carbon monoxide concentration at the intersection would be 2.2 ppm, which is below the 9 ppm California and federal 8-hour standard. The carbon monoxide concentrations at all of the remaining intersections under each scenario are also below the state and federal standards. Potential carbon monoxide impacts are less than significant.

## 2. Toxic Air Contaminants

The Chula Vista General Plan addresses the siting of sensitive receptors to avoid exposure to TACs. Objective E-6 in the General Plan is to improve local air quality by minimizing the production and



emission of air pollutants and TACs, and limit the exposure of people to such pollutants. This objective includes the following policies related to TACs:

- **Policy E 6.4:** Avoid siting new or re-powered energy-generation facilities and other major toxic air emitters within 1,000 feet of a sensitive receiver or the placement of a sensitive receiver within 1,000 feet of a major toxic emitter.
- **Policy E 6.10:** The siting of new sensitive receivers within 500 feet of highways resulting from development or redevelopment projects shall require the preparation of a HRA as part of the CEQA review of the project. Attendant health risks identified in the HRA shall be feasibly mitigated to the maximum extent practicable, in accordance with CEQA, in order to help ensure that applicable federal and state standards are not exceeded.

Construction and operation of the project would expose occupants to TACs from on- and off-site sources. TACs can result in cancer risk as well as both acute (short-term) non-cancer effects and chronic (long-term) effects. The following analysis discusses the potential risks related to the commercial, residential, park, and school uses within the Village 9 site from on-site and off-site sources.

#### a. On-site TAC Sources

The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* lists land uses that are considered major air toxic emitters. These land uses are generally industrial and processing land uses that require a permit from the SDAPCD to operate, including chrome plating facilities, refineries, rail yards, and distribution centers. The SPA Plan proposes residential, mixed-use, school, and park land uses. It does not propose any major toxic emitters. However, CARB does consider dry cleaning facilities and gas stations to be stationary sources of TAC emissions that should not be located near sensitive receptors. Based on CARB siting recommendations within the Air Quality and Land Use Handbook, a detailed HRA should be conducted for proposed sensitive receptors within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater), 50 feet of a "typical" gas station (a facility with a throughput of less than 3.6 million gallons per year), or within 500 feet of a dry cleaning facility that uses perchloroethylene (CARB 2005).

Although the SPA Plan would include primarily residential and commercial uses, the allowed land uses may allow the development of gas stations and dry cleaning facilities, as these are common uses within mixed-use and resident-serving development. Dry cleaning facilities and gas stations are allowable in the Town Center, subject to a conditional use permit. However, only storefront dry cleaning facilities or facilities that do not use perchloroethylene are allowable in the Town Center, subject to a conditional use permit.

Due to physical size constraints, large gas stations with a throughput of 3.6 million gallons per year or more would not be permitted within the compact Town Center. Development of a typical-sized gas station in Village 9 would be possible, but would be subject to the CARB siting recommendations and would not be allowed within 50 feet of a sensitive receptor (see Section 2.0, Project Description). Additionally, new sources of TAC emissions such as gas stations are required to obtain authority to construct and operate from the SDAPCD, at which time location-specific details are analyzed. Sources must comply with established criteria, as established in SDAPCD Rule 1200, requiring demonstration that risks are below thresholds and that sources are constructed and operated with appropriate controls. Provided that new sources of TAC emissions proposed within Village 9 comply with SDAPCD standards, the impact associated with risk of toxic exposure to sensitive receptors is considered less than significant.

Sensitive receptors may be exposed to diesel particulate matter emissions from land uses that attract large numbers of diesel trucks or buses, such as distribution centers or regional transit centers. The SPA Plan does not include any distribution centers. Commercial land uses would intermittently attract diesel trucks for the delivery of goods. However, in 2004, the CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other TACs and their pollutants. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. The measure does not allow diesel fueled commercial vehicles to idle for more than five minutes at any given time. This may be enforced by either the Chula Vista Police Department or the SDAPCD.

Potential localized air toxic impacts from on-site sources of diesel particulate matter would be minimal since only a limited number of heavy-duty trucks would access the project site. The delivery trucks that would frequent the area would not idle for extended periods of time. Village 9 does not include a transit center; Metropolitan Transit System buses would intermittently briefly idle at the proposed bus stops in the Town Center to load and unload passengers. The Metropolitan Transit System buses are subject to the CARB's Public Transit Bus Fleet Rule and Emission Standards for New Urban Buses (CCR Title 13, Section 1956). This rule includes requirements for transit agencies to include alternative-fuel buses in their fleet, meet fleet-wide nitrogen oxides and diesel particulate matter emissions reduction requirements, and zero-emissions bus purchase requirements. As older buses are phased out under the CARB program, new buses would either be alternatively fueled or powered by diesel engines with limited diesel particulate matter emissions. In the meantime, fleet-wide emissions standards would reduce exposure to emissions from older buses by reducing their use or installation of retrofits to reduce emissions. Therefore, required compliance with existing CARB regulations would reduce potential impacts related to commercial deliveries and bus service to a less than significant level.

Diesel particulate matter would result from operation of construction equipment. As shown in Table 5.4-6, construction of Village 9 would result in significant particulate matter emissions during grading activities, including fugitive dust and diesel emissions from construction equipment. However, diesel particulate matter is considered to have a long-term health effect (eight years or more) (CalEPA 2003). Grading would be a short-term event (a total of 15 months over five phases) and would be spaced throughout the project site. Diesel particulate emissions from construction would be substantially reduced following completion of grading. Additionally, the majority (99 percent) of particulate matter emissions during grading are from fugitive dust, not diesel engines. Emissions of particulate matter from diesel sources during grading would be well below the significance thresholds. Therefore, emissions would not result in a significant long-term health risk to surrounding receptors.

#### **b. Off-site TAC Sources**

With the exception of SR-125, the project would not be located within 1,000 feet of any existing off-site TAC sources as identified in the City's 2005 General Plan Update and CARB *Air Quality and Land Use Handbook*. Village 9 is located within 500 feet of SR-125; therefore, an HRA was prepared for the project (Atkins 2013).

With respect to emissions of toxic air contaminants from highway related air contaminants, there are no Federal or State TAC emissions thresholds for determining significance under CEQA. Furthermore, the City of Chula Vista has not adopted an air toxic emissions threshold by which to determine significance under CEQA. The SCAQMD and the Office of Environmental Health Hazard Assessment refer to a maximum incremental cancer risk of greater than or equal to 10 in a million. However, this criterion is not specifically applied to health risks associated with locating sensitive receptors near a freeway. Due

to the lack of any adopted CEQA threshold, the HRA compares the findings of the AERMOD dispersion model for Village 9 to SCAQMD and the Office of Environmental Health Hazard Assessment's cancer risk criteria of greater than or equal to 10 in a million and a non-cancer risk criteria of 1. The analysis provided herein is for informational purposes and is not used to make a significance determination.

The health risk evaluation included the existing plus project, 2020, 2025, and full buildout (2030) scenarios. Concentrations of DPM were estimated using the AERMOD Dispersion Model. Risk calculations are based on both 9 and 70 year exposure durations for residential/ park land uses and a 9 year exposure duration for school sites. Annual emissions are based on the average daily traffic along SR-125, estimated at 25,353 and 46,300 ADT respectively for the 2010 plus project and the buildout (2030) scenarios. For details regarding the methodology and assumptions included in the HRA, please refer to Appendix C2.

Concentrations of DPM within the project area were determined for 15 specific locations as well as throughout the project area as a whole. Specific locations included receptors at residences, schools, and parks proposed in Village 9. The receptor locations are shown in Figure 2 in the HRA. The HRA analyzed the potential cancer risk associated with proximity to SR-125 for the on-site receptor locations as well as the maximum emission concentrations (see Table 3 in the HRA). The maximum risk levels represent the absolute maximum potential for exposure calculated at any point within the site boundary, regardless of whether a discrete receptor is associated with that location.

The potential cancer risks from DPM associated with SR-125 ranges from 0.160 in the 2020 scenario to 12.687 in the full buildout (2030) scenario for the discrete residential/park receptors. For schools, the potential cancer risk ranges from 0.0611 in the 2020 scenario to 0.959 in 2030 for the discrete school receptors. This identified risk is a conservative estimate based on exposure at the specific location for 24-hours per day, 350 days per year over a 9 or 70 year exposure duration for residential exposure, and 24-hours per day, 260 days per year, over 9 years student exposure duration. Exposure over the 9 year period for all school and residential/park receptors would be below the risk criteria of 10 in a million. The 70-year exposure duration would result in four discrete receptors exceeding the criteria of 10 in a million.

The HRA includes a graphic depiction of emission contours to visualize the risk levels throughout the project site. The distance from the edge of the roadway to where risk falls below the 10 in a million standard varies by year and location along the western project border. Because of the area topography and meteorological conditions, concentrations at any given point along near the western site border can vary from near maximum risk to below the 10 in a million standard. The maximum distance from the edge of the SR-125 where the project risk would reach 10 in a million standard are 207 feet, 225 feet, and 235 feet for the 70 year exposure duration of the 2020, 2025, and 2030 scenarios respectively. Four receptors (R 7, R 8, R 9, and R 10) were calculated to have a cancer risk that was above the risk criteria for 2020, 2025, and 2030 conditions.

The non-cancer hazard quotient is determined by dividing the DPM concentration by the reference exposure level for the air toxic of concern. Table 4 (Non-cancer Risk) in the HRA shows the potential non-cancer risk associated with proximity to SR-125 for all 15 discrete receptor locations under each analysis scenario. The maximum potential non-cancer risks from DPM associated with SR-125 is 0.0095 for both residential/park and school receptors. As discussed under cancer risk, this maximum identified risk is a conservative estimate based on exposure at the specific locations. Even with the conservative exposure estimates presented, the maximum increase in non-cancer risk of 0.0095 is below the risk criteria of 1.

The HRA included recommendations to reduce the potential cancer and non-cancer risk associated with DPM to below criteria levels. These recommendations include the use of tiered planting in landscaped areas adjacent to SR-125 and the installation of a sealed HVAC system in conjunction with MERVE 7 or higher rated filters for residential areas identified as having a higher risk.

### **C. Threshold 3: Create objectionable odors affecting a substantial number of people.**

Offensive odors can present a nuisance to the general public, but seldom result in permanent physical damage. Offensive odors may cause agitation, anger, and concern to the public, especially in residential neighborhoods located near major sources of odor.

Construction associated with implementation of the project could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. However, construction equipment would be operating at various locations throughout the project site and construction would not take place all at once. The use of architectural coatings and solvents may also emit odors from the evaporation of VOC. SDAPCD Rule 67 limits the amount of VOC from coatings and solvents, and the project would incorporate the use of low-VOC coatings. In addition, construction near existing sensitive receptors would be temporary. Therefore, consistent with the findings of the air quality technical report for the 2013 GPA/GDPA SEIR, impacts associated with nuisance odors during project construction would not be significant.

The CARB's *Air Quality and Land Use Handbook* identifies a list of the most common sources of odor complaints received by local air districts. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The project proposes the development of residential, commercial, school, and park land uses. Residential development does not typically result in a source of nuisance odors associated with operation. The project does not propose any specific new sources of odor that could affect sensitive receptors. The mixed-use Town Center would potentially result in residences located near commercial land uses with the potential to generate some odors, such as refuse containers or kitchen exhaust vents for restaurants. However, these odor sources would be required to comply with SDAPCD Rule 51, which prohibits nuisance odors.

The Otay Landfill, located approximately three miles west of the project site, is considered to be a major odor-generating facility in Chula Vista. This facility has the potential to produce odors that can be detected outside of the landfill boundary. Odor control practices are in place at all landfills, and odor control is under the purview of the SDAPCD. Landfill odor control practices include application of odor absorbing materials or collecting and treating gases from the landfill before they are released into the surrounding community.

The 2005 General Plan EIR included a summary of the health risk assessment that was conducted for the Otay Landfill as part of the environmental review process for the proposed expansion of the landfill. As part of the proposed expansion, the landfill was upgraded to include control odor facilities, such as installing flares to dispose of excess landfill gases. This assessment also included an evaluation of nuisance odor issues (County of San Diego 2000). The analysis indicated that a buffer of 1,000 feet should be used as a screening threshold for health risk and nuisance odor impacts. The EIR included mitigation measure 5.11-2 that requires that no residential use be permitted within 1,000 feet of the Otay Landfill while the landfill was open and operating, unless a project-specific analysis is completed demonstrating that odor effects are below the odor thresholds for common compounds emitted by the landfill. One such compound is hydrogen sulfide, which has an odor threshold of 0.0045 ppm.

The distance between the landfill and the proposed residences within Village 9 (three miles) is beyond the screening distance (1,000 feet) established by the General Plan EIR as resulting in a significant impact. However, even at a distance of three miles, it is possible that odors from the Otay Landfill may be detected occasionally (depending on wind direction or other meteorological factors) by the proposed residents of Village 9. Facilities that cause nuisance odors are subject to enforcement action by the SDAPCD. Regarding odor impacts, the California Health and Safety Code Section 41700 and SDAPCD Rule 51 prohibit emissions from any source whatsoever in such quantities of air contaminants or other material, which cause injury, detriment, nuisance, or annoyance to the public health or damage to property. The SDAPCD responds to odor complaints by investigating the complaint determining whether the odor violates SDAPCD Rule 51. The inspector takes enforcement action if the source is not in compliance with the SDAPCD rules and regulations (SDAPCD 2010). In the event of enforcement action, odor-causing impacts must be mitigated by appropriate means to reduce the impacts to sensitive receptors to less than significant. Such means include shutdown of odor sources or requirements to control odors using add-on equipment.

Therefore, consistent with the air quality technical report for the 2013 GPA/GDPA SEIR, the project would not create or result in objectionable odors that may affect a substantial number of people, and odor impacts are less than significant.

#### **D. Threshold 4: Result in a conflict with, or obstruct implementation of, the RAQS or SIP.**

The air quality plans relevant to this discussion are the SIP and RAQS. The SIP includes strategies and tactics to be used to attain and maintain acceptable air quality in the SDAB based on the NAAQS; while the RAQS includes strategies for the Basin to meet the CAAQS. Consistency with the RAQS is typically determined by two standards. The first standard is whether the project would exceed growth assumptions contained in the RAQS. If the project would exceed the RAQS growth assumptions, the second standard is whether the project would increase the frequency or severity of existing air quality violations, contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as specified in the RAQS.

The RAQS rely on information from the CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County of San Diego, to forecast future emissions and then determine the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emissions projections and the SANDAG growth projections are based on population and vehicle use trends and land use plans developed by the cities and the County as part of the development of their respective general plans. As such, projects that propose development consistent with, or less than, the growth projections anticipated by a general plan would be consistent with the RAQS. The growth projections in the RAQS, most recently updated in 2009, are based on the 2030 Regional Transportation Plan prepared by SANDAG (2003). For Village 9, the Chula Vista General Plan is the document governing future land use that was considered as part of SANDAG's projections. The growth projections for the city in the Chula Vista General Plan and the 2005 GPU EIR, adopted in December 2005, are consistent with the projections in the 2030 Regional Transportation Plan. However, the General Plan was amended in 2013. The amendment increased the number of units in Village 9 by 396 units. This project is consistent with the General Plan as amended but since the RAQS have not yet been updated to be consistent with the General Plan, this project is inconsistent with the RAQS.



Because the project would conflict with the growth assumptions of the RAQS, it is subject to the second criterion for determining consistency with the RAQS: whether the project would increase the frequency or severity of existing air quality violations, contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as specified in the RAQS.

The city has experienced violations of the state and federal ozone, state  $PM_{10}$ , and state and federal  $PM_{2.5}$  ambient air quality standards between 2008 and 2010. The SDAB is currently designated as a nonattainment area for the state standard for  $PM_{10}$ ,  $PM_{2.5}$ , 1-Hour and 8-Hour ozone, and the Federal 8-Hour standard for ozone. The project would allow residential, mixed use, school, and park uses. It is not anticipated that development constructed as a result of the project would result in significant stationary sources that would result in any air quality violations. As shown in Table 5.4-7,  $PM_{10}$  and  $PM_{2.5}$  unmitigated emissions from area sources are less than significant; however emissions of VOCs, an ozone precursor, would be significant.

The project would have the potential to result in air pollutant emissions from increased traffic on area roadways that may lead to air quality violations, consistent with the conclusion in the 2013 GPA/GDPA SEIR air quality technical report. Pollutant emissions from vehicular emissions would exceed the thresholds for VOCs,  $PM_{10}$  and  $PM_{2.5}$ .

Additionally, as shown in Table 5.4-6, construction of the project would result in temporary significant emissions of VOCs,  $NO_x$ ,  $PM_{10}$ , and  $PM_{2.5}$ . Operational and construction emissions would be significant and unavoidable, even with implementation of BMPs and other mitigation in measures 5.4-1, 5.4-2, and 5.4-3. Therefore, consistent with the conclusion of the 2013 GPA/GDPA SEIR air quality technical report, emissions from the project may lead to air quality violations. The project would be consistent with all applicable transportation and area source control measures proposed in the RAQS to reduce emissions in the region, as shown in Table 5.4-9. However, implementation of the project would exceed the significant thresholds for ozone precursors and particulate matter during construction and operation. Therefore, impacts related to consistency with applicable thresholds would be potentially significant.

**Table 5.4-9 Project Consistency with RAQS Control Measures**

RAQS Control Measure	Project Consistency
Transit Improvements	Village 9 would be transit ready for future extension of transit service into the area. Transit service would consist of bus service, including Rapid Bus Service. The bus system would provide local connections between residential, employment, and major activity centers within Village 9 and Otay Ranch, as well as regional connections. Additionally, Rapid Bus Service has a higher level of service with more frequent headways and is designed to be faster and easier for riders to use than traditional bus service. Two potential transit stop locations are proposed in the Town Center.
Park-and-Ride Facilities	The Village 9 SPA and TM does not specifically propose park and ride facilities; however, the SPA plan is designed to provide transit service in easily accessible areas and provide bicycle and pedestrian connections to the transit stop so the transit riders would not need to drive to transit stops.
Bicycle Facilities	Main vehicular thoroughfares and all internal Town Center streets, except Streets B and M, include dedicated, striped, on-street Class II bike lanes. Local streets would not provide dedicated lanes for bicycles; however, the traffic volumes on parkway residential streets would be low enough to accommodate bicycles as well as vehicles. A Village Pathway would be provided along the south side of Campus Boulevard and would provide a multi-use trail. A Regional Trail would also provide a Class I bike path along the south side of Otay Valley Road.

**Table 5.4-9 Project Consistency with RAQS Control Measures (continued)**

RAQS Control Measure	Project Consistency
Smart Growth Development	SANDAG'S Smart Growth Concept Map identifies Village 9 as a Town Center to provide a pedestrian-oriented Town Center with mixed-use and higher residential densities strongly tied to the planned university campus. The SPA plan is consistent with this concept. The proposed project promotes smart growth principles such as mixed-use development, high-density residential development, walkability, proximity to employment centers, environmentally sensitive design, providing adequate infrastructure, and by providing a variety of transportation choices. The SPA land use plan is oriented toward the planned university site directly east of Village 9.
Pedestrian Facilities	The pedestrian circulation network includes an interconnected system of a village pathways, sidewalks, and trails. All streets in Village 9 would include a sidewalk. Multiple pathways would be provided through parks, the Town Center, and multi-family neighborhoods to provide direct pedestrian connections between the various transects in Village 9 and to adjacent villages.
Traffic Calming Practices	The SPA Plan and TM would implement several traffic calming measures including an urban couplet; intersection bulb-outs; narrow, multi-modal streets; on-street parking; and a circulation pattern design with multiple connections to more evenly distribute traffic.
Support Bus Rapid Transit	Bus Rapid Transit is the highest level of transit service being considered for the Otay Ranch area. Village 9 supports extension of the transit system by providing at least one accessible transit stop and accommodating reserved transit lanes on project roadways.
Source: SDAPCD 2009a	

**E. Threshold 5: Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding air quality thereby resulting in a significant physical impact.**

Table 5.4-10 evaluates the consistency of the project with the applicable General Plan policies and Table 5.4-11 evaluate the project's consistency with the GDP goals and objectives. As shown in these tables, the project would be consistent with the General Plan and GDP policies that pertain to air quality.

**Table 5.4-10 Project Consistency with Applicable General Plan Air Quality Policy**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 6:</b> Improve local air quality by minimizing the production and emission of air pollutants and toxic air contaminants and limit the exposure of people to such pollutants.</p> <p><b>Policy E 6.1:</b> Encourage compact development featuring a mix of uses that locate residential areas within reasonable walking distance to jobs, services, and transit.</p> <p><b>Policy E 6.2:</b> Promote and facilitate transit system improvements in order to increase transit use and reduce dependency on the automobile.</p> <p><b>Policy E 6.6:</b> Explore incentives to promote voluntary air pollutant reductions, including incentives for developers who go above and beyond applicable requirements and for facilities and operations that are not otherwise regulated.</p> <p><b>Policy E 6.7</b> Encourage innovative energy conservation practices and air quality improvements in new development and redevelopment projects consistent with AQIP guidelines or its equivalent, pursuant to the Growth Management Ordinance.</p>	<p><b>Consistent.</b> The project would be consistent with this objective and supporting policies because the SPA Plan encourages compact development surrounding a mixed-use town center with transit service. The Town Center would include high-density housing and would be surrounded by lower density housing. Pedestrian and bicycle facilities would be provided to connect all areas to the Town Center and promote transit use.</p> <p>Mitigation measures 5.4-2 and 5.4-3 include construction BMPs and dust minimizing practices that go beyond the typical City dust-minimizing practices for construction. The SPA Plan includes an AQIP to minimize the project's impact on air quality. The SPA Plan proposes a land use plan to minimize vehicle trips, which would conserve energy and protect air quality.</p>

**Table 5.4-11 Project Consistency with Applicable GDP Air Quality Policy**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 6 – Air Quality</b>	
<p><b>Goal:</b> Minimize the adverse impacts of development on air quality.</p>	<p><b>Consistent.</b> The SPA Plan encourages job/housing balance, transit access, and alternative travel modes to minimize criteria air pollutant emissions. The SPA Plan has been designed to offer residents numerous alternative methods of transportation, including public transit and pedestrian paths, which connect residential neighborhoods to the Town Center as well as to other areas outside of the villages. A mix of uses promotes walking and decreases car trips and air pollution. Additionally, the Village 9 AQIP has incorporated mitigation measures 5.4-1, 5.4-2, and 5.4-3 to further minimize criteria air pollutant emissions.</p>
<p><b>Goal:</b> Land development patterns which minimize the adverse impacts of development on air quality.</p> <p><b>Objective:</b> Encourage mixed use development to promote linking of trips, reduce trip length and encourage alternative mode usage.</p> <p><b>Policy:</b> Villages should have a mixed-use village core area where higher density residential, civic, and park uses are interspersed with neighborhood commercial and office development.</p> <p><b>Policy:</b> Locate sensitive receptors, such as schools, day care facilities and similar uses away from emissions generating uses.</p> <p><b>Policy:</b> Minimize "drive-in" establishments to reduce emissions from idling vehicles.</p> <p><b>Policy:</b> Arterials and transit stops should be linked by a network of sidewalks and bike paths.</p> <p><b>Policy:</b> Transit facilities should be located near village cores, proximate to park-and-ride facilities, the EUC and allow sufficient space reserved for bus stops, and pedestrian waiting areas, including sidewalks, benches, landscaping, street furniture and bicycle storage.</p> <p><b>Policy:</b> Transit stops should be within 1/4 mile of village core residential areas and within 1/8 mile of village core activity centers.</p> <p><b>Policy:</b> Locate employment centers close to housing, transit and HOV lane corridors.</p>	<p><b>Consistent.</b> The SPA Plan has been designed with a mixed use town center in accordance with village concepts that promote a jobs/housing balance and alternatives to automobile use. The convenient village pedestrian path system and internal streets, which are designed to accommodate bicycles, will encourage alternate modes of travel. Additionally, all areas within the project area would be linked by sidewalks or pedestrian trails. Mitigation measure 5.4-4 requires compliance with CARB guidelines for siting sensitive receptors. Drive-in establishments would be limited to the Town Center and subject to a conditional use permit. Transit stops would be centrally located in the Town Center and accessible to bicyclists and pedestrians. The SPA Plan includes design guidelines for well-designed transit stops, sidewalks, benches, landscaping, street furniture and bicycle storage.</p>
<p><b>Objective:</b> Minimize particulate emissions, which are the result of the construction process.</p> <p><b>Policy:</b> Minimize particulate emission during construction to control fugitive dust.</p> <p><b>Policy:</b> Minimize simultaneous operation of multiple construction vehicles and equipment, use low polluting construction equipment.</p> <p><b>Policy:</b> Manage unpaved roads to minimize particulate emissions during the construction and development activities, and during interim agricultural/off road activities.</p>	<p><b>Consistent.</b> Mitigation measures 5.4-1, 5.4-2, and 5.4-3 would implement the BMPs recommended in these policies and additional BMPs to minimize particulate emissions.</p>

## 5.4.5 Level of Significance Prior to Mitigation

### A. Air Quality Violations

Implementation of the project would result in significant criteria pollutant emission impacts during construction and operation.

### B. Sensitive Receptors

The project would have the potential to result in the exposure of sensitive receptors to TACs during operation if the project does not comply with CARB siting criteria.

### C. Air Quality Plans

Implementation of the project would conflict with applicable air quality plans.

### D. Objectionable Odors

No significant impacts related to objectionable odors have been identified for implementation of the project.

### E. Consistency with Air Quality Policies

The project would be consistent with applicable General Plan and GDP policies related to air quality.

## 5.4.6 Mitigation Measures

### A. Air Quality Violations

The following mitigation measures would minimize criteria pollutant emissions during construction. The 1993 Program EIR for the GDP (EIR 90-01) includes land use policies, siting/design policies, and transportation-related management actions to mitigate operational emissions (Ogden 1992). All applicable measures have already been incorporated into the SPA Plan, such as provision of bike lanes, providing services near residences, and providing transit support facilities such as bus stops, as listed in Chapter 3, Project Description.

Mitigation measure GDP EIR-1 from the 1993 Program EIR for the GDP (EIR 90-01) (Ogden 1992) is included below as mitigation measure 5.4-1. Mitigation measure 5.5.5-1 from the 2013 GPA/GDPA SEIR (SEIR 09-01) is included below as mitigation measure 5.4-2. Mitigation measures 5.4-1 through 5.4-3 would reduce impacts related to emissions of nitrogen oxides, PM<sub>10</sub>, and PM<sub>2.5</sub> during construction. Mitigation measure 5.4-1 lists the BMPs recommended in the Otay Ranch GDP Final Program EIR to reduce construction emissions. Mitigation measure 5.4-1 lists the BMPs recommended by the city in the 2005 GPU EIR and the 2013 GPA/GDPA SEIR for reducing fugitive dust emissions during grading. Mitigation measure 5.4-3 includes additional project-specific measures to reduce nitrogen oxides, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions during all construction activities. These measures would also minimize potential indirect impacts to sensitive biological resources from dust. Future construction activities would also be required to comply with SDAPCD Rule 55 requirements for grading and the SDAPCD Rule 67 requirements for low VOC coatings. The following mitigation measures are also required in the AQIP, which incorporated the analysis in the air quality technical report (Appendix C1).

- 5.4-1 **Short-term Air Quality Violations Reduction Measures.** The following techniques to reduce construction emissions shall be implemented during all construction activities:
- i. Minimize simultaneous operation of multiple construction equipment units (i.e., phase construction to minimize impacts).
  - ii. Use low pollutant-emitting construction equipment.
  - iii. Use electrical construction equipment as practical.
  - iv. Use catalytic reduction for gasoline-powered equipment.
  - v. Use injection timing retard for diesel-powered equipment.
  - vi. Water the construction area twice daily to minimize fugitive dust.
  - vii. Stabilize (for example hydroseed) graded areas as quickly as possible to minimize fugitive dust.
  - viii. Pave permanent roads as quickly as possible to minimize dust.
- 5.4-2 **Dust Control Measures.** Mitigation of PM<sub>10</sub> impacts requires active dust control during construction. As a matter of standard practice, the City shall require the following standard construction measures be included on all grading plans to the satisfaction of the City Engineer, and shall be implemented during construction to the extent applicable:
- i. All unpaved construction areas shall be sprinkled with water or other acceptable San Diego Air Pollution Control District dust control agents twice daily during dust-generating activities to reduce dust emissions. Additional watering or acceptable Air Pollution Control District dust control agents shall be applied during dry weather or on windy days until dust emissions are not visible.
  - ii. Trucks hauling dirt and debris shall be properly covered to reduce windblown dust and spills.
  - iii. A 20-mile-per-hour speed limit on unpaved surfaces shall be enforced.
  - iv. On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce re-suspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.
  - v. On-site stockpiles of excavated material shall be covered or watered.
  - vi. Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the City and/or Air Pollution Control District to reduce dust generation.
  - vii. To the maximum extent feasible:
    - a. Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction activities.
    - b. Catalytic reduction for gasoline-powered equipment shall be used.
  - viii. Equip construction equipment with pre-chamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of nitrogen oxides, to the extent available and feasible.
  - ix. Electrical construction equipment shall be used to the extent feasible.
  - x. The simultaneous operations of multiple construction equipment units shall be minimized (i.e., phase construction to minimize impacts).



- 5.4-3 **Construction Best Management Practices.** During all construction activities for the project, the project applicant shall ensure implementation of the following best management practices to reduce the emissions of nitrogen oxides and fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>). Prior to issuance of a grading permit, the following best management practices shall be included on all grading plans to the satisfaction of the City Engineer and shall be implemented during construction to the extent applicable:
- i. All construction equipment shall be outfitted with best available control technology devices certified by California Air Resources Board. A copy of each unit's best available control technology documentation shall be provided at the time of mobilization of each applicable unit of equipment.
  - ii. Approach routes to the site shall be cleaned daily of construction-related dirt.
  - iii. Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.
  - iv. Install wheel washers or rumble plates adjacent to a paved apron prior to any vehicle entry on public roads.
  - v. Remove any visible track-out into traveled public streets within 30 minutes of occurrence.
  - vi. Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.
  - vii. Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.
  - viii. General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues should turn their engines off when not in use to reduce vehicle emissions. Construction emissions should be phased and scheduled to avoid emissions peaks and shall be discontinued during second stage smog alerts.
  - ix. During construction, site grading activities within 500 feet of a school in operation shall be discontinued or all exposed surfaces shall be watered to minimize dust transport off site to the maximum degree feasible, when the wind velocity is greater than 15 miles per hour in the direction of the school.

## B. Sensitive Receptors

- 5.4-4 **San Diego Air Pollution Control District Toxic Air Contaminants Emission Criteria Compliance.** Prior to approval of the building permit for any uses that are regulated for toxic air contaminants emissions by the San Diego Air Pollution Control District, the project applicant shall demonstrate to the satisfaction of the Development Services Director (or their designee) that the use complies with established criteria (such as those established by San Diego Air Pollution Control District Rule 1200 and California Air Resources Board). Specifically, gas stations would not be allowed to be constructed within 50 feet of a sensitive receptor, in compliance with California Air Resources Board siting recommendations

## C. Objectionable Odors

No mitigation measures are required.

## D. Air Quality Plans

Mitigation measures 5.4-1, 5.4-2, and 5.4-3 would also minimize impacts related to conflicts with air quality plans but not to a level below significance.

## E. Consistency with Air Quality Policies

No mitigation measures are required.

### 5.4.7 Level of Significance After Mitigation

#### A. Air Quality Violations

##### 1. Construction

The 2013 GPA/GDPA SEIR determined that construction emissions from implementation of the GPA/GDPA would be reduced to a less than significant level with implementation of the measures listed in mitigation measure 2005 GPU EIR 5.11-1 and GPA/GDPA SEIR 5.5.5.1. However, construction emissions and emissions reductions were not quantified because no specific construction details were available at the programmatic level of analysis. Additionally, the GPA/GDPA SEIR mitigation measures only addressed fugitive dust emissions (PM<sub>10</sub> and PM<sub>2.5</sub>). Construction of the project would also result in significant emissions of nitrogen oxides during grading, and additional significant emissions of nitrogen oxides and VOCs would result from simultaneous construction activities.

The Otay Ranch GDP Final Program EIR and GPA/GDPA SEIR do not quantify the emissions reductions associated with the recommended BMPs. However, the URBEMIS 2007 provides emission reductions for some of the BMPs required in the mitigation measures. Table 5.4-12 summarizes the construction related emissions for a single phase of Village 9 with implementation of mitigation measures 5.4-1, 5.4-2, and 5.4-3. Implementation of these mitigation measures would reduce significant emissions of nitrogen oxides, PM<sub>10</sub>, and PM<sub>2.5</sub> during grading and significant nitrogen oxides emissions during surface improvements, but not to a less than significant level.

Additionally, simultaneous construction activities would still have the potential to result in exceedances of the significance thresholds for nitrogen oxides, VOCs, PM<sub>10</sub>, and PM<sub>2.5</sub>. Additional available mitigation measures to reduce emissions would require the use of electric powered earth movers or aqueous diesel fuel. Use of electric power earth movers is not feasible because a large enough power source that would be needed to supply energy to such large equipment is not available on the site. A commitment to use aqueous diesel fuel is currently not feasible because this fuel is not widely used or available in San Diego County. However, the project would incorporate electrically-powered tools and smaller equipment that would be served by hard wired temporary power sources until more permanent power sources are available. If a reliable source of diesel aqueous fuel becomes available, it would be used during project construction. Use of an alternative fuel type of such as natural gas or propane instead of electricity is not a feasible alternative because these fuels would increase nitrogen oxides and VOC emissions. Therefore, construction emissions would remain significant and unavoidable.

##### 2. Operation

The applicable measures of the Otay GDP Final Program EIR mitigation measures have already been incorporated into the SPA Plan, such as provision of bike lanes, providing services near residences, and providing transit support facilities such as bus stops. There are no other feasible mitigation measures available at the project level to reduce vehicular emissions other than reducing vehicle trips.

**Table 5.4-12 Mitigated Construction Maximum Daily Emissions by Activity (pounds/day)**

Construction Activity	Pollutant Emissions (pounds/day)					
	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Unmitigated Emissions</b>						
Mass Grading <sup>(1)</sup>	162	41	<b>353</b>	0	<b>4,344</b>	<b>917</b>
Trenching <sup>(2)</sup>	16	5	41	0	2	1
Surface Improvements (paving) <sup>(3)</sup>	52	15	<b>121</b>	0	5	4
Building Construction and Coating Phases <sup>(4)</sup>	192	37	96	0	5	4
<b>Combined Daily Total for all Construction Activities (unmitigated)</b>	<b>422</b>	<b>98</b>	<b>611</b>	<b>0</b>	<b>4,356</b>	<b>926</b>
<b>Mitigated Emissions<sup>(5)</sup></b>						
Mass Grading <sup>(1)</sup>	162	41	<b>300</b>	0	<b>2,453</b>	<b>515</b>
Trenching <sup>(2)</sup>	18	5	35	0	1	1
Surface Improvements (paving) <sup>(3)</sup>	52	15	<b>103</b>	0	1	1
Building Construction and Coating Phases <sup>(4)</sup>	192	37	87	0	5	4
<b>Combined Daily Total for all Construction Activities (mitigated)</b>	<b>424</b>	<b>98</b>	<b>525</b>	<b>0</b>	<b>2,460</b>	<b>521</b>
Significance Threshold	550	75	100	150	150	55
Significant Impact?	No	<b>Yes</b>	<b>Yes</b>	No	<b>Yes</b>	<b>Yes</b>
<p><b>Bold</b> = Exceeds significance threshold  CO = carbon monoxide; VOC = reactive organic gases; NO<sub>x</sub> = nitrogen oxides;  SO<sub>x</sub> = sulfur oxides; PM<sub>10</sub> = respirable particulate matter; PM<sub>2.5</sub> = fine particulate matter  Modeling assumptions: Emissions are based on assumptions for the Purple development phase. Worst-case construction activities for the Purple development phase were assumed to occur during 2013-2015. No blasting for construction would be required.</p> <p><sup>(1)</sup> Assumes a three-month period and a maximum land disturbance of 20 acres per day. A total of approximately 274.3 acres would be disturbed over four development phases. A total of 6.7 million cubic yards would be graded and replaced within the disturbance area, or 1.68 million cubic yards in each phase. All cut material would be used on site and no hauling of material off site would be required. Equipment list for grading includes an excavator, two graders, four heavy duty trucks, five dozers, 12 scrapers, and two water trucks.</p> <p><sup>(2)</sup> Assumes a two-month period. Equipment list includes two excavators, two dump trucks, a dozer, two backhoes, and a water truck.</p> <p><sup>(3)</sup> Assumes a two-month period. Paving and surface improvements would be required for approximately 12 percent of the SPA area (32 acres), or eight acres per phase. Assumes an additional 1.1 acres for off-site improvements. Equipment list includes a grader, a paver, a roller, and 27 dump trucks and concrete trucks.</p> <p><sup>(4)</sup> Assumes a two-year period and architectural coating activities would occur simultaneously with the building construction activities. Assumes building construction would require a total of 11 dump trucks and concrete trucks, an excavator, a backhoe, and a water truck. Calculations are based on the Purple phase, which includes development of 1,573 multi-family units, a town square, and 754,000 square feet of commercial land use. Assumes the model defaults low VOC coating emissions (250 grams of VOC per liter or less).</p> <p><sup>(5)</sup> Assumes use of diesel particulate filters and diesel oxidation catalysts for all equipment. Due to a calculation error in the URBEMIS 2007 model, the total reduction in PM<sub>10</sub> and PM<sub>2.5</sub> emissions that would occur as result of watering exposed surfaces, applying chemical stabilizers, and replacing ground cover cannot be calculated because the URBEMIS 2007 model overestimates the reduction in emissions. SCAQMD recommends application of the single highest control measure. Watering twice daily was applied for the proposed project. Additionally, emission reductions estimates are not available for all of the BMPs. Emissions would likely be reduced compared to these estimates, but not to a less than significant level.</p> <p>Source: URBEMIS 2007. See Appendix C1 for data sheets.</p>						

The project trip generation rates account for the approximately 40 percent reduction in vehicle trips that would occur as a result of the mixed-use areas, transit use, and availability of pedestrian and bicycle facilities proposed as part of the project. In addition, future vehicular emissions may be lower than estimated due to increasingly stringent California fuel efficiency requirements. Some measures cannot be implemented at the SPA level, such as providing video-conference facilities in work places or requiring flexible work schedules. Additionally, there are no feasible mitigation measures currently available to reduce area sources of emissions without regulating the purchases of individual consumers. Operation emissions of VOCs, NO<sub>x</sub>, carbon monoxide, PM<sub>10</sub>, and PM<sub>2.5</sub> would be significant and unavoidable.

## **B. Sensitive Receptors**

Mitigation measure 5.4-4 ensures that any stationary use within Village 9 that emits TACs would comply with SDAPCD criteria. Therefore impacts would be less than significant after mitigation.

## **C. Objectionable Odors**

Impacts associated with objectionable odors are less than significant without mitigation.

## **D. Air Quality Plans**

Mitigation measures 5.4-1, 5.4-2, and 5.4-3 would reduce construction emissions of nitrogen oxides, VOC, PM<sub>10</sub>, and PM<sub>2.5</sub>. However, even with implementation of all feasible mitigation measures, construction and operational impacts would exceed the significance thresholds and contribute to potential air quality violations. Further, the project is inconsistent with the RAQS. Therefore, impacts related to consistency with applicable air quality plans would also be significant and unavoidable, consistent with the conclusion of the 2013 GPA/GDPA SEIR air quality analysis.

## **E. Consistency with Air Quality Policies**

The project is consistent with applicable air quality policies without mitigation.

## 5.5 Noise

This section describes the existing noise environment of Village 9 and the surrounding region and evaluates the potential impacts associated with noise due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). Section 5.6, Noise, of the final SEIR for the GPA/GDPA (SEIR 09-01) analyzed the existing conditions, potential impacts, and mitigation measures related to the proposed land uses for the GPA/GDPA area, including Village 9. The GPA/GDPA SEIR identified a significant impact related to permanent increases in traffic noise, and that mitigation would be required at the project level for this impact. The analysis and discussion of the GPA/GDPA SEIR are incorporated by reference. Information contained in this section is based on the Otay Ranch Village 9 SPA Project Noise Technical Report, prepared by Atkins in May 2013, provided as Appendix D to this EIR. This report updates the applicable information in the previously certified SEIR.

### 5.5.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Federal

##### a. Federal Aviation Administration Standards

Enforced by the FAA, Code of Federal Regulations (CFR) Title 14, Part 150 prescribes the procedures, standards and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. Title 14 also identifies those land uses which are normally compatible with various levels of exposure to noise by individuals. The FAA has determined that interior sound levels up to 45 dBA Ldn (or CNEL) are acceptable within residential buildings. The FAA also considers residential land uses to be compatible with exterior noise levels at or less than 65 dBA Ldn (or CNEL).

##### b. Federal Highway Administration Standards

CFR Title 23, Part 772 sets procedures for the abatement of highway traffic noise and construction noise. Title 23 is implemented by the Department of Transportation Federal Highway Administration (FHWA). The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the Department of Transportation FHWA Noise Standards. Title 23 establishes 67 dBA as the worst-case hourly average noise level standard for impacts of federal highway projects to land uses including residences, recreational uses, hotels, hospitals, and libraries [23 CFR Chapter 1, Part 772, Section 772.19].

##### c. Federal Transit Administration Standards and Federal Railroad Administration Standards

Although the Federal Transit Administration (FTA) standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the FTA Transit Noise and Vibration Impact Assessment Manual (May 2006) are routinely used for projects proposed by local jurisdictions. The FTA and Federal Railroad Administration (FRA) have published guidelines for assessing



the impacts of groundborne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA measure of the threshold of architectural damage for conventional sensitive structures from groundborne vibration is 0.2 inches/second PPV.

## **2. State**

### **a. California Noise Control Act of 1973**

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

### **b. California Noise Insulation Standards (CCR Title 24)**

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multi-family residential buildings (CCR Title 24, Part 2). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure may be exposed to exterior noise levels of 60 dBA CNEL (or Ldn) or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or Ldn) of a maximum noise level of 45 dBA [California's Title 24 Noise Standards, Chap. 2-35].

### **c. 2010 California Green Building Standards Code**

Section 5.507 of the California Green Building Standards Code (CalGreen) establishes requirements for acoustical control in non-residential buildings. The standards require that wall and roof-ceiling assemblies making up the building envelope shall have a sound transmission class value of at least 50, and exterior windows shall have a minimum sound transmission class of 30 for any of the following building locations: 1) within 1,000 feet (300 meters) of right of ways of freeways, 2) within 5 miles (8 kilometers) of airports serving more than 10,000 commercial jets per year, and 3) where sound levels at the property line regularly exceed 65 dBA, other than occasional sound due to church bells, train horns, emergency vehicles and public warning systems. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have a sound transmission class of at least 40. Additionally, Section A5.507.5 requires that classrooms have a maximum interior background noise level of no more than 45 dBA Leq.

## **3. Local**

### **a. City of Chula Vista General Plan**

The Environmental Element of the Chula Vista General Plan contains goals and policies related to environmental noise in Section 3.5, Noise. The General Plan defines noise sensitive land uses (NSLU) as residences, schools, hospitals, libraries, parks, and places of worship. To establish the compatibility of various land uses with exterior noise levels, the City uses CNEL in its planning guidelines. Table 5.5-1 illustrates Chula Vista's exterior land use noise compatibility guidelines. Shading in this table represents the maximum noise level considered compatible for each land use category. These guidelines reflect the

levels of noise exposure that are generally considered to be compatible with various types of land uses. The City of Chula Vista states that these guidelines are to be used at the land use planning stage, for noise impact assessments, and to determine mitigation requirements for development proposals.

As stated in the General Plan, the noise control ordinance of the CVMC, discussed below, establishes noise level limits for individual generators. The noise control ordinance limits in the Municipal Code are used in noise impact assessments to determine mitigation requirements for individual noise generators, such as industrial equipment, to ensure that they will not adversely impact surrounding land uses. Conversely, the guidelines listed in Table 5.5-1 reflect the total noise exposure that is compatible with a particular land use, including vehicular traffic that contribute to permanent ambient noise levels that are not regulated by the noise control ordinance.

**Table 5.5-1 Exterior Land Use/Noise Compatibility Guidelines**

Land Use	Annual CNEL in decibels					
	50	55	60	65	70	75
Residential						
Schools, Libraries, Daycare Facilities, Convalescent Homes, Outdoor Use Areas, and Other Similar Uses Considered Noise Sensitive						
Neighborhood Parks, Playgrounds						
Community Parks, Athletic Fields						
Offices and Professional						
Places of Worship (excluding outdoor use areas)						
Golf Courses						
Retail and Wholesale Commercial, Restaurants, Movie Theaters						
Industrial, Manufacturing						
Note: Shading represents the maximum noise level considered compatible for each land use category. Source: City of Chula Vista 2005a						

#### **b. City of Chula Vista Multiple Species Conservation Program Subarea Plan**

The MSCP Subarea Plan regulates impacts to sensitive biological resources, including noise impacts. In accordance with Section 7.5.2 of the Chula Vista Subarea Plan, Adjacency Management Issues, uses in or adjacent to the Preserve should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas and any other use that may introduce noises that could impact or interfere with wildlife utilization of the Preserve. Excessively noisy areas or activities adjacent to breeding areas, including temporary grading activities, must incorporate noise reduction measures or be curtailed during the breeding season of sensitive bird species, consistent with Table 3-5 of the MSCP Subregional Plan, included as Appendix A to the MSCP Subarea Plan. In general, the noise threshold for sensitive biological resources is an hourly average noise level of 60 dBA during construction and no clearing, grubbing, and/or grading is permitted within the MSCP Preserve during the breeding season of the sensitive species present.

#### **c. City of Chula Vista Municipal Code**

Chapter 19.68 of the CVMC, Performance Standards and Noise Control (Noise Ordinance), establishes noise criteria for Chula Vista. Section 19.68.030 defines exterior noise standards for various land uses. The noise standards are not to be exceeded at the portion of a property used for a particular land use. For nuisance noise, the noise standards cannot be exceeded at any time. Examples of nuisance noise provided in the noise ordinance include pets in residential neighborhoods, private parties of limited

duration, sound amplifiers and musical instruments, and any activities in commercial areas other than permitted uses. For environmental noise, the Leq in any one hour cannot exceed the noise standards. These standards are shown in Table 5.5-2. The noise standards in Table 5.5-2 do not apply to construction activities.

**Table 5.5-2 Exterior Noise Limits**

Receiving Land Use Category	Noise Level (dBA) <sup>(1,2,3)</sup>	
	10:00 p.m. to 7:00 a.m. (Weekdays)	7:00 a.m. to 10:00 p.m. (Weekdays)
	10:00 p.m. to 8:00 a.m. (Weekends)	8:00 a.m. to 10:00 p.m. (Weekends)
All residential (except multiple dwelling)	45	55
Multiple dwelling residential	50	60
Commercial	60	65
Light industry – I-R and I-L zones	70	70
Heavy Industry – I zone	80	80
<sup>(1)</sup> Environmental Noise – Leq in any hour, Nuisance Noise – not be exceeded any time <sup>(2)</sup> According to Section 19.68.030(B)(2), if the alleged offensive noise contains a steady, audible sound such as a whine, screech or hum, or contains a repetitive impulsive noise such as hammering or riveting, the standard limits shall be reduced by 5 dB. <sup>(3)</sup> If the measured ambient level, measured when the alleged noise violation source is not operating, exceeds the standard noise limit, the allowable noise exposure standard shall be the ambient noise level. Source: City of Chula Vista 2012a		

Section 19.68.050 regulates vibration from construction and operational sources. It prohibits operating or permitting the operation of any device that creates a vibration that is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way.

Section 19.68.060 exempts occasional outdoor gatherings, public dances, shows, and sporting and entertainment events (excluding regularly scheduled school athletic events) from the noise level limits in Table 5.5-2, provided that the events are conducted pursuant to a permit or license issued by the City.

Construction noise is regulated by Section 17.24.040 of the Municipal Code. The ordinance prohibits construction and building work in residential zones that would cause noises disturbing to the peace, comfort, and quiet enjoyment of property of any person residing or working in the vicinity between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, and between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday.

## B. Noise Basics

### 1. Quantification of Noise

Noise is commonly defined as unwanted sound. Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). Sound pressures in the environment have a wide range of values and the sound pressure level was developed as a convenience in describing this range as a logarithm of the sound pressure. The sound pressure level is the logarithm of the ratio of the unknown sound pressure to a reference quantity of the same kind. To account for the pitch of sounds and the corresponding sensitivity of human hearing to them, the raw sound pressure level is adjusted with an A-weighting scheme based on frequency that is stated in units of decibels (dBA). Typical A-weighted noise levels are listed in Table 5.5-3.

**Table 5.5-3 Typical A-Weighted Noise Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 mph	— 80 —	Food blender at 3 feet Garbage disposal at 3 feet
Noisy urban area, daytime	— 70 —	Vacuum cleaner at 10 feet Normal speech at 3 feet
Gas lawn mower, 100 feet Commercial area	— 60 —	
Heavy traffic at 300 feet	— 50 —	Large business office Dishwasher next room
Quiet urban daytime	— 40 —	Theater, large conference room (background)
Quiet urban nighttime	— 30 —	Library
Quiet suburban nighttime	— 20 —	Bedroom at night
Quiet rural nighttime	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 1998.

A given level of noise may be more or less tolerable depending on the sound level, duration of exposure, character of the noise sources, the time of day during which the noise is experienced, and the activity affected by the noise. For example, noise that occurs at night tends to be more disturbing than that which occurs during the day because sleep may be disturbed. Additionally, rest at night is a critical requirement in the recovery from exposure to high noise levels during the day. In consideration of these factors, different measures of noise exposure have been developed to quantify the extent of the effects anticipated from these activities. For example, some indices consider the 24-hour noise environment of a location by using a weighted average to estimate its habitability on a long-term basis. Other measures consider portions of the day and evaluate the nearby activities affected by it as well as the noise sources. The most commonly used indices for measuring community noise levels are the Equivalent Energy Level (Leq), and the Community Noise Equivalent Level (CNEL).

**Leq**, the Equivalent Energy Level, is the average acoustical or sound energy content of noise, measured during a prescribed period, such as 1 minute, 15 minutes, 1 hour, or 8 hours. It is the decibel sound level that contains an equal amount of energy as a fluctuating sound level over a given period of time.

**CNEL**, Community Noise Equivalent Level, is the average equivalent A-weighted sound level over a 24-hour period. This measurement applies weights to noise levels during evening and nighttime hours to compensate for the increased disturbance response of people at those times. CNEL is the equivalent sound level for a 24-hour period with a +5 dBA weighting applied to all sound occurring between 7:00 p.m. and 10:00 p.m. and a +10 dBA weighting applied to all sound occurring between 10:00 p.m. and 7:00 a.m. Similar to the CNEL, Ldn, the day-night average noise level, is a 24-hour average Leq with a +10 dBA weighting applied to noise during the hours of 10:00 p.m. to 7:00 a.m. Ldn and CNEL are typically within 1 dBA of each other and, for most intents and purposes, are interchangeable.

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a single point source such as a piece of mechanical equipment, the sound level normally decreases by about 6 dBA for each doubling of distance from the source. Sound that originates from a linear, or “line” source such as a heavily traveled traffic corridor, attenuates by approximately 3 dBA per doubling of distance, provided that the surrounding site conditions lack ground effects or obstacles that either scatter or reflect noise. Noise from roadways in environments with major ground effects due to vegetation and loose soils may either absorb or scatter the sound yielding attenuation rates as high as 4.5 dBA for each doubling of distance. Other contributing factors that affect sound reception include meteorological conditions and the presence of manmade obstacles such as buildings and sound barriers.

## **2. Noise Effects**

Noise has a significant effect on the quality of life. An individual’s reaction to a particular noise depends on many factors such as the source of the noise, its loudness relative to the background noise level, and the time of day. The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 5 dBA change in community noise levels is clearly noticeable, and a 3 dBA change is the smallest increment that is perceivable by most receivers. Generally, 1 to 2 dBA changes generally are not detectable. Although the reaction to noise may vary, it is clear that noise is a significant component of the environment, and excessively noisy conditions can affect an individual’s health and well-being. The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on a community can be organized into six broad categories: sleep disturbance, permanent hearing loss, human performance and behavior, social interaction of communication, extra-auditory health effects, and general annoyance.

## **3. Environmental Vibration Basics**

Vibration is defined as any oscillatory motion induced in a structure or mechanical device as a direct result of some type of input excitation. Vibration consists of waves transmitted through solid material. There are several types of wave motion in solids, unlike in air, including compressional, shear, torsional, and bending. The solid medium can be excited by forces, moments, or pressure fields. This leads to the terminology of “structure-borne/ground-borne” vibration.

Vibration energy spreads out as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. Soil properties also affect the propagation of vibration. When groundborne vibration interacts with a building there is usually a ground-to-foundation coupling loss, but the vibration can also be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as rattling of windows or items on shelves or the motion of building surfaces. The vibration of building surfaces can also be radiated as sound and heard as a low-frequency rumbling noise, known as groundborne noise.

Ambient and source vibration information for this study are expressed in terms of the peak particle velocity (PPV) in inches per second (in/sec) that correlates best with human perception. The particle velocity is the velocity of the soil particles resulting from a disturbance. Agencies such as Caltrans use the PPV descriptor because it correlates well with damage or complaints. Caltrans estimates that the threshold of perception is approximately 0.006 in/sec PPV and the level at which continuous vibrations begins to annoy people is approximately 0.010 in/sec PPV.



## C. Existing Noise Environment

Existing noise sources, including transportation, operation, and construction that affect the project site are described below.

### 1. Ambient Noise Levels

An ambient sound level survey was conducted on March 18, 2011, to quantify the noise environment in Village 9 and surrounding vicinity. A total of four measurements were taken across the project site and one was taken in the existing residential neighborhood north of the project site in Village 7. The measurements were taken during the daytime (9:00 a.m. to 1:00 p.m.) and were 15 minutes in duration. A Larson Davis 820 ANSI (American National Standards Institute) Type I Integrating Sound Level Meter calibrated with a Larson Davis CAL200 calibrator was used to record ambient sound levels. Weather conditions during the measurements were calm with a mild temperature and partly-cloudy to clear skies. Table 5.5-4 summarizes the measured Leq and noise sources for each monitoring location, and the on-site monitoring locations are shown on Figure 5.5-1.

**Table 5.5-4 Ambient Sound Level Measurements (dBA)**

Site	Location	Daytime Noise Sources	Date/Time	Leq	Lmax	Lmin
1	Southwestern edge of Village 9, west of Planning Area V in the location of the future SR-125 ramps. Adjacent to the Planning Area V, a proposed site of mixed use development in the Neighborhood Center zone.	Traffic on SR-125, birds	3-18-2011 / 10:26 a.m.	57	67	46
2	Northeast area of Planning Area FF in the southeast area of Village 9. Proposed site of medium density residential development in the Neighborhood Edge zone.	Distant construction or manufacturing noise, traffic on SR-125	3-18-2011 / 10:47 a.m.	52	65	41
3	Eastern edge of Planning Area N in the middle of Village 9. Proposed site of mixed use development in the Town Center.	Birds, distant plane and helicopters flyovers	3-18-2011 / 11:07 a.m.	48	61	36
4	South of Planning Area C on the eastern edge of Village 9. Planning Area C is proposed for a Town Square in the Urban Center Zone.	Birds, distant traffic, traffic on SR-125	3-18-2011 / 11:26 p.m.	40	57	33
5	Southeast corner of Fleishbein Street & Kincaid Avenue in the residential development northwest of Olympian High School and Wolf Canyon Elementary School in Village 7	Traffic, sanitation pickup trucks, construction	3-18-2011 / 12:25 p.m.	57	76	36

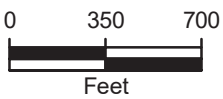
Source: Atkins 2013. Ambient measurements were 15 minutes in duration.

The results of the ambient noise survey reflect noise levels that range between 40 dBA and 57 dBA Leq within the project site. This is consistent with the noise measurement taken at the northeast corner of the project site for the 2013 GPA/GDPA SEIR, which measured a noise level of 52 dBA Leq. The primary noise sources included traffic on SR-125, birds, distant planes and helicopters taking off from Brown Field, and distant traffic and construction. The measured noise level at the existing residential development north of the project site in Village 7 was 57 dBA Leq. Noise sources in this development include traffic, sanitation truck noise, and construction. As described previously, noise levels up to 65 dBA CNEL are considered compatible with residential development as specified in the Chula Vista General Plan. Based on the City of Chula Vista noise compatibility guidelines, ambient noise levels measured within the project site and adjacent area would be compatible with the land uses proposed in the SPA Plan.

One additional noise measurement was taken off site at the southeast corner of Fleishbein Street and Kincaid Avenue. Measured noise level was 57 dBA.



Source: CASIL 2011



**NOISE MEASUREMENT LOCATIONS  
FIGURE 5.5-1**



## 2. Transportation Noise Sources

### a. Aviation

The nearest airport to the project site is Brown Field, located approximately 1.75 miles to the southwest of Village 9. The airport is located in and operated by the City of San Diego. The airport is a general aviation airport. It accommodates propeller and jet powered aircraft and serves as a port of entry for private aircraft entering the U.S. from Mexico. It is also used by military and law enforcement agencies and is classified as a “reliever airport” by the FAA. According the ALUCP for Brown Field, the airport has an 8,000 foot long runway. The predominant runway alignments are east-west. There were 101,117 operations at Brown Field in 2011, and 91,025 operations in 2010. Due to distance and the east-west orientation of the runway, the project site is not located within 60 dBA CNEL noise contour for the airport, or within the airport’s area of influence (SDCRAA 2010).

### b. Roadways

No paved roadways currently exist on the project site. A few dirt roads are located on the project site for occasional vehicle trips for maintenance of infrastructure in the Otay River Valley. Vehicular traffic along roadways in the vicinity contributes to the overall noise environment on the project site. Eastlake Parkway and Hunte Parkway currently terminate at the northeast corner of the project site. Major roadways in the area surrounding Village 9 include Birch Road, located approximately 0.7 mile north of the project site, and Olympic Parkway, located approximately one mile north of the project site. Table 5.5-5 shows the existing noise levels generated by the roadways surrounding the project site. Noise levels along Olympic Parkway, Birch Road, Main Street, Hunte Parkway, Heritage Road, La Media Road, and Eastlake Parkway currently exceed the Chula Vista noise compatibility standard of 65 dBA CNEL for residences, schools, and other NSLU. The SR-125 toll road right-of-way is adjacent to the western boundary of Village 9. The toll road is also an existing source of vehicular noise on the project site.

**Table 5.5-5 Existing Off-site Roadway Noise Levels**

Roadway	Segment	Existing Average Daily Trips	Noise Level at 50 feet from Roadway Centerline (dBA CNEL)
Olympic Parkway	I-805 to Brandywine Avenue	47,000	75
	Brandywine Avenue to Heritage Road	48,721	75
	Heritage Road to La Media Road	50,538	75
	La Media Road to SR-125 Ramps	43,563	75
	SR-125 Ramps to Eastlake Parkway	40,478	79
	Eastlake Parkway to Hunte Parkway	13,926	70
	East of Hunte Parkway	7,846	66
Birch Road	La Media Road to SR-125	11,084	69
	SR-125 to Eastlake Parkway	10,250	68
Main Street	I-805 to Brandywine Avenue	26,896	73
	Brandywine Avenue to Heritage Road	18,729	71
Hunte Parkway	Eastlake Parkway to Olympic Parkway	1,406	60
	Olympic Parkway to Otay Lakes Road	9,580	67
Heritage Road	Palomar Street to Olympic Parkway	12,383	69
	Main Street to Entertainment Circle	10,035	65
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	9,846	65

**Table 5.5-5 Existing Off-site Roadway Noise Levels (continued)**

Roadway	Segment	Existing Average Daily Trips	Noise Level at 50 feet from Roadway Centerline (dBA CNEL)
La Media Road	East Palomar Street to Olympic Parkway	12,658	69
	Olympic Parkway to Birch Road	11,037	69
Magdalena Avenue	Birch Road to Main Street	9,122	64
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	18,945	70
	Olympic Parkway to Birch Road	9,199	68
	Birch Road to Main Street	1,310	59

Source: RBF 2013 (traffic data); FHWA 2004 (noise level estimates).

### c. Railroads

Chula Vista is served by the San Diego trolley system, which is operated by the San Diego Metropolitan Transit System. The San Diego Trolley Blue Line passes through the western part of Chula Vista, along the east side of I-5, with stations at E Street, H Street, and Palomar Street. Freight trains also use the same rail line during nighttime hours. Two primary rail haulers of freight, the Burlington Northern Santa Fe (BNSF) and the San Diego and Imperial Valley (SDIV) railroads, link the San Diego County coastal region (including Chula Vista) to the larger national railway system. The SDIV operates freight service on the SANDAG-owned railway in the southwestern part of San Diego County, including Chula Vista, where it is known as the San Diego and Arizona Eastern (SD&AE) Railway. The rail line is located in the coastal area of the City near I-5, approximately eight miles west of the project site. Due to distance, railway noise is not audible at the site.

### 3. Operational Noise Sources

The project site and surrounding area is currently undeveloped. In accordance with the Otay Ranch GDP, development is planned to occur to the west (Otay Ranch Village 8 East), north EUC, and east (the University site, RTP, and Otay Ranch Village 10) of the project site. Village 8 East is anticipated to be planned using the traditional Otay Ranch village model. Future land uses planned for the EUC include destination retail, commercial, and entertainment development with higher density residential development, schools, and parks. The entire University site and Village 10 are proposed for a university and supporting land uses, including commercial, cultural, and entertainment services. The RTP would be located within Village 10 and would consist of a large, master-planned business park, providing research and high-tech manufacturing industries, arranged in clusters. However, none of these land uses have been developed and do not contribute to the existing noise environment.

Otay Valley Regional Park and the Otay River Valley form the southern boundary of the project site and are proposed to remain undeveloped. The closest development to the project site is in Village 7, located northwest of the project site on the other side of SR-125. Development begins approximately 0.2 mile from the project site and includes residences, Olympian High School, and Wolf Canyon Elementary School. High Tech High, High Tech Middle, and High Tech Elementary Chula Vista are located on one campus approximately 0.25 mile northeast of the project site on Discovery Falls Drive. Residences are also located approximately 0.3 mile to the northeast of the project site on Discovery Falls Drive.

### 4. Noise Sensitive Land Uses

NSLUs are land uses that may be subject to stress and/or interference from excessive noise. The Chula Vista General Plan defines NSLUs as residences, schools, hospitals, libraries, parks, places of worship, and outdoor use areas, including outdoor dining spaces. Industrial and commercial land uses are

generally not considered sensitive to noise. There are no NSLU currently located on the project site. The nearest NSLU to the project site is Olympian High School, located approximately 0.2 mile west of the project site on the other side of SR-125. Other NSLU in the project vicinity are the High Tech High campus located approximately 0.25 mile northeast of the project site, the residences located approximately 0.3 mile northeast of the project site near Discovery Falls Drive and the residences located 0.6 mile north of the project site off of Birch Road. The City's MSCP Subarea Plan defines sensitive wildlife species as noise sensitive. MSCP Preserve area is located adjacent to the southern boundary of the site.

### 5. *Vibration Sensitive Land Uses*

Land uses in which groundborne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations (FTA 2006) are considered "vibration-sensitive." The degree of sensitivity depends on the specific equipment that would be affected by the groundborne vibration. Excessive levels of groundborne vibration of either a regular or an intermittent nature can result in annoyance to residential uses. The nearest vibration sensitive land use to the project site is the Sharp Chula Vista Medical Center, located approximately three miles to the northwest of the project site on Medical Center Court.

## 5.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the City of Chula Vista, implementation of the project would result in a significant adverse impact if it would:

- **Threshold 1:** Expose persons to or generate noise levels in excess of standards established in the Chula Vista General Plan or noise ordinance, or applicable standards of other agencies.

This threshold includes exposure of persons to or generation of noise levels in excess of the interior noise standard of 45 dBA CNEL in single-family and multi-family residences, or noise levels that violate the Chula Vista Noise Ordinance standards, shown in Table 5.5-2 (Chapter 19.68 of the Chula Vista Municipal Code).

- **Threshold 2:** Expose persons to or generation of excessive groundborne vibration or groundborne noise levels.

Excessive groundborne vibration is defined as groundborne vibration equal to or in excess of 0.2 in/sec PPV. Construction activities within 200 feet and pile driving within 600 feet of a vibration sensitive use would be potentially disruptive to vibration-sensitive operations (Caltrans 2002).

- **Threshold 3:** Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

A substantial permanent increase would occur if implementation of the project results in an ambient noise level that exceeds the exterior noise limits established in the Chula Vista General Plan, including 65 dBA CNEL for schools, recreational uses, and residences; 70 dBA CNEL for offices, community parks and athletic fields; and 75 dBA CNEL for commercial uses. For transportation-related noise, a significant impact would occur if the project results in a 3 dBA CNEL or greater increase in traffic noise on a roadway segment and the resultant noise level would exceed the General Plan exterior noise limits.

- **Threshold 4:** Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.



Construction activity would be considered significant if it violates the limits established in Section 17.24.040 of the Chula Vista Municipal Code. The ordinance prohibits construction and building work between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, and between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday.

- **Threshold 5:** For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public use airport or private airstrip, expose people residing or working in the project area to excessive noise.
- **Threshold 6:** Be inconsistent with General Plan, GDP or other objectives and policies regarding noise, thereby resulting in a significant physical impact.

### 5.5.3 Impact Analysis

#### **A. Threshold 1: Expose persons to or generate noise levels in excess of standards established in the Chula Vista General Plan or noise ordinance, or applicable standards of other agencies.**

The project includes a range of uses that have the potential to generate noise that may affect adjacent noise-sensitive receptors. The noise technical report prepared for the 2013 GPA/GDPA SEIR determined that operational impacts would be less than significant with conformance to Chula Vista noise ordinance; however, the analysis was at a programmatic level and did not take into account the specific land uses and their placement proposed in the SPA Plan and TM. The following analysis tiers from the GPA/GDPA EIR, and determines whether the proposed land uses would have the potential to conflict with Chula Vista's noise standards.

The project would have the potential to generate noise levels in excess of established standards by developing new stationary sources of noise, by increasing human activity throughout the project site, and by constructing roadways. NSLU both on and beyond the project site may be affected by the project. Proposed NSLU associated within Village 9 include schools, parks, and residential development. Other NSLU, including libraries and places of worship, are permitted to be developed throughout the project area. Potential noise-generating land uses on site include mixed-use commercial and resident serving commercial; public or quasi-public uses including day care, schools, or parks; and a CPF.

This section also addresses the potential for on-site sensitive receptors to be exposed to excessive noise levels from the proposed roadways. The permanent increase in noise levels that would occur as a result of increased traffic on roadways is addressed under Threshold 3.

#### **1. Commercial Development and the Community Purpose Facility**

Commercial development would be located throughout the Urban Center, Urban Neighborhood, Town Center, and Neighborhood Core Zones. Potential operational noise sources associated with commercial development within the project site include HVAC equipment, commercial truck deliveries, loading docks, and parking lots. Future uses in the CPF are unknown at this time. Therefore, it would be speculative to analyze the potential noise generated by a specific use at the CPF location. However, it can reasonably be assumed the CPF would include a structure for community use that would involve HVAC equipment. Therefore, the CPF is included in the discussion of commercial HVAC equipment below.

Mechanical HVAC equipment located on the ground or on rooftops of new buildings would have the potential to generate noise levels which average 65 dBA at a distance of 50 feet (City of Santa Ana

2010), and may run continuously during the day and night. Depending on where it is located, HVAC equipment could exceed the City's hourly noise limit for adjacent single-family residences and NSLU (such as parks) of 55 dBA during daytime hours (45 dBA at night), the limit for adjacent multi-family residences of 60 dBA during daytime hours (50 dBA at night), or the limit for daytime-only NSLU (such as a school) of 55 dBA. For a single point source such as a piece of mechanical equipment, the sound level normally decreases by about 6 dBA for each doubling of distance from the source. Therefore, it is assumed that HVAC equipment would generate noise levels that exceed 45 dBA within 500 feet for the equipment, 50 dBA within approximately 275 feet of the equipment, and 55 dBA within 155 feet of the equipment. Consequently, residences or other NSLU located in or in close proximity to a mixed-use building or other building that requires an HVAC system could result in a potentially significant impact.

Large commercial facilities that would require HVAC systems are permitted in the Urban Center, Town Center, Urban Neighborhood, and Neighborhood Core zones. Within these mixed-use areas, residential development and commercial development would be located adjacent to or within the same building as each other. The proposed elementary school in Planning Area G and the Neighborhood Park are in the Urban Neighborhood zone and would potentially be exposed to excessive noise from a commercial HVAC unit. The elementary school in Planning Area W would be located within 155 feet of Planning Area T in the Neighborhood Core zone, which is proposed for commercial development and may expose the school to HVAC noise. The CPF in Planning Area X would also be located within 155 feet of Planning Area W and potentially include an HVAC unit. Multi-family residences in Planning Areas H-1, K-1, M, N, O-1, S-2, T, U-1, Y-1, and Z-1, and the elementary school in either Planning Area G or W would be located near a CPF site.

No commercial development is proposed for the planning areas adjacent to the lower-density Neighborhood Edge and Neighborhood General Zones and no commercial HVAC units would be located within 500 feet of single-family residential development. No single-family residences would be exposed to excessive noise levels from commercial HVAC units. However, proposed parks within 500 feet of a commercial HVAC unit, multi-family residences within 275 feet of a commercial HVAC unit, and schools within 155 feet of a commercial HVAC unit, could be exposed to noise levels that exceed the City's noise standards. A potentially significant noise impact would occur. If Planning Areas G and W are ultimately not chosen to be school sites and instead proposed for multi-family residential development, a potentially significant impact related to HVAC noise would still occur in these planning areas.

Olympian High School, the nearest existing NSLU to the project site, is located approximately 1,000 feet (0.2 mile) west of the project site and the nearest proposed commercial land use. Schools are a daytime NSLU. As discussed above, HVAC units have the potential to generate noise levels which average 65 dBA at a distance of 50 feet, which would attenuate to 55 dBA at approximately 155 feet from the source. Therefore, HVAC noise would not exceed the most conservative daytime standard of 55 dBA more than 155 feet from the source. The High Tech High campus and the nearest off-site residences are located more than 1,000 feet northeast of the project site on Discovery Falls Drive. The project would not result in a significant noise impact to existing off-site receivers related to on-site HVAC equipment.

In addition to HVAC systems, commercial land uses also have the potential to generate noise from truck deliveries, such as engines idling and beeping from backing warning signals at commercial loading docks. Truck deliveries to Village 9 would involve deliveries of supplies to commercial uses. State law currently prohibits heavy-duty diesel delivery trucks from idling more than five minutes; therefore, noise from idling would be limited to five minutes during truck deliveries (CCR Title 13, Section 2485). Truck trips would be periodic throughout the Urban Center, Town Center, Urban Neighborhood, and Neighborhood Core zones and would not be concentrated in one location. Given the intermittent and short duration of noise from truck deliveries in a given location, truck deliveries would not be a source of excessive

ambient noise. Section 3.6 of the SPA Plan, Performance Standards, includes standards for parking and loading. This section requires loading activities to be located and operated so that they do not disturb neighboring residences. Therefore, impacts related to truck deliveries and loading would be less than significant.

Noise sources from parking lots include car alarms, door slams, radios, tire squeals. These sources typically range from about 30 to 66 dBA at a distance of 100 feet (Gordon Bricken & Associates 1996), and are generally short-term and intermittent. Parking lots also have the potential to generate noise levels that exceed 65 dBA depending on the location of the source; however, noise sources from the parking lot would be different from each other in kind, duration, and location, so that the overall effects would be separate and in most cases would not affect noise-sensitive receptors at the same time. Therefore, noise generated from parking lots would be less than significant.

## **2. Residential Development**

Residences would be developed across the project site. Multi-family residential development would be located in the northern half of the site in the Town Center, Urban Centers, Urban Neighborhoods, and Neighborhood Core Zones. Single-family development would be located in the southern area of the site in the Neighborhood General and Neighborhood Edge Zones. Noise generated from residential uses is generally described as “nuisance noise.” Nuisance noise is defined as intermittent or temporary neighborhood noise from sources such as amplified music, barking dogs, and landscape maintenance equipment that may be disturbing to other residents.

Nuisance noise impacts are more likely to occur in the more densely developed areas of the project site (such as the Urban Center, Town Center, Urban Neighborhood, and Neighborhood Core) where residences would be closer together and neighbors would be more likely to hear a neighbor’s dog or music. However, single-family development would also likely be exposed to occasional nuisance noise. CVMC Section 19.68, the noise ordinance, prohibits nuisance noise from exceeding the City’s noise standards at any time. Compliance with the noise ordinance would limit exposure to excessive nuisance noise. The Chula Vista Police Department enforces the City’s noise ordinance. Additionally, nuisance noises would be different from each other in kind, duration, and location, so that the overall effects would be separate and in most cases would not affect the receptors at the same time. Therefore, nuisance noise in residential neighborhoods would not result in significant impact.

## **3. Neighborhood Park**

A Neighborhood Park is proposed in the western area of the project site in Planning Area L and would accommodate uses such as athletic fields, sports courts, play equipment, community center building, and picnic areas. The neighborhood park is intended for community use. The Neighborhood Park would provide larger fields and more courts compared to other parks in Village 9 in order to accommodate games and spectators for uses such as team sports events. This park would provide lighting on the fields and sports courts to accommodate evening programs. Specific amenities and locations are not known at this time. Actual parks plans will be determined by an individual park site master plan prepared prior to park development. The actual location of the active uses is not known at this time; therefore is conservatively assumed that active uses would be located at the edge of the park, adjacent to planning areas proposed for residential use.

The EIR for the Otay Ranch Villages 2, 3, and Portion of 4 SPA Plan determined that the use of multi-purpose fields such as those proposed for the Village 9 Neighborhood Park have the potential to generate noise levels of approximately 54 dBA at 50 feet from the field (City of Chula Vista 2006). Noise attenuates at a rate of 6 dBA for every doubling of distance (FTA 2006); therefore, noise from the active

park uses could generate noise levels of 60 dBA at 25 feet from the use. Due to distance, the active park uses would generally attenuate to below the daytime noise limit of 60 dBA more than 25 feet from the use, and 55 dBA more than 45 feet from the use.

There are no single-family residences located within 45 feet of the Neighborhood Park site. Therefore, a potential daytime noise impact would not occur. A potential daytime noise impact could occur if exterior noise levels associated with park uses exceed 60 dBA at the property lines of multi-family residences or an elementary school located adjacent to the park. Because the actual layout of the park is currently unknown, it is assumed that active uses could be located at the edge of the park. Therefore, the Neighborhood Park could generate noise levels that exceed 60 dBA up to 25 feet from the park boundary. The park is separated from all planning areas by more than 25 feet by Street G, with the exception of Planning Areas F, S-1, and S-2. As shown on the grading plan for Village 9 (Figure 3-16), a steep slope between the Neighborhood Park and the adjacent Planning Areas S-1 and S-2 would provide a more than 25 foot separation between the park and developable areas in Planning Areas S-1 and S-2. Therefore, the Neighborhood Park would not generate noise levels in excess of 60 dBA in Planning Areas S-1 and S-2 and a significant daytime impact would not occur. A steep slope would also separate Planning Area F from the Neighborhood Park; however, the southernmost developable area of Planning Area F would still be located within 25 feet of the Neighborhood Park, where noise levels may exceed 60 dBA during daytime hours. The exact location of future residences in Planning Area F is unknown; therefore, it is conservatively assumed that residences may be located at the southern edge of Planning Area F and would have the potential for exposure to excessive noise from the playing fields. A potentially significant impact would occur.

According to CVMC Section 2.66.270 some parks in the City stay open as late as 10:30 p.m.; therefore, the Neighborhood Park could be subject to the stricter City nighttime one-hour noise standard of 50 dBA between 10:00 p.m. and 10:30 p.m. for multi-family residential uses, and 45 dBA for single-family residences, if noise-generating activities from sports fields are expected to operate after 10:00 p.m. However, it is reasonable to assume that noise levels would generally be lower than 54 dBA at 50 feet between 10:00 p.m. and 10:30 p.m. because activities would be winding down in anticipation of park closing, and few children would be generating noise levels during the late evening as high as those occurring during peak park activity hours. Therefore, noise levels from parks would not be expected to exceed nighttime noise standards between 10:00 p.m. and 10:30 p.m.

Electronic amplification equipment would not be permanently installed at the Neighborhood Park, but temporary systems may be used in conjunction with active sport activities such as skating, softball, soccer, court sports, and swimming. Public events may also occur that required amplified noise. Activities that would include amplified noise or other temporary noise generating equipment would be required to obtain a permit from the City of Chula Vista Director of Recreation. If a permit is not obtained, CVMC Section 2.66.185 prohibits any park or recreation center user to operate a radio, television, stereo or any similar electronic or mechanical device capable of producing or emitting sound at a volume where the sound is audible at a distance greater than 100 feet from the point of emission.

Activities that require permitted amplified noise would be limited to normal park operation hours. Additionally, amplified noise would not be a constant source of noise. Activities would occur on various dates and times, and at varied locations. Permitted uses would still be subject to the City hourly exterior noise level limits established in the municipal code. The Chula Vista Police Department enforces the nuisance noise provisions of the City municipal code and the Development Services Department enforces the remaining provisions of the noise ordinance. Therefore, nuisance noise and permitted amplified noise from events at the Neighborhood Park would not result in a significant impact.

Scheduled maintenance by maintenance crews would occur on a daily basis at the Neighborhood Park. Maintenance activities would include the use of gasoline-powered mowers, trimmers, blowers, and edgers resulting in intermittent short-term temporary noise increases. Maintenance activities are permitted uses and would be subject to the one-hour Leq noise limits of 60 dBA in multi-family neighborhoods. Additionally, maintenance equipment would not be operating at any one location for more than a few minutes, and all equipment would not be operating simultaneously. Due to the limited amount of time equipment would be operating in one location, operation of landscape equipment would generally not exceed the hourly noise level limit at a particular receptor. Therefore, landscape maintenance would result in a less than significant impact.

#### **4. Town Squares**

Two town squares would be located in Village 9 in Planning Areas C and I. The town squares may be used for special events. Special events may be exempt from the City's noise level limits in accordance with Section 19.68.060 of the Noise Ordinance. Such events would be required to obtain a permit issued by the City, and would be subject to any limitations established in the permit. Additionally, the town squares would not include major active use facilities. The town squares would serve as community gathering places and would support events such as farmer's markets and art shows that would generally not result in noise levels higher than normal conservation. The town squares may also include gardens or urban spaces for quiet reflection that would encourage low noise levels. Nighttime activity in the town squares would be expected to be limited to normal conversation levels. Similar to the Neighborhood Park, use of electronic amplification equipment, if occasionally required, and maintenance activities at these facilities would be subject to City requirements and would not result in excessive noise levels. Therefore, the town squares would not result in a significant impact.

#### **5. Other Recreational Facilities**

Additional parks, trails, and playgrounds would be located throughout the site, including pedestrian parks in Planning Areas GG, HH, and II, and a pedestrian trail through Planning Area OS-3. These facilities would be located in close proximity to residences. Additionally, the pedestrian parks proposed in Planning Areas HH and II and trail through OS-3 would be located adjacent to or within 100 feet of the MSCP Preserve. The proposed trails would be used for walking and bicycling and would generally not support activities that generate noise levels higher than normal conservation. The amenities, facilities, and uses of the pedestrian parks that occur within the Preserve Edge, a 100-foot buffer zone adjacent to the Preserve, would be restricted to the types that are least likely to impact adjacent biological resources, such as small to medium toddler play areas (tot lots). Playgrounds and sports courts are also potential uses in pedestrian parks, but would only be allowed outside of the Preserve Edge. Therefore, these uses would be limited to the pedestrian park in Planning Area GG. The playgrounds and sports courts would be limited in size and designed to serve residences immediately surrounding the parks. These pedestrian parks would support smaller playground and sports courts compared to the Neighborhood Park to serve immediately surrounding residences. The linear shape of the parks would limit the playground and sports courts from being able to accommodate large organized sporting events or play groups because no extra space for spectators or parking would be provided. Unlike the Neighborhood Park, which would provide lighted sports amenities, the pedestrian park sports courts and neighborhood playgrounds would generally not be in use after dark because these uses would not be lighted, other than lighting required for safety. Therefore, the facilities would not generate noise levels that would interfere with wildlife, or result in excessive noise levels at nearby residences. Impacts from the trails, pedestrian parks, and small playgrounds would be less than significant.



## **6. Schools**

Two elementary school sites are proposed in Village 9 in Planning Area G and Planning Area W. Schools may generate noise from amplified noise such as bells and loudspeaker announcements. Bells or other announcement devices are classified as stationary non-emergency signaling devices by the City. The noise ordinance prohibits schools from sounding these devices for more than 120 seconds continually in an hourly period, or intermittent sounding over a five-minute period in any hour. The elementary schools would comply with Chula Vista's noise standards and would not result in significant impact related to bells and loudspeaker announcements.

The elementary school would include recreational facilities such as playgrounds. Noise from the elementary school would be limited to daytime hours. The level of activity during recess and afterschool activities is assumed to be similar to active use of the multi-purpose fields at the Neighborhood Park. Therefore, the schools would have the potential to generate noise levels up to 54.3 dBA at 50 feet, which would exceed the daytime noise level limit of 55 dBA at single-family residences up to 45 feet from the schools, and the daytime noise level limit of 60 dBA up to 25 feet from the school. Impacts from the schools would generally be limited to residences located directly adjacent to the school property. Both elementary schools sites are separated from other development on all sides by roadways and would not expose sensitive receptors to excessive noise. Similar to the Neighborhood Park, use of electronic amplification equipment and maintenance activities at the school would not result in a significant impact.

## **7. Operational Noise Associated with Infrastructure Improvements**

The infrastructure improvements associated with Village 9 include pipelines and electrical lines, which are passive systems and would not generate operational noise. Inspection of these facilities would not require intensive activities that would result in excessive noise levels. Occasional maintenance (2-4 times per year) may be required that necessitates the use of large equipment; however, such activities would be infrequent, temporary, and limited to the area close to the maintenance site. Maintenance equipment would be subject to the limits on operation hours in the City's Noise Ordinance for construction and building work in residential zones. Therefore, impacts that occur from operation of these facilities would be less than significant.

## **8. Exposure to Traffic Noise**

The primary way in which the project could result in the exposure of proposed NSLU to excessive noise levels is on-site vehicular traffic noise. Acoustical calculations were conducted for mitigated buildout (2030) traffic volumes along on-site roadway segments using the FHWA Traffic Noise Model (TNM) Version 2.5 (2004). The modeling equations take into account the posted vehicle speed, traffic volumes, estimated vehicle mix, and topography. The traffic volumes are based on data from the Village 9 traffic study prepared by RBF Consulting (2013). The Unmitigated Year 2030 scenario represents the worst-case condition for off-site impacts. However, the Mitigated Year 2030 scenario is the worst-case condition for traffic that traverses the project site because of the redistribution of regional traffic that would occur as a result of the implementation of the required traffic measures, and is therefore used in the noise analysis for on-site noise impacts.

There are currently no major sources of traffic noise and no NSLU on the project site; therefore the Existing Plus Project scenario is not applicable for the on-site analysis relating to noise exposure of NSLU. Table 5.5-6 includes the traffic assumptions for the on-site roadways.

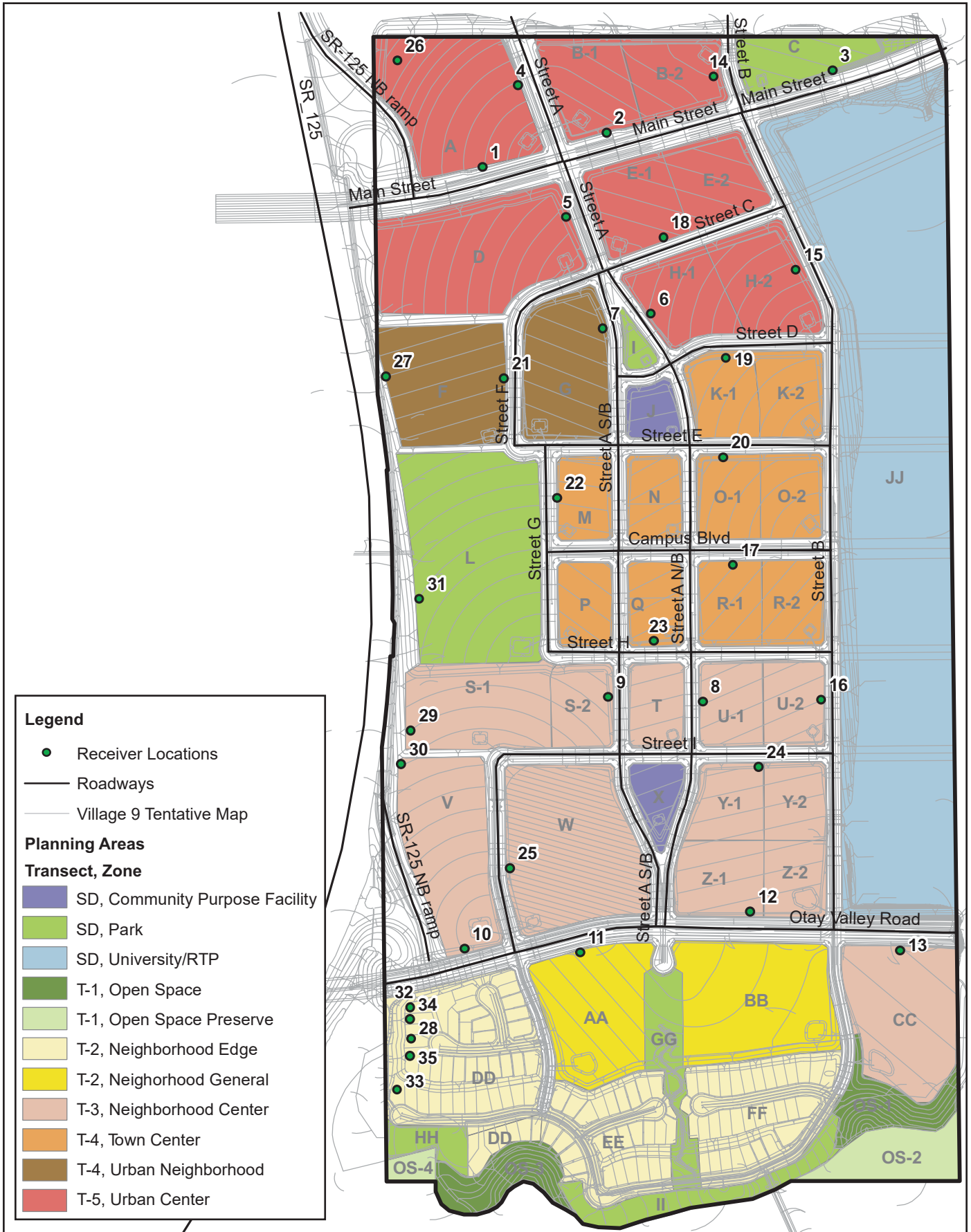
Noise levels were modeled for a series of receiver locations throughout the site to determine the future traffic noise levels at locations where NSLU have been proposed according to the TM for Village 9, as shown in Figure 5.5-2. In areas where individual lots have not been planned yet, receptor locations were placed 50-75 feet from the roadway centerline, or at a location that would be most affected by roadway noise (such as along the western sides of the Planning Areas near SR-125). Noise levels were modeled for one ground level and one upper story receptor at each location. Buildings proposed within the SPA Plan range from two stories to 15 stories in height.

A floor height of 26 feet was used to provide a general estimate of upper story receivers, and a distance of 5 feet was added to the floor height to represent receiver ear height. The modeled noise level at each receiver location is shown in Table 5.5-7. Receivers at different heights may experience higher or lower noise levels than shown. Additionally, ground-level noise contours were calculated for SR-125 and the primary site roadways: Main Street, Otay Valley Road, Street A, Street B, Street C, Street D, Street E, Campus Boulevard, Street H, Street I, Street F, and Street G. These contours are shown in Figure 5.5-3, and include the effects of future grading on the property but do not take into account any noise mitigation measures or shielding provided by the proposed buildings. Traffic noise modeling data is provided in the noise technical report (Appendix D).

Existing measured daytime ambient noise levels on the project site range from 40 dBA to 57 dBA Leq. As shown in Table 5.5-7, the increase in vehicular traffic on the project site would result in ambient noise levels as high as 73 dBA (CNEL) at the receptor closest to the centerline of a major roadway. However, there are no existing NSLU on the project site. Therefore, the increase in noise levels on the project site would not result in the exposure of any on-site existing NSLU to noise levels in excess of Chula Vista's noise compatibility guidelines. No impact related to existing on-site NSLU would occur.

As shown in Table 5.5-7 and on Figure 5.5-3, the upper story receivers in the single-family residential lots at the northwest corner of Planning Area DD closest to Otay Valley Road and SR-125, would potentially be exposed to noise levels in excess of 65 dBA CNEL, which is the City's exterior noise level limit for residences. Ground floor and upper story multi-family residences and outdoor use areas in Planning Areas A, D, F, S-1, and V and the portion of the neighborhood park (Planning Area L) closest to SR-125 along the western edge of the site; ground floor and upper story single-family and multi-family residences, an elementary school, and outdoor use areas in Planning Areas V, W, and AA along Otay Valley Road; ground level and upper story multi-family residences and outdoor use areas in Planning Areas A, B-1, B-2, D, E-1, and E-2 along Main Street, Street A, and Street B; and the Town Square (Planning Area C) along Main Street and Street B would potentially be exposed to noise levels in excess of Chula Vista's noise compatibility guidelines of 65 dBA CNEL for NSLU, including residences and outdoor use areas.

Some office uses would be potentially located in the mixed-use areas of the site, which are compatible with noise levels up to 70 dBA CNEL. Traffic noise would not exceed 70 dBA CNEL outside of the roadway right-of-way, except for along the western edge of the site near SR-125 in portions of Planning Areas D, and along Main Street in Planning Areas A, B-1, B-2, D, E-1, and E-2. If offices are located in these areas proposed for commercial development, they may be exposed to noise levels in excess of 70 dBA CNEL. Therefore, potentially significant impacts to residences, parks and outdoor use areas, and offices would potentially occur as a result of traffic noise that exceeds Chula Vista's noise compatibility guidelines.



**Legend**

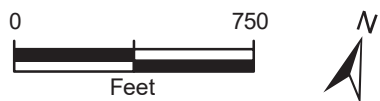
- Receiver Locations
- Roadways
- Village 9 Tentative Map

**Planning Areas**

**Transect, Zone**

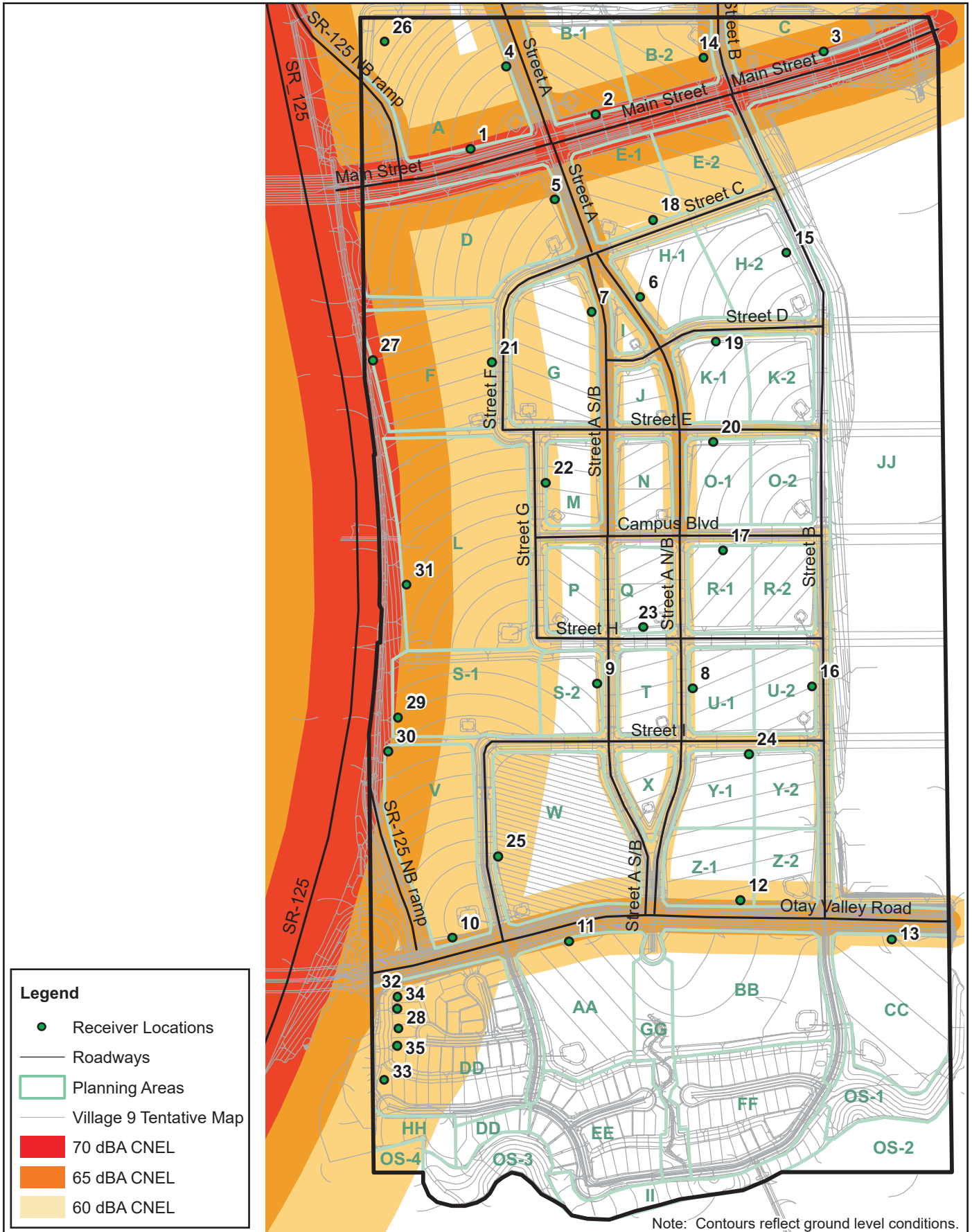
- SD, Community Purpose Facility
- SD, Park
- SD, University/RTP
- T-1, Open Space
- T-1, Open Space Preserve
- T-2, Neighborhood Edge
- T-2, Neighborhood General
- T-3, Neighborhood Center
- T-4, Town Center
- T-4, Urban Neighborhood
- T-5, Urban Center

Source: Atkins 2011

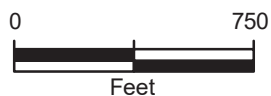


**NOISE RECEIVER LOCATIONS  
FIGURE 5.5-2**





Source: Atkins 2011



**2030 BUILDOUT NOISE CONTOURS  
FIGURE 5.5-3**

**Table 5.5-6 2030 Buildout On-site Roadway Traffic Volumes**

Roadway	Segment	Speed (mph) <sup>(1)</sup>	ADT Volume <sup>(2)</sup>	Vehicle Mix		
				Autos	MDT	HDT
Main Street	SR-125 ramp to Street A	45	53,400	95%	3%	2%
Main Street	Street A to Street B	45	44,500	95%	3%	2%
Main Street	Street B to Eastlake Parkway	45	40,800	95%	3%	2%
Street A	North project boundary to Main Street	30	19,600	95%	3%	2%
Street A	Main Street to Street C	30	24,400	95%	3%	2%
Street A	Northbound, Campus Boulevard to Street C	30	7,200	95%	3%	2%
Street A	Southbound, Street C to Campus Boulevard	30	7,200	95%	3%	2%
Street A	Northbound, Otay Valley Road to Campus Boulevard	30	5,700	95%	3%	2%
Street A	Southbound, Campus Boulevard to Otay Valley Road	30	5,700	95%	3%	2%
Otay Valley Road	West project boundary to Street I	45	14,500	95%	3%	2%
Otay Valley Road	Street I to Street A	45	11,400	95%	3%	2%
Otay Valley Road	Street A to Street B	45	9,500	95%	3%	2%
Otay Valley Road	Street B to east project boundary	45	7,700	95%	3%	2%
Street B	Northern project boundary to Main Street	25	12,300	95%	3%	2%
Street B	Main Street to Campus Boulevard	25	15,800	95%	3%	2%
Street B	Campus Boulevard to Otay Valley Road	25	8,600	95%	3%	2%
Campus Boulevard	Street G to Street B	25	2,000	97%	2%	1%
Street C	Street F to Street B	25	8,000	97%	2%	1%
Street D	SB Street A to Street B	25	4,000	97%	2%	1%
Street E	Street F to Street B	25	1,500	97%	2%	1%
Street F	Street C to Street E	25	2,000	97%	2%	1%
Street G	Street E to Street H	25	1,000	97%	2%	1%
Street H	Street G to Street B	25	1,500	97%	2%	1%
Street I	WB End to Street B	25	3,700	97%	2%	1%
Street I	WB end, south to Otay Valley Road	25	3,700	97%	2%	1%
SR-125	Birch Road to Main Street	65	30,200	95%	3%	2%
SR-125	Main Street to Otay Valley Road	65	46,300	95%	3%	2%
SR-125	South of Otay Valley Road	65	46,300	95%	3%	2%
SR-125/Main Street northbound ramp	On-ramp	35	13,230	95%	3%	2%
SR-125/Otay Valley Road southbound ramp	On-ramp	35	3,820	95%	3%	2%

<sup>(1)</sup> On-site roadway speed is the posted speed limit proposed for the roadway provided in the Village 9 SPA Plan.

<sup>(2)</sup> ADT volumes are based on the peak hour intersection volumes provided in the TIA in Exhibit 38 (RBF 2013). ADT is assumed to be ten times the peak hour volume.

NB = northbound; SB = southbound; WB = westbound; EB = eastbound; MDT = medium duty trucks; HDT = heavy duty trucks

Note: Traffic volumes assume the future construction of the road improvements required in the implementation program described in the project traffic study. This condition is referred to as the 2030 Mitigated scenario in the project traffic study.

Source: RBF 2013.



**Table 5.5-7 2030 Buildout On-site Noise Levels**

Receiver Location <sup>(1)</sup>	Planning Area	Receiver Type	Acceptable Noise Level <sup>(2)</sup>	Ground Level Traffic Noise Level (dBA CNEL)	Upper Story Traffic Noise Level (dBA CNEL)	Significant Impact?
#1	A	Multi-family Residences and Commercial	65	<b>72</b>	<b>72</b>	<b>Yes</b>
#2	B-1	Multi-family Residences and Commercial	65	<b>72</b>	<b>72</b>	<b>Yes</b>
#3	C	Town Square	65	<b>71</b>	<b>71</b>	<b>Yes</b>
#4	A	Multi-family Residences and Commercial	65	<b>66</b>	<b>66</b>	<b>Yes</b>
#5	D	Multi-family Residences and Commercial	65	65	<b>68</b>	<b>Yes</b>
#6	H-1	Multi-family Residences and Commercial	65	63	64	No
#7	G	Elementary School	65	62	64	No
#8	U-1	Multi-family Residences	65	62	62	No
#9	S-2	Multi-family Residences	65	61	62	No
#10	V	Multi-family Residences	65	65	<b>68</b>	<b>Yes</b>
#11	AA	Single-family Residences	65	<b>66</b>	<b>66</b>	<b>Yes</b>
#12	Z-1	Multi-family Residences	65	65	65	No
#13	CC	Multi-family Residences	65	63	63	No
#14	B-2	Multi-family Residences and Commercial	65	<b>66</b>	<b>67</b>	<b>Yes</b>
#15	H-2	Multi-family Residences and Commercial	65	59	63	No
#16	U-2	Multi-family Residences	65	60	60	No
#17	R-1	Multi-family Residences and Commercial	65	57	59	No
#18	E-1	Multi-family Residences and Commercial	65	60	64	No
#19	K-1	Multi-family Residences	65	59	60	No
#20	O-1	Multi-family Residences and Commercial	65	58	59	No
#21	F	Multi-family Residences	65	61	65	No
#22	M	Multi-family Residences and Commercial	65	60	62	No
#23	Q	Multi-family Residences and Commercial	65	57	60	No
#24	Y-1	Multi-family Residences	65	58	59	No
#25	W	Elementary School	65	61	63	No
#26	A	Multi-family Residences and Commercial	65	63	65	No
#27	F	Multi-family Residences	65	<b>72</b>	<b>73</b>	<b>Yes</b>
#28	DD	Single-family Residences	65	62	<b>66</b>	<b>Yes</b>
#29	S-1	Multi-family Residences	65	<b>68</b>	<b>72</b>	<b>Yes</b>
#30	V	Multi-family Residences	65	<b>71</b>	<b>72</b>	<b>Yes</b>
#31	L	Neighborhood Park	65	<b>68</b>	<b>72</b>	<b>Yes</b>
#32	DD	Single-family Residences	65	64	<b>67</b>	<b>Yes</b>
#33	DD	Single-family Residences	65	64	65	No
#34	DD	Single-family Residences	65	64	<b>66</b>	<b>Yes</b>
#35	DD	Single-family Residences	65	62	65	No

<sup>(1)</sup> Receivers are located at various distances from the roadway centerline. Noise level represents the noise level at the receptor. See Figure 5.5-2 for receptor locations. Upper story receivers are assumed to be located at a floor height of 26 feet.

<sup>(2)</sup> 65 dBA CNEL is the most conservative noise level that is acceptable for the land uses associated with the receiver location. Some land uses have an acceptable noise level higher than 65 dBA CNEL, including commercial land use.

Note: Significant impacts are shown in **bold**.

Source: FHWA 2004. See appendix for noise model outputs.

Noise levels would not exceed 65 dBA CNEL at the proposed Planning Area G elementary school site. Therefore, a potentially significant impact to this school as a result of traffic noise would not occur. If this site is ultimately not chosen to be used as a school site and instead developed with multi-family residential uses, the residential development would not be exposed to noise levels in excess of 65 dBA CNEL and impacts would be less than significant.

Multi-family residences throughout the Urban Center, Urban Neighborhood, Neighborhood Center, and Neighborhood General Zones would potentially be exposed to exterior noise levels exceeding 65 dBA CNEL from traffic noise, which would exceed the City's noise compatibility guidelines, and would also trigger the Title 24 requirement for the preparation of acoustical studies for all multi-family residences potentially exposed to noise levels greater than 60 dBA CNEL. Outdoor usable areas in these zones, such as outdoor dining patios, would also potentially be exposed to noise levels in excess of 65 dBA CNEL from traffic noise.

The Planning Area W elementary school along Otay Valley Road would also potentially be exposed to noise levels in excess of 65 dBA CNEL from traffic noise. If this site is ultimately not chosen as a school site and instead developed with multi-family residential uses, the residential development would potentially be exposed to noise levels in excess of 65 dBA CNEL from traffic noise. Additionally, multi-family and single-family residences along Otay Valley Road, Main Street, Street A, Street B, or SR-125 would potentially be exposed to exterior noise levels in excess of 60 dBA CNEL. Interior noise levels would also have the potential to exceed 45 dBA CNEL in residences in the Urban Center, Urban Neighborhood, and Neighborhood Center Zones and single-family residences along Otay Valley Road and SR-125; therefore, a potentially significant impact related to interior noise levels would also occur.

Street C, Street D, Street E, Campus Boulevard, Street H, Street I, Street F, and Street G would not generate noise levels of 65 CNEL or greater. The noise contours in Figure 5.5-3 show that traffic noise in all of the commercial areas in the Village 9 Urban Center, Urban Neighborhood, Town Center, and Neighborhood Center are projected to be below the 75 dBA CNEL standard for commercial uses that do not include outdoor usable areas, and that the noise level for the school proposed in Planning Area G would not exceed 65 dBA CNEL. Therefore, impacts to commercial uses and the Planning Area G elementary school as a result of traffic noise would be less than significant. As discussed in the previous paragraph, commercial or retail uses that include outdoor useable space such as an outdoor dining area are compatible with noise levels up to 65 dBA CNEL and would have the potential to be exposed to traffic noise in excess of this standard.

### **9. MSCP Preserve Area**

Following construction, the southernmost residences in Village 9 would be located adjacent to MSCP Preserve area. However, residences are not sources of substantial noise. As described above, Planning areas HH and II are designated as pedestrian parks in the Village 9 Site Utilization Plan. These areas are also adjacent to the Preserve but would not be expected to generate excessive noise levels.

Occasional maintenance activities would be required along the edge of development, such as vegetation and sediment removal. These activities would not require heavy construction equipment that would generate excessive noise. As described in the Preserve Edge Plan in the Village 9 SPA Plan, a manual weeding program would be prepared for the preserve edge.

Occasional maintenance of the off-site utilities may require heavy equipment; however, such activities would be infrequent and temporary. The City's MSCP Plan states that infrastructure repairs and maintenance are allowable as needed in the MSCP Preserve. Maintenance would be subject to the

MSCP requirement that, to the extent practicable, access for non-emergency routine maintenance will be limited during bird breeding seasons (April 1 through June 31) in areas where breeding and/or nesting activity may occur. Therefore, impacts would be less than significant.

### **10. Impacts from Operation of Off-site Facilities**

Olympian High School is a source of non-vehicular operational noise from bells or other signaling devices and activities on the campus such as cheering and loudspeakers at football games. The football field is located on the east side of campus, approximately 0.2 mile from the project site, and is separated from the site by SR-125. Noise levels for a high school championship game have been estimated to be 71 dBA at a distance of 50 feet (RECON 2005). This estimate was used to represent the worst-case scenario for football games at Otay Ranch High School. Otay Ranch High School has a greater stadium capacity than Olympian High School, and therefore this estimate represents a conservative estimate of noise generated by Olympian High School. Based on this estimate, football games currently generate a worst-case noise level of up to 45 dBA at the Village 9 boundary when speakers are in use, which would not exceed the City's daytime or nighttime noise standard for single-family residences. Additionally, noise from the school would generally not be noticeably audible over traffic noise from SR-125. Therefore, noise from Olympian High School would not result in a significant impact to Village 9. However, large events may occasionally be audible in the northeastern area of the site.

The closest off-site operation to the project site that would involve blasting or other loud industrial noise is the Otay Valley Rock Quarry. The Otay Valley Rock Quarry is located southwest of Village 4, approximately 1.5 miles from the project site. The project site and the quarry are separated by changes in topography and SR-125. Operation of the quarry is not audible on the project site. Therefore, operation of the quarry would not result in a significant impact to development in Village 9.

The San Diego Trolley Blue Line and SD&AE freight line pass through the western part of Chula Vista approximately eight miles west of the project site. No noise contours have been established for rail line operations in Chula Vista. According to the EIR prepared for the Downtown San Diego Community, noise levels generated by railroad activity along the streets adjacent to the railroad tracks do not exceed 65 dBA CNEL. Due to distance, Village 9 would not be exposed to railroad noise. No impact would occur.

### **B. Threshold 2: Expose persons to or generation of excessive groundborne vibration or groundborne noise levels.**

The main concern associated with groundborne vibration from this type of project is annoyance; however, vibration-sensitive instruments and operations, such as those found in hospitals and laboratories, can be disrupted at much lower levels than would typically affect other uses. In extreme cases, the vibration can cause damage to buildings, particularly those that are old or otherwise fragile. No vibration-sensitive land uses are proposed as part of the project; however, excessive levels of groundborne vibration may be an annoyance to residences. Some common sources of groundborne vibration are trains, and construction activities such as blasting, pile-driving and heavy earth-moving equipment. Vibration sensitive land uses within 600 feet of a railroad may be exposed to disruptive vibration (FTA 2006). Beyond 600 feet, vibration impacts would not occur. Since the project is located more than six miles away from the trolley and freight rail line in western Chula Vista, vibration from railroads would not be felt at the project site. Blasting and earth moving activities occur at the Otay Valley Rock Quarry. However, the quarry is located more than one mile from the project site. Vibration from quarry operations would not be felt at the project site. Therefore, the primary source of groundborne vibration occurring as part of the project is construction activity.

Vibration-sensitive instruments and operations may require special consideration during construction. Vibration criteria for sensitive equipment and operations are not defined and are often case specific. In general, the criteria must be determined based on manufacturer specifications and recommendations by the equipment user. As a guide, major construction activity within 200 feet and pile driving within 600 feet may be potentially disruptive to sensitive operations (Caltrans 2002). No pile driving is anticipated to be necessary as part of project construction.

The nearest existing vibration-sensitive land use to the project site is the Sharp Chula Vista Medical Center, located approximately three miles to the northwest of the project site on Medical Center Court. At three miles from the nearest construction activity, the research facility would be located outside of the vibration screening distances for major construction activity (200 feet) and pile driving (600 feet). Therefore construction activity would not affect any existing off-site vibration-sensitive land use. Because construction across the project site would be phased, new construction on the project site would have the potential to expose developed on-site residences to groundborne vibration because construction activities would likely take place within 200 feet of a residence. If blasting is required, the City Engineer and Fire Marshal will require compliance with blasting restrictions placed on grading plans.

It should be noted that ground vibrations from construction activities do not often reach the levels that can damage structures or affect activities that are not vibration-sensitive, although the vibrations may be felt by nearby persons in close proximity and result in annoyance (FTA 2006). Additionally, Village 9 development would consist of new buildings constructed in accordance with all building codes and would not be susceptible to vibration damage. Vibration impacts would be temporary and would cease following construction. Therefore, impacts related to groundborne vibration during construction would be less than significant.

### **C. Threshold 3: Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

This section addresses the potential for implementation of the SPA Plan and TM to permanently increase ambient noise levels as a result of increased traffic noise. The potential for other noise sources associated with project implementation to result in increases in noise levels that would expose NSLU to excessive noise levels is addressed under Threshold 1.

The noise technical report prepared for the GPA/GDPA SEIR determined that potential impacts related to increases in traffic would be significant (City of Chula Vista 2013). However, the report was based on a programmatic traffic analysis for the GPA/GDPA area. The following analysis tiers updates the noise analysis based on the project-specific traffic study prepared for Village 9 (RBF 2013) and the SPA Plan. The potential for the project to permanently increase traffic noise is addressed under the following scenarios: Existing Plus Project, Interim (Year 2025), and Buildout (Year 2030) with and without implementation of the mitigation measures proposed in Section 5.3, Transportation and Traffic, to reduce traffic congestion. The interim Year 2020 traffic scenario was not analyzed for traffic noise because fewer trips would be generated on the study area roadways under these scenarios compared to the Year 2025 and Year 2030 scenarios (RBF 2013). In addition, the roadways affected by the mitigation required for the Year 2025 scenario result in lower traffic volumes than the Unmitigated Year 2025 scenario; therefore, the Mitigated Year 2025 scenario is not included in the traffic noise analysis.

Traffic levels for each roadway are included in the appendix. Noise levels for area roadways were calculated using standard noise modeling equations adapted from the FHWA noise prediction model. The modeling calculations take into account the posted vehicle speed, average daily traffic volume, and the estimated vehicle mix. Noise levels at distances further from the source than the specific receptor

would be lower due to attenuation provided by increased distance from the noise source. Generally, noise from heavily traveled roadways would experience a decrease of approximately 3 dBA for every doubling of distance from the roadway.

### 1. Existing Plus Project Scenario

Existing and future increases in traffic, with and without the proposed project, are provided in Table 5.5-8, which shows 17 of the 22 existing roadway segments currently generate noise levels that exceed 65 dBA CNEL, without implementation of the project. Project-related traffic noise increases would result in a significant noise impact on six roadway segments under the Existing Plus Project scenario:

- Birch Road, La Media Road to SR-125
- Birch Road, SR-125 to Eastlake Parkway
- Hunte Parkway, Eastlake Parkway to Olympic Parkway
- La Media Road, Olympic Parkway to Birch Road
- Eastlake Parkway, Olympic Parkway to Birch Road
- Eastlake Parkway, Birch Road to Main Street

**Table 5.5-8 Existing Plus Project Traffic Noise Levels**

Roadway	Segment	Existing + Project				
		Existing	Existing + Project	Exceeds 65 dBA CNEL?	Increase in Noise Level	Significant Impact?
Olympic Parkway	I-805 to Brandywine Avenue	75	76	Yes	+1	No
	Brandywine Avenue to Heritage Road	75	76	Yes	+1	No
	Heritage Road to La Media Road	75	77	Yes	+2	No
	La Media Road to SR-125 Ramps	75	75	Yes	0	No
	SR-125 Ramps to Eastlake Parkway	79	80	Yes	+1	No
	Eastlake Parkway to Hunte Parkway	70	71	Yes	+1	No
	East of Hunte Parkway	66	68	Yes	+2	No
Birch Road	La Media Road to SR-125	<b>69</b>	<b>74</b>	<b>Yes</b>	<b>+5</b>	<b>Yes</b>
	SR-125 to Eastlake Parkway	<b>68</b>	<b>74</b>	<b>Yes</b>	<b>+6</b>	<b>Yes</b>
Main Street	I-805 to Brandywine Avenue	73	73	Yes	0	No
	Brandywine Avenue to Heritage Road	71	71	Yes	0	No
Hunte Parkway	Eastlake Parkway to Olympic Parkway	<b>60</b>	<b>69</b>	<b>Yes</b>	<b>+9</b>	<b>Yes</b>
	Olympic Parkway to Otay Lakes Road	67	69	Yes	+2	No
Heritage Road	Palomar Street to Olympic Parkway	69	71	Yes	+2	No
	Main Street to Entertainment Circle	65	65	No	0	No
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	65	65	No	0	No
La Media Road	East Palomar Street to Olympic Parkway	69	71	Yes	+2	No
	Olympic Parkway to Birch Road	<b>69</b>	<b>73</b>	<b>Yes</b>	<b>+4</b>	<b>Yes</b>
Magdalena Avenue	Birch Road to Main Street	64	66	Yes	+2	No
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	70	70	Yes	0	No
	Olympic Parkway to Birch Road	<b>68</b>	<b>71</b>	<b>Yes</b>	<b>+3</b>	<b>Yes</b>
	Birch Road to Main Street	<b>59</b>	<b>75</b>	<b>Yes</b>	<b>+16</b>	<b>Yes</b>

Note: Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by RBF Consulting (2013). Traffic levels for each roadway are included in the appendix. Decibel levels are rounded to the nearest whole number. Significant impacts are shown in **bold**. See appendix for data sheets.



The segments of Hunte Parkway from Eastlake Parkway to Olympic Parkway, and of Eastlake Parkway from Birch Road to Main Street currently do not exceed 65 dBA. Project-related traffic would result in a 9 dBA CNEL increase along this segment of Hunte Parkway and a 16 dBA CNEL increase along this segment of Eastlake Parkway. These increases would cause the noise level along these segments to exceed 65 dBA CNEL and a significant impact would occur. The large increase in noise level along these segments is due to the fact that these roadways currently terminate at the Village 9 boundary and do not provide a thoroughfare for existing development. Project-related traffic noise would also result in a significant increase of three decibels or more along four roadway segments that already exceed 65 dBA CNEL: Birch Road (La Media Road to SR-125 and SR-125 to Eastlake Parkway), La Media Road (Olympic Parkway to Birch Road), and Eastlake Parkway (Olympic Parkway to Birch Road).

The project would result in an increase in noise levels of 1 to 2 dBA CNEL along 10 other roadway segments; however, increases of less than 3 dBA CNEL are generally not perceptible and are considered a less than significant impact.

### **2. Unmitigated Year 2025 Scenario**

The Unmitigated Year 2025 scenario includes development of 245 single-family residences; 3,511 multi-family residences; 875,000 square feet of commercial development; a school; all park and recreational facilities except one CPF in Village 9 as well as cumulative development anticipated by Year 2025. In addition to the existing street network and improvements that would be implemented through the Year 2020, this scenario assumes construction of Main Street from Street A to Eastlake Parkway, Street A from Main Street to Otay Valley Road, Otay Valley Road from Street I to Street A, Street I south of Otay Valley Road, Heritage Road from Olympic Parkway to Main Street, Main Street from La Media Road to Magdalena Avenue, and Santa Victoria Road from Heritage Road to La Media Road. This scenario also assumes installation of a traffic signal at the intersection of Main Street and Street A and widening of Heritage Road from Main Street to Avenida de las Vistas. Year 2025 traffic noise levels, with and without the proposed project, are provided in Table 5.5-9. As shown, 24 of the 25 roadway segments would exceed 65 dBA CNEL without project-related traffic.

The project would result in an increase in noise level of 1 to 2 dBA CNEL along seven roadway segments that would exceed 65 dBA without project implementation; however, increases of less than 3 dBA CNEL are generally not perceptible and are considered a less than significant impact. Additionally, the project would result in an increase in noise level of 1 to 2 dBA CNEL along two roadways that would not exceed 65 dBA CNEL without project implementation. Project-related traffic would not cause these roadways to exceed 65 dBA CNEL and the project-related increase would be less than significant. The project would not result in any significant impacts from noise increases along roadways under the Unmitigated Year 2025 scenario.

### **3. Unmitigated Year 2030 Scenario**

The Unmitigated Year 2030 scenario compares buildout (Year 2030) traffic volumes with and without the project, and without implementation of the mitigation measures identified in Section 5.3, Transportation and Traffic. This scenario assumes full buildout of the proposed Village 9 development and circulation network, as well as cumulative development through Year 2030, with the exception of the segment of Otay Valley Road from Main Street to Village 9. Unmitigated Year 2030 traffic noise levels, with and without the project, are provided in Table 5.5-10. As shown, 26 of the 27 roadway segments would exceed 65 dBA CNEL without project-related traffic.

In the Unmitigated Year 2030 scenario, project-related traffic would not cause any roadway segments to exceed 65 dBA CNEL or result in an increase of three decibels or more along roadways that would exceed 65 dBA CNEL without implementation of the project.

**Table 5.5-9 Unmitigated Year 2025 Traffic Noise Levels**

Roadway	Segment	Year 2025	Year 2025 + Project	Exceeds 65 dBA CNEL?	Increase in Noise Level	Significant Impact?
Olympic Parkway	I-805 to Brandywine Avenue	75	75	Yes	0	No
	Brandywine Avenue to Heritage Road	74	75	Yes	+1	No
	Heritage Road to La Media Road	76	76	Yes	0	No
	La Media Road to SR-125 Ramps	76	76	Yes	0	No
	SR-125 Ramps to Eastlake Parkway	80	80	Yes	0	No
	Eastlake Parkway to Hunte Parkway	74	74	Yes	0	No
	East of Hunte Parkway	69	70	Yes	+1	No
Birch Road	La Media Road to SR-125	74	75	Yes	+1	No
	SR-125 to Eastlake Parkway	73	75	Yes	+2	No
Main Street	I-805 to Brandywine Avenue	74	74	Yes	0	No
	Brandywine Avenue to Heritage Road	73	73	Yes	0	No
	La Media Road to Magdalena Avenue	60	61	No	+1	No
Hunte Parkway	Eastlake Parkway to Olympic Parkway	72	72	Yes	0	No
	Olympic Parkway to Otay Lakes Road	68	69	Yes	+1	No
Heritage Road	Palomar Street to Olympic Parkway	75	75	Yes	0	No
	Olympic Pkwy to Main Street/Hunte Pkwy	73	73	Yes	0	No
	Main Street to Entertainment Circle	68	68	Yes	0	No
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	68	68	Yes	0	No
La Media Road	East Palomar Street to Olympic Parkway	71	71	Yes	0	No
	Olympic Parkway to Birch Road	74	74	Yes	0	No
	Birch Road to Main Street	72	73	Yes	+1	No
Magdalena Avenue	Birch Road to Main Street	67	67	Yes	0	No
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	70	70	Yes	0	No
	Olympic Parkway to Birch Road	72	72	Yes	0	No
	Birch Road to Main Street	74	76	Yes	+2	No

Note: Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by RBF Consulting (2013). Traffic levels for each roadway are included in the appendix. Decibel levels are rounded to the nearest whole number. See appendix for data sheets.

**Table 5.5-10 Unmitigated Year 2030 Traffic Noise Levels**

Roadway	Segment	Unmitigated Year 2030	Unmitigated Year 2030 + Project	Exceeds 65 dBA CNEL?	Increase in Noise Level	Significant Impact?
Olympic Parkway	I-805 to Brandywine Avenue	75	75	Yes	0	No
	Brandywine Avenue to Heritage Road	74	74	Yes	0	No
	Heritage Road to La Media Road	73	74	Yes	+1	No
	La Media Road to SR-125 Ramps	75	75	Yes	0	No
	SR-125 Ramps to Eastlake Parkway	80	80	Yes	0	No
	Eastlake Parkway to Hunte Parkway	74	74	Yes	0	No
	East of Hunte Parkway	72	72	Yes	0	No
Birch Road	La Media Road to SR-125	76	76	Yes	0	No
	SR-125 to Eastlake Parkway	76	76	Yes	0	No
Main Street	I-805 to Brandywine Avenue	76	76	Yes	0	No
	Brandywine Avenue to Heritage Road	75	75	Yes	0	No
	Heritage Road to La Media Road	70	71	Yes	+1	No
	La Media Road to Magdalena Avenue	66	68	Yes	+2	No
	Magdalena Avenue to SR-125	67	69	Yes	+2	No
Hunte Parkway	Eastlake Parkway to Olympic Parkway	74	74	Yes	0	No
	Olympic Parkway to Otay Lakes Road	70	70	Yes	0	No
Heritage Road	Palomar Street to Olympic Parkway	75	75	Yes	0	No
	Olympic Pkwy to Main Street/Hunte Pkwy	74	75	Yes	+1	No
	Main Street to Entertainment Circle	73	73	Yes	0	No
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	73	73	Yes	0	No
La Media Road	East Palomar Street to Olympic Parkway	73	73	Yes	0	No
	Olympic Parkway to Birch Road	73	73	Yes	0	No
	Birch Road to Main Street	73	73	Yes	0	No
Magdalena Avenue	Birch Road to Main Street	65	65	No	0	No
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	70	71	Yes	+1	No
	Olympic Parkway to Birch Road	73	73	Yes	0	No
	Birch Road to Main Street	74	74	Yes	0	No

Note: Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by RBF Consulting (2013). Traffic levels for each roadway are included in the appendix. Decibel levels are rounded to the nearest whole number. See appendix for data sheets.

#### 4. Mitigated Year 2030 Scenario

The Unmitigated Year 2030 scenario represents the worst-case condition for off-site roadway noise impacts. As described in the previous section, the proposed project would not result in a significant impact to any roadways in the Unmitigated Year 2030 scenario. However, the Mitigated Year 2030 scenario included in the traffic study represents the worst-case condition for traffic that traverses the project site because of the redistribution of regional traffic that would occur as a result of the implementation of the required traffic measures. Therefore, the Mitigated Year 2030 scenario is also included in this noise analysis. The Mitigated Year 2030 scenario compares buildout (Year 2030) traffic volumes with and without the project, assuming implementation of all of the traffic mitigation measures required for buildout of the proposed project identified in Section 5.3, Transportation and Traffic (mitigation measures 5.3-1 through 5.3-21). This scenario assumes full buildout of the proposed Village 9 development and circulation network, as well as cumulative development through Year 2030.

Mitigated Year 2030 traffic noise levels, with and without the proposed project, are provided in Table 5.5-11. As shown, 26 of the 29 roadway segments would exceed 65 dBA CNEL without project-related traffic.

In the Mitigated Year 2030 scenario, project-related traffic noise increases would not cause any roadway segments to exceed 65 dBA CNEL or result in an increase of three decibels or more along roadways that would exceed 65 dBA CNEL without implementation of the project.

**Table 5.5-11 Mitigated Year 2030 Traffic Noise Levels**

Roadway	Segment	Mitigated Year 2030	Mitigated Year 2030 + Project	Exceeds 65 dBA CNEL?	Increase in Noise Level	Significant Impact?
Olympic Parkway	I-805 to Brandywine Avenue	75	75	Yes	0	No
	Brandywine Avenue to Heritage Road	74	74	Yes	0	No
	Heritage Road to La Media Road	73	74	Yes	+1	No
	La Media Road to SR-125 Ramps	75	75	Yes	0	No
	SR-125 Ramps to Eastlake Parkway	80	80	Yes	0	No
	Eastlake Parkway to Hunte Parkway	74	74	Yes	0	No
	East of Hunte Parkway	72	72	Yes	0	No
Birch Road	La Media Road to SR-125	72	72	Yes	0	No
	SR-125 to Eastlake Parkway	73	74	Yes	+1	No
Main Street	I-805 to Brandywine Avenue	76	76	Yes	0	No
	Brandywine Avenue to Heritage Road	75	75	Yes	0	No
	Heritage Road to La Media Road	70	71	Yes	+1	No
	La Media Road to Magdalena Avenue	69	70	Yes	+1	No
	Magdalena Avenue to SR-125	70	71	Yes	+1	No
Hunte Parkway	Eastlake Parkway to Olympic Parkway	74	74	Yes	0	No
	Olympic Parkway to Otay Lakes Road	70	70	Yes	0	No
Heritage Road	Palomar Street to Olympic Parkway	75	75	Yes	0	No
	Olympic Pkwy to Main Street/Hunte Pkwy	74	75	Yes	+1	No
	Main Street to Entertainment Circle	73	73	Yes	0	No
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	73	73	Yes	0	No
La Media Road	East Palomar Street to Olympic Parkway	73	73	Yes	0	No
	Olympic Parkway to Birch Road	73	73	Yes	0	No
	Birch Road to Main Street	69	70	Yes	+1	No
Magdalena Avenue	Birch Road to Main Street	65	65	No	0	No
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	70	71	Yes	+1	No
	Olympic Parkway to Birch Road	73	73	Yes	0	No
	Birch Road to Main Street	71	72	Yes	+1	No
Otay Valley Road	Main Street to SR-125	63	65	No	+2	No
	SR-125 to Village 9 Access	63	65	No	+2	No

Note: Noise levels are calculated at 50 feet from roadway centerline. Noise levels are based upon traffic data provided by RBF Consulting (2013). Traffic levels for each roadway are included in the appendix. Decibel levels are rounded to the nearest whole number. See appendix for data sheets.

#### **D. Threshold 4: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

Construction of the development proposed in the SPA Plan and TM would generate noise that could expose nearby receptors to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Sound levels from typical construction equipment range from 60 dBA to 90 dBA Leq at 50 feet from the source (FHWA 2008). Noise from construction equipment generally exhibits point source acoustical characteristics. Strictly speaking, a point source sound decays at a rate of 6 dBA per doubling of distance from the source. The rule applies to the propagation of sound waves with no ground interaction.

Construction of the project development would be completed in four phases. The order of phasing has not been determined and would depend on market conditions. The Orange phase would develop a maximum of 308 multi-family residential units, 145 single-family units, a town square, two CPFs, two elementary schools, a pedestrian park, and 194,000 square feet of commercial space in primarily the central and southwest portion of the project site. The Blue phase would develop a maximum of 1,239 multi-family residential units, 494,000 square feet of commercial space, and a neighborhood park in the northwestern area of the project site. The Yellow phase would include a maximum of 614 multi-family units, 121 single-family units, a pedestrian park, and 58,000 square feet of commercial land use in the southeastern portion of the project site. The Purple phase would develop a maximum of 1,573 single-family residential units, a town square, and 754,000 square feet of commercial space in the northeast portion of the project site.

The construction timeframe for the entire buildout of the project is expected to begin in 2013 and take a minimum of eight years to complete, although full buildout of the project is not expected until 2030. All phases would involve grading and site preparation, as well as utilities installation, surface improvements including paving and landscaping, building construction, and external/internal building work. Grading for each phase would last approximately three months, utilities installation would take approximately two months, surface improvements would take approximately two months, and building construction would take place over two years. Off-site grading would also be required in four locations. A small amount of off-site grading would be required in each phase. The grading, utility installation, and surface improvement activities of one phase would overlap with the last nine months of building construction in the previous phase. Although it is unlikely, it is possible that all four categories of construction activities could occur simultaneously on the site within different development phases.

Standard equipment, such as dozers, loaders, scrapers, and miscellaneous trucks would be used for construction of most of the project facilities. The grading, utility installation, and surface improvement activities in each phase would be completed prior to any building construction. However, building construction within each phase would not take place all at once; some areas would be completed before other structures within the phase are under construction. Therefore, building construction activities would have the potential to expose residents within developed, occupied buildings within an area to construction noise in adjacent areas.

Because the order of the development phases is unknown, the estimated noise level at a particular on-site receptor cannot be conclusively determined. However, based on the construction equipment list provided by the applicant and typical equipment noise levels determined by the Roadway Construction Noise Model (RCNM) (FHWA 2008), noise levels from simultaneous operation of the five noisiest pieces of construction equipment (excavator, roller, crane, dozer, and scraper) for each construction activity that could occur simultaneously from any development phase in the same location would have the



potential to generate noise levels of up to 87 dBA at 50 feet from the construction site. These estimates are conservative because equipment for a single construction activity would be spread out over several acres and would not be operating all at once.

The nearest existing receptor to the project site is Olympian High School, located approximately 0.2 mile west of the project site. Construction in the northwest area of the site would generate the greatest amount of construction noise that could be heard at the school. At this distance, the worst-case construction noise level would be approximately 61 dBA during grading operations. Simultaneous construction activities are not likely to occur within the same phase; therefore, the high school would be exposed to Purple phase construction, but would not be exposed to simultaneous construction activities from other phases. Additionally, on-site land uses would potentially be exposed to construction noise as buildings in some areas become occupied while other areas of Village 9 are under construction. Although the Chula Vista exterior noise limits do not apply to construction activity, the noise level from construction would potentially exceed the day time exterior noise standards and may be considered disruptive to residences and the high school during construction operations.

Although the on-site residences could be exposed to excessive construction noise levels, the exposure would be short-term, and would cease upon project buildout. Additionally, construction activities associated with buildout of the project would occur between the hours of 7:00 a.m. and 10:00 p.m., Monday through Friday, and between the hours of 8:00 a.m. and 10:00 p.m., Saturday and Sunday, which is the limit specified in the Chula Vista construction noise ordinance. Because construction would comply with the applicable regulation for construction noise, temporary increases in noise level from construction activities at the on-site residences would be less than significant.

Noise from construction activities would also have the potential to impact sensitive wildlife species in the MSCP Preserve area to the south of the project site. The Biological Resources Report prepared for Village 9 (URS 2012) determined that construction noise exceeding an hourly average sound level of 60 dBA would potentially impact special status wildlife species by inhibiting audible communication between potential mates and between parents and offspring. Based on the worst-case construction noise level of 87 dBA at 50 feet, determined using the RCNM model, and an attenuation rate of 6 dBA for every doubling of distance, construction activities would have the potential to exceed 60 dBA up to 1,100 feet from the source. Assuming that construction noise would be emanating from a location on the project site closest to the MSCP Preserve area (Planning Areas CC, DD, EE, FF, HH, II, and OS-3), construction noise would exceed 60 dBA within the MSCP Preserve area and significant construction noise impact would occur.

**E. Threshold 5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, expose people residing or working in the project area to excessive noise.**

The project site is located 1.75 miles northeast of the Brown Field airport. As discussed in Section 5.5.2, the project site is currently subject to overflights from Brown Field. Flyovers of planes and helicopters taking off from Brown Field are audible on the project site. The project site is not located within the 60 dBA CNEL noise contour of Brown Field; therefore, it would not be anticipated to be exposed to excessive noise levels from the airport. However, overflights from Brown Field may be considered a nuisance to residents. In accordance with standard condition #46 in Section 5-300 of the City's Subdivision Manual, applicants are required to record an Airport Overflight Agreement against the property to the satisfaction of the Development Services Director prior to recordation of any Final Map. This condition would run with the property, and as such, potential nuisance noise from aircraft

overflights would be disclosed to future residents. Therefore, implementation of the project would have a less than significant impact related to exposure of residents to aircraft noise.

#### **F. Threshold 6: Be inconsistent with General Plan, GDP, or other objectives and policies regarding noise thereby resulting in a significant physical impact.**

Table 5.5-12 evaluates the consistency of the project with the applicable General Plan policies and Table 5.5-13 evaluative the project's consistency with the GDP. As shown, the project would be consistent with the General Plan and GDP policies that pertain to noise.

**Table 5.5-12 Project Consistency with Applicable General Plan Noise Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E21:</b> Protect people from excessive noise through careful land use planning and the incorporation of appropriate mitigation techniques.</p> <p><b>Policy E 21.1:</b> Apply the exterior land use-noise compatibility guidelines listed in Table 9-2 of this Environmental Element to new development, where applicable, and in light of project-specific considerations.</p> <p><b>Policy E 21.2:</b> Where applicable, the assessment and mitigation of interior noise levels shall adhere to the applicable requirements of the California Building Code with local amendments and other applicable established City standards.</p> <p><b>Policy E 21.3:</b> Promote the use of available technologies in building construction to improve noise attenuation capacities.</p> <p><b>Policy E 21.4:</b> Continue to implement and enforce the City's noise control ordinance.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these noise policies. This noise impact analysis utilized the land use-noise compatibility guidelines in the Environmental Element, the City's Noise Ordinance, and CCR Title 24 as thresholds for determining significance between different land uses. The City's Noise Ordinance would continue to be enforced with implementation of the SPA Plan.</p> <p>As discussed under Threshold 1 and Threshold 3, the project would have the potential to result in noise impacts that would conflict with the noise compatibility guidelines, the City's Noise Ordinance, and Title 24; however, mitigation measures 5.5-1 through 5.5-8, including compliance with CalGreen, and buildout of the proposed circulation network would reduce potential impacts to a less than significant level, consistent with State and City standards. No significant noise impacts would occur as a result of project construction.</p>
<p><b>Objective E22:</b> Protect the community from the effects of transportation noise.</p> <p><b>Policy E 22.1:</b> Work to stabilize traffic volumes in residential neighborhoods by limiting throughways and by facilitating the use of alternative routes around, rather than through, neighborhoods.</p> <p><b>Policy E 22.3:</b> Employ traffic calming measures, where appropriate, such as narrow roadways and on-street parking, in commercial and mixed use districts.</p> <p><b>Policy E 22.4:</b> Encourage walking; biking; carpooling; use of public transit; and other alternative modes of transportation to minimize vehicular use and associated traffic noise.</p> <p><b>Policy E 22.5:</b> Require projects to construct appropriate mitigation measures in order to attenuate existing and projected traffic noise levels, in accordance with applicable standards, including the exterior land use/noise compatibility guidelines listed in Table 9-2 of this Environmental Element.</p>	<p><b>Consistent.</b> The proposed SPA Plan and TM is consistent with these noise policies. Village 9 would connect to existing arterials, Eastlake Parkway and Hunte Parkway, and would include the Main Street and Otay Valley Road arterial roadways that traverse the project site. These roadways would serve as major throughways for the site and would minimize the use of streets within the residential districts as throughways. In addition, on-site streets are intentionally narrow with on-site parking to encourage slower traffic and encourage other modes of transportation such as bus, transit, walking and bicycling. Other traffic calming measures include "bulb outs" at corner sidewalks, traffic signals and/or signs, posted speed limit signs and allowing bicycles to share the road right-of-way. A BRT route is provided through the SPA Plan to encourage the use of public transit within the SPA Plan area as well as to/from other parts of Otay Ranch and the City.</p> <p>The mixed-use nature of the project, which places residences, employment, services and entertainment in close proximity, would also result in a significant reduction of vehicle trips thereby reducing vehicular traffic volumes and noise impacts. The SPA Plan does not prohibit the use of new technologies to minimize traffic noise. As discussed under Issue 1 and Issue 3, the proposed project would have the potential result in the exposure of on-site and off-site receptors to excessive traffic noise. However, mitigation measures 5.5-1 through 5.5-5 and buildout of the proposed circulation network would reduce potential impacts to a less than significant level.</p>

**Table 5.5-13 Project Consistency with Applicable GDP Noise Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 7 – Noise</b>	
<p><b>Goal:</b> Promote a quiet community where residents live without noise which is detrimental to health and enjoyment of property.</p> <p><b>Goal:</b> Ensure residents are not adversely affected by noise.</p> <p><b>Objective:</b> Otay Ranch shall have a noise abatement program to enforce regulations to control noise.</p> <p><b>Policy:</b> Prohibit excessive noises which are a detriment to the health and safety of residents.</p> <p><b>Policy:</b> Limit noise at the source, along the path of transmission and/or at the receiver site.</p> <p><b>Policy:</b> Reduce the need for noise mitigation through site and land use planning techniques, whenever feasible.</p> <p><b>Policy:</b> Consider the effects of noise, especially from transportation, in land use decisions to ensure noise compatibility.</p> <p><b>Policy:</b> Comply with applicable noise ordinances and performance standards in zoning ordinances.</p> <p><b>Policy:</b> Use the Environmental Review Process to evaluate the effects of noise.</p> <p><b>Policy:</b> Regularly review technological developments and building techniques which decrease the project related noise impacts on-site and off-site and specify needed noise mitigation measures.</p>	<p><b>Consistent.</b> The Chula Vista Noise Ordinance would continue to be enforced with implementation of the SPA Plan. As discussed under Threshold 1 and Threshold 3, the project would have the potential result in noise impacts that would conflict with the noise compatibility guidelines, the noise ordinance, and CCR Title 24; however, mitigation measures 5.5-1 through 5.5-8, including compliance with CalGreen, and buildout of the proposed circulation network would reduce potential impacts to a less than significant level, consistent with state and City standards. No significant noise impacts would occur as a result of project construction.</p>

## 5.5.4 Level of Significance Prior to Mitigation

### A. Excessive Noise Levels

Implementation of the project would have the potential to result in on-site exposure to excessive noise levels from traffic noise and operational sources including HVAC equipment, commercial equipment, and recreational facilities.

### B. Groundborne Vibration and General Plan Policies

No significant impacts related to groundborne vibration or consistency with general plan policies have been identified for the project.

### C. Permanent Increase in Ambient Noise Level

#### 1. Existing Plus Project Scenario

Seven roadway segments would result in a significant noise impact under the Existing Plus Project scenario: Birch Road, La Media Road to SR-125; Birch Road, SR-125 to Eastlake Parkway; Main Street, Street A to Eastlake Parkway; Hunte Parkway, Eastlake Parkway to Olympic Parkway; La Media Road, Olympic Parkway to Birch Road; Eastlake Parkway, Olympic Parkway to Birch Road; and Eastlake Parkway, Birch Road to Main Street. Traffic-related noise could be reduced either by constructing noise barriers, lowering traffic speeds, or by reducing traffic. However, the project is planned to be

constructed in a series of phases over a period of up to 20 years, and over time would include the construction of new roadways that would provide new connections from the project area to the regional transportation system. These new connections would reduce long-term traffic on the roadways surrounding the project site by routing some cumulative traffic through Village 9 instead of the surrounding roadways. Additionally, these connections would direct traffic generated by Village 9 away from the existing off-site roadways and reduce associated traffic noise.

The 2030 buildout traffic scenario includes future roads that are proposed as part of the development plans for other villages. However, according to the traffic report, if the equivalent dwelling unit assumption for the buildout study year (2030) is reached prior to implementation of these roadways being open to traffic, then mitigation measure 5.3-20 in Section 5.3, Transportation and Traffic, would be implemented to ensure that this circulation system would be implemented concurrently with Village 9.

### **2. Unmitigated Year 2025 Scenario**

In the Unmitigated Year 2025 scenario, Village 9 not result in a significant traffic noise increase on any off-site roadway.

### **3. Unmitigated and Mitigated Year 2030 Scenarios**

In the Unmitigated and Mitigated Year 2030 (Buildout) scenarios, Village 9 not result in a significant traffic noise increase on any roadway.

## **D. Temporary Increase in Ambient Noise Level**

Construction of the project would have the potential to generative noise levels and that would significantly impact biological resources. Mitigation measures 5.6-3, 5.6-6, 5.6-7, 5.6-8, 5.6-9, and 5.6-11 would reduce impacts to the preserve areas during construction.

## **E. Aircraft Noise**

The proposed project would not have a significant impact on airport operations, nor would the project be exposed to excessive aircraft overflight noise levels.

## **F. Consistency with Applicable Noise Policies**

The project is consistent with applicable noise policies. Therefore, no mitigation is required.

## **5.5.5 Mitigation Measures**

The exact location of future development, such as individual residences, commercial buildings, and park amenities is currently unknown. Therefore, the location of specific setbacks, sound barriers, and other noise attenuating features cannot be determined at this time. The following mitigation measures require subsequent analysis when this information becomes available to ensure compliance with applicable noise regulations.

## A. Excessive Noise Levels

The following mitigation measures would minimize exposure to on-site NSLU from excessive traffic noise.

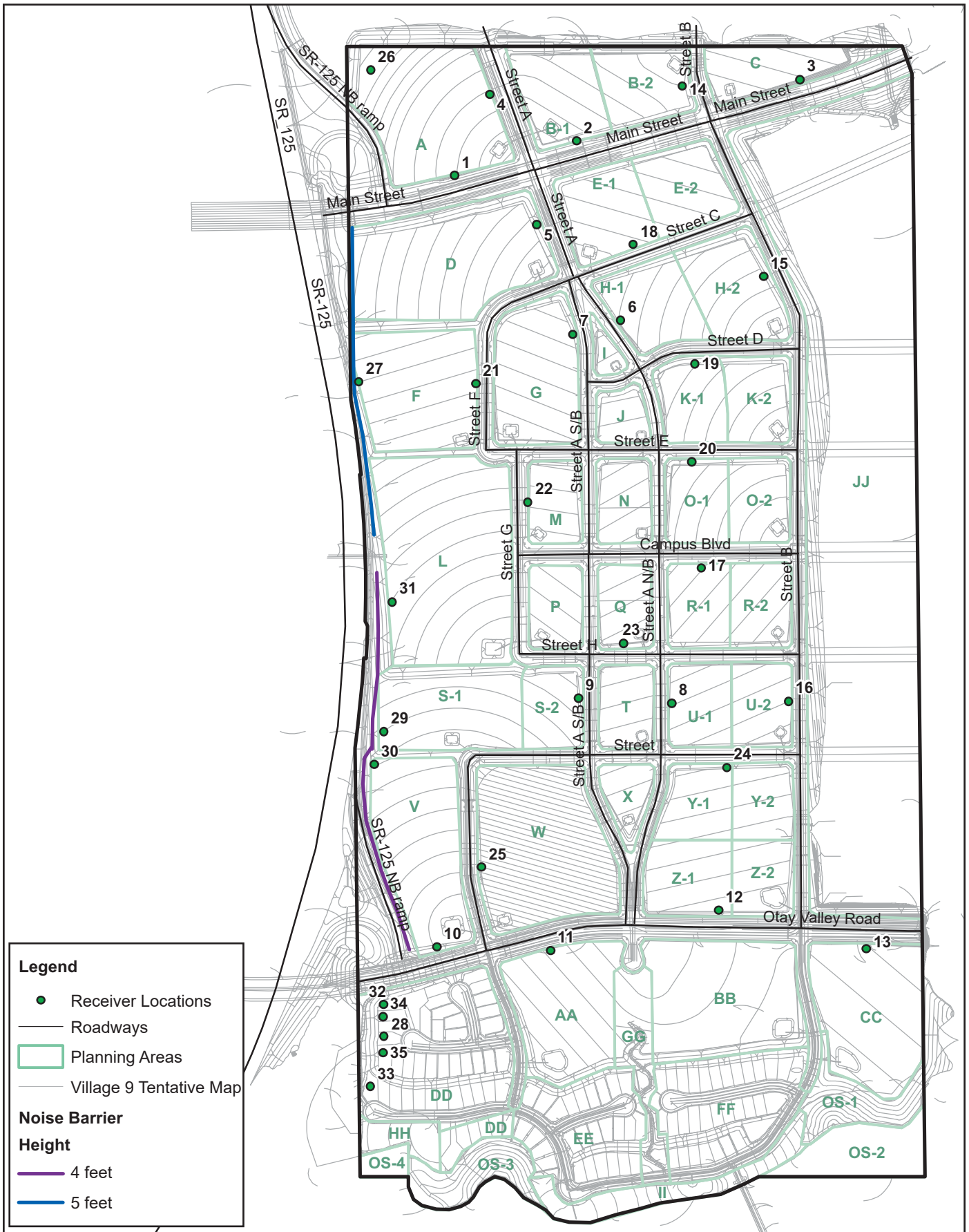
- 5.5-1 **Noise Attenuation in the Urban Center (Planning Area D), Urban Neighborhood (Planning Area F), and Neighborhood Center Zones (Planning Areas S-1 and V), and Neighborhood Park (Planning Area L).** Prior to the approval of grading permits for residential or park development along the western edge of Planning Areas D, F, L, S-1, and V in the Urban Center, Urban Neighborhood Edge, Neighborhood Center, and Neighborhood Park zones (as shown in Figure 3-4, Transect Zones), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. The site plan and acoustical analysis shall include, but not be limited to the following:
- i. Location and height of the noise barriers in accordance with Figure 5.5-4. Heights are provided relative to final pad elevation. Required heights may be achieved through construction of walls, berms or a wall/berm combination;
  - ii. A detailed analysis which demonstrates that barriers and/or setbacks have been incorporated into the project design, such that noise exposure to residential receivers placed in all useable outdoor areas, including multi-family residential patios and balconies, are at or below 65 dBA CNEL; and
  - iii. Should grading, lot configuration, and/or traffic assumptions change during the processing of any final maps, the barriers shall be refined to reflect those modifications.

The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.

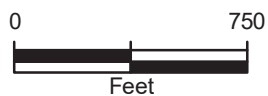
The following mitigation measures would minimize exposure of on-site land uses to ambient noise levels in excess of the City's noise compatibility standards, including the projected ambient traffic noise levels shown in Figure 5.5-3.

- 5.5-2 **Site-Specific Acoustic Analysis – Single-family Residences.** Concurrent with design review and prior to the approval of building permits for single-family residential development where the exterior noise level exceeds 65 dBA CNEL (Planning Areas AA and DD), the applicant shall prepare an acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that the proposed building plans ensure that interior noise levels due to exterior noise sources will be at or below 45 dBA CNEL in any habitable room. The analysis must also identify Sound Transmission Loss rates of each window. Design-level architectural plans will be available during design review and will permit the accurate calculation of transmissions loss for habitable rooms. For these lots, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 dBA CNEL. Consequently, the design for these units may need to include ventilation or an air conditioning system to provide a habitable interior environment with the windows closed based on the result on the interior acoustical analysis. The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 45 dBA CNEL in any habitable room.





Source: Atkins 2011



**APPROXIMATE NOISE BARRIER LOCATIONS  
FIGURE 5.5-4**

- 5.5-3 **Site-Specific Acoustic Analysis – Multi-family Residences.** Concurrent with design review and prior to the approval of building permits for multi-family areas where first and/or upper floor exterior noise levels exceed 60 dBA CNEL and/or where required outdoor area (patios or balconies) noise levels exceed 65 dBA CNEL (Planning Areas A, B-1, B-2, D, E-1, E-2, F, H-1, K-1, M, N, O-1, P, R-1, S-1, S-2, T, U-1, V, Z-1, and Z-2), the applicant shall 1) prepare an acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that the proposed building plans ensure that interior noise levels due to exterior noise sources will be at or below California’s Title 24 Interior Noise Standards (i.e., 45 dBA CNEL) in any habitable room, and 2) that all outdoor useable areas are not exposed to noise levels in excess of the City’s Noise Compatibility Guidelines for outdoor use areas (i.e., 65 dBA CNEL). The analysis must also identify Sound Transmission Loss rates of each window. Design-level architectural plans will be available during design review and will permit the accurate calculation of transmission loss for habitable rooms. For these areas, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 dBA CNEL. Consequently, the design for buildings in these areas may need to include a ventilation or air conditioning system to provide a habitable interior environment with the windows closed based on the result on the interior acoustical analysis. The Applicant shall construct and/or install the required noise attenuation features that would 1) reduce sound levels to 45 dBA CNEL in any habitable room, and 2) that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.
- 5.5-4 **Site-Specific Acoustic Analysis – Non-Residential Noise Sensitive Land Uses.** Concurrent with Design Review and prior to the approval of building permits for any non-residential Noise Sensitive Land Uses (schools, neighborhood parks, outdoor use areas, some Community Purpose Facility use, etc.) area where exterior noise levels exceed 65 dBA CNEL (Planning Areas A, B-1, B-2, C, D, F, E-1, E-2, L, S-1, V, and W), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. Measures to reduce noise levels may include, but would not be limited to, setback of structures from the roadway, installing acoustic barriers, or orienting outdoor activity areas away from roadways so that surrounding structures provide noise attenuation. Roof-ceiling assemblies making up the building envelope shall have a sound transmission class value of at least 50, and exterior windows shall have a minimum sound transmission class of 30 in compliance with the California Green Building Standards Code. The Applicant shall construct and/or install the required noise attenuation features would reduce sound levels to 65 dBA CNEL at outdoor usable areas. If Planning Area W is ultimately developed with multi-family residential uses rather than a school, this planning area would be subject to mitigation measure 5.5-3.
- 5.5-5 **Site-Specific Acoustic Analysis – Office Uses.** Concurrent with Design Review and prior to the approval of building permits for any office use within Planning Areas A, B-1, B-2, D, E-1, and E-2, the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that exterior noise levels at the property line are at or below the City’s Noise Compatibility Guidelines for office uses (i.e., 70 dBA CNEL). Measures to reduce noise levels may include, but would not be limited to, setback of structures from the roadway, installing acoustic barriers, or, in mixed-use buildings, orienting offices away from roadways so that surrounding structures provide noise attenuation. The Applicant shall construct and/or install the required noise attenuation features would reduce sound levels to 70 dBA CNEL at the property line.

- 5.5-6 **Shielded Private Outdoor Usable Space for Urban Center Residences.** Concurrent with Design Review and prior to the approval of building permits for any private usable outdoor space such as patios, balconies, or outdoor dining areas for new residential or commercial development along Main Street or Street B (Planning Areas A, B-1, B-2, D, E-1, and E-2), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.

The following mitigation measure would minimize noise generated from on-site HVAC equipment.

- 5.5-7 **HVAC Mechanical Equipment Shielding.** Concurrent with Design Review and prior to the approval of building permits for non-residential development, the applicant shall submit a design plan for the project demonstrating to the satisfaction of the Development Services Director (or their designee) that the noise level from operation of mechanical equipment will not cumulatively exceed the noise level limits for a designated receiving land use category as specified in Section 19.68.030 of the City of Chula Vista Noise Ordinance. Noise control measures may include, but are not limited to, the selection of quiet equipment, equipment setbacks, silencers, and/or acoustical louvers. The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to allowable Chula Vista Noise Ordinance Standards.

The following mitigation measure would minimize exposure of on-site NSLU to noise from the Neighborhood Park in excess of the City's noise level limits.

- 5.5-8 **Site Specific Analysis - Neighborhood Park.** Concurrent with the preparation of site-specific plan(s), and prior to the approval of a precise grading plan for the Neighborhood Park or Planning Area F (whichever occurs first), the project applicant shall prepare, or in the case of the City being the lead on the preparation of the site specific plan, the project applicant shall fund the preparation of an acoustical analysis to ensure that noise levels generated from any active uses at the Neighborhood Park, such as sports fields, shall not exceed the receiving land use category's exterior noise limits as identified in the Chula Vista Noise Ordinance. The project applicant shall be responsible for the preparation of the acoustical analysis and to fund the implementation of any measures recommended as a result of the analysis. Measures to reduce noise levels may include, but would not be limited to, siting of structures or buildings either at the Neighborhood Park or at the receiving land use site in order to provide setbacks between active areas of the Neighborhood Park and adjacent noise sensitive uses, or construction of a wall to provide noise attenuation. Final noise attenuation design would be determined by a site-specific acoustic analysis conducted by a qualified acoustical engineer, to the satisfaction of the Development Services Director (or their designee).

## **B. Excessive Groundborne Vibration**

No mitigation measures are required.

## **C. Permanent Increase in Ambient Noise Levels**

No mitigation measures are required.

## D. Temporary Increase in Ambient Noise Levels

Section 5.6, Biological Resources, identifies mitigation measures 5.6-3, 5.6-6, 5.6-7, 5.6-8, 5.6-9, and 5.6-11 to reduce impacts to the preserve areas during construction to a less than significant level. These measures require pre-construction surveys, acoustical analyses to demonstrate that the average hourly 60 dBA noise level standard would not be exceeded at the location of any occupied sensitive habitat areas, and use of noise abatement methods that may include, but are not limited to, installation of noise abatement at the source, and/or installation of noise abatement at the receiving areas. Therefore, this impact would be reduced to a less than significant level with the implementation of the proposed biological resources mitigation measures.

## E. Aircraft Noise

No mitigation measures required.

## F. Consistency with Applicable Noise Policies

No mitigation measures are required.

## 5.5.6 Level of Significance After Mitigation

### A. Excessive Noise Levels

Table 5.5-14 shows on-site ground level traffic noise levels with implementation of mitigation measure 5.5-1. Table 5.5-14 applies only to the receptors that would be affected by the proposed noise wall. Walls are not feasible along Main Street, Street A, Street B or Otay Valley Road because a wall would conflict with SPA Plan policies. The SPA Plan requires frontages along Otay Valley Road and all public roads, which include Main Street, Street A, and Street B (see pages 3-22, 3-26, 3-32, 3-38, and 3-44 of the SPA Plan). Additionally, the SPA Plan requires that buildings be oriented toward the street (see pages 4-12, 4-13, 4-16, 4-20, 4-23, 4-25, 4-26, 4-28, 4-34, and 4-38 of the SPA Plan). Noise walls would block building frontages and views from buildings oriented toward the roadway, which would create conflicts with the SPA vision for cohesive character, pedestrian-friendly sidewalks, and quality public streetscapes within the SPA.

**Table 5.5-14 On-site 2030 Buildout Ground Level Traffic Noise Levels with Implementation of Mitigation Measure 5.5-1**

Receiver Location	Receiver Type	Ground Level Traffic Noise Level (dBA CNEL)	Ground Level Traffic Noise Level with Implementation of 5.5-1 (dBA CNEL)	Significant Impact?
#27	Multi-family Residences	72	64	No
#29	Multi-family Residences	68	63	No
#30	Multi-family Residences	71	65	No
#31	Neighborhood Park	68	64	No

Source: FHWA 2004. See appendix for noise model outputs.

Note: As part of measure 5.5-1, the noise barrier for Planning Areas D, F, and the upper portion of L is assumed to be five feet in height, and the noise wall for Planning Areas S-1, and V and the lower portion of L is assumed to be four feet in height as shown in Figure 5.5-4. Noise levels for upper level receivers were not attenuated discernibly from the noise walls.

Walls are not feasible for all potential traffic noise impacts in Village 9; therefore, measures 5.5-2 through 5.5-5 are included to mitigate the traffic noise impacts to the remaining receptors. With implementation of the above measures, operational noise sources would comply with the City noise ordinance, the General Plan noise compatibility guidelines, and CalGreen. Operational noise impacts would be reduced to a less than significant level.

## **B. Groundborne Vibrations**

Impacts related to groundborne vibration would be less than significant without mitigation.

## **C. Permanent Increase in Ambient Noise Levels**

### **1. Existing Plus Project Scenario**

Short-term increases in traffic noise off-site on Birch Road, Hunte Parkway, La Media Road, and Eastlake Parkway would be significant and unavoidable until the proposed roadway circulation system is complete. Completion of the off-site circulation system improvements, such as the extension of Otay Valley Road to SR-125, would reduce project-related traffic noise increases by redistributing project-related traffic so that it would be not concentrated on the impacted roadways. Implementation of the Village 9 circulation system would reduce project-generated traffic volumes on off-site roadways by providing new transportation routes and would reduce the project's short-term increases in noise levels during interim years on Birch Road, Hunte Parkway, La Media Road, and Eastlake Parkway to a less than significant level. Impacts would be significant and unavoidable until the proposed circulation system is complete. With implementation of the proposed circulation system, future and long-term traffic noise impact would be less than significant.

### **2. Unmitigated Year 2025 Scenario**

Implementation of Village 9 would not result in a significant traffic noise increase on any roadway in the Unmitigated Year 2025 scenario without mitigation.

### **3. Unmitigated and Mitigated Year 2030 Scenarios**

Implementation of Village 9 would not result in a significant traffic noise increase on any roadway in the Unmitigated Year 2030 or Mitigated Year 2030 scenario without mitigation.

## **D. Temporary Increase in Ambient Noise Levels**

Impacts related to temporary construction noise would be less than significant with implementation of the mitigation measures 5.6-3 and 5.6-11.

## **E. Aircraft Noise**

Impacts related aircraft noise would be less than significant without mitigation.

## **F. Consistency with Applicable Noise Policies**

Impacts related policy consistency would be less than significant without mitigation.



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## 5.6 Biological Resources

This section describes existing biological conditions of Village 9 and surrounding area and evaluated the potential impacts to biological resources due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR did not address biological resources, but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01). The analysis in this EIR is based on the Biological Resources Report for Otay Land Company Village 9 (Biology Report), prepared by URS Corporation (URS) in January 2012. The Biology Report is included as Appendix E of this EIR. The report updates the applicable information in the previously certified EIRs.

### 5.6.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Federal

##### a. Federal Clean Water Act, Section 404

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged material, placement of fill material, or excavation within “waters of the U.S.” and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. “Waters of the U.S.” are defined by the CWA as “rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands.” Wetlands are defined by the CWA as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.” The permit review process entails an assessment of potential adverse impacts to U.S. Army Corps of Engineers (ACOE) jurisdictional waters of the U.S. and wetlands. In response to the permit application, the ACOE would also require conditions amounting to mitigation measures. Where a federally listed species may be affected, they would also require Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA).

##### b. Federal Clean Water Act, Section 401

Section 401 of the CWA is administered through the RWQCB within California. Section 401 Water Quality Certification applies to any person applying for a federal permit or license which may result in a discharge of pollutants into waters of the U.S., and 401 Water Quality Certification must document that the activity complies with applicable water quality standards, limitations, and restrictions. CWA Section 404 permits and authorizations are usually considered by the California RWQCBs during 401 Water Quality Certification. Section 401 Water Quality Certification only applies to waters of the U.S., including wetlands.

##### c. Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S. Code 703-711) implements an international treaty for the conservation and management of bird species that may migrate through more than one country. Enforced in the United States by the USFWS, the Migratory Bird Treaty Act makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in CFR Title 50, Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations

(CFR Title 50, Part 21). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered a take and is potentially punishable by fines and/or imprisonment. In 1972, the Migratory Bird Treaty Act was amended to include protection for migratory birds of prey (raptors).

## **2. State**

### **a. Porter Cologne Water Quality Act**

The Porter Cologne Water Quality Act otherwise defines waters of the state as any surface water or groundwater, including saline waters, within the boundaries of the state. Therefore, surface waters subject to potential regulation pursuant to the Porter Cologne Water Quality Act include isolated, intrastate waters, which are not considered pursuant to Section 401 Water Quality Certification.

### **b. California Fish and Game Code**

The California Fish and Game Code regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the State. The California Fish and Game Code includes the California Endangered Species Act (Sections 2050-2115) and Streambed Alteration Agreement regulations (Sections 1600-1616), as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife. The California Fish and Game Code also includes protection of birds (3500 et seq.) and the California Native Plant Protection Act of 1977 (Sections 1900-1913), which directed the California Department of Fish and Wildlife (CDFW) to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State."

Section 1602 of the California Fish and Game Code requires any person, state, or local governmental agency to provide advance written notification to CDFW prior to initiating any activity that would: 1) divert or obstruct the natural flow of, or substantially change or remove material from the bed, channel, or bank of any river, stream, or lake; or 2) result in the disposal or deposition of debris, waste, or other material into any river, stream, or lake. The state definition of "lakes, rivers, and streams" includes all rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and watercourses with surface or subsurface flows that support or have supported riparian vegetation.

## **3. Local**

### **a. Otay Ranch Resource Management Plan**

The project is part of the Otay Ranch GDP, which includes an Otay Ranch RMP. The Otay Ranch GDP and Otay Ranch RMP were approved by the County of San Diego and the City of Chula Vista in October of 1993. The Otay Ranch RMP is comprised of two separate documents, the Phase 1 Otay Ranch RMP and Phase 2 Otay Ranch RMP. The Phase 1 Otay Ranch RMP identifies preserve areas within Otay Ranch, and contains policies regarding species and habitat conservation and long-term management of the preserve. The Phase 2 Otay Ranch RMP includes ranch-wide studies that were conducted pursuant to the Phase 1 Otay Ranch RMP and provides additional detail on conveyance, management and funding.

The Otay Ranch RMP identifies a preserve system of 11,375 acres dedicated within Otay Ranch. Within Village 9, the preserve includes portions of Otay Valley. To ensure that transfer of preserve land occurs in step with development, the Otay Ranch RMP incorporates a preserve conveyance plan, which

includes a conveyance ratio of 1.188 acres of preserve for each acre of non-common development area. The Otay Ranch RMP and the Otay Ranch Preserve were the primary basis for the CEQA impact analysis and mitigation of biological impacts identified in the Otay Ranch GDP Program EIR for impacts resulting from development of less sensitive areas as a result of the Otay Ranch GDP.

#### **b. City of Chula Vista Multiple Species Conservation Program Subarea Plan**

The Chula Vista MSCP Subarea Plan was prepared pursuant to the MSCP Subregional Plan for southern San Diego, as approved by the City of Chula Vista in 2003, and permits were issued by the USFWS and CDFW (formerly CDFG) in 2005. The Chula Vista MSCP Subarea Plan identifies lands that would conserve habitat for covered federal and state endangered, threatened, or sensitive species. The Chula Vista MSCP Subarea Plan also designates a preserve and provides a regulatory framework for determining impacts to the preserve and sensitive habitat throughout the city and identifies mitigation to reduce those impacts.

The Chula Vista MSCP Subarea Plan also provides a process that allows the City to convey "take" authorization under the federal and state Endangered Species Acts (ESA) for the incidental take of threatened and endangered species. The Chula Vista MSCP Subarea Plan authorizes take in two ways: 1) it establishes "covered projects" for which take is authorized and, 2) for projects located within mapped development areas that are outside of covered projects, take of covered species requires the issuance of a Habitat Loss and Incidental Take Permit. In addition, the Chula Vista MSCP Subarea Plan requires issuance of an incidental take permit for "all development within the City's jurisdiction which is not located within the development areas of covered projects prior to issuance of any land development permit."

Otay Ranch, including Village 9, is a "covered project" in the Chula Vista MSCP Subarea Plan. The 100 percent conservation areas are either already in public ownership or would be dedicated to the Otay Ranch Preserve as part of the development approval process for covered projects. Any portions of covered projects that are located within 100 percent conservation areas must be consistent with conditions allowing specific land uses within the preserve as outlined in the Chula Vista MSCP Subarea Plan and are subject to the narrow endemic species policy (avoidance and minimization) and Wetlands Protection Program. Almost all of Village 9 is located in an area of the MSCP Subarea Plan designated for development. Chula Vista MSCP Subarea Plan 100 percent preserve area is located south of Village 9, including two areas in the southwest and southeast corners of the project site.

#### **Development Areas within Covered Projects**

Covered projects provide protection of narrow endemic species through consideration of narrow endemic species in the preserve design for those projects. Narrow endemic species include those species with habitat ranges limited to Southwestern San Diego County. Take of covered species, including narrow endemic species, for development areas within covered projects are extended at the time of development approval. There are no limitations on impacts to narrow endemic species within the development areas of covered projects.

#### **100% Conservation Areas within Covered Projects**

Impacts to covered narrow endemic species from planned and future facilities located within the 100 percent conservation areas of covered projects would be avoided to the maximum extent practicable. Where impacts are demonstrated to be unavoidable, impacts would be limited to 5 percent of the total narrow endemic species population within the project area. If impacts exceed 5 percent of

the covered narrow endemic species population after comprehensive consideration of avoidance and minimization measures, the City of Chula Vista must make a determination of biologically superior preservation, consistent with Section 5.2.3.7 of the Chula Vista MSCP Subarea Plan.

Section 7.5.2 of the Chula Vista MSCP Subarea Plan also provides guidelines to address adjacency management issues, in order to address indirect impacts associated with development adjacent to the Preserve. All new development must adhere to these guidelines, which address potential drainage issues, overspill of lighting, noise into the preserve, use of non-invasive plant species, and limiting of public access in sensitive preserve areas. As part of the SPA Plan, an Edge Plan was prepared to ensure consistency with the City's adjacency management guidelines.

### **c. City of Chula Vista MSCP Subarea Plan – Wetland Protection Program**

As part of the CEQA review, development projects that contain wetlands are required to demonstrate that impacts to wetlands have been avoided to the greatest extent practicable and, where impacts are unavoidable, such impacts have been minimized. For unavoidable impacts to wetlands, the City would apply the wetlands mitigation ratios identified in Table 5-6 of the Chula Vista MSCP Subarea Plan. The wetlands mitigation ratios provide a standard for each habitat type, but may be adjusted depending on the functions and values of both the impacted wetlands as well as the wetlands mitigation proposed by the Project. The City may also consider the wetland habitat type(s) being impacted and utilized for mitigation in establishing whether the Chula Vista MSCP Subarea Plan standards have been met.

## **B. Biological Surveys**

The following sections summarize information on the methods and results of the biological surveys that were conducted for Village 9. Additional details regarding the survey methods and results are provided in Appendix E.

### **1. Biological Survey Methods**

URS Corporation biologists conducted biological surveys of the Village 9 and off-site improvement areas in June, July, and December of 2006, in March and April 2007, in June and July of 2009, and in April through June and December of 2010. Regional biological databases were also queried to determine historical sightings of sensitive plant and animal species nearing the vicinity of the proposed on-site and off-site areas. Vegetation communities were mapped according to the Holland Vegetation Classification and identified according to the percent cover of the combination of dominant plant species observed. Certain natural vegetation communities were given a “disturbed” modifier when they showed evidence of disturbance, and supported a high density of non-native grasses or weedy species.

#### **a. Plant Surveys**

Special status plant surveys were conducted in 2006 throughout the proposed Project area during a seasonally favorable phase for observing floral diversity in southern San Diego County. Late-season surveys for Otay tarplant (*Deinandra conjugens*) were conducted in 2009 and 2010, in addition to additional special-status plant species surveys. Surveys were focused on special status plant species that may potentially occur on or around the vicinity of the project, including MSCP identified narrow endemic species. Surveys were intensified at locations that historically supported special status plants, in unique microhabitats that could potentially support sensitive species such as clay soils, and in areas where endemic species were detected within the project area during general surveys.



## b. Wildlife Surveys

Surveys for the California gnatcatcher were conducted during 2006, in accordance with the USFWS protocol for presence/absence surveys. California gnatcatcher individuals and family groups, including paired individuals or individuals with nestlings or fledglings, were mapped according to the perceived central location of their territory. Surveys for Quino Checkerspot butterfly (*Euphydryas editha quino*) (QCB) followed USFWS protocol. Focused flight surveys took place during QCB flight season between March 1 and April 13, 2007 and between March 29 and April 25, 2010 to determine presence on site. A wintering raptor survey was conducted in December 2006. A burrowing owl habitat assessment also took place in 2007 and 2010. Suitable habitats, including native and non-native grassland, disturbed habitat, and agricultural vegetation communities were surveyed for burrowing owl. Key habitat features, including the presence of fossorial mammal burrows, were identified and recorded.

## c. Jurisdictional Delineation

Waters of the U.S., including wetlands, within on-site and off-site areas were delineated based on field surveys. Supplemental material that was used to facilitate the delineation included information such as United States Geological Survey (USGS) topographic maps, recent and historic aerial photographs, published information, mapped or modeled floodplains, and Natural Resource Conservation Service soil maps. Jurisdictional delineations were conducted in 2006 and 2010.

## 2. Survey Results

### a. Vegetation Communities

Figure 5.6-1 identifies the location of the vegetation communities identified in the Village 9 survey area. As shown in Figure 5.6-1, four native vegetation communities occur within the proposed Project area: chaparral, maritime succulent scrub, riparian scrub, and coastal sage scrub (including broom baccharis scrub). In addition to these native habitats, six non-native vegetation categories also occur within on-site and off-site areas: agricultural lands, disturbed vegetation, non-native grassland, tamarisk scrub, bare ground, and developed lands.

Table 5.6-1 identifies the acreage of various vegetation communities within the project. These vegetation communities are discussed below.

**Maritime Succulent Scrub.** Maritime succulent scrub, a form of sage scrub, occurs on thin, rocky or sandy soils on steep slopes or bluffs near the coast. Maritime succulent scrub is present in the canyons and along the portions of the bluffs facing the Otay River Valley in the project area, to the south boundary of Village 9. The dominant shrub species in this community includes some of the coastal sage scrub dominants, but it is notable for having a high percentage of cacti and other succulent species. Within the project area, shrub species include jojoba, San Diego sunflower, lemonadeberry (*Rhus integrifolia*), California buckwheat, and California sagebrush. Succulent species include coast barrel cactus (*Ferocactus viridescens*), coastal cholla (*Cylindropuntia prolifera*), coastal prickly pear (*Opuntia littoralis*), fishhook cactus (*Mamillaria dioica*), and chalk-leaf live-forever (*Dudleya pulverulenta*).

**Table 5.6-1 Existing Vegetation Communities**

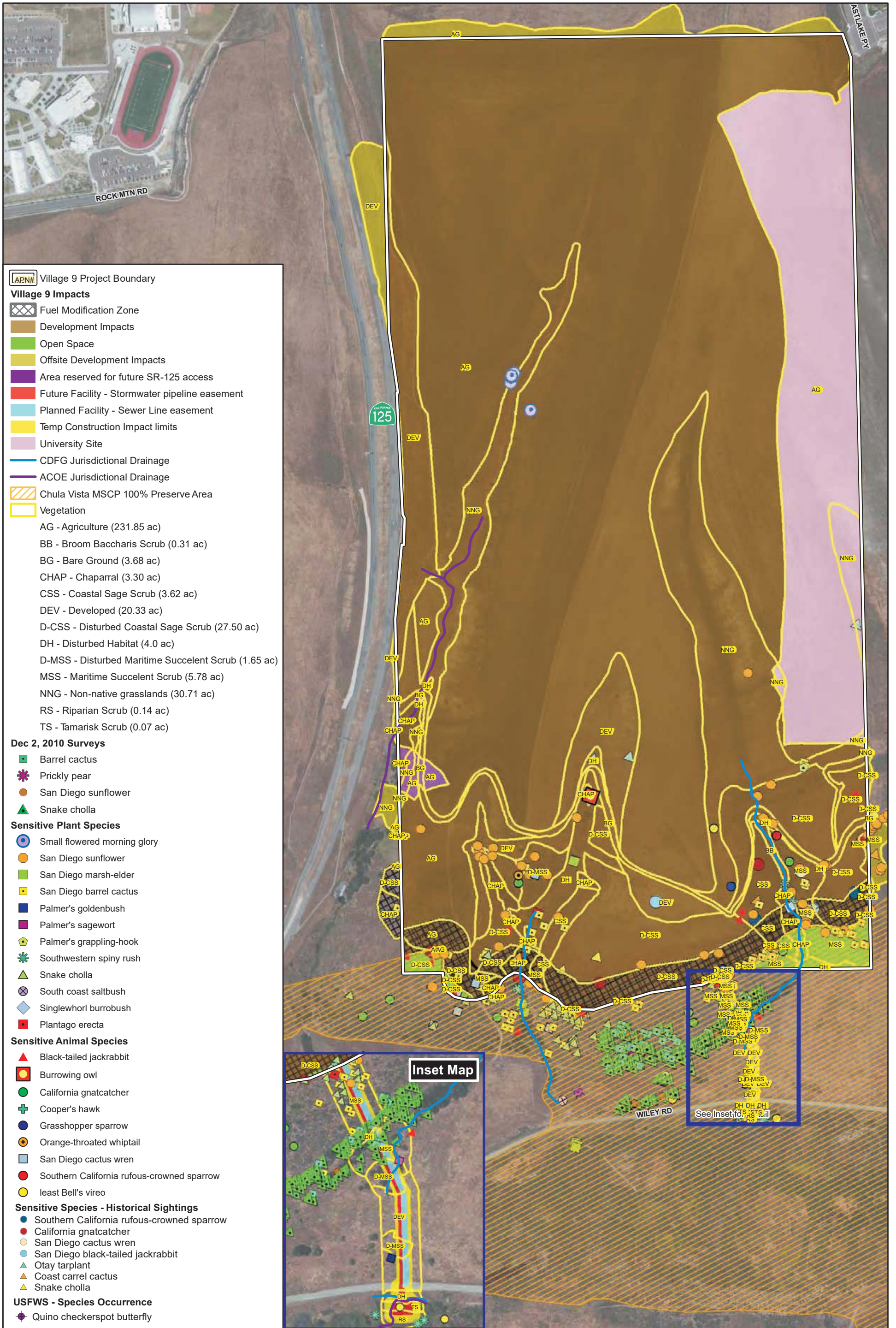
Vegetation Type	MSCP Tiers	Village 9 Site	Off-site Facilities Alignment	Off-site Grading Areas	Total
Maritime Succulent Scrub	I	4.57	0.35	0.85	5.77
Disturbed Maritime Succulent Scrub	I	1.47	0.18	0	1.65
Coastal Sage Scrub	II	3.62	0	0	3.62
Disturbed Coastal Sage Scrub	II	27.30	0	0.56	27.86
Broom Baccharis Scrub	II	0.31	0	0	0.31
Chaparral	III	3.20	0	0.76	3.96
Non-native Grasslands	III	30.06	0	0.63	30.69
Agriculture Land	IV	227.65	0	4.21	231.86
Bare Ground	IV	3.64	0	0.04	3.68
Disturbed (Ruderal) Vegetation	IV	3.91	0.09	0	4.00
Developed	IV	17.33	0.32	2.68	20.33
Riparian Scrub	wetland	0.05	0.09	0	0.14
Tamarisk Scrub	wetland	0	0.07	0	0.07
<b>Total</b>		<b>323.11</b>	<b>1.10</b>	<b>9.73</b>	<b>333.94</b>
Source: URS 2012					

**Coastal Sage Scrub.** Coastal sage scrub is comprised of low, soft-woody subshrubs of up to one meter (three feet) high, many of which are facultative drought-deciduous. This association is typically found on dry sites, such as steep, south- and west-facing slopes with clay-rich soils that are slow to release stored water. The dominant shrub species within the coastal sage scrub vegetation community include California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), jojoba (*Simmondsia chinensis*), and San Diego sunflower (*Viguiera laciniata*). Coastal sage scrub is generally located in the southern portion of the project site.

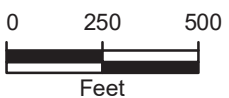
A subtype of coastal sage scrub, broom baccharis scrub (Holland Code 32530), also occurs within the proposed project area. Broom baccharis scrub is dominated by nearly monotypic stands of broom baccharis and is typical of areas that previously supported coastal sage scrub but were subjected to disturbance. Broom baccharis scrub is generally located in the southeast area of Village 9.

**Chaparral.** Chaparral is widely distributed throughout California on dry slopes and ridges at low and medium elevations where it occupies thin, rocky, or heavy soils and is usually most prominent on east- and north-facing slopes. It is typically composed of a dense cover of broad-leaved, sclerophyllous shrubs (e.g. bearing stiff, leathery leaves), although species composition varies considerably by location. Within the project area, chaparral is scattered in the swales and along the natural drainages. Chaparral within the project area is dominated by lemonadeberry, with sub-dominants chamise (*Adenostoma fasciculata*), jojoba, toyon (*Heteromeles arbutifolia*), broom baccharis, and Mexican elderberry (*Sambucus mexicana*).





Source: URS 2013



**VEGETATION COMMUNITIES AND IDENTIFIED SENSITIVE SPECIES LOCATIONS**  
**FIGURE 5.6-1**



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**Agricultural Land.** Agricultural land is regularly plowed or cultivated to grow crops. Agricultural land within the project area occur primarily on the relatively flat mesa tops where repeatedly tilled land had been planted with cereal wheat (*Triticum aestivum*). Other species observed within the agricultural land included wild oat (*Avena barbata*), tocalote, red brome (*Bromus madritensis ssp. rubens*), fennel (*Foeniculum vulgare*), Russian thistle, and short-pod mustard (*Hirschfeldia incana*).

**Disturbed or Ruderal Vegetation.** Disturbed or ruderal vegetation typically develops on sites with heavily compacted soils following intense levels of disturbance such as grading, agriculture, off-road activities, or previous development. Disturbed areas are dominated by broad-leaf herbaceous species such as mustards (*Brassica spp.*, *Hirshfeldia incana*), fennel, horseweed (*Conyza canadensis*), thistles (*Centaurea spp.*, *Silybum spp.*, *Carduus spp.* etc.). Often, disturbed vegetation areas have a subordinate cover (less than 50 percent cover) of annual non-native grasses. Disturbed vegetation is located in the southern area of the project site.

**Developed Lands.** Developed lands associated with SR-125 occur along the western boundary of Village 9 and developed land associated with the existing pipeline easement occurs in the southern portion of the project area.

**Non-native Grasslands.** Non-native grasslands generally occur on fine-textured loam or clay soils which are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. This habitat is a disturbance-related community most often found in old fields or openings in native scrub habitats and is characterized by a dominant cover (greater than 50 percent cover) of non-native annual grasses, and occasionally native and non-native annual forbs. Non-native grasses have replaced native grassland and coastal sage scrub at many localities throughout Southern California. Non-native grassland within the project area includes wild oat, soft chess (*Bromus mollis*), red brome, rip-gut grass (*Bromus diandrus*), and foxtail fescue (*Vulpia megalura*). Characteristic forbs include red-stem filigree (*Erodium cicutarium*), mustards (*Brassica spp.*), and fascicled tarplant. Non-native grassland is generally located along the eastern and western edges of the site.

**Bare Ground.** Bare ground includes areas that have been cleared of vegetation and are actively used, which prevents recolonization by vegetation. Bare ground occurs within the project area in existing dirt roads and firebreaks.

**Riparian Scrub.** Riparian scrub varies from a dense, broad-leaved, winter-deciduous association dominated by several species of willow to an herbaceous scrub dominated by mulefat. Riparian scrub includes both the southern willow scrub and mulefat scrub communities. Typical willow species include black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), and sandbar willow (*Salix exigua*). Mulefat (*Baccharis salicifolia*) dominated scrub occurs along intermittent streams with a fairly coarse substrate and moderately deep water table. Understory vegetation is usually composed of non-native, weedy species or is lacking altogether. Two small patches of riparian scrub are associated with Drainage 3 within Village 9 and additional riparian scrub is associated with the storm water outfall structure in the Otay River floodplain at the terminus of the off-site improvement area.

**Tamarisk Scrub.** Tamarisk scrub is a disturbed non-native vegetation type dominated by salt cedar (*Tamarix spp.*). This habitat is located in the Otay River floodplain at the terminus of the off-site improvement area.



## b. Wildlife

The results of the coastal California gnatcatcher, QCB, and burrowing owl surveys are summarized below, as well as a discussion of other wildlife observed on site during the surveys.

**Burrowing Owl (*Athene cunicularia*).** Suitable habitat was identified during the project area surveys. However, no owl burrows were observed during the surveys. A burrowing owl sighting during the wintering raptor survey in 2006 represented a single individual that was likely a non-breeding season transient.

**Coastal California gnatcatcher (*Polioptila californica californica*).** A total of seven potential suitable gnatcatcher habitat territories, including coastal sage scrub, disturbed coastal sage scrub, and maritime succulent scrub were identified in the project area.

**Quino Checkerspot Butterfly (*Euphydryas editha quino*).** No QCBs were observed on the project site during site surveys. Although no historical QCB observations are known within the project area, QCB has been documented in the Otay River floodplain to the south and was observed during the 2006 wildlife survey.

**Other Wildlife.** Village 9 supports a diverse assemblage of wildlife species, primarily distributed throughout the south facing slopes of the Otay River Valley in the southern portion of the project area. A few wildlife species were also sighted in the disturbed agricultural land in the northern portion of Village 9.

Bird species that were common within the project area include California towhee (*Pipilo crissalis*), lesser goldfinch (*Carduelis psaltria*), western meadowlark (*Sturnella neglecta*), Anna's hummingbird (*Calypte anna*), American kestrel (*Falco sparverius*), and mourning dove (*Zenaida macroura*). The project area also supports several sensitive wildlife species including, but not limited to, southern California rufous-crowned sparrow, Least Bell's vireo, white-tailed kite, red-tailed hawk, northern harrier, Cooper's hawk, golden eagle, and San Diego cactus wren.

Mammal species detected in the project area include coyote (*Canis latrans*), bobcat (*Felis rufus*), California ground squirrel (*Spermophilus beecheyi nudipes*), Audubon's cottontail (*Sylvilagus auduboni*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Dulzura California pocket mouse (*Chaetodipus californicus femoralis*), San Diego desert woodrat (*Neotoma lepida intermedia*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*, SSC). Reptiles that were observed or recorded previously on or near the project area include orange-throated whiptail (*Cnemidophorus hyperythrus*, SSC), western fence lizard (*Sceloporus occidentalis*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).

## c. Wildlife Movement

A wildlife corridor is defined as a linear area that allows for the movement of wildlife between patches of habitat or from habitat to some other resource such as water. The quality of a particular corridor to wildlife is evaluated based on the focal target species expected to use the corridor. Focal species commonly used to evaluate corridor usage in San Diego County include large mammals such as mule deer, bobcat, coyote, or sensitive birds such as coastal California gnatcatcher or San Diego cactus wren. Types of corridors often used by focal target species include canyons and road underpasses such as culverts, bridges, and freeway interchanges of varying dimensions. The off-site facility alignment will traverse a wildlife corridor along the Otay River Valley that supports the movement of coastal California

gnatcatcher and San Diego cactus wren. The Otay River Valley is the primary corridor linkage connecting Wolf Canyon, Salt Creek Canyon, and O'Neal Canyon in the project vicinity.

### **3. Jurisdictional Delineation Results**

Figure 6 in Appendix E, Jurisdictional Waters, identifies the results of the jurisdictional delineations performed for the project. Three primary drainages traverse the project area. Drainage 1 is located in the western area of Village 9. Drainage 1 consists of a swale in the northern portion of the drainage and a well-defined streambed in the southern portion of Village 9 that eventually flows off site to the Otay River. Drainage 2 is located in the southwest area of Village 9 that is partially channelized. Drainage 2 flows in a southerly direction, ultimately draining off site into the Otay River. Drainage 3 is located within the southeastern portion of Village 9 and is channelized on site. This drainage also flows south to Otay River.

The total ACOE jurisdictional other waters of the U.S. within the SPA Plan boundary (Drainage 1) is 0.10 acre of unvegetated waters and 0.14 acre of vegetated wetlands associated with the off-site infrastructure within the Otay River floodplain for a total of 0.24 acre of Federal jurisdictional waters. Total CDFW jurisdictional area is 0.63 acre of unvegetated channel, and 0.21 acre of vegetated wetlands for a total of 0.84 acre of State jurisdictional waters. A total of 0.84 acre of wetlands area is also protected under the City's Wetland Protection Program.

### **4. Sensitive Biological Resources**

The following discussion summarizes the present, or potentially present, sensitive vegetation communities, plant species, and wildlife species within the on-site and off-site project areas. Table 5.6-2 provides a summary of California Native Plant Society (CNPS), global and state biological resource sensitivity rankings used to describe the sensitivity of these resources.

### **5. Sensitive Vegetation Communities**

Sensitive vegetation communities are those that are considered rare within the region, support sensitive plant and/or wildlife species, or are important in providing connections for wildlife movement. Maritime succulent scrub and coastal sage scrub occur within the project area, and are both considered a sensitive vegetation community by USFWS and CDFW because they are limited geographically, support sensitive species, and are under development pressure throughout their respective ranges. Non-native grasslands, chaparral, and riparian vegetation are also sensitive vegetation. Wetland habitats, including riparian and tamarisk scrub, are sensitive status vegetation communities subject to resource specific permitting requirements by the City, State, and Federal agencies.

### **6. Sensitive Plant Species**

Special status plants are defined as any species covered by the Chula Vista MSCP Subarea Plan, including sensitive species and MSCP narrow endemics, federal and state threatened or endangered plants and any plant on CNPS List 1-4 (see Table 5.6-2). In total, 12 sensitive plant species occur within the project area and off-site improvement area. Sensitive plant species are described below and identified in Figure 5.6-1.

**Table 5.6-2 Summary of California Native Plant Society List, Global and State Sensitivity Rankings**

CNPS List	Description
List 1A – Presumed Extinct in California	Thought to be extinct in California based on a lack of observation or detection for many years.
List 1B – Rare or Endangered in California	Species that are generally rare throughout their range, and are also judged to be vulnerable to other threats such as declining habitat.
List 2 - Rare or Endangered in California, More Common Elsewhere	Species that are rare in California, but more common outside of California.
List 3 – Need More Information	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific list. In addition, many of the List 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
List 4 – Plants of Limited Distribution	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for List 3 species above, CNPS lacks survey data to accurately determine status in California. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
List is followed by threat code (e.g. CNPS List 1B.2)	.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
	.2 – Fairly endangered in California (20-80% occurrences threatened)
	.3 – Not very endangered in California (<20% of occurrences threatened)
Global and State Rankings	Description
G1/S1	Critically Imperiled — At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2/S2	Imperiled — At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors.
G3/S3	Vulnerable — At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors.
G4/S4	Apparently Secure — Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5/S5	Secure — Common; widespread and abundant.
Source: URS 2012	

**Otay Tarplant (*Deinandra conjugens*).** Otay tarplant (*Deinandra conjugens*) was not detected on site, but is of special concern in the Otay region. This species is listed as Endangered by the CDFG, and Federally Threatened by the USFWS. It is currently on CNPS List 1B.1. Otay tarplant is narrowly endemic to southern San Diego County and typically occurs on fractured clay soils with little or no woody shrub cover. Although Otay tarplant have been historically documented at three locations within the project boundaries, and several large populations presently occur on mesas and hillsides within a mile of the project, no Otay tarplant was detected within or adjacent to the proposed Project area.

**Coast barrel cactus (*Ferocactus viridescens* var. *viridescens*).** Approximately 59 individuals of coast barrel cactus occur within the SPA and off-site improvement area. Coast barrel cactus is listed on CNPS List 2.1 and is a MSCP covered species. Coast barrel cactus is seriously threatened by urbanization, off-road vehicle activity, and commercial exploitation. It can grow in many different soil types and in varying habitat, but it is most often found on cliff faces and open areas within coastal sage scrub and maritime succulent scrub communities. It often makes up a large percentage of the succulent component within maritime succulent scrub regions.

**San Diego Marsh Elder (*Iva hayesiana*).** San Diego marsh elder is listed on CNPS List 2.2 and is a low-growing, conspicuous shrub with bright green foliage and gland-dotted leaves that grows below 800 feet and blooms from April to September. San Diego Marsh Elder grows along creeks or intermittent streambeds with an open riparian canopy which allows substantial sunlight to reach the marsh elder. San Diego marsh elder is considered stable but potentially affected by modifications and degradation of coastal drainages in San Diego County.

**Singlewhorl burrowbush (*Ambrosia monogyra*).** Singlewhorl burrowbush is listed on CNPS List 2.2 and is a shrub that occurs in washes and dry riverbeds at elevations less than 1,500 feet. It blooms in the fall and is locally common in sandy washes in the southern part of San Diego County. One individual was detected within Village 9 associated with most eastern drainage.

**Snake cholla.** Snake cholla is a dark green, long-stemmed and prostrate growing cactus listed on CNPS List 1B.1 and is an MSCP Covered, Narrow Endemic species. Snake cholla grows only in maritime succulent scrub habitats within a few miles of the coast in southern San Diego County. This species is highly threatened by commercial and residential development. Nine individuals were observed within Village along the southern boundary. A total of 471 individuals were detected with the MSCP preserve open space south of the Village 9 boundary. This species is present in high numbers throughout the maritime succulent scrub patches that occur along the Otay River Valley in the project vicinity.

**South Coast Saltbush (*Atriplex pacifica*).** South coast saltbush occurs within the proposed open space preserve. South coast saltbush is a CNPS List 1B.2 species and a small annual species with prostrate to decumbent reddish stems. It grows in xeric, often mildly disturbed locales and occurs on bluffs and in coastal scrublands in areas with elevations less than 300 feet AMSL. South coast saltbush is severely declining throughout its coastal range on the mainland. One individual was detected within the MSCP Preserve area of Village 9.

**Palmer's Grappling-hook (*Harpagonella palmeri*).** One individual of Palmer's grappling-hook was detected within Village 9. Palmer's grappling-hook is on CNPS List 4.2 and is a small and easily overlooked annual member of the Borage family with distinctive hooked fruit. It occurs in dry sites in chaparral, coastal scrub and grassland under 3,000 feet. Palmer's grappling hook is declining throughout Southern California and many historical sites are likely extirpated by urban development and agricultural disking.

**Palmer's Sagewort (*Artemisia palmeri*).** Palmer's sagewort is a strongly scented perennial herb that grows from a woody base and has distinctly lobed leaves and is listed in CNPS List 4.2. This species is associated with moist drainages and sandy soil under 1,800 feet. In San Diego County, it is frequent in low places including the Otay River and often found within a shaded understory beneath willow, sycamore, or cottonwood. Palmer's sagewort blooms from June-September. San Diego sagewort is being impacted by projects that channelize or disrupt minor drainages, or via flood control projects. Two individuals of this species were detected within the MSCP Preserve.

**Palmer's Goldenbush (*Ericameria palmeri* ssp. *Palmeri*).** Palmer's goldenbush is listed in CNPS List 2 and 3, and is an MSCP covered species. It is a medium-sized, light-green, finely-textured shrub found below 200 meters (656 feet) elevation in coastal sage scrub in southern San Diego County and Baja California. In San Diego County, reported localities include Mission Valley, Mahogany Canyon, Balboa Park, Jamacha, Cottonwood, Dulzura, and Telegraph Canyon. One individual of this species were detected within the MSCP Preserve adjacent to the off-site facilities alignment.

**San Diego sunflower (*Viguiera laciniata*).** San Diego sunflower is a relatively common species in the coastal sage scrub vegetation community within the SPA and off-site improvement area. The San Diego sunflower is on CNPS List 4.2 and is a yellow-flowered, spring-blooming (January-July), xerophytic shrub that occurs in coastal sage scrub. San Diego sunflower is declining but still found at hundreds of locales where it is occasionally a dominant shrub. The species is recommended for de-listing by the CNPS; due to the fact that it is somewhat common and wide-ranging in San Diego County.

**Small-Flowered Morning-Glory (*Convolvulus simulans*).** Several individuals of small-flowered morning-glory were identified within Village 9. Small-flowered morning-glory is on CNPS List 4.2 and is a diminutive annual found in chaparral openings, coastal scrubs, and grasslands including non-native grasslands, clay lenses and serpentine seeps.

**Southwestern spiny rush (*Juncus acutus ssp. leopoldii*).** This species is found within the patch of riparian scrub habitat in the most eastern drainage within the SPA Plan area. Populations of southwestern spiny rush occur within the three drainages in the project area. Southwestern spiny rush is on CNPS List 4.2 and is a relatively common plant associated with moist, saline or alkaline soils. This species is found in drainages and wetland areas south of Aqua Hedionda to the Otay River Valley. The sensitivity of this plant is due to the decline in wetland habitats throughout the County.

## 7. Sensitive Wildlife Species

Special status wildlife species are defined as any species covered by the Chula Vista MSCP Subarea Plan, including covered species and MSCP narrow endemics and federal and state threatened or endangered wildlife. In total, 13 sensitive wildlife species occur in the project area. These wildlife species are described below and shown in Figure 5.6-1.

**Burrowing Owl.** No active burrows or burrowing owls were detected within the project area; however, the coastal sage scrub, grassland and agricultural habitats are potentially used by owls as foraging habitat. A burrowing owl sighting during the wintering raptor survey in 2006 represented a single individual that was likely a non-breeding season transient. The burrowing owl is a USFWS bird of conservation concern; a CDFW species of special concern; and a covered species under the MSCP. Burrowing owls use rodent burrows throughout the year for shelter from weather and predators and for nesting during the breeding season (February 1 to August 31). Burrowing owls have declined through much of their range because of habitat loss due to urbanization, agricultural conversion, and control of ground squirrel colonies. Burrowing owls are relatively tolerant of lower levels of human activity, but have been negatively impacted by high levels of human related disturbances such as shooting and the introduction of non-native predators.

**Coastal California gnatcatcher.** Seven potential gnatcatcher territories were identified within Village 9. The Coastal California gnatcatcher is listed as threatened by USFWS; a species of special concern by CDFW; and is a covered species under the MSCP. The population of the coastal California gnatcatcher within the United States is estimated to be approximately 5,000 pairs. Of this, roughly 2,500 pairs reside in San Diego County. Like other species that rely on coastal sage scrub, the decline of the coastal California gnatcatcher has been instigated by cumulative loss of coastal sage scrub vegetation to urban and agricultural development.

**San Diego Cactus Wren (*Campylorhynchus brunneicapillus ssp. Sandiegensis*).** The San Diego cactus wren is seriously endangered throughout its range, which is restricted to coastal lowlands from the San Juan Creek drainage basin in Orange County south to the River drainage basin in extreme northwestern



Baja California. The San Diego cactus wren is found only in coastal sage scrub and maritime succulent scrub. A total of four cactus wrens were observed within the project area.

**Dulzura California Pocket Mouse (*Chaetodipus californicus femoralis*).** Although no Dulzura California pocket mice were observed on site or off site, this species is presumed to occur within the coastal sage scrub and maritime succulent scrub located within Village 9 and the off-site improvement area. The Dulzura California Pocket Mouse is a CDFW species of special concern. It generally occurs in coastal sage scrub, chaparral, woodlands and grasslands, often at the scrub-grassland interface. Much of the suitable habitat within the small range of the Dulzura California pocket mouse has been converted to urban and agricultural uses and the remainder is vulnerable to similar conversion.

**Least Bell's Vireo (*Vireo bellii pusillus*).** A total of four Least Bell's vireo were observed off site in the Preserve and off-site improvement area. The Least Bell's vireo is a USFWS and CDFW endangered species and a covered species under the MSCP. Least Bell's vireo is restricted to riparian woodland and is most frequent in areas that combine an understory of dense young willows or mulefat with a canopy of tall willows.

**Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*).** Although no northwestern San Diego pocket mice were observed on site or off site, this species is presumed to occur within the coastal sage scrub and maritime succulent scrub located within Village 9 and the off-site improvement area. The Northwestern San Diego pocket mouse is a CDFW species of special concern. This species is often associated with open, arid habitats including coastal sage scrub, annual grassland, and desert habitat.

**Orange-Throated Whiptail (*Aspidocelis hyperythrus ssp. beldingi*).** One individual orange-throated whiptail was detected on the slopes of Drainage 2 on the southwestern portion of Village 9. The orange-throated whiptail is a CDFW species of special concern and a MSCP covered species. This species appears to prefer sage scrub that covers about 50 percent of the ground without dense grasses in between, but it also inhabits dense to extremely open stands of sage as well as chamise chaparral and floodplain areas. The principal threat to this species is loss of open sage scrub, its preferred habitat.

**Quino Checkerspot Butterfly.** No historical Quino Checkerspot butterfly observations are known within the SPA and off-site improvement area. However, Quino Checkerspot butterfly has been documented within the Otay River floodplain and suitable host plant habitats (*Plantago erecta* patches) were detected on site (see Figure 5.6-1). Quino checkerspot butterfly were observed within the Preserve during 2006 survey. The Quino Checkerspot butterfly is a USFWS endangered species and a MSCP covered species. Potential habitat for Quino Checkerspot butterfly in the region includes vegetation communities with relatively open areas that typically include patches of dot-seed and other plantains, owl's clover, and nectaring plants. These habitats include vernal pools, lake margins, nonnative grassland, perennial grassland, disturbed habitat, disturbed wetlands, and open areas within shrub communities. The current distribution of this species has been greatly reduced due to loss of habitat to development, habitat degradation, complex metapopulation dynamics, and pressures resulting from a prolonged drought in California during the late 1980s and early 1990s.

**San Diego Black-tailed jackrabbit (*Lepus californicus bennettii*).** Eight San Diego black-tailed jackrabbit were observed within Village 9. This species was not detected in the proposed off-site improvement areas. The San Diego black-tailed jackrabbit is a CDFW species of special concern. Typical habitats include early stages of chaparral, open coastal sage scrub, and grasslands near the edges of brush.

**San Diego Desert Woodrat (*Neotoma lepida intermedia*).** Although no San Diego desert woodrats were observed on site or off site, this species is presumed to occur within the coastal sage scrub and maritime succulent scrub located within Village 9 and the off-site improvement area. This San Diego desert woodrat is a CDFW species of special concern. Like other woodrats, it constructs large middens, usually of small twigs, cactus pads and other plant material.

**Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*).** Four Southern California rufous-crowned sparrows were observed within Village 9. The Southern California rufous-crowned sparrow is on the CDFW watch list and is a MSCP covered species. The Southern California rufous-crowned sparrow forages and nests on the ground, usually near vegetative cover, and maintains year-round territories. Most of the species' population occurs in coastal sage scrub, and has been reduced greatly by urban development.

**White-tailed Kite (*Elanus leucurus*).** No white-tailed kites were observed within the SPA and off-site improvement area; however, two were detected within the Otay River flood plain in the project vicinity. Therefore, the white-tailed kite may potentially use Village 9 as foraging habitat. The white-tailed kite is a CDFW fully protected species and a MSCP covered species. This species nests in riparian or oak woodland adjacent to grassland or open fields where it hunts rodents. The white-tailed kite is a fairly common resident in San Diego County.

**Raptors.** Agriculture and grassland habitat within Village 9 provides suitable raptor foraging habitat. Golden eagle (MSCP covered), Cooper's hawk (MSCP covered), northern harrier (MSCP covered), and one burrowing owl were observed on site during the wintering raptor survey. Additional raptor species observed by biologists during other surveys include red-tailed hawk (*Buteo jamaicensis*), white-tailed kite and American kestrel. These raptors were primarily observed foraging or perched in the canyons and on the on-site slopes south of the agricultural lands and within the Preserve south of the proposed project. Raptors were seen primarily in the canyons that are within 500 feet of the Otay River floodplain. No raptor breeding activity was observed within Village 9. The agricultural lands have been tilled and mowed annually for many years, precluding potential nesting on site.

## 5.6.2 Thresholds of Significance

According to the CEQA Guidelines, Appendix G, impacts to biological resources would be significant if the project would:

- **Threshold 1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- **Threshold 2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS.
- **Threshold 3:** Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- **Threshold 4:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- **Threshold 5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- **Threshold 6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### 5.6.3 Impact Analysis

#### A. Threshold 1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

##### 1. Sensitive Plant Species

###### a. Direct Impacts

Implementation of the project has the potential to result in direct impacts to candidate, sensitive, or special status plant species through removal or disturbance of habitats from construction activities involving clearing, grading, re-contouring of topography, earth moving activities and the construction of buildings, pipelines, and other facilities. Direct impacts to sensitive plant species that would occur from implementation of the project are discussed below. No direct impact would occur to populations of south coast saltbush, Palmer's sagewort, and Palmer's goldenbush, because these species are only located in the Preserve within Village 9 and would not be directly disturbed. Therefore, these species are not discussed below.

**Coast barrel cactus.** Implementation of the project would result in the direct loss of 43 coast barrel cactus identified within the project area. This impact would be significant.

**Snake cholla.** Implementation of the project would result in the direct loss of 29 snake cholla individuals within the project site and the off-site improvement area. This impact would be significant.

**Other Special Status Plant Species not Covered by the MSCP.** Construction activities associated with the project would result in direct impacts to Palmer's grappling hook, San Diego marsh-elder, singlewhorl burrowbush, southwest spiny rush, small-flowered morning glory, and San Diego sunflower because individuals from these species would be removed during construction. However, impacts to these species are not considered significant because the populations of these species are adequately protected in the Otay Ranch Preserve and are relatively common species in this portion of the county.

###### b. Indirect Impacts

Indirect impacts to sensitive plant species communities would result primarily from adverse "edge effects." Edge effects may include excess dust or construction-related soil erosion and runoff. Excess dust from construction work could disrupt short-term plant vitality by clogging reproductive structures. Long-term indirect impacts on vegetation communities include intrusions by exotic species, continued exposure to agricultural pollutants (fertilizers, pesticides, and herbicides), soil erosion, and fire. A Preserve Edge Plan was developed for Village 9 to offset and minimize potential edge effects within 100 feet of the MSCP Preserve, consistent with adjacency management requirements in the MSCP. However,

indirect impacts to sensitive vegetation communities and plants may still occur and are considered potentially significant.

## **2. Sensitive Wildlife Species**

### **a. Direct Impacts**

Implementation of the project has the potential to result in habitat loss or disturbance from construction and operational activities. Loss of habitat may result in direct impacts to the candidate, sensitive, or special status wildlife species that are dependent on these habitats. Direct impacts to sensitive wildlife species that would occur from implementation of the project are described below.

**Burrowing owl.** No active burrows were detected within the proposed development area. However, burrowing owls are known to occupy agricultural areas such as those found on site, and use such areas for both nest and foraging. The project would result in a significant impact to the burrowing owl if this species is detected in suitable habitat during pre-construction surveys or subsequent construction biological monitoring.

**Cactus wren.** Two cactus wrens were observed in the project area. The cactus wren occurs in coastal sage scrub and maritime succulent scrub, which are found on the site and in the off-site improvement area. The loss of habitat for cactus wren is considered a significant impact.

**California gnatcatcher.** Two California gnatcatcher territories would be directly impacted by implementation of the project. This loss of habitat is considered a significant impact.

**Least Bell's vireo.** One least Bell's vireo territory would be affected by the construction of the off-site improvement areas. This loss of habitat is considered a significant impact.

**Raptors.** Habitats in the existing agricultural areas on site provide foraging areas for sensitive avian species including northern harrier, burrowing owl, Cooper's hawk, white-tailed kite, and golden eagle. The project would reduce on-site agricultural vegetation. Therefore, the removal of this vegetation would result in a significant impact. Additionally, impacts to avian species protected under the MBTA may occur if suitable habitat is removed or impacted during the bird breeding season (February 15 through August 31). Therefore, impacts related to raptors and breeding migratory birds would be significant.

**Wildlife Species Not Covered in MSCP.** The project would result in the direct removal of suitable on-site and off-site habitat for the southern California rufus-crowned sparrow, San Diego black tailed jackrabbit, orange-throated whiptail, Northwestern San Diego pocket mouse, Dulzura California pocket mouse, San Diego woodrat, and coast rosy boa were not observed within the project area, but are typically found in coastal sage scrub habitat and may be impacted by removal of this vegetation on site if they are present. However, the loss of this habitat would not be considered a significant impact to these wildlife species due to the relatively small amount affected on a regional scale and the low risk of endangerment associated with these species. Grasshopper sparrow could be impacted by the loss of grassland and fallow agricultural lands, but this species is still too common for such an impact to be considered significant at a range-wide scale. Therefore, impacts to these species would be less than significant.

## **b. Indirect Impacts**

**Short-term Impacts.** Short-term indirect impacts to sensitive wildlife species would occur during construction activities and would potentially consist of noise, lighting, presence of toxic substances, degradation of water quality. Species potentially affected by such activities include, but are not limited to: California gnatcatchers, nesting raptors as northern harrier, burrowing owl, and black-tailed jackrabbits. As discussed in Section 5.5, Noise, construction equipment would generate noise levels that may affect adjacent biologically sensitive areas. Construction noise exceeding an average hourly noise level greater than 60 dBA Leq at the location of any occupied habitat areas can indirectly impact sensitive wildlife species by inhibiting audible communication between potential mates and between parents and offspring. Construction equipment would have the potential to exceed 60 dBA at a distance of 1,100 feet from the source. Therefore, construction activities throughout the project site would have the potential to exceed 60 dBA at occupied habitat. Short-term indirect impacts would be considered potentially significant.

**Long-term Impacts.** Long-term indirect impacts to sensitive wildlife species would occur as a result of increased human activity in the Preserve, and domestic animal predation on listed wildlife species in the Preserve. Indirect impacts would be considered potentially significant to sensitive species residing in the Preserve.

## **B. Threshold 2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS.**

Any removal of a sensitive vegetation community is considered a significant impact because these habitats have the potential to support sensitive species, including those discussed under Threshold 1. Implementation of the project would result in direct impacts to five sensitive vegetation communities, including freshwater marsh, coastal sage scrub (including disturbed coastal sage scrub), maritime succulent scrub, mulefat scrub, and non-native grassland. Impacts to sensitive vegetation communities are identified in Table 5.6-3. Impacts to these vegetation communities would be considered significant.

## **C. Threshold 3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

### **1. Direct Impacts**

Table 5.6-4 summarizes the impacts to jurisdictional water and wetlands that would occur as a result of the project. A total of 0.24 acre of ACOE jurisdictional waters and 0.84 acre of CDFW jurisdictional channels would be impacted by implementation of the project. Impacts to ACOE and CDFW jurisdictional waters and channels would be considered significant and would require mitigation in accordance with the terms and conditions of a Section 404 permit from the ACOE. A Section 401 Water Quality Certification from the RWQCB would be required to be issued prior to the project receiving a Section 404 permit. Additionally, impacts to wetlands and channels would be required to be mitigated in order to be consistent with the City's wetlands protection program. Impacts to jurisdictional water and wetlands are considered significant.



**Table 5.6-3 Sensitive Vegetation Community Direct Impacts**

Vegetation Type	MSCP Tiers <sup>(1)</sup>	Existing Acreage	Village 9 Project Site	Off-site Grading	Off-site Facilities <sup>(2)</sup>			Total Impacts
					Planned Facilities Sewer, Access Rd	Future Facilities Storm Drain	Temporary Impacts <sup>(3)</sup>	
Maritime Succulent Scrub	I	5.77	2.32	0.85	0.14	0.07	0.14	3.52
Disturbed Maritime Succulent Scrub	I	1.65	1.47	0	0.08	0.04	0.06	1.65
<b>Subtotal</b>		<b>7.42</b>	<b>3.79</b>	<b>0.85</b>	<b>0.22</b>	<b>0.11</b>	<b>0.20</b>	<b>5.17</b>
Coastal Sage Scrub	II	3.62	3.35	0	0	0	0	3.35
Disturbed Coastal Sage Scrub	II	27.86	26.19	0.56	0	0	0	26.75
Broom Baccharis Scrub	II	0.31	0.31	0	0	0	0	0.31
<b>Subtotal</b>		<b>31.79</b>	<b>29.85</b>	<b>0.56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30.41</b>
Chaparral	III	3.96	2.87	0.76	0	0	0	3.63
Non-Native Grasslands	III	30.69	30.06	0.63	0	0	0	30.69
Agriculture	IV	227.76	227.65	4.21	0	0	0	231.86
Bare Ground	IV	3.68	3.64	0.04	0	0	0	3.68
Developed	IV	20.33	17.33	2.68	0.11	0.06	0.15	20.33
Disturbed (Ruderal) Vegetation	IV	4.00	3.91	0	0.01	0.03	0.05	4.00
<b>Subtotal</b>		<b>290.38</b>	<b>285.46</b>	<b>8.32</b>	<b>0.12</b>	<b>0.09</b>	<b>0.20</b>	<b>294.19</b>
Riparian Scrub	wetland	0.14	0.05	0	0	0.02	0.07	0.14
Tamarisk Scrub	wetland	0.07	0	0	0	0.04	0.03	0.07
<b>Subtotal</b>		<b>0.21</b>	<b>0.05</b>	<b>0</b>	<b>0</b>	<b>0.06</b>	<b>0.10</b>	<b>0.21</b>
<b>Total</b>		<b>329.84<sup>(4)</sup></b>	<b>319.15<sup>(4)</sup></b>	<b>9.73</b>	<b>0.34</b>	<b>0.26</b>	<b>0.50</b>	<b>329.98<sup>(4)</sup></b>
<p><sup>(1)</sup> Sensitive habitats are identified as Tier I, Tier II, or Tier III in the Chula Vista MSCP Subarea Plan. Impacts to these vegetation types are considered significant. Wetland habitat types are not covered by the MSCP Tier classification system; however, impacts to these wetland vegetation types are also considered significant.</p> <p><sup>(2)</sup> Off-site planned facilities include the sewer lateral and paved access road, and off-site future facilities includes a storm drain pipeline with associated drainage outfall/energy dissipater structure.</p> <p><sup>(3)</sup> Construction would result in direct impacts to these areas; however, impacts would be temporary because habitat would be replaced following construction.</p> <p><sup>(4)</sup> 3.94 acres in biological open space preserve and not impacted.</p>								

Source: URS 2012

**Table 5.6-4 Impacts to Jurisdictional Waters**

Location/Resource Type	ACOE Jurisdictional Waters					CDFW Jurisdictional Wetlands				
	Length (feet)	Width (feet)	Area (square feet)	Area (acres)	2:1 Mitigation Ratio (acres)	Length (feet)	Width (feet)	Area (square feet)	Area (acres)	2:1 Mitigation Ratio (acres)
Drainage 1	1,743	2.5	4,358	0.10	0.20	1,573	11.5	18,090	0.42	0.84
Drainage 2	-	-	-	-	-	369	9	3,321	0.08	0.16
Drainage 3 – On-site Jurisdictional Waters	-	-	-	-	-	1,036	5.5	5,698	0.13	0.26
Drainage 3 – Wetland	-	-	-	-	-			2,178	0.05	0.10
Drainage 3 – Off-site Jurisdictional Waters	-	-	-	-	-	63	1.5	104	0.002	0.004
Drainage 3 – Off-site Wetlands			6,098	0.14	0.28			6,970	0.16	0.32
<b>Total</b>	<b>1,743</b>		<b>10,456</b>	<b>0.24</b>	<b>0.48</b>	<b>3,041</b>		<b>36,361</b>	<b>0.84</b>	<b>1.68</b>

Note: Numbers may be off due to rounding.  
Source: URS 2011

## 2. Indirect Impacts

Indirect adverse effects to ACOE and CDFW jurisdictional waters and channels that would potentially occur as a result of the project include increased runoff, sedimentation, erosion, and invasive exotic plant introduction. However, any potential indirect impact to jurisdictional waters would be reduced to below significant levels through compliance with the drainage and hydromodification design features outlined in the water quality and drainage reports prepared for Village 9 (Appendices K1 and K2), including compliance with the Chula Vista Development Storm Water Manual requirements and a project-specific Storm Water Pollution Prevention Plan (SWPPP). Additional information on these requirements is provided in Section 5.11, Hydrology and Water Quality.

The Village 9 Water Quality Technical Report outlines the post-construction water quality requirements and related BMPs to be implemented during the operation of the project. Implementation of the drainage and hydromodification design features identified in these plans and compliance with existing regulations, would reduce potential indirect impacts to areas downstream of Village 9 to less than significant.

### **D. Threshold 4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.**

Implementation of the project would not permanently interfere with the movement of fish or wildlife species, and no wildlife nursery sites are present in the project area. Installation of off-site underground utilities would result in temporary construction impacts related to wildlife movement in the Otay River valley, but would not interfere with wildlife movement over the long term. The continuity of suitable wildlife habitat associated with the Otay River valley would continue to be protected by the MSCP, Otay Ranch GDP, and Otay Ranch RMP. Therefore, the project would not interfere substantially with the

movement of fish or wildlife species, established native or migratory wildlife corridors, or no wildlife nursery sites and impacts to wildlife corridors would be less than significant.

**E. Threshold 5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and**

**Threshold 6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.**

**1. Consistency with Chula Vista MSCP Subarea Plan and Otay Ranch Resource Management Plan**

The project design is consistent with the MSCP Subarea Plan and the Otay Ranch RMP through specific adherence to conditions of coverage and mitigation/conveyance requirements for covered projects, as defined in the Chula Vista MSCP, Section 7.6 and the Otay Ranch RMP. The planned and future facilities that are located within the Preserve were designed to minimize impacts to covered habitats and species by following the MSCP Siting Criteria.

The Otay Ranch RMP and the Otay Ranch Preserve were the primary basis for CEQA mitigation of biological impacts identified in the Otay Ranch GDP Program EIR. The RMP includes conveyance procedures for dedicating parcels of land to the Otay Ranch Preserve and for determining the proportionate share for each village. The Otay Ranch GDP identified that the entire Otay Ranch GDP area contained 9,575 developable acres. The estimated conveyance obligation of 11,375 acres to the Otay Ranch Preserve would be met on a village-by-village basis. The conveyance ratio for all development is 1.188 acres for each acre of project area, less common areas, including schools, parks, and roadways. The project would have significant impacts related to biological resources management unless the Otay Ranch Preserve is established concurrently with development in accordance with provisions of the Chula Vista MSCP and Otay Ranch RMP.

Village 9 is located within the area designated for development under the Otay Ranch RMP and the Chula Vista MSCP Subarea Plan with the exception of the off-site component that would traverse through designated Preserve areas. The off-site facilities components include the construction of a sewer lateral and associated access road (planned facilities) and a storm drain pipeline (future facility) within the MSCP Preserve. Land use compatibility with the MSCP Preserve area is further described in Section 6.0, Land Use Consideration in the Preserve, of the Chula Vista MSCP Subarea Plan. Project components located within the Preserve are subject to the facilities siting criteria contained in Section 6.3.3.4 of the Subarea Plan. Compliance with the facilities siting criteria ensures that impacts to the Preserve have been minimized to the maximum extent practical. The following section provides an analysis of the facilities siting criteria relative to the project's off-site planned and future facilities components.

**a. Planned and Future Facilities/Siting Criteria Located within the Preserve (CCV MSCP Sections 6.3.3, 6.3.3.1, 6.3.3.4)**

The proposed off-site improvements support a covered project and are allowed in the Preserve under the Chula Vista MSCP Subarea Plan, subject to the siting criteria identified in Sections 6.3.3, 6.3.3.1, and 6.3.3.4. The following is an analysis of the facilities siting criteria relative to the project's off-site improvements.

***(a) Such facilities will be located in the least environmentally sensitive location feasible, and use existing roads, trails and other disturbed areas, including use of the active recreation areas in the Otay River Valley, as much as possible (except where such areas are occupied by the QCB). Facilities should be routed through developed or developing areas where possible. If no other routing is feasible, alignments should follow previously existing roads, easements, rights of way, and disturbed areas, minimizing habitat fragmentation.***

The off-site improvements would be co-located within a single right-of-way to minimize habitat fragmentation and impacts to sensitive species. Co-location of the two utilities reduced the corridor width to 30 feet wide, instead of the standard width of 20 feet typically required for each facility. A 12-foot wide concrete road would provide maintenance access to the southerly portion of the sewer and storm drain. The northern portion of the sewer and storm drain just south of the development area will not have an access road due to the steep topography in that location. Temporary impacts associated with the construction of the project's off-site facilities component would be limited to a 50-foot wide temporary construction zone during the installation. This construction zone will be narrowed to approximately 40 feet in the area that the Snake Cholla was found. Construction impacts would be addressed pursuant to a revegetation plan required as part of mitigation for direct impacts to sensitive species. The additional 20 feet of the construction zone will be re-vegetated with native plants. The plan is subject to the oversight and approval of the Development Services Director (or their designee). Therefore, this criterion has been satisfied.

***(b) Such facilities shall avoid, to the maximum extent practicable, impacts to covered species and wetlands, and will be subject to the provisions, limits, and mitigation requirements for narrow endemic species and wetlands pursuant to Section 5.2.3 and 5.2.4 of the Subarea Plan.***

The off-site facilities have been co-located within a single alignment and clustered with existing facilities to minimize impacts to covered species and their habitats. Given the relatively even distribution of maritime succulent scrub located along the southern boundary of Village 9, moving the alignment further east or west would not substantially reduce impacts to these habitat communities and the sensitive species that they support. Impacts to riparian scrub would be minimized by restricting the temporary construction ROW associated with the storm drain outfall/point of discharge to 25 feet within the area containing riparian scrub.

Impacts to sensitive species, their potential habitats and wetlands were minimized by co-locating the facilities and limiting the extent of the construction footprint. The proposed alignment minimizes direct impacts to narrow endemic species (snake cholla). All temporary impacts associated with the construction of the off-site components would be revegetated. Therefore, this criterion has been satisfied.

***(c) Where roads cross the Preserve, they should provide for wildlife movement in areas that are graphically depicted on and listed in the MSCP Subregional Plan Generalized Core Biological Resource Areas and Linkages map as a core biological area or a regional linkage between core biological areas. All roads crossing the Preserve should be designed to result in the least impact feasible to covered species and wetlands. Where possible at wildlife crossings, road bridges for vehicular traffic rather than tunnels for wildlife use will be employed. Culverts will only be used when they can achieve the wildlife crossing/movement goals for a specific location. To the extent feasible, crossings will be designed as follows: the substrate will be left in a natural condition or revegetated if soils engineering requirements force subsurface excavation and vegetated with native vegetation if possible; a line-of-***

***sight to the other end will be provided; and if necessary, low-level illumination will be installed in the tunnel.***

The off-site facility would include a permanent access road that will be paved with concrete or asphalt. The access road would not impede a major regional linkage and culverts would not be required within the Preserve. By co-locating the facilities within a minimal width construction right-of-way and revegetating areas affected by temporary construction disturbance, these linear facilities would not impede wildlife movement. Redundant facilities through the preserve are avoided. The proposed off-site facilities would not include lighting that may indirectly impact wildlife. The remainder of the Otay River Valley, south of the proposed off-site facilities, would also be available for wildlife movement. Therefore, this criterion has been satisfied.

***(d) To minimize habitat disruption, habitat fragmentation, impediments to wildlife movement and impact to breeding areas, road and/or right-of-way width shall be narrowed from existing City design and engineering standards, to the maximum extent practicable. In addition, roads shall be located in lower quality habitat or disturbed areas to the maximum extent practicable.***

The design of the paved access road has been narrowed to 12 feet wide from the original design of 25 feet wide and will be used for both sewer and storm water facilities, thus avoiding redundant access roads through the Preserve and minimizing impacts to wildlife habitats.

Given the relatively even distribution of maritime succulent scrub, located along the southern boundary of the project site, moving the access road east or west would not substantially reduce impacts to sensitive habitat communities and the sensitive species that they support. Therefore, this criterion has been satisfied.

***(e) Impacts to covered species and habitats within the Preserve resulting from construction of future facilities will be evaluated by the City during project review and permitting. The City may authorize "take" for impacts to covered species and habitats resulting from construction of future facilities located outside the Preserve, pursuant to the Subarea Plan and consistent with the Facility Siting Criteria in this section.***

The off-site storm drain facility is considered a future facility under the Chula Vista MSCP Subarea Plan. Impacts to sensitive species and habitats in the Preserve would be minimized by co-locating the access road, storm drain, and sewer facilities within a single 30-foot permanent corridor within a 40-50 foot temporary construction right-of-way through the Preserve. Sensitive species potentially utilizing this area include snake cholla, California gnatcatcher, burrowing owl, cactus wren, and least Bell's vireo. Therefore, mitigation for potential impacts to sensitive species is required to satisfy this criterion.

***(f) The City may authorize "take" for impacts to covered species resulting from construction of future facilities located within the Preserve, subject to a limitation of two acres of impact for individual projects and a cumulative total of 50 acres for all future facilities. Wildlife Agency concurrence will be required for authorization of take for any impacts to covered species and habitat within the Preserve that exceed two acres that may result from construction of any individual future facility. Wildlife Agency concurrence will be required for authorization of take for impacts to covered species and habitat within the Preserve that exceed 50 acres that may result from all future facilities combined.***

The total permanent impact to habitat for covered species associated with the development of the future facilities would be 0.17 acre (see Table 5.6-3), which is consistent with the two acres per project



limitation. Cumulative deductions from the City's 50-acre allotment for future facilities, including deductions for Villages 2, 3, 4, 11, Village 8 West, and Village 9 total 0.85 acre. Temporary impacts would be addressed through revegetation and are not subject to the acreage limitations for future facilities. This criterion has been satisfied.

***(g) Planned and future facilities must avoid impacts to covered narrow endemic species and the Quino checkerspot butterfly to the maximum extent practicable. When such impacts cannot be avoided, planned and future facilities located within the Preserve are subject to the provisions of Section 5.2.3.6 of the Chula Vista MSCP Subarea Plan. Impacts to Quino checkerspot butterfly that will result from construction of planned and future facilities within the Preserve are subject to the provisions of Section 5.2.8 of the Chula Vista MSCP Subarea Plan.***

Based on the survey results, a total of 471 individuals of snake cholla, a narrow endemic species, were detected within the MSCP Preserve south of the SPA Plan boundary. A total of 21 individuals (4.5 percent of total) were detected within the alignment that passes through the maritime succulent scrub habitat that supports this species. The off-site facilities alignment was located to avoid impacts to narrow endemics to the maximum extent practicable. Cultural resources have also been found within the Preserve in the same area that the snake chollas were detected. The planned/future facilities alignment was located to avoid cultural resources completely, while avoiding impacts to narrow endemics to the maximum extent practicable. Appendix E includes an Equivalency Analysis that demonstrates the total avoidance of the snake cholla is infeasible due to the wide-spread locations of snake cholla on the slope where the facilities must pass through. To minimize impacts, the construction footprint was limited to 40-50 feet, and the permanent corridor to 30 feet through co-locating both pipelines and access road within the narrower corridor. Snake cholla would be salvaged and replanted within the temporary construction impact area of the planned/future facilities alignment, and within the adjacent maritime succulent scrub patch where deemed appropriate. Net loss of snake cholla individuals would be less than five percent of the population in the Preserve area associated with the off-site facilities. Given the distribution of snake cholla is relatively even across the maritime succulent scrub patch that the alignment must pass through, moving the alignment east or west would not substantially reduce the number of individuals impacted by the planned/future facilities. Impacts to narrow endemic species are consistent with Sections 5.2.3 of the Subarea Plan.

Results for updated QCB surveys that were conducted for the alignment were negative. The small amount of potential habitat impact is considered less than significant. Therefore, consistent with Section 5.2.8 of the Subarea Plan, the Project as designed will minimize impacts to covered narrow endemic species and QCB, and this criterion is satisfied.

#### **b. Equivalency Analysis**

The following findings of equivalency are required for the infrastructure projects constructed within the Preserve, pursuant to Section 5.2.3.6 of the Subarea Plan, in order to obtain Take Authorization for covered Narrow Endemic Species.

##### ***(a) Definition of the Project Area***

The project area includes Otay Ranch Village 9 SPA Plan area and off-site future facilities in a portion of the Otay River Valley. Some off-site grading within adjacent non-preserve lands is also included in the proposed project.

**(b) A written description of the project**

The proposed off-site future facilities (sewer and drainage pipelines, outfall structure, and associated access road) requiring the equivalency analysis would pass through Preserve lands within the Otay River flood plain.

**(c) A written description of biological information available for the project site including the results of narrow endemic surveys**

The complete description of biological information for the site, including survey methodologies and results is included as Appendix E to this EIR and is summarized in the discussions above. The primary vegetation components of the adopted MSCP Preserve associated with the off-site future facilities include approximately 0.53 acre of maritime succulent scrub, 0.09 acre of riparian scrub, 0.07 acre of tamarisk scrub, and 0.41 acre of disturbed or developed lands. One Narrow Endemic Plant species was detected within the project area: snake cholla (*Cylindropuntia californica* var. *californica*). A total of 471 individuals were detected with the MSCP preserve open space south of the SPA Plan boundary. Twenty-one individuals (4.5 percent) occur on the maritime succulent scrub slope within the impact area of the off-site future facilities. An additional eight individuals are within the SPA Plan area. This species is present in high numbers throughout the maritime succulent scrub patches that occur along the Otay River Valley in the proposed Project vicinity.

**(d) Written finding of infeasibility of total avoidance of Narrow Endemic Species population**

Impacts to snake cholla within the MSCP preserve will result from the planned/future facilities alignment. Impacts will be mitigated in kind at through transplantation of snake cholla (mitigation measure 5.6-2). Other strategies to achieve coverage for these species include avoidance and minimization of impacts; management directives from Table 3-5 of the MSCP Subregional Plan; enhancement of existing habitats and populations; and transplantation where appropriate, as implemented through project specific mitigation for Covered Projects. Alternative construction methods, such as horizontal drilling or jack and bore, were considered. After reviewing the site conditions, including the geology, topography, and pipeline size, the alternative construction methods were deemed infeasible.

Total avoidance is not feasible due to the wide-spread locations of snake cholla on the slope where the off-site future facilities must pass through. The location for the off-site facilities was chosen to minimize impacts on vegetation and cultural resources. A total of 21 snake cholla (4.5 percent of 471 individuals) within the planned/future facilities alignment area will be impacted by the off-site facilities within the Preserve. An additional eight snake cholla are within the SPA Plan area. SPA Plan impacts to Narrow Endemics are not included in the population count because there are no limitations on impacts to Narrow Endemic Species within the development area of Covered Projects, such as the proposed project. Per MSCP Subarea Plan Section 5.3.36, impacts to Narrow Endemic Species are limited to less than 5 percent of the affected population associated with off-site facilities in the Preserve. However, with the transplantation and revegetation of snake cholla individuals and maritime succulent scrub, the net result will be equivalent with no permanent impact to snake cholla and maritime succulent scrub. The proposed impact to snake cholla associated with the off-site facilities within the Preserve are consistent with this limitation. Impacts to snake cholla are considered significant but mitigable.

The parallel off-site facilities are co-located within a single construction ROW (45 to 50 feet wide) to minimize habitat fragmentation and impacts to covered species and habitats. The permanent easement

width needed for the storm drain pipeline was reduced from the City's engineering standard width of 20-feet down to 10-feet due to the co-location with the 20-foot easement width required for the sewer pipeline. In addition, the access road associated with the planned sewer lateral will be also be used to access the storm drain pipeline. The width of the temporary construction area has been reduced where practicable to avoid snake cholla individuals. Through the co-location of these facilities, impacts associated with habitat fragmentation have been minimized as compared to if these facilities were geographically separated. Temporary impacts associated with the construction of the project's off-site facilities component will be revegetated pursuant to an approved revegetation plan (mitigation measure 5.6-5). Affected snake cholla individuals will be salvaged and replanted in the project vicinity in the Preserve. Given the distribution of snake cholla is relatively even across the maritime succulent scrub patch that the alignment must pass through, moving the alignment east or west would not substantially reduce the number of individuals impacted by the planned/future facilities alignment. Impacts to narrow endemic species are consistent with Sections 5.2.3 of the Subarea Plan.

***(e) Quantification of impacts to Narrow Endemic Species associated with the project including direct and indirect effects***

A total of 471 individuals were detected with the MSCP preserve open space south of the SPA Plan boundary. Twenty-one individuals (4.5 percent) occur on the maritime succulent scrub slope within the impact area of the off-site facilities. An additional eight individuals are within the SPA Plan area. Affected snake cholla individuals will be salvaged and replanted in the project vicinity in the Preserve. This species is present in high numbers throughout the maritime succulent scrub patches that occur along the Otay River Valley in the proposed project vicinity. Indirect effects may include dust deposition on adjacent cholla during construction.

***(f) A written description of project design features that reduce indirect effects such as edge treatments, landscaping, elevation differences; minimization and/or compensation through restoration or enhancement***

The Village 9 SPA Plan includes a Preserve Edge Plan, as required by the Otay Ranch RMP. The Preserve Edge Plan addresses drainage, toxic substances, lighting, noise, fuel modification, fencing, and invasive species. Drainage facilities will be equipped with mechanisms for removing pollutants prior to leaving developed areas en route to natural water bodies. Toxic substances related to agricultural uses on Otay Ranch will be phased out as development ensues. Lighting requirements will mandate screening of exterior light in order to avoid spillover into the Preserve. Specifications such as preconstruction surveys have been mandated through the Edge Plan; this will reduce impacts to sensitive avian species during project construction. Fuel modification and building setback requirements will result in fuel modification maintenance activities being conducted outside of the preserve. Fencing and wail treatments have been designed to control human access into the Preserve, and to control predation by domestic animals. Landscaping materials have been selected to avoid the use of invasive exotic species and provide a landscape palette that provides consistency with the Preserve. Affected snake cholla individuals will be salvaged and replanted in the project vicinity in the Preserve.

***(g) Description of measures proposed to compensate for identified impacts in a manner that demonstrates that the proposed design including compensation would result in a long-term Preserve design for the species of concern that is functionally equivalent to or better than the Preserve design that would occur in the absence of the identified impact***

This equivalency analysis is based on the particular requirements of the species of concern. As summarized in the Tables 3 and 4 of this report, the MSCP Preserve area within the off-site facilities impact area is approximately 1.1 acres, including 0.69 acre of sensitive vegetation. Vegetation components of the adopted MSCP Preserve associated with the off-site facilities include approximately 0.53 acre of maritime succulent scrub, 0.09 acre of riparian scrub, 0.07 acre of tamarisk scrub, and 0.41 acre of disturbed or developed lands. The proposed off-site facilities would result in an overall net decrease of 0.60 acre after restoration of 0.20 acre of temporary impact area but is offset by the off-site habitat creation of 5.17 acres of maritime succulent scrub as mitigation for impacts to this vegetation community (mitigation measure 5.6-1). The proposed project also contributes 3.94 acres of biological open space to the Preserve. However, with the transplantation and revegetation of snake cholla individuals and maritime succulent scrub, the net result will be equivalent with no permanent impact to snake cholla and maritime succulent scrub. The proposed impact to snake cholla associated with the off-site facilities within the Preserve are consistent with this limitation. Impacts to snake cholla are considered significant, but mitigable.

***(h) A summary conclusion, including findings of consistency with the applicable percentage criterion***

Based on the information contained in this analysis, the proposed project, including the off-site facilities would result in overall benefits to the Preserve through planned conservation of covered habitats and species. Less than 5 percent of the affected population of snake cholla would be affected and these individuals would be salvaged and replanted within the Preserve. Off-site habitat creation of 5.17 acres of maritime succulent scrub habitat would also benefit snake cholla (mitigation measure 5.6-1).

**c. Additional Measures (MSCP Subarea Plan Section 5.2.8.1)**

In accordance with Section 5.2.8.1 of the MSCP Subarea Plan, infrastructure projects constructed within the Preserve would be subject to the following sequence of measures to avoid and minimize impacts to QCB and QCB habitat.

***(a) A habitat assessment will be conducted in potential facility locations as part of the project siting and design process.***

Multiple habitat assessments have been conducted within the off-site alignment within the Preserve. URS biologists conducted biological surveys of the off-site improvement area in 2006, 2007, 2009, and 2010. The results of these surveys are summarized in Section B, Biological Surveys, under Existing Conditions. Therefore, this criterion has been satisfied.

***(b) Quino Checkerspot Butterfly surveys will be conducted in appropriate habitat by a qualified biologist in accordance with the most recent survey protocol adopted by the USFWS.***

Surveys for the QCB using current USFWS protocol were conducted in 2009, and 2010. No QCB were detected during these surveys. Therefore, this criterion has been satisfied.

***(c) If Quino Checkerspot Butterfly are observed within the proposed project area, the project will be designed to avoid impacts to Quino Checkerspot Butterfly habitat to the maximum extent practicable.***

No QCB were observed within or adjacent to the off-site alignments, and no avoidance is required. Therefore this criterion has been satisfied.

***(d) The following avoidance criteria will be applied specifically to preserve Habitat-Category A areas located east of SR 125.***

The off-site alignment is located east of SR-125. No QCB or significant patches of dwarf plantain (50 square meet minimum patch size) were detected within the planned and future facilities alignment. Therefore this criterion has been satisfied.

***(e) For construction in areas adjacent to occupied habitat, dust control measures (i.e., watering) will be applied during grading activities.***

No occupied habitat has been found adjacent to the off-site alignments; however, suitable habitat exists in the vicinity. Air quality dust control measures and previously adopted air quality mitigation measures from the Otay Ranch GDP PEIR will be implemented during project construction (see Section 5.4, Air Quality), which would minimize indirect impacts to sensitive biological resources.

***(f) As part of the overall preserve management strategy, a weed control program will be established for all water/sewer line access roads built through potential Quino Checkerspot Butterfly habitat. This will include road construction using a concrete-treated base material with aggregate rock to prevent vegetation growth on the road surface, while allowing sufficient percolation to minimize flows. The zone of influence to be subject to the weed control program will be determined by the City's Habitat Manager based on site-specific conditions.***

No occupied habitat has been found adjacent to the off-site alignments; however, suitable habitat exists in the vicinity. The off-site access road has been designed to be consistent with this requirement. The access road would be constructed of concrete or asphalt and would contain aggregate on either side to minimize vegetation growth. Therefore, this criterion has been satisfied.

#### **d. Implementation Criteria/Assurances**

Table 6-1 of the MSCP Subarea Plan identifies implementation criteria/assurances for planned facilities. The off-site sewer lateral and access road are associated with the Salt Creek Interceptor/Otay Trunk Sewer. These implementation criteria/assurances include the following:

***(a) Siting of these sewer facilities is subject to the Otay Ranch RMP Phase 1 Policy 6.6 and the Otay Ranch RMP Infrastructure Plan, Section 6.0; and Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan.***

The development associated with the off-site facilities in the Preserve is consistent with the Otay Ranch RMP Phase 2 Conceptual Infrastructure Plan in that the Village 9 has been sited primarily in development, disturbed and/or low quality agricultural areas to the extent practicable, temporary impacts to Diegan coastal sage scrub and maritime succulent scrub would be mitigated, potential impacts to sensitive wildlife species will be mitigated, erosion control is required through the BMPs required by the project-specific SWPPP (see Section 5.11, Hydrology and Water Quality), and wetland impacts would be minimized through site design. Therefore, this criterion has been satisfied.

***(b) BMPs will be used to design and maintain these facilities.***

Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits, the applicant would prepare a SWPPP to the satisfaction of the City Engineer. The BMPs contained in the SWPPP shall include, but are not limited to, silt fences, fiber rolls, gravel bags,



and soil stabilization measures such as erosion control mats and hydro-seeding. Therefore, this criterion has been satisfied.

***(c) Sewer lines will be sited to avoid mitigation-sites created as mitigation for other projects.***

No mitigation sites are known to occur within the immediate vicinity of the off-site alignments. Therefore, this criterion has been satisfied.

***(d) Maintenance access roads related to these sewer facilities will be sited to avoid to the maximum extent practicable impacts to covered species and habitats, including covered narrow endemic species, pursuant to the Facilities Siting Criteria in Section 6.3.3.4 of the Subarea Plan.***

A new access road will be constructed in conjunction with the off-site component that will provide access to utility infrastructure. The design of the access road has been narrowed to 12 feet wide from the original design of 25 feet wide. This access road would also be used to access the storm water facilities, thus avoiding redundant access roads through the Preserve and minimizing impacts to wildlife habitats. Snake cholla, a narrow endemic species, is located within the access road footprint and impacts have been minimized to the extent practicable. Less than 5 percent of the affected population of snake cholla will be directly impacted. The off-site facilities through the Preserve were sited to minimize impacts to snake cholla. Therefore, this criterion is satisfied.

***(e) Through the Otay River Valley where existing unpaved roads will be utilized, road widths will be limited to 20 feet. Maintenance access roads will be constructed as follows: access roads will be constructed of concrete-treated base material with aggregate rock to minimize frequency of maintenance; where access roads exceed a 5 percent grade concrete or asphalt may be permitted to ensure maintenance vehicle traction; where cross-drainage occurs concrete aprons may be permitted to minimize erosion.***

The proposed access road would be constructed in association with the off-site sewer lateral. The design of the access road has been narrowed to 12 feet wide from the original design of 25 feet wide. This access road will also be used to access the storm water facilities, thus avoiding the need to construct redundant access roads through the Preserve and minimizing impacts to wildlife habitats. Therefore, this criterion is satisfied.

***(f) Temporary impacts related to these sewer facilities will be revegetated pursuant to Section 6.3.3.5 of the Chula Vista MSCP Subarea Plan.***

All temporary impacts resulting from the planned and future facilities alignments would be revegetated. Therefore, this criterion has been satisfied.

***(g) Public access to finger canyons associated with the primary canyons involving these facilities will be limited, pursuant to the Otay River Valley Framework Management Plan, Section 7.6.3 of the Subarea Plan.***

Access connecting Village 9 to off-site facilities would be limited to authorized personnel and would be provided via use of the existing road constructed for the Salt Creek Sewer Interceptor. This criterion is satisfied.

Based on the preceding discussion, the proposed off-site planned and future facilities alignments that would be located within the Preserve are considered to be consistent with the requirements and criteria

of the City's MSCP Subarea Plan and would not conflict with the adopted MSCP. The proposed off-site facilities would minimize impacts MSCP narrow endemic species. All impacts to covered species and their habitats within the Preserve would be mitigated through implementation criteria for these facilities and through conservation strategies of the City's MSCP Subarea Plan. Therefore, impacts would be considered less than significant.

#### **e. Adjacency Management**

In accordance with Policy 7.2 of the Otay Ranch RMP II, a Preserve Edge Plan was developed for Village 9, and addresses adjacency issues such as drainage, contaminants, invasive species, lighting and noise, and measures to minimize impacts to the adjacent habitats. The Preserve edge is located within the site and consists of a 100-foot buffer strip of land adjacent to the Preserve.

In accordance with the Otay Ranch GDP and Otay Ranch RMP, a draft agricultural plan was developed to discuss the phased elimination of agricultural activities on site. Grazing and dry farming are the only activities currently permitted on the site. The plan also includes measures to reduce agricultural impacts such as a requiring a minimum 200-foot buffer between agricultural operations and developed areas, the use of vegetation to shield development within at least 400 feet from areas where pesticide may be applied, fencing off of areas for safety/security, and preliminarily notifying local residents of any pesticide use.

A fire protection plan has been developed to address fire safety for Village 9 and outlines fire response strategies, fire prevention strategies, and fire potential in relation to the native habitat along the southern edge of the site, in the Preserve area. This document also outlines fuel modification specifications for vegetation, including acceptable plant lists. The fuel modification zone does not encroach into the Preserve, as shown in Figure 3-13.

To further reduce indirect impacts to sensitive vegetation communities as a result of edge effects from development, the following directives are included in the SPA Plan and must be implemented accordingly:

1. No invasive, non-native plant species shall be introduced into areas within 100 feet of the Preserve. All slopes adjacent to the Preserve shall be planted with native species that are consistent with the adjacent native habitat. The Edge Plan includes plant lists that can and cannot be used in the revegetation of natural areas.
2. All agricultural uses, including animal-keeping activities, and recreational uses that use chemicals or general by-products such as manure, potentially toxic to special status habitats or plants need to incorporate methods on-site to reduce impacts caused by the application and/or drainage of such material into Preserve areas.
3. A 100 feet buffer has been installed around the edge of the Preserve areas. This buffer is not part of the Preserve, but is a privately or publicly owned area included in lots within the urban portion of Otay Ranch. This buffer may include the fuel modification zones.
4. An on-site detention basin will be installed to control the post-development peak storm water runoff discharge rates and velocities prior to discharging project flows into the western drainage. This is consistent with the City's storm water management plans and the MSCP's adjacency management guidelines related to reducing the potential for erosion and protecting downstream habitat.

These documents are incorporated into the SPA Plan and were prepared to address the relevant adjacency management guidelines including, but not limited to, access control, noise, drainage, lighting, buffers/brush management, and toxic substances. Implementation of the design features contained in these would reduce short and long-term indirect impacts associated with Village 9 to a level below significant.

## 2. Consistency with General Development Plan Policies

Table 5.6-5 evaluates the consistency of the project with the applicable General Plan policies and, as shown in this table, the project would be consistent with the General Plan policies that pertain to biological resources.

**Table 5.6-5 Project Consistency with Applicable General Plan Biological Resource Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 1:</b> Conserve Chula Vista's sensitive biological resources.</p> <p><b>Policy E 1.1:</b> Implement the Chula Vista MSCP Subarea Plan.</p>	<p><b>Consistent.</b> The project would be consistent with the Chula Vista MSCP Subarea Plan.</p>

## 3. Consistency with General Development Plan Policies

Table 5.6-6 evaluates the consistency of the project with the applicable GDP policies and, as shown in this table, the project would be consistent with the GDP policies that pertain to biological resources.

**Table 5.6-6 Project Consistency with Applicable GDP Biological Resource Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 10 – Resource Protection, Conservation and Management</b>	
<p><b>Goal:</b> Establishment of an open space system that will become a permanent preserve dedicated to the protection and enhancement of the biological, paleontological, cultural resources (archaeological and historical resources), flood plain, and scenic resources of Otay Ranch, the maintenance of long-term biological diversity, and the assurance of the survival and recovery of native species and habitats within the preserve, and to serve as the functional equivalent of the County of San Diego Resource Protection Ordinance.</p> <p><b>Objective:</b> Identify sensitive and significant biological, cultural, paleontological, agricultural, and scenic resources within Otay Ranch that require protection and/or management.</p> <p><b>Objective:</b> Preserve sensitive and significant biological, cultural, paleontological, flood plain, visual, and agricultural resources.</p> <p><b>Objective:</b> Enhance, restore, and re-establish sensitive biological resources (species and habitats) in disturbed areas where the resources either formerly occurred or have a high potential for establishment.</p> <p><b>Objective:</b> Establish functional connections for on-site resources and integrate the Preserve into a larger regional system.</p>	<p><b>Consistent.</b> Prior to recordation of each final map the applicant shall convey land within the Otay Ranch Preserve to the Otay Ranch Preserve Owner Manager or its designee at a ratio of 1.188 acres for each acre of development area, as defined in the Otay Ranch RMP. A biological resource technical report was prepared for the project. Mitigation measures 5.6-1 through 5.6-19 were identified to reduce the project's impact on biological resources to a less than significant level.</p> <p>Coastal sage scrub, maritime succulent scrub, and jurisdictional wetlands/waters would be restored off site within the Otay Ranch Preserve in the project vicinity (Otay River Valley) consistent with the Otay Ranch RMP and MSCP Subarea Plan.</p> <p>The proposed development pattern is consistent with the MSCP Preserve boundary. On-site biological habitat being conserved in the Preserve would contribute to wildlife movement function associated with the Otay River Valley.</p>

Table 5.6-6 Project Consistency with Applicable GDP Biological Resource Policies (continued)

Applicable Policies	Evaluation of Consistency
<b>Objective:</b> Effectively manage the preserve to protect, maintain, and enhance resources in perpetuity.	Preserve land would be maintained and preserved in accordance with the RMP.
<b>Objective:</b> Identify permitted land uses within the preserve.	Uses of the preserve area in Village 9 would be subject to the regulations of the Otay Ranch RMP and MSCP Subarea Plan. Adjacent uses would also be subject to the Preserve Edge Plan.
<b>Objective:</b> Identify allowable uses within appropriate land use designations for areas adjacent to the preserve.	The SPA Plan and TM proposes the lowest density development in the project area, adjacent to the Preserve, and adjacent development would be required to comply with the Preserve Edge Plan to ensure that adjacent land uses are compatible with the Preserve.

## 5.6.4 Level of Significance Prior to Mitigation

### A. Sensitive Plant and Wildlife Species

Implementation of the project would result in significant direct and indirect impacts to several sensitive species, including snake cholla, least Bell's vireo, southern California rufous-crowned sparrow, burrowing owl, raptors and breeding migratory birds.

### B. Riparian Habitat and Other Sensitive Natural Communities

The project would result in significant direct impact to broom baccharis scrub, coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, disturbed maritime succulent scrub, chaparral, non-native grasslands, riparian scrub, and tamarisk scrub, as shown in Table 5.6-3.

### C. Federally Protected Wetlands

Prior to mitigation, ACOE regulated jurisdictional waters and CDFW jurisdictional channels would be significantly impacted by development of the project.

### D. Wildlife Movement Corridors and Nursery Sites

The project would not result in potentially significant impacts related to wildlife corridors and no mitigation is required.

### E. Consistency with Local Policies, Ordinances, HCP, and NCCP

The project would have the potential to result in impacts to sensitive species that would conflict with Chula Vista MSCP Subarea Plan. Additionally, the project would have significant impacts related to biological resources management unless the Otay Ranch regional open space is preserved proportionally and concurrently with development, in accordance with the provisions of the City MSCP Subarea Plan and the Otay Ranch RMP.

## 5.6.5 Mitigation Measures

The following mitigation measures, mitigation measures 5.4-1 through 5.4-3 in Section 5.4, Air Quality, mitigation measures 5.11-1 through 5.11-5 in Section 5.11, Hydrology and Water Quality, and mitigation

measures 5.6-17 through 5.6-19 related to MSCP compliance have been identified to reduce biological resources impacts associated with the project to below a level of significance.

## A. Sensitive Plant and Wildlife Species

- 5.6-1 **Maritime Succulent Scrub Restoration Plan.** Prior to the issuance of any land development permits (including clearing and grubbing or grading permits) the applicant shall prepare a restoration plan to restore impacted maritime succulent scrub at 1:1 ratio, pursuant to the Otay Ranch Resource Management Plan. A total of 5.17 acres of maritime succulent scrub will require restoration. The restoration plan shall include, at a minimum, an implementation strategy; species salvage and relocation, appropriate seed mixtures and planting method; irrigation; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The maritime succulent scrub restoration plan shall be prepared by a City-approved biologist pursuant to the Otay Ranch Resource Management Plan restoration requirements. The applicant shall also be required to implement the revegetation plan subject to the oversight and approval of the Development Services Director (or their designee).
- 5.6-2 **Resource Salvage Plan.** Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall prepare a resource salvage plan for areas with salvageable resources, including, but not limited to, snake cholla Chula Vista Narrow Endemic Species, dot-seed plantain (Quino checkerspot butterfly larval host plant), coast barrel cactus, other cacti species, and San Diego sunflower. The resource salvage plan shall, at a minimum, evaluate options for plant salvage and relocation, including native plant mulching, selective soil salvaging, application of plant materials on manufactured slopes, and application/relocation of resources within the Preserve. Relocation efforts may include seed collection and/or transplantation to a suitable receptor site and will be based on the most reliable methods of successful relocation. The program shall contain a recommendation for method of salvage and relocation/application based on feasibility of implementation and likelihood of success. The program shall include, at a minimum, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. The resource salvage plan shall be prepared by a City-approved biologist. The applicant shall also be required to implement the resource salvage plan subject to the oversight of the Development Services Director (or their designee).
- 5.6-3 **Coastal California Gnatcatcher, Coastal Cactus Wren, and Least Bell's Vireo Pre-Construction Survey.** For any work proposed between February 15 and ~~September~~ August 15 (March 15 and September 15 for least Bell's vireo), a pre-construction survey for the coastal California gnatcatcher, coastal cactus wren, and least Bell's vireo shall be performed in order to reaffirm the presence and extent of occupied habitat. The pre-construction survey area for the species shall encompass all potentially suitable habitat within the project work zone, as well as a 300-foot survey buffer. The pre-construction survey shall be performed to the satisfaction of the Development Services Director (or their designee) by a qualified biologist familiar with the Chula Vista MSCP Subarea Plan. The results of the pre-construction survey must be submitted in a report to the Development Services Director (or their designee) for review and approval prior to the issuance of any land development permits and prior to initiating any construction activities. If California gnatcatcher, cactus wren or least Bell's vireo is detected, a minimum 300-foot buffer delineated by orange biological fencing shall be established around the detected species



to ensure that no work shall occur within occupied habitat from February 15 through August 15 for Coastal California gnatcatcher and cactus wren, and March 15 through September 15 for least Bell's vireo. On-site noise reduction techniques shall be implemented to ensure that construction noise levels not exceed 60 dBA Leq at the location of any occupied sensitive habitat areas. The Development Services Director (or their designee) shall have the discretion to modify the buffer width depending on site-specific conditions. If the results of the pre-construction survey determine that the survey area is unoccupied, the work may commence at the discretion of the Development Services Director (or their designee) following the review and approval of the pre-construction report.

- 5.6-4 **Burrowing Owl Pre-Construction Surveys.** Prior to issuance of any land development permits (including clearing and grubbing or grading permits), the applicant shall retain a City-approved biologist to conduct focused pre-construction surveys for burrowing owls. The surveys shall be performed no earlier than ~~30~~10 days prior to the commencement of any clearing, grubbing, or grading activities. If occupied burrows are detected, the City-approved biologist shall prepare a passive relocation mitigation plan subject to the review and approval by the wildlife agencies and City including any subsequent burrowing owl relocation plans to avoid impacts from construction-related activities.
- 5.6-5 **Revegetation Plan.** Prior to issuance of land development permits, including clearing, grubbing, grading and construction permits, the applicant shall provide a revegetation plan to restore 0.2 acre of temporary impacts to maritime succulent scrub and 0.1 acre of temporary impacts to riparian scrub associated with off-site planned and future facilities. The revegetation plan must be prepared by a qualified City-approved biologist familiar with the Chula Vista MSCP Subarea Plan and must include, but not be limited to, an implementation plan; appropriate seed mixtures and planting method; irrigation method; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The applicant shall be required to prepare and implement the revegetation plan subject to the oversight and approval of the Development Services Director (or their designee).
- 5.6-6 **Biological Construction Monitoring.** Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for any areas adjacent to the Preserve and the off-site facilities located within the Preserve, the applicant shall provide written confirmation that a City-approved biological monitor has been retained and shall be on site during clearing, grubbing, and/or grading activities. The biological monitor shall attend all pre-construction meetings and be present during the removal of any vegetation to ensure that the approved limits of disturbance are not exceeded and provide periodic monitoring of the impact area including, but not limited to, trenches, stockpiles, storage areas and protective fencing. The biological monitor shall be authorized to halt all associated project activities that may be in violation of the Chula Vista MSCP Subarea Plan and/or permits issued by any other agencies having jurisdictional authority over the project.
- 5.6-7 **Pre-Construction Education.** Before construction activities occur in areas adjacent to and/or containing sensitive biological resources, all workers shall be educated by a City-approved biologist to recognize and avoid those areas that have been marked as sensitive biological resources.
- 5.6-8 **Migratory Bird Treaty Act Compliance.** To avoid any direct impacts to raptors and/or any migratory birds protected under the Migratory Bird Treaty Act, removal of habitat that supports

active nests on the proposed area of disturbance should occur outside of the breeding season for these species (January 15 to August 31). If removal of habitat on the proposed area of disturbance must occur during the breeding season, the applicant shall retain a City-approved biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction, the results of which must be submitted to the City for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan as deemed appropriate by the City, shall be prepared and include proposed measures to be implemented to ensure that disturbance of breeding activities are avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City-approved mitigation monitor shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

- 5.6-9 **Northern Harrier Pre-Construction Survey.** Prior to issuance of any land development permits, including clearing and grubbing or grading permits, the applicant shall retain a City-approved biologist to conduct focused surveys for northern harrier to determine the presence or absence of this species within 900 feet of the construction area. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction. The results of the survey must be submitted to the City for review and approval. If active nests are detected by the City-approved biologist, a biological monitor shall be on site during construction to minimize construction impacts and ensure that no nests are removed or disturbed until all young have fledged.
- 5.6-10 **Construction Fencing and Signage.** Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits, the applicant shall install fencing in accordance with Chula Vista Municipal Code Section 17.35.030. Prominently colored, well-installed fencing and signage shall be in place wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the qualified monitoring biologist. Fencing shall remain in place during all construction activities. All temporary fencing shall be shown on grading plans for areas adjacent to the Preserve and for all off-site facilities constructed within the Preserve. Prior to release of grading and/or improvement bonds, a qualified biologist shall provide evidence that work was conducted as authorized under the approved land development permit and associated plans.
- 5.6-11 **Indirect Impact Avoidance.** In accordance with the Chula Vista Adjacency Management Guidelines and the Otay Ranch Village 9 Edge Plan, and in addition to mitigation measure 5.11-1, Storm Water Pollution Prevention Plan, the following measures shall be implemented to further reduce indirect impacts (from lighting, noise, invasive, toxic substances, and public access) to sensitive biological resources located in the adjacent Otay Ranch Preserve areas:
- i. Prior to issuance of a building permit, a lighting plan and photometric analysis shall be submitted to the satisfaction of the Development Services Director (or their designee) to ensure lighting of all developed areas adjacent to the Preserve has been directed away from the Preserve, wherever feasible and consistent with public safety. The lighting plan shall illustrate the location of the proposed lighting standards and, if applicable, type of shielding measures required to minimize light spillage into the Preserve. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably

native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting.

- ii. Construction-related noise shall be limited within and adjacent to the Preserve during the typical breeding season of January 15 to September 15. Construction activity within and adjacent to any occupied sensitive habitat areas must not exceed 60 dBA Leq, or ambient noise levels if higher than 60 dBA Leq, during the breeding season. Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for areas within or adjacent to the Preserve, the applicant shall prepare and submit to the satisfaction of the Development Services Director (or their designee), an acoustical analysis to demonstrate that the 60 dBA Leq noise level is not exceeded at the location of any occupied sensitive habitat areas as determined based on the results the required biological pre-construction surveys. The acoustical analysis shall describe the methods by which construction noise shall not exceed 60 dBA Leq. Noise abatement methods may include, but are not limited to, reoperation of specific construction activities, installation of noise abatement at the source, and/or installation of noise abatement at the receiving areas.

5.6-12 **Retain Existing Vegetation.** Existing vegetation shall be retained where possible during construction activities and grading activities shall be limited to the immediate area required for construction.

5.6-13 **Landscape Plan.** Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for areas within the 100-foot Preserve edge, the applicant shall prepare and submit to the satisfaction of the Development Services Director (or their designee), landscape plans to ensure that the proposed plant palette is consistent with the plant list contained in Attachment A of the Otay Ranch Village 9 Preserve Edge Plan. The landscape plan shall also incorporate a manual weeding program for areas adjacent to the Preserve. The manual weeding program shall describe at a minimum, the entity responsible for controlling invasive species, the maintenance activities and methods required to control invasives, and a maintenance/monitoring schedule.

5.6-14 **MCSP Preserve Boundary Delineation.** Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for the project, the applicant shall submit wall and fence plans depicting appropriate barriers to prevent unauthorized access into the Otay Ranch Preserve. The wall and fence plans shall, at a minimum, illustrate the locations and cross-sections of proposed walls, fences, informational and directional signage, access controls, and/or boundary markers along the Preserve boundary and any off-site pedestrian trails as conceptually described in the Otay Ranch Village 9 Edge Plan. The required wall and fence plan shall be subject to the approval the Development Services Director (or their designee).

## B. Riparian Habitat and Other Sensitive Natural Communities

Implementation of mitigation measures 5.6-1, 5.6-2, 5.6-5, 5.6-6, 5.6-7, and 5.6-10 through 5.6-19; mitigation measures 5.4-1 through 5.4-3 from Section 5.4, Air Quality; and mitigation measures 5.11-1 through 5.11-5 from Section 5.11, Hydrology and Water Quality, would reduce impacts to riparian habitat and other sensitive natural communities.

### C. Federally Protected Wetlands

In addition to the mitigation measures listed below, implementation of mitigation measures 5.11-1 through 5.11-5 would reduce impacts to federally protected wetlands.

- 5.6-15 **Wetlands Mitigation and Monitoring Plan.** Prior to issuance of land development permits, including clearing or grubbing and grading permits that impact jurisdictional waters, the applicant shall prepare a wetlands mitigation and monitoring plan. This plan shall include, at a minimum, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. Areas under the jurisdictional authority of Army Corps of Engineers and California Department of Fish and Wildlife shall be delineated on all grading plans. Creation areas shall occur within the Otay River watershed in accordance with the wetlands mitigation and monitoring plan to the satisfaction of the Development Services Director (or their designee), Army Corps of Engineers, and California Department of Fish and Wildlife. The applicant shall also be required to implement the wetlands mitigation and monitoring plan subject to the oversight of the Development Services Director (or their designee), Army Corps of Engineers, and California Department of Fish and Wildlife.
- 5.6-16 **Regulatory Permits.** Prior to issuance of land development permits, including clearing or grubbing and grading permits for areas that impact jurisdictional waters, the applicant shall provide evidence that all required regulatory permits, such as those required under Sections 404 and 401 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act, have been obtained.

### D. Wildlife Movement Corridors and Nursery Sites

No mitigation measures are required. However, mitigation measure 5.6-14 would ensure that fencing installed along the off-site trail would not impede wildlife movement.

### E. Local Policies, Ordinances, HCP and NCCP

Mitigation measures 5.6-1 through 5.6-7, and 5.6-9 through 5.6-16 would also reduce potential impacts related to conflicts with the MSCP Subarea Plan.

- 5.6-17 **Annexation into Otay Ranch Preserve Community Facilities District No. 97-2.** Prior to the approval of the first final map for the SPA Plan, the applicant shall coordinate with the City Engineer and annex the project area within the Otay Ranch Preserve Community Facilities District No. 97-2.
- 5.6-18 **Otay Ranch Preserve Land Conveyance.** Prior to recordation of each final map the applicant shall convey land within the Otay Ranch Preserve to the Otay Ranch Preserve Owner Manager or its designee at a ratio of 1.188 acres for each acre of development area, as defined in the Otay Ranch Resource Management Plan. Access for maintenance purposes shall also be conveyed to the satisfaction of the Preserve Owner Manager, and each tentative map shall be subject to a condition that the applicant shall execute a maintenance agreement with the Preserve Owner Manager stating that it is the responsibility of the applicant to maintain the conveyed parcel until the Otay Ranch Preserve Community Facilities District No. 97-2 has generated sufficient revenues to enable the Preserve Owner Manager to assume maintenance responsibilities. The applicant shall maintain and manage the offered conveyance property consistent with the Otay

Ranch Resource Management Plan Phase 2 until the Otay Ranch Preserve Community Facilities District No. 97-2 has generated sufficient revenues to enable the Preserve Owner Manager to assume maintenance and management responsibilities.

- 5.6-19 **Area-Specific Management Directives.** Prior to the Preserve Owner Manager's acceptance of the conveyed land in fee title, the applicant shall prepare, to the satisfaction of the Preserve Owner Manager, area specific management directives for the associated conveyance areas, which shall incorporate the guidelines and specific requirements of the Otay Ranch Resource Management Plan, management requirements of Table 3-5 of the MSCP Subregional Plan and information and recommendations from any relevant special studies. Guidelines and requirements from these documents shall be evaluated in relationship to the Preserve configuration and specific habitats and species found within the associated conveyance areas and incorporated into the area specific management directives to the satisfaction of the Preserve Owner Manager.

## 5.6.6 Level of Significance After Mitigation

### A. Sensitive Plant and Wildlife Species

With implementation of mitigation measures 5.6-1 through 5.6-14 and 5.6-17 through 5.6-19 identified above; measures 5.4-1 through 5.4-3 in Section 5.4, Air Quality; and measures 5.11-1 through 5.11-5 in Section 5.11, Hydrology and Water Quality, sensitive species impacts related to the project would be reduced to below a level of significance.

### B. Riparian Habitat and Other Sensitive Natural Communities

With implementation of mitigation measures 5.6-1, 5.6-2, 5.6-5, 5.6-6, 5.6-7, and 5.6-10 through 5.6-19; measures 5.4-1 through 5.4-3 in Section 5.4, Air Quality; and measures 5.11-1 through 5.11-5 in Section 5.11, Hydrology and Water Quality, riparian habitat and other sensitive natural communities impacts related to the project would be reduced to below a level of significance.

### C. Federally Protected Wetlands

With implementation of mitigation measures 5.6-15 and 5.6-16 identified above, and 5.11-1 through 5.11-5 in Section 5.11, Hydrology and Water Quality, federally protected wetlands impacts related to the project would be reduced to below a level of significance.

### D. Wildlife Movement Corridors and Nursery Sites

Impacts would be less than significant before mitigation.

### E. Consistency with Local Policies, Ordinances, HCP and NCCP

With implementation of mitigation measures 5.6-1 through 5.6-7 and 5.6-9 through 5.6-19, biological resources impacts related to compliance with local polices, ordinances, HCPs and NCCPs would be reduced to below a level of significance.



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## 5.7 Cultural and Paleontological Resources

This section discusses cultural and paleontological resources within Village 9 and evaluates the potential for impact to these resources due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR did not address cultural or paleontological resources, but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01). The cultural resources discussions in this EIR are based on the project-level *Cultural Resources Survey and Test for Otay Ranch Village 9*, prepared by Gallegos and Associates in February 2009, and updated by Noah Archaeological Consulting in December 2010, provided in Appendix F1 of this EIR. The paleontological resources discussion is based on the *Technical Report, Paleontological Resource Assessment, Otay Ranch –Village 9*, prepared by the Department of PaleoServices, San Diego Natural History Museum (SDNHM), in September 2010, provided in Appendix F2 of this EIR. These studies update the applicable information in the previously circulated EIRs.

### 5.7.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Federal

##### a. National Register of Historic Places

First authorized by the Historic Sites Act of 1935, the National Register of Historic Places (National Register) was established by the National Historic Preservation Act (NHPA) of 1966, CFR Title 36, Section 60.2, as “an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment.” The National Register recognizes properties that are significant at the national, state and local levels.

##### b. Native American Graves Protection and Repatriation Act

Enacted in 1990, Native American Graves Protection and Repatriation Act (NAGPRA) conveys to American Indians of demonstrated lineal descent, the human remains and funerary or religious items that are held by federal agencies and federally supported museums, or that have been recovered from federal lands. It also makes the sale or purchase of American Indian remains illegal, whether or not they derive from federal or Indian lands.

##### 2. State Level

##### a. California Register of Historical Resources

The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State’s jurisdictions.

Created by Assembly Bill (AB) 2881 which was signed into law on September 27, 1992, the California Register of Historic Resources (CRHR) is defined by Section 5024.1(a) of the PRC as “an authoritative

listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change.” The criteria for eligibility for the California Register are based upon National Register criteria (PRC Section 5024.1(b)). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places (PRC Section 5024.1(d)).

To be eligible for the California Register, a prehistoric or historic property must be significant at the local, state, and/or federal level under one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and it must retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

1. California properties listed on the National Register and those formally determined eligible for the National Register.
2. California Registered Historical Landmarks from No. 770 onward.
3. Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

1. Historical resources with a significance rating of identified as eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and/or a local jurisdiction register.
2. Individual historical resources.
3. Historical resources contributing to historic districts.
4. Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

**b. California Native American Graves Protection and Repatriation Act**

The California NAGPRA 2001 conveys to American Indians of demonstrated lineal descent, the human remains and funerary items that are held by state agencies and museums.

**c. California Health and Safety Code Section 7050.5 - Human Remains**

Health and Safety Code Section 7050.5(b) specifies protocol when human remains are discovered. The code states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC.

**d. PRC 5097.9-5097.991 – Native American Heritage**

PRC Sections 5097.9-5097.991 identifies that no public agency, and no private party using or occupying public property, or operating on public property, under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the U.S. Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require it.

This section also details the composition and responsibilities of the Native American Heritage Commission (NAHC). The NAHC strives for the preservation and protection of Native American human remains, associated grave goods, and cultural resources. The NAHC has developed a strategic plan to assist the public, development community, local and federal agencies, educational institutions and California Native Americans to better understand problems relating to the protection and preservation of cultural resources and to serve as a tool to resolve these problems and create an awareness among lead agencies and developers of the importance of working with Native Americans. PRC Sections 5097.91 and 5097.98 were amended by AB 2641 in 2006. This bill authorizes the NAHC to bring an action to prevent damage to Native American burial grounds or places of worship and establishes more specific procedures to be implemented in the event that Native American remains are discovered.

**3. Local Level**

Chula Vista assesses and mitigates the potential impacts of private development and public facilities and infrastructure to significant cultural resources pursuant to the provisions of CEQA and CVMC Title 21. Historical resources are not limited to officially listed resources, but also include resources found to be eligible for listing at the local, state, and federal levels. Cultural resources that reflect the history of a community, from descendants of the earliest Native Americans to later explorers, settlers, and immigrants, are important to the community and, therefore, warrant protection by the City.

Furthermore, the accessibility of important cultural resources to the public for educational, religious, cultural, scientific and other purposes should be supported and encouraged by the City.

The City of Chula Vista includes protections for cultural resources in the General Plan. Both the Land Use and Transportation Element and the Environmental Element includes objectives to protect Chula Vista's important cultural resources and support and encourage their accessibility to the public (Objective E 9) and protect important paleontological resources and support and encourage public education and awareness of such resources (Objective E 10). In addition to the General Plan and Title 21, the City of Chula Vista implements a Historic Preservation Program to inform citizens, staff and elected and appointed officials of the regulatory requirements, program options and features, surveyed and designated properties, and economic benefits and incentives related to historic preservation in Chula Vista. The program was adopted by City Resolution No. 2011-147 on July 19, 2011 and is referenced in Title 21.

CVMC Section 2.49 (Ordinance 3197) establishes the Historic Preservation Commission. The Commission meets the certified local government requirements, as defined by the National Historic Preservation Act, to serve as the authority on historic preservation matters and advises the City Council and other City boards and commissions, as needed, on historic preservation matters. Creation of the commission is mandated by CVMC Title 21. The purposes of Title 21 are the following:

- A. Serve as the regulatory document of the Chula Vista Historic Preservation Program;
- B. Promote and accomplish the historic preservation goals, policies, and strategies of the Chula Vista General Plan;
- C. Promote the recognition, preservation, protection and use of historical resources through historical resource surveys and the designation of historical resources;
- D. Preserve and enhance those historical resources that give Chula Vista its identity by utilizing the Secretary of Interior Standards for Treatment of Historic Properties;
- E. Honor Chula Vista's rich history and heritage by designating significant historical resources and historic preservation districts that are associated with important historical events, persons, significant architecture, and landscape elements;
- F. Provide strong and safe neighborhoods by encouraging harmony as to style, form, proportion, and material between historical resources and new construction that are located within designated historic preservation districts;
- G. Provide for a sustainable environment through the preservation and protection of resources and neighborhoods that have historical significance;
- H. Carry out the provisions of the National Historic Preservation Act and the Certified Local Government Program established under said act;
- I. Establish the use of incentives and benefits for the protection, retention and preservation of historical resources; and
- J. Promote the recognition, preservation, protection and use of historical resources through education and a historic preservation plan that is maintained up to date and valid.



## **B. Definition of Resources**

CEQA defined cultural resources include prehistoric resources and historical-period resources. Title 21 Section 21.03 governs the meaning of words used in both Title 21 and the City's Historic Preservation Program. Prehistoric resources are physical properties resulting from human activities that predate written records and are generally identified as isolated finds or sites. Prehistoric resources can include village sites, temporary camps, lithic (stone tool) scatters, roasting pits/hearths, milling features, rock features, and burials. Historic resources consist of physical properties, structures, or built items resulting from human activities after the time of written records. In North America, the historical-period is generally considered equivalent to the time period since European contact, beginning in A.D. 1492. Historic resources can include archaeological remains and architectural structures.

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

## **C. Existing Cultural Setting**

The body of current research of Native American occupation in San Diego County recognizes the existence of at least two major cultural traditions, discussed here as the Early Period/Archaic and Late Period, based upon general economic trends and material culture. Within San Diego County, the Early Period/Archaic includes the period from 10,000 to 1,300 years before present, while the Late Period is from 1,300 years before present to historic contact. The Post-Contact/Historic Period covers the time from Spanish contact to present. A detailed overview of the prehistory and history of the project vicinity is provided in Appendix F1 of the EIR. A summary of the prehistoric and historical background follows below.

### **1. Prehistoric Setting**

#### **a. Archaic Period (10,000 – 1,300 years before present)**

The Early Period/Archaic includes the San Dieguito, La Jolla and Pauma complexes. Early migrations into San Diego County may have come from the north. Recent work on the northern Channel Islands near Santa Barbara demonstrates island occupation dating back to the terminal Pleistocene, roughly 11,600 years ago. At this time in San Diego County, the shoreline was situated two to six kilometers farther seaward than today's coast. Therefore, any evidence for early coastal habitation similar to the northern Channel Islands may have been destroyed by sea encroachment thousands of years ago. Early migrations may also have come from Great Basin/desert groups. However, whether migration into San Diego County was coastal or from inland areas, the first occupants immediately exploited coastal and inland resources of plants, animals, shellfish, and fish. This initial occupation is referred to as the San Dieguito complex. The La Jolla and Pauma complexes, which are referred to as following the San Dieguito Complex, may simply represent seasonal or geographic variations of the older and more general San Dieguito Complex. Archaic occupation sites have been reported in coastal settings, transverse valleys, sheltered canyons, benches and knolls. In north San Diego County, non-coastal sites

were defined as containing a predominance of grinding implements (manos and metates), a general lack of shellfish remains, a greater tool variety, and expressing an emphasis on both gathering and hunting.

Early Period/Archaic sites from 10,000 to 1,300 years ago within San Diego County include coastal and inland valley habitation sites, inland hunting and milling camps, and quarry sites. Material culture assemblages during this long period are similar in many respects and represent a process of relative terrestrial economic stability and presumably slow cultural change. Although various cultural traits developed or disappeared during the long span of 10,000 to 1,300 years ago, there is a clear pattern of cultural continuity during this period.

**b. Late Period (1,300 years before present - A.D. 1492)**

This period is characterized by the Luiseño and Kumeyaay/Diegueño cultures. However, Late Period cultural patterns were shared with groups along the northern and eastern periphery of San Diego County, incorporating many elements of their neighbors' cultures into their own cultures and making associations between archaeological deposits and a particular ethnographic culture difficult. Luiseño occupation in north San Diego County during the Late Period has been viewed as an occupation that resulted from the migration of a population from the desert to the coast. Although significant differences exist between Luiseño and Kumeyaay/Diegueño cultures, including language, the long interaction of these groups during the Late Period resulted in the exchange of many social patterns. Artifacts and cultural attributes reflecting this Late Period pattern include small projectile points, pottery, the establishment of permanent or semi-permanent seasonal habitation sites, a proliferation of bedrock milling for acorn and grass seed processing in the uplands, the presence of obsidian from the Imperial Valley source Obsidian Butte, and interment by cremation.

**2. Historic Context**

The history of San Diego County is commonly presented in terms of Spanish, Mexican, and American political domination. Certain themes are common to all periods, such as the development of transportation, settlement, and agriculture. A summary of the three periods of San Diego County history is provided below, as well as summary of the local history of Otay Ranch.

**a. Spanish Period**

The Spanish Period represents exploration, the establishment of the San Diego Presidio and missions at San Diego (1769) and San Luis Rey (1798), and asistencias (chapels) to the San Diego Mission at Santa Ysabel (1818) and to the San Luis Rey Mission at Pala (1816). Horses, cattle, agricultural foods and weed seeds, and a new architectural style and method of building construction were also introduced. Spanish influence continued after 1821 when California became a part of Mexico. For a period under Mexican rule, the missions continued to operate as in the past, and laws governing the distribution of land were retained.

**b. Mexican Period**

The Mexican Period includes the initial retention of Spanish laws and practices until shortly before secularization of the missions in 1834, a decade after the end of Spanish rule. Although several grants of land were made prior to 1834, vast tracts of land were dispersed through land grants offered after secularization. Cattle ranching prevailed over agricultural activities, and the development of the hide and tallow trade increased during the early part of this period. The Pueblo of San Diego (present-day

Old Town) was established and transportation routes were expanded. The Mexican Period ended in 1848 as a result of the Mexican-American War.

### **c. American Period**

The American Period began when Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo. Terms of the treaty brought about the creation of the Lands Commission, in response to the Homestead Act of 1851 that was adopted as a means of validating and settling land ownership claims throughout the state. Few Mexican ranchos remained intact because of legal costs and the difficulty of producing sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and the San Diego region resulted from several factors including the discovery of gold in the state, the conclusion of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The growth and decline of towns occurred in response to population fluxes and economic boom and bust cycles.

### **d. Local History of Otay Ranch**

Otay Ranch was originally a Mexican-period land grant located in the southwest portion of San Diego County, which encompassed the century-long occupied Native American village of Otai.

Doña Magdalena Estudillo, daughter of Captain José María Estudillo, received the original land grant from Governor José María Echandia in 1829. At the same time, Doña Magdalena's brother, José Antonio Estudillo, received the smaller (4,436 acres) grant of Rancho Janal, which adjoined Rancho Otay. The Land Act of 1851 required all holders of property in California to prove their rights of ownership to the lands they claimed. The Estudillo's petitions for the Otay and Janal properties lasted 10 years before the United States Land Commission finally confirmed Doña Magdalena's and José Antonio's claims. Both properties were known as Rancho Otay at this time.

The first American owner of the property was Solon S. Sanborn, who purchased it on July 1, 1872. The ranch changed ownership several more times before John D. Spreckles bought Otay Ranch around 1900. Mr. Spreckles sold both Otay and Janal to his friend and business associate Elisha Spurr Babcock. An avid sportsman, Babcock hunted ducks, quail, rabbits, and other game in Otay. During these outings, he and his guests resided in a hunting lodge built by him and Spreckles. The property changed hands several more times, and in 1936, the property was purchased by Stephen Birch Sr., a wealthy man who had made a fortune as a mining engineer in Alaska. By combining the properties, the original area of Rancho Otay, which was nearly 6,658 acres, grew to about 29,000 acres. The Birch family resided in the hunting lodges built by Babcock and Spreckles. Farming, cropping, and livestock operations continued on the Village 9 site during this time. The land was intensively farmed, producing principally lima beans, hay, and grain. In 1939, 6,000 acres were planted with lima beans and the remaining ranch land was used to graze about 1,000 head of livestock. Lima beans were abandoned as a major crop when bindweed morning glory infested the fields. The last year of lima bean production was 1949. Later crops included barley, wheat, and oat hay.

Following the death of Stephen Birch Sr. in 1940, his daughter Mary inherited the ranch and family farming business. She died in 1983, leaving a hotly contested will, which was still in litigation five years later. The ranch was ultimately sold to the Baldwin Company of Irvine in 1988 for \$180,000,000.

## D. Known Cultural and Paleontological Resources

Assessment of cultural resources included a cultural resources record search conducted through the California Historical Resources Information System South Coastal Information Center (CHRIS-SCIC) located at San Diego State University and research in the Gallegos and Associates research library. Results of these investigations are described by project area parcel below. Assessment of paleontological resources is based on a review of relevant published and unpublished geologic and paleontological reports, and SDNHM paleontological locality data.

### 1. Cultural Records Search

Sixty-seven studies have been conducted in the proximity of Village 9, and 173 cultural resource sites and 49 isolates are recorded within a one-mile radius of the project area. Six cultural resource sites (CA-SDI-4726, CA-SDI-4731, CA-SDI-12286, CA-SDI-14209, CA-SDI-17103, and P-37-014554) and three isolates (P-37-015141, P-37-015142, P-37-015143) are located within or adjacent to Village 9. One site (CA-SDI-11383H) is located within the Area of Potential Effect for the off-site improvement area. The seven sites and three isolates located within or adjacent to Village 9 or off-site improvement area are described below.

**CA-SDI-4726.** Site CA-SDI-4726 was recorded by Waters and Berg (1973a) as a surface scatter of flakes and a possible “SD #II workshop.” This site, which is in Village 9, has not been tested to determine site significance.

**CA-SDI-4731.** Site CA-SDI-4731 was recorded by Waters and Berg (1973b) as a surface scatter of flakes and chipping debris, and as a possible “SD #II workshop.” This site, which is adjacent to Village 9, has not been tested to determine site significance.

**CA-SDI-12286.** Site CA-SDI-12286 was recorded by Goddard and James (1991) as an artifact scatter measuring 85 meters by 100 meters. One mano, one quartzite projectile point, and dozens of flakes were noted on the site surface. The projectile point was previously collected by ERCE. This site, which is within Village 9, has not been tested to determine site significance.

**CA-SDI-14209.** Site CA-SDI-14209 was recorded by BFSa (1996a) for the Otay Valley Parcel of the Otay Ranch project. The site was described as a lithic scatter that consists of at least 40 flakes scrapers, cores, utilized flakes, and retouched flakes. Disturbance at the site consists of a dirt road that crosses the site. This site, which is within Village 9, has not been tested to determine site significance.

**CA-SDI-17103.** Site CA-SDI-17103 was recorded by Robbins-Wade et al. (2004) as a light lithic scatter consisting of one core and five debitage. This site is located within Village 9 and has not been tested to determine site significance.

**P-37-014554.** P-37-014554 was recorded by BFSa (1996b) for the Otay Valley Parcel of the Otay Ranch project (Smith 1996). The site consists of a historic wooden bridge measuring 8 meters by 8 meters. This site is within Village 9 and has not been evaluated to determine site significance.

**P-37-015141.** Isolate P-37-015141 was recorded by Rader and James (1991a) for the 22,873-acre Otay Ranch project (ERCE 1991). The isolate consists of one metavolcanic core, which was collected by ERCE.

**P-37-015142.** Isolate P-37-015142 was recorded by Rader and James (1991b) for the 22,873-acre Otay Ranch project (ERCE 1991). The isolate consists of one metavolcanic scraper, which was collected by ERCE.

**P-37-015143.** Isolate P-37-015143 was recorded by Rader and Mitchell (1991) for the 22,873-acre Otay Ranch project (ERCE 1991). The isolate consists of one metavolcanic core, which was collected by ERCE.

**CA-SDI-11383H.** Site CA-SDI-11383H is included in the off-site grading area adjacent to SR-125. The site is a roughly 1,500-foot-long part of a flume; the site has since been identified as a remnant of an Otay Ranch irrigation system. Caltrans evaluated the pipe for significance as part of its SR-125 project. Historical research uncovered no reference to the pipe in archival or oral accounts. Schaefer et al. (1994:21) stated that the irrigation system probably operated between 1900 and 1970 when the greatest amount of capital was invested in agricultural activities on the ranch. The site was recommended as not eligible for the National Register of Historic Places (NRHP) because: 1) little or no archival or oral information was likely to be found, 2) historical or physical investigations would not answer any significant research questions, and 3) the pipe lacks integrity and therefore does not meet the National Register criteria for significant resources. On May 25, 1995, the Office of Historic Preservation concurred with the recommendation. Because the criteria for the NRHP (which allows for significance not only at the national level, but at the state or local level as well) are almost identical to those for the CRHR, Caltrans has taken the position that properties that are not eligible for the NRHP at the national, state, or local level are also not eligible for the CRHR. In accordance with Caltrans policy, the site was considered not significant under CEQA.

## **2. Historical Map Review**

Early maps of the project vicinity were reviewed for historical structures, features, and roads. No items of historical significance were identified within the Otay Ranch project area on the early maps.

## **3. Paleontological Resources**

### **a. Stratigraphic Rock Units**

According to the paleontological resource assessment (Appendix F2), Village 9 is underlain primarily by three geologic formations: the Otay Formation (To and Tof), which underlies the majority of the site; Quaternary alluvial and terrace deposits (Qoa) in the southern portion of the site; and Holocene alluvial deposits (Qya), also in the southern portion of the site. The location of these formations on site is shown in Figure 5.8-1.

Numerous fossil localities have been discovered in the Otay Formation in the Otay Mesa area. These localities have produced well-preserved remains of a diverse assemblage of terrestrial vertebrates which includes tortoises, lizards, snakes, birds, shrews, rodents, rabbits, dogs, foxes, cat-like nimravids, rhinoceros, camels, mouse-deer, and oreodonts. Based on these fossil discoveries, the Otay Formation is now considered the richest source of late Oligocene terrestrial vertebrates in California. Because of its paleontological richness, the on-site portion of the Otay Formation is assigned high paleontological resource sensitivity.

No fossils are known from the Quaternary alluvial and terrace deposits in the immediate project area. However, significant Pleistocene land mammal fossils have been found in similar deposits throughout coastal San Diego County. Although disturbed at the surface of the project area by agricultural activities,



the deeper, undisturbed portions of Quaternary alluvial and terrace deposits are assigned high paleontological resource sensitivity.

The Holocene alluvial deposits are too young to contain true fossil remains or traces. Based on its post-Pleistocene age, Holocene alluvial deposits are assigned as having low paleontological resource sensitivity.

#### **b. Results of Record Search**

Thirteen previously recorded fossil collecting localities are documented within one-half mile or less of the project site. These localities were discovered during paleontological monitoring of construction projects in the Otay Formation to the north and west of Village 9.

One of the eight localities was collected from the Otay Formation during excavation for the SR-125 toll road. Fossils recovered from the other twelve localities mentioned above included plants; invertebrates; and vertebrates, including unidentified bird and lizard material, extinct mammals, and the very rare discovery of fossilized eggshell, found during grading at the Otay Ranch Village 7 project site to the north of Village 9.

### **5.7.2 Thresholds of Significance**

According to the CEQA Guidelines, Appendix G, impacts to cultural and paleontological resources would be significant if the project would:

- **Threshold 1:** Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.
- **Threshold 2:** Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5.
- **Threshold 3:** Disturb any human remains, including those interred outside of formal cemeteries.
- **Threshold 4:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- **Threshold 5:** Be inconsistent with General Plan cultural and paleontological policies thereby resulting in a significant physical impact.

### **5.7.3 Impact Analysis**

#### **A. Threshold 1: Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.**

CEQA Guidelines Section 15064.5 recognizes that historical resource includes: 1) a resource in the CRHR; 2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The cultural resource record search and historic map survey conducted for the project determined that no historic or potential historic resources occur in the project area. The project site is currently undeveloped. Therefore, there would be no impacts from the project on historic resources.

**B. Threshold 2: Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5.**

As defined in PRC Section 21083.2 a “unique” archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Several previously identified archaeological sites and isolates were identified within Village 9: CA-SDI-4726, CA-SDI-4731, CA-SDI-12286, CA-SDI-14209, CA-SDI-17103, P-37-014554, P-37-015141, P-37-015142, and P-37-015143. Site CA-SDI-11383H is located in an off-site improvement area, but was previously determined as not significant under CEQA criteria.

Gallegos and Associates (2009) intensively surveyed the entire project area to locate the previously identified resources and record any additional resources. A detailed methodology for the survey, testing and evaluation is included in Appendix F1. Testing and evaluation was conducted at the previously identified sites that were located: CA-SDI-4726, CA-SDI-4731, CA-SDI-17103, and P-37-014554. CA-SDI-12286 and CA-SDI-14209 were not found and are therefore identified as not significant. P-37-015141, P-37-015142, and P-37-015143 were not present because they had been previously collected by others.

Generally, testing at these archaeological sites consisted of the collection of surface artifacts, excavation of shovel test pits, and artifact cataloging and analysis. As a result of the survey, one site (CA-SDI-20155) and three additional isolates were identified in the off-site grading area (P-37-031726, P-37-031727, and P-37-031728). The significance of each of the previously recorded sites and the newly recorded site is discussed below, based on previous studies and the current field survey. Isolates by their nature are not considered significant and no further analysis is required. Detailed results and findings from the survey are included in Appendix F1.

Sites CA-SDI-4726 (which has been expanded to incorporate additional artifacts at previously recorded sites CA-SDI-4731 and CA-SDI-17103) and CA-SDI-20155 have low to moderate site integrity and a low amount of artifacts. Given the results of the test program, additional work at these sites would not significantly contribute to the understanding of the sites or past use of the site locations or the site occupants. Given low to moderate site integrity, low subsurface artifact counts, absence of ecofactual materials, and site disturbance, these sites are identified as not significant under CEQA criteria, and are recommended ineligible for listing on the CRHR.

P-37-014554 was recorded as a historic wooden bridge. The bridge was located during the current survey; however, only the wooden footing of the bridge remains. The footing remnants consist of a wooden retaining wall on the west side of a streambed. Because the historic bridge (P-37-014554) has

been heavily impacted, it lacks architectural integrity. In addition, historical research did not determine historical association. Therefore, P-37-014554 is identified as not significant under CEQA criteria and is recommended ineligible for listing on the CRHR.

Based on these determinations, none of the archeological resources identified on the site are culturally significant as defined in CEQA Guidelines Section 15064.5. Therefore, the project would not result in impacts to known archaeological resources. However, given the presence of archeological resources on the site, the project would have the potential to impact unknown archaeological resources during earth-disturbing construction activities. This impact would be potentially significant.

### **C. Threshold 3: Disturb any human remains, including those interred outside of formal cemeteries.**

Results of the cultural resources record search and survey did not identify any human remains or records of human remains in Village 9. However, given the presence of archeological resources on the site, regardless of cultural significance, previously unknown human remains may be present in the project area and off-site improvement areas. Ground-disturbing construction activities, grading, and trenching associated with the project would have the potential to uncover human remains. If human remains were inadvertently uncovered, projects would be required to comply with NAGPRA, PRC Section 5097.98, California NAGPRA, and Health and Safety Code Section 7050.5, described above in Section 5.7.1 under Regulatory Framework. Compliance with existing regulations would reduce impacts to a less than significant level. However, without an archaeological monitor on-site during construction to identify evidence of remains and ensure proper regulatory compliance, ground-disturbing construction activities associated with the SPA Plan and TM would have the potential to result in a significant impact to human remains.

### **D. Threshold 4: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.**

The majority of Village 9 is underlain by the Otay Formation. Quaternary alluvial and terrace deposits occur in the southern portion of the project site. These geological formations and sedimentary deposits have a high potential for containing fossilized material. In addition, fossils have been recovered during excavation activities in the vicinity of the project site. Direct impacts to paleontological resources could occur during earthwork activities, such as mass grading operations on site, or trenching activities associated with the proposed off-site improvements. These direct impacts would have the potential to adversely affect unique fossilized remains. Therefore, ground-disturbing construction activities associated with Village 9 would have the potential to result in a significant impact to paleontological resources.

### **E. Threshold 5: Be inconsistent with General Plan cultural and paleontological policies thereby resulting in a significant physical impact.**

The project is compared to the applicable General Plan objectives and policies in Table 5.7-1, and applicable GDP policies in Table 5.7-2. As shown in these tables, impacts would be less than significant with respect to this threshold.

**Table 5.7-1 Project Consistency with Applicable General Plan Cultural and Paleontological Resources Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 10:</b> Protect important paleontological resources and support and encourage public education and awareness of such resources.</p> <p><b>Policy E 10.1:</b> Continue to assess and mitigate the potential impacts of private development and public facilities and infrastructure to paleontological resources in accordance with the CEQA.</p> <p><b>Policy E 10.2:</b> Support and encourage public education and awareness of local paleontological resources, including the establishment of museums and educational opportunities accessible to the public.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these policies. The on-site and off-site areas have high sensitivity for paleontological resources. Therefore, with implementation of mitigation measures 5.7-4 through 5.7-7, construction activities that have the potential to disturb fossiliferous soils would be monitored by a qualified paleontologist. Any paleontological resources would be recovered and deposited in a scientific institution such and the SDNHM.</p>
<p><b>Objective LUT 12:</b> Protect Chula Vista’s important historic resources.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective. The cultural resource record search and historic map survey conducted for the project determined that no historic or potential historic resources occur in the project area.</p>

**Table 5.7-2 Project Consistency with Applicable GDP Cultural and Paleontological Resource Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Part II, Chapter 10 – Resource Protection, Conservation and Management</b></p>	
<p><b>Goal:</b> Establishment of an open space system that will become a permanent preserve dedicated to the protection and enhancement of the biological, paleontological, cultural resources (archaeological and historical resources), flood plain, and scenic resources of Otay Ranch, the maintenance of long-term biological diversity, and the assurance of the survival and recovery of native species and habitats within the preserve, and to serve as the functional equivalent of the County of San Diego Resource Protection Ordinance.</p> <p><b>Objective:</b> Identify sensitive and significant biological, cultural, paleontological, agricultural, and scenic resources within Otay Ranch that require protection and/or management.</p> <p><b>Policy:</b> Recover any significant fossils unearthed during grading activities for subsequent scientific study and/or display.</p> <p><b>Policy:</b> Prior to issuance of a grading permit within areas identified with the RMP as paleontologically sensitive (i.e., the Otay, Sweetwater, and San Diego formations), a letter shall be filed with the lead agency indicating that a qualified paleontologist has been retained to carry out an appropriate mitigation program.</p> <p><b>Objective:</b> Preserve sensitive and significant biological, cultural, paleontological, flood plain, visual, and agricultural resources.</p> <p><b>Policy:</b> Preserve significant cultural resources.</p>	<p><b>Consistent.</b> Significant cultural and paleontological resources in the SPA Plan area are identified in the cultural resources and paleontological resources technical reports prepared for the project, included in this EIR as appendices F1 and F2. Mitigation measures 5.7-1 through 5.7-7 were identified to reduce potential impacts to these resources to a less than significant level, including avoidance of known archaeological resources, fossil recovery, and providing written confirmation to the Development Services Director (or their designee) that a qualified paleontologist has been retained to carry out an appropriate mitigation program.</p>

## 5.7.4 Level of Significance Prior to Mitigation

### A. Historical Resources

No significant impacts related to historical resources have been identified for the project.

### B. Archaeological Resources

The project would not result in a significant impact to known archaeological resources on the site. However, construction activities associated with the project could inadvertently result in significant impacts to presently unknown archaeological resources that may be uncovered during clearing and grading.

### C. Human Remains

No known human remains have been identified at Village 9. However, construction activities associated with the project could inadvertently result in significant impacts to human remains that may be uncovered during clearing and grading.

### D. Paleontological Resources

Geological formations and soil deposits underlying Village 9 and off-site improvement areas have a high sensitivity for paleontological resources. Therefore, construction activities would have the potential to significantly impact these resources.

### E. Consistency with Cultural and Paleontological Resource Policies

No significant impacts related to consistency with cultural and paleontological resource policies have been identified for implementation of the project.

## 5.7.5 Mitigation Measures

### A. Historical Resources

No mitigation measures are required.

### B. Archaeological Resources

5.7-1 **Archaeological Monitor.** Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall provide written confirmation and incorporate into grading plans, to the satisfaction of the Development Services Director (or their designee), that a principle investigator as listed by the Secretary of the Interior (Code of Federal Regulations Title 36, Section 61) has been retained in an oversight capacity to ensure that an archeological monitor will be present during all cutting of previously undisturbed soil. If these cutting activities would occur in more than one location, multiple monitors shall be provided to monitor these areas, as determined necessary by the principal investigator.

5.7-2 **Resource Discovery Procedure.** During the initial grading of previously undisturbed soils within Village 9 and off-site improvement area, prehistoric and historic resources may be encountered. In the event that the monitor identifies a potentially significant site, the archaeological monitor



shall secure the discovery site from further impacts by delineating the site with staking and flagging, and by diverting grading equipment away from the archaeological site. Following notification to the Development Services Director (or their designee), the archaeological monitor shall conduct investigations as necessary to determine if the discovery is significant under the criteria listed in CEQA and the environmental guidelines of the City of Chula Vista.

If the discovery is determined to be not significant, grading operations may resume and the archaeological monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities. The letter report shall describe the results of the on-site archeological monitoring, each archaeological site observed, the scope of testing conducted, results of laboratory analysis (if applicable), and conclusions. The letter report will be completed to the satisfaction of the Development Services Director (or their designee) prior to release of grading bonds. Any artifacts recovered during the evaluation shall be curated at a curation facility approved by the Development Services Director (or their designee). For those prehistoric/historic resources that are determined to be significant, the following measures shall be implemented:

- i. An alternate means of achieving mitigation shall be pursued. In general, these forms of mitigation include: 1) site avoidance by preservation of the site in a natural state in open space or in open space easements, 2) site avoidance by preservation through capping the site and placing landscaping on top of the fill, 3) data recovery through implementation of an excavation and analysis program, or 4) a combination of one or more of the above measures. Procedures for implementing the alternative forms of mitigation described herein are further detailed in the Mitigation Monitoring and Reporting Program adopted as part of the 1993 Otay Ranch General Development Plan Program EIR (EIR 90-01).
- ii. For those sites for which avoidance and preservation is not feasible or appropriate, the applicant shall prepare a Data Recovery Plan. The plan will, at a minimum, include the following: 1) a statement of why data recovery is appropriate as a mitigating measure, 2) a research plan that explicitly provides the research questions that can reasonably be expected to be addressed by excavation and analysis of the site, 3) a statement of the types and kinds of data that can reasonably be expected to exist at the site and how these data will be used to answer important research questions, 4) a step-by-step discussion of field and laboratory methods to be employed, and 5) provisions will be stated for curation and storage of the artifacts, notes, and photographs. In cases involving historic resources, archival research and historical documentation shall be used to augment field-testing programs. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). All significant artifacts collected during the implementation of the Data Recovery Plan shall be curated at a facility approved by the Development Services Director (or their designee).
- iii. Following the completion of mass grading operations, the applicant shall prepare a plan that addresses the temporary on-site presentation and interpretation of the results of the archaeological studies for the project. This could be accomplished through exhibition within a future community center, civic building and/or multi-purpose building. This exhibition will only be for temporary curation of those materials being actively used for interpretation and display, and that permanent curation of artifacts and data will be at a regional repository

when one is established. All significant artifacts collected during the implementation of the Data Recovery Plan shall be permanently curated at a facility approved by the Development Services Director (or their designee).

### C. Human Remains

5.7-3 **Human Remains Disturbance Protocol.** If human remains are discovered during grading or site preparation activities within Village 9, the archaeological monitor shall secure the discovery site from any further disturbance. State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission. The Native American Heritage Commission will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American. The Most Likely Descendent will assist the Development Services Director (or their designee) in determining what course of action shall be taken to deal with the remains. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). The Archaeological Monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities.

### D. Paleontological Resources

5.7-4 **Paleontological Resource Mitigation Program.** Prior to the issuance of grading permits for Village 9 or off-site improvement area, the applicant shall provide written confirmation to the Development Services Director (or their designee) that a qualified paleontologist has been retained to carry out an appropriate mitigation program. A qualified paleontologist is defined as an individual with a M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques. A pre-grade meeting shall be held among the paleontologist and the grading and excavation contractors.

5.7-5 **Paleontological Monitor.** A paleontological monitor shall be on site at all times during the original cutting of previously undisturbed sediments of the Otay Formation or Quaternary alluvial and terrace deposits to inspect cuts for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of a qualified paleontologist.

- i. The monitor shall be on the site at least a quarter-time basis during the original cutting of previously undisturbed sediments of low sensitivity geologic formations (Holocene alluvial deposits) to inspect cuts for contained fossils. He or she shall periodically (every several weeks) inspect original cuts in deposits with unknown resource sensitivity (i.e., Quaternary alluvium).
- ii. In the event that fossils are discovered in unknown, low, or moderately sensitive formations, the per-day field monitoring time shall be increased. Conversely, if fossils are not discovered, the monitoring, at the discretion of the Planning Department, shall be reduced. A paleontological monitor is not needed during grading of rocks with no resource sensitivity (Santiago Peak Volcanics).

- 5.7-6 **Fossil Discovery Procedure.** If fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short time frame. However, some fossil specimens (such as a complete whale skeleton) may require an extended salvage time. In these instances, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains such as isolated mammal teeth, it may be necessary in certain instances and at the discretion of the paleontological monitor to set up a screen-washing operation on the site.
- 5.7-7 **Fossil Recording.** Prepared fossils along with copies of all pertinent field notes, photos, and maps shall be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum. A final summary report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils.

## **E. Consistency with Cultural and Paleontological Resource Policies**

No mitigation measures are required.

### **5.7.6 Level of Significance After Mitigation**

#### **A. Historic Resources**

Impacts to historic resources are less than significant without mitigation.

#### **B. Archaeological Resources**

With implementation of mitigation measures 5.7-1 and 5.7-2 identified above, potential impacts to archaeological resources related to the project would be reduced to below a level of significance.

#### **C. Human Remains**

With implementation of mitigation measure 5.7-3 identified above, potential impacts to human remains related to the project would be reduced to below a level of significance.

#### **D. Paleontological Resources**

With implementation of mitigation measures 5.7-4 through 5.7-7 identified above, potential impacts to paleontological resources related to the project would be reduced to below a level of significance.

## **E. Consistency with Cultural and Paleontological Resource Policies**

The project is consistent with applicable policies without mitigation.

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## 5.8 Geology and Soils

This section describes the geologic setting of Village 9 and evaluates the potential for geological and soil impacts due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR did not address geology and soils, but relies on analysis in the 1993 Program EIR for the GDP (EIR 90-01). Section 3.8, Geology and Soils, of the Otay Ranch GDP Program EIR (EIR 90-01) analyzed geology and soils impacts for the entire Otay Ranch. The Otay Ranch GDP Program EIR concluded that potentially significant impacts regarding seismic-related hazards, erosion, unstable soils, and expansive soils would occur with implementation of the Otay Ranch GDP. However, the potential geologic and soils impacts were able to be mitigated to a less than significant level with incorporation of the mitigation measures recommended in site-specific geotechnical investigations into the design and construction of future development projects. The analysis and discussion of geology and soils contained in the 1993 Otay Ranch GDP Program EIR are incorporated by reference.

The analysis is also based on the geotechnical investigation for Village 9 prepared by Advanced Geotechnical Solutions, Inc., dated November 9, 2010. This report is included in Appendix G of this EIR. The geotechnical investigation updates the applicable information in the previously certified GDP EIR.

### 5.8.1 Existing Conditions

#### A. Regulatory Framework

##### 1. State

##### a. California Geologic Survey

The California Geologic Survey (CGS) provides guidance with regard to seismic hazards. The CGS's Special Publications 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California (1997) provides guidance for evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigation.

##### b. Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act) regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. The Act helps define areas where fault rupture is most likely to occur. The Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be sufficiently active and well defined by detailed site-specific geologic explorations in order to determine whether building setbacks should be established.

##### c. Uniform Building Code and California Building Code

The Uniform Building Code (UBC) published by the International Conference of Building Officials forms the basis for about half the state building codes in the United States, including California's. The UBC has been adopted by the state legislature together with Additions, Amendments, and Repeals to address the specific building conditions and structural requirements in California. CCR Title 24, Part 2, the California



Building Code (CBC), provides minimum standards for building design. Local codes are permitted to be more restrictive than Title 24, but are required to be no less restrictive. Chapter 16 of the CBC deals with general Design Requirements, including but not limited to regulations governing seismically resistant construction (Chapter 16, Division IV) and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapters 18 and A33 deal with site demolition, excavations, foundations, retaining walls, and grading, including but not limited to requirements for seismically resistant design, foundation investigations, stable cut and fill slopes, and drainage erosion control.

## **2. Local**

### **a. Chula Vista General Plan**

Individual project development proposed on property under the City of Chula Vista's jurisdiction is required through similar UBC and CBC requirements to comply with Objective E 14 and its three associated policies (E 14.1, E 14.2, and E 14.3) contained in the adopted General Plan. Implementation of this objective and policies are intended to reduce potential impacts associated with geological hazards and public safety.

## **B. Geologic Setting**

Village 9 is located within the Peninsular Ranges geomorphic province of California. This province, which stretches from the Los Angeles basin to the tip of Baja California, is characterized as a series of northwest trending mountain ranges separated by subparallel fault zones, and a coastal plain of subdued landforms. The mountain ranges are underlain primarily by Mesozoic metamorphic rocks that were intruded by plutonic rocks of the southern California batholith, while the coastal plain is underlain by subsequently deposited marine and non-marine sedimentary formations.

The project site is located on the Otay Mesa, which is part of a broad, uplifted highland encompassing much of western and southern San Diego County. Otay Mesa is part of the Santa Ana sub-block of the Peninsular Ranges. Consistent with the geology of the Peninsular Ranges, Otay Mesa consists of Mesozoic metamorphic, volcanic, and igneous rocks on which marine and non-marine sediments have been deposited. These deposits are widespread, near-horizontal, sedimentary beds forming the broad tablelands and rolling hills of Otay Mesa.

The site consists of rolling hills, with southerly-flowing tributary drainages of the Otay River. The natural landform gradient ranges from relatively flat to steeply sloped, nearing a 2:1 slope ratio (horizontal to vertical). Fill slopes on the site associated with the construction of SR-125 also have steep 2:1 slope ratios. Elevations within the proposed development envelope range from approximately 324 feet AMSL in the southern portion of the site to approximately 621 feet AMSL in the northern portion of the site.

The local stratigraphy reflects the regional, near-horizontal to gently southwest dipping Oligocene Otay Formation. This mapped unit overlies volcanic and metavolcanic rocks of the Mesozoic Santiago Peak Volcanics. The Santiago Peak Volcanics, which are found in surface exposures on Rock Mountain, do not crop out within Village 9. In turn, various Pleistocene and Holocene non-marine sediments form layers above those formations, particularly in the south part of the site. The components of the site stratigraphy are described in greater detail below.

### **1. Otay Formation (To)**

Figure 5.8-1, Geologic Formations, shows the predominant geologic formations within the site, as identified in the geotechnical investigation for the proposed project (Appendix G to this EIR). The Oligocene Otay Formation underlies most of the site. The formation is typically brown to light gray sandstone/gritstone. In general, it is poorly to moderately compacted and is locally cross-bedded. There are a small number of claystone and bentonite beds within the Otay section within Village 9. Typically, these beds are irregular and discontinuous with relatively sharp contacts with the other sedimentary layers. The siltstones are mildly expansive and exhibit lower shear strengths when wetted. Harder and more resistant gritstone sub-units are common within the Otay Formation. Conglomerate sub-units consisting of rounded to angular cobbles to boulder sized clasts with a fine- to coarse-grained silty to clayey sand matrix can also be found. The Otay Formation is more susceptible to erosion than the unnamed Fanglomerate formation found in surrounding villages, and thus forms more subdued, rolling topography typical of the Otay Mesa. Its steepest slopes occur where tributaries to the Otay River actively erode material headward and downward.

### **2. Sweetwater Formation (Esw)**

The Eocene-age Sweetwater Formation (Esw) was encountered at depth (approximately 70 feet) in the southern margin of the property during soil borings conducted as part of the geotechnical investigation. This unit consists predominately of siltstones and mudstones, which are dark red-brown, moist and hard.

### **3. Terrace Deposits**

Veneers of Pleistocene cobbly to bouldery, well oxidized, dense sands have been mapped on surfaces 320 to 390 feet above the modern Otay River channel. These deposits are depicted as terrace deposits in the southern portion of the project site. These deposits vary from a few tens of feet thick to only a veneer of lag gravel composed of residual dense cobbles and boulders.

### **4. Alluvium (Qoal and Qal)**

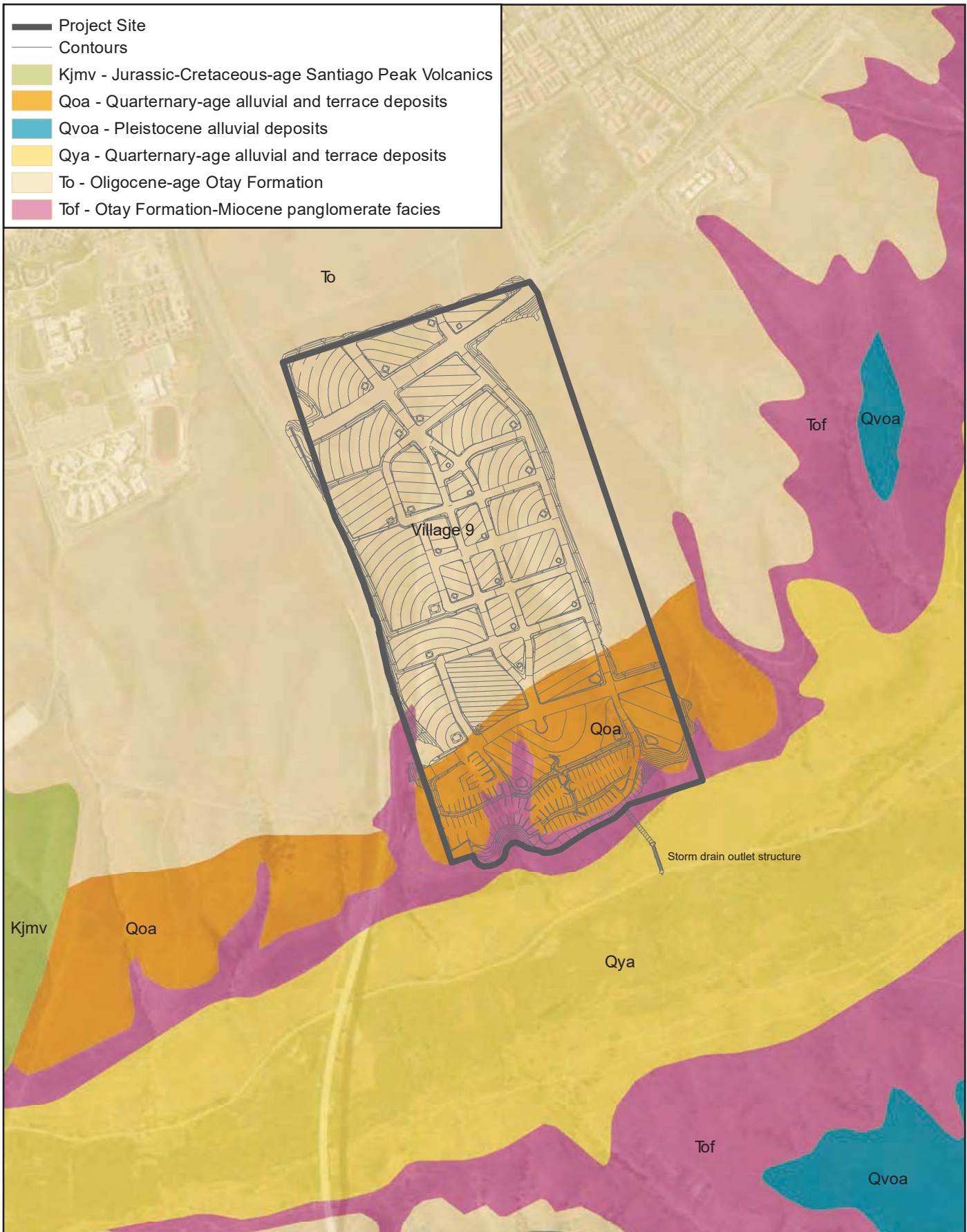
Alluvium is a soil that is deposited by water. The older alluvium (Qoal) consists of unconsolidated to consolidated sediments laid down during a higher late Pleistocene to early Holocene stand of the Otay River and now have been incised by the modern Otay River. These deposits are confined to the lower reaches of the project site, specifically along the alignment of the sewer access road. Younger alluvium (Qal) occupies the on-site drainages. The alluvium tends to be porous, expansive, and exhibits low density. These sediments vary from a few feet to up to 12 feet in thickness.

### **5. Topsoil**

A layer of residual topsoil is present over much of the rolling hills underlain by the Otay Formation. The soils are typically one to five feet thick, have a low density, and are organic-rich and expansive.

### **6. Artificial Fill – Undocumented (afu)**

Undocumented artificial fill is present in the form of service roads and trench backfill associated with the 100 feet wide water line easement in the southern portion of the project site. The fill consists of silty sands, sandy silts, and gravelly sands with cobbles. They are brown to gray brown in color, dry to slightly moist and loose to moderately dense. A maximum thickness of five feet was observed during mapping conducted as part of the geotechnical investigation.



Source: California Geological Survey 2010; AGS 2010; Atkins 2012

**GEOLOGIC FORMATIONS  
FIGURE 5.8-1**

### **7. Artificial Fills – Compacted ( $afc_1$ , $afc_2$ , and $afc_3$ )**

Three generations of compacted artificial fill occur along the west and northeast portions of the site. Two generations of fill are associated with SR-125 ( $afc_1$ ) and Hunte/Eastlake Parkway intersection ( $afc_2$ ). These fills are locally derived and consist of silty sands to clayey sands, light brown to gray in color, moist and moderately to medium dense. These fills were observed and tested by PSE (June 2006) and Geocon (2005) during placement to verify that grading operations had been performed in general conformance with the previous geotechnical recommendations by PSE (PSE 2004 & 2005) and City of Chula Vista grading code. During these grading phases several subdrains were installed which outlet into Village 9. The third generation of fill is associated with the access road and backfill for the Salt Creek Gravity Sewer main at the southern project boundary. These fills are locally derived and consist of silty sands to clayey sands, light brown to gray in color, moist and moderately to medium dense.

### **C. Groundwater**

No groundwater was observed during the geologic field mapping or subsurface investigation conducted as part of the geotechnical investigation. Seasonal, intermittent groundwater associated with precipitation may occur in on-site drainages. Water from precipitation may also become trapped along subsurface joints or beds and may be encountered during grading.

### **D. Geologic Hazards**

The following discussion describes the existing setting pertaining to potential geologic hazards including faulting and seismicity, ground surface rupture, liquefaction, compressible and expansive soils, landslides, seismically induced tsunamis, seiches and flooding, and subsidence.

#### **1. Faulting and Seismicity**

Village 9 is located in the tectonically active southern California, and will likely experience some effects from future earthquakes. The type or severity of seismic hazards affecting a site is dependent upon the distance to and direction from the faults, the intensity and duration of the seismic event, and the on-site soil characteristics.

The Otay Mesa is part of the Santa Ana sub-block of the Peninsular Ranges. The Santa Ana sub-block is bounded by the Elsinore Fault Zone on the east and by the Rose Canyon Fault Zone on the west. Regional faults in southernmost California typically trend northwest and display major right lateral slip. Significant faults of this system displaying Holocene offset are the San Andreas, Elsinore, San Jacinto, Coronado Bank, Newport-Inglewood and Rose Canyon faults. Of these, the Rose Canyon fault is closest, at approximately 12 miles west of the project site. This fault has the potential to generate a seismic event with a maximum moment magnitude of 6.9. Another mapped fault in the vicinity of Village 9 is the La Nacion fault, located about two miles to the west. This fault is a "pre-Quaternary" fault in and paralleling the Otay River. It is not considered active.

In 1972, the state passed the Alquist-Priolo Earthquake Zoning Act to help identify areas subject to severe ground shaking. The purpose of this Act is to prohibit the placement of most structures for human occupancy across the traces of active faults; thereby mitigating the hazard of fault ruptures. Alquist-Priolo Zones serve as an official notification of the probability of ground rupture for future earthquakes. Due to its distance from known active faults, no Alquist-Priolo Fault Hazard Zones have been designated within Otay Ranch. However, although no known active faults exist within the project

limits, the site would potentially experience ground motion and associated effects from earthquakes generated along regional active faults such as those in the Elsinore Fault Zone.

## 2. Ground Surface Rupture

Ground rupture results from movement on an active fault reaching the surface. Village 9 is not located within any established Alquist-Priolo Fault Zone and no active, potentially active, or inactive faults are known to underlie the project area. Accordingly, the potential for fault surface rupture within the project is limited. Table 5.8-1 provides a listing of active faults within about 65 miles of the site with the estimated maximum seismic event potential for each fault.

**Table 5.8-1 Distance to Known Active Faults**

Fault Name	Distance from Village 9 (miles)	Maximum Moment Magnitude (Mmax)
Rose Canyon	12	6.9
Coronado Bank	28	7.4
Elsinore-Julian	43	7.1
Elsinore-Coyote Mountain	45	6.8
Earthquake Valley	46	6.5
Newport-Inglewood (Offshore)	47	6.5
Elsinore-Temecula	54	6.9
San Jacinto-Coyote Creek	63	6.8
San Jacinto-Borrego	63	6.6
Laguna Salada	66	7.0
Source: Advanced Geotechnical Solutions 2010		

## 3. Liquefaction

Liquefiable soil typically consists of cohesionless sands and silts that are loose to medium dense, and saturated. To liquefy, these soils must be subjected to a ground shaking of sufficient magnitude and duration. The effects of liquefaction at a site may include ground oscillations, loss of bearing, lateral spread, dynamic settlement, or flow failure. Village 9 has a very low risk for liquefaction due to the dense nature of the on-site geologic units. Only the southern extension of the sewer access corridor that is underlain with modern alluvium has a low to moderate potential for liquefaction.

## 4. Compressible and Expansive Soils

Soil conditions vary across Village 9, and loose, compressible soils are also found on the site, including alluvium, slope wash, topsoil and the undocumented artificial fill, and the highly weathered portions of older alluvium, terrace, and Otay Formation. These materials are subject to settlement under increased loads or due to an increase in moisture content from site irrigation or change in drainage patterns.

Expansive soils are soils that undergo volumetric change with change in water content. The soils will swell with increase in moisture content and will shrink with decrease in water content. Soils with high shrink-swell potential generally contain high percentages of certain clay minerals and can cause extensive damage to structures and improvements. The predominately clayey sand and sandy clay materials within the Otay Formation, as well as the other materials on site, have a high to very high expansion potential.



### 5. Landslides and Lateral Spreads

The geotechnical investigation did not identify any significant landslides on Village 9 during site reconnaissance or subsurface investigation. The Otay Formation, which underlies most of Village 9 (see Figure 5.8-1), and the Sweetwater Formation are susceptible to erosion and slumping. Surficial slumps and bedrock landslides were observed within the Otay Formation west of Village 9. Erosion and slumping features are often associated with the La Nacion fault or bentonite beds when these beds are exposed by erosion or down cutting. As discussed above, bentonite and clay beds are found on the project site.

### 6. Subsidence

Subsidence occurs when a large-scale fluid withdrawal is performed causing surface settlement. This is common within large farming communities where groundwater is pumped from great depths over long periods of time. The Sweetwater Formation, Otay Formation, Terrace deposits, and the older alluvium on site are not susceptible to subsidence. There are no activities in the project area that pump large amounts of groundwater; however, the surficial units on the site (alluvium, undocumented fill, and topsoil) are susceptible to minor amounts of subsidence.

## 5.8.2 Thresholds of Significance

According to the CEQA Guidelines, Appendix G, impacts regarding geology and soils would be significant if the project would:

- **Threshold 1:** Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42); strong seismic ground shaking; seismic-related ground failure, including liquefaction; and/or landslides.
- **Threshold 2:** Result in substantial soil erosion or the loss of topsoil.
- **Threshold 3:** Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- **Threshold 4:** Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (2007), creating substantial risks to life or property.
- **Threshold 5:** Be inconsistent with General Plan geotechnical policies thereby resulting in a significant physical impact.
- **Threshold 6:** Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for disposal of wastewater.

### 5.8.3 Impact Analysis

#### **A. Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; and/or landslides.**

Village 9 is not located within an established Alquist-Priolo Fault Zone and no active faults are known to underlie the project area. Therefore, ground surface rupture is not considered to be a significant geologic hazard at the site.

As shown in Table 5.8-1, the closest active fault is the Rose Canyon fault, approximately 12 miles west of the project site. A major earthquake along this fault or other regional active faults listed in Table 5.8-1 could subject future on-site development to moderate-to-severe ground shaking. The design of future structures within Village 9 would be in accordance with the Chula Vista Grading Ordinance, current seismic design specifications of the Structural Engineering Association of California, current CBC and UBC standards, and other regulatory requirements. Compliance with these regulations would ensure that the risk of damage from potential seismic ground-shaking impacts to people or structures is less than significant.

The potential for liquefaction in Village 9 is very low and does not present a significant risk to future development. Although no evidence of ancient landslides or slope instabilities was cited in the Geotechnical Investigation, grading activities associated with cut slopes could result in slope instabilities within the project area because grading could expose bentonitic claystone beds on the finished slope faces. Thus, slope stability is considered to be a potentially significant impact.

#### **B. Threshold 2: Result in substantial soil erosion or the loss of topsoil.**

Village 9 is generally comprised rolling hills with southerly-flowing tributary drainages of the Otay River. The natural landform gradient ranges from relatively flat to steeply sloped. Elevations within the proposed development envelope range from approximately 324 feet AMSL in the southern portion of the site to approximately 621 feet AMSL in the northern portion of the site.

During construction, erosion (including loss of topsoil) can occur or be accelerated by site preparation activities. Vegetation removal throughout the site could reduce soil cohesion, as well as the buffer provided by vegetation from wind, water, and surface disturbance, which could render the exposed soils more susceptible to erosive forces. Additionally, newly exposed soils from excavation or grading activities may also be vulnerable to erosion. Earth-disturbing activities associated with construction would be temporary and erosion effects would depend largely on the areas disturbed, the quantity of disturbance, and the length of time soils are subject to conditions that would be affected by erosion processes. All construction activities would comply with Chapter 29 of the CBC, which regulates excavation activities and the construction of foundations and retaining walls, and Chapter 70 of the CBC, which regulates grading activities, including drainage and erosion control.

Furthermore, as described in Section 5.11, Hydrology and Water Quality, a site-specific SWPPP would be prepared prior to project construction in accordance with the National Pollutant Discharge Elimination System General Construction Permit and the Chula Vista Development Storm Water Manual. For coverage by the General Construction Permit, the applicant is required to submit to the State Water Resources Control Board (SWRCB) a Notice of Intent (NOI) and develop a SWPPP describing BMPs to be

used during and after construction to prevent discharge of sediment and other pollutants in storm water runoff from the project site. The BMPs may include silt fences, fiber rolls, gravel bags, temporary desilting basins, velocity check dams, temporary ditches or swales, storm water inlet protection, or soil stabilization measures such as erosion control mats.

Prior to the issuance of grading permits, the SWPPP would be required to be prepared to the satisfaction of the City Engineer and the Director of Public Works. Additionally, all construction activities would comply with the Chula Vista Development Storm Water Manual. In addition to requiring compliance with the project-specific SWPPP and General Construction Permit, the manual requires proper inspection, monitoring, and maintenance of construction BMPs during dry and wet weather conditions. Compliance with applicable regulatory requirements described above, which is prescribed as mitigation measure 5.8-1 for the project, would ensure that potentially significant water quality impacts during on-site construction would be reduced to a less than significant level.

Following construction of the project, development of Village 9 would include drainage improvements to minimize soil erosion and loss of topsoil on Village 9 and along sloped areas. As discussed in detail within Section 5.11, Hydrology and Water Quality, the increase in total volume of runoff from the project site to the Otay River would not result in substantial erosion because characteristics of Otay River system include low gradients, significant natural peak flow attenuation, and wide floodplain areas. These characteristics translate to a low potential for channel erosion. Additionally, although the increase in flow volume from the project site would not result in substantial erosion or siltation, a concrete energy dissipater and rip-rap apron would be constructed at the end of the Village 9 drainage system where the off-site drainage pipe discharges to Otay River to reduce the velocity of discharge. The discharge location to the Otay River is heavily vegetated, which would also dissipate flows. Section 5.11, Hydrology and Water Quality, provides a comprehensive analysis of the existing and proposed hydrology and drainage features of the project. With implementation of the proposed drainage facilities, impacts related to runoff and erosion would be reduced to a less than significant level.

**C. Threshold 3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.**

As discussed under Threshold 1, liquefaction does not present a significant risk to future development. However, loose, compressible soils that could be subject to landslide, lateral spreading, subsidence, or collapse are found over much of the project area, including alluvium, slope wash, topsoil and the undocumented artificial fill, the highly weathered portions of older alluvium, terrace, and Otay Formation. These materials may settle under increased loads, or due to an increase in moisture content from changes in irrigation or site drainage. Thus, soils could become unstable over time. As a result, there is the potential for landsliding, lateral spreading, and/or collapse as a result of compressible soils. Specifically, the Otay Formation, which underlies most of Village 9 and would be encountered during grading, is susceptible to landslides, lateral spread, or collapse. The Sweetwater formation in the southern area of the site is also susceptible to these hazards, but is located at a depth of approximately 70 feet or greater on the project site and is unlikely to be encountered during grading. The surficial units across Village 9 (alluvium, undocumented fill, and topsoil) are potentially susceptible to subsidence. These impacts are considered to be potentially significant.

**D. Threshold 4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (2007), creating substantial risks to life or property.**

The predominately clayey sand and sandy clay materials, such as bentonite clays, within the Otay Formation, as well as the other materials on site, have a high to very high expansion potential in some areas. However, due to the wide range of expansion potential typically exhibited by soils in the Otay Ranch area, soils on the project site may possess a very low expansion potential. Expansive soils within pavement, foundation, or slab subgrade could heave when wetted, resulting in cracking or failure of these developments improvements. This is considered to be a potentially significant impact.

**E. Threshold 5: Be inconsistent with General Plan geotechnical policies thereby resulting in a significant physical impact.**

The project is compared to the applicable General Plan objectives and policies in Table 5.8-2, and applicable GDP policies in Table 5.8-3. As shown, policy consistency impacts would be less than significant.

**Table 5.8-2 Project Consistency with Applicable General Plan Geology and Soils Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 14:</b> Minimize the risk of injury, loss of life, and property damage associated with geologic hazards.</p> <p><b>Policy E 14.1:</b> To the maximum extent practicable, protect against injury, loss of life, and major property damage through engineering analyses of potential seismic hazards, appropriate engineering design, and the stringent enforcement of all applicable regulations and standards.</p> <p><b>Policy E 14.2:</b> Prohibit the subdivision, grading, or development of lands subject to potential geologic hazards in the absence of adequate evidence demonstrating that such development would not be adversely affected by such hazards and would not adversely affect surrounding properties.</p> <p><b>Policy E 14.3:</b> Require site-specific geotechnical investigations for proposals within areas subject to potential geologic hazards; and ensure implementation of all measures deemed necessary by the City Engineer and/or Building Official to avoid or adequately mitigate such hazards.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these relevant policies in that it will protect against injury, loss of life, and major property damage through engineering analyses of potential seismic hazards, appropriate engineering design, and compliance with applicable regulations and standards; prohibit the subdivision, grading, or development of lands subject to potential geologic hazards; and provide site-specific geotechnical investigations within areas subject to potential geologic hazards and ensure that all measures deemed necessary by the City Engineer and/or Building official to avoid or adequately mitigate such hazards will be implemented.</p>

**Table 5.8-3 Project Consistency with Applicable GDP Geology and Soils Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 8 – Safety</b>	
<p><b>Goal:</b> Promote public safety and provide public protection from fire, flooding, seismic disturbances, geologic phenomena and manmade hazards in order to preserve life, health and property; continue government functions and public order; maintain municipal services; and rapidly resolve emergencies and return the community normalcy and public tranquility.</p> <p><b>Objective:</b> Provide public protection from earthquakes, rockslides, and liquefaction in order to minimize loss of life, injury, property damage and disruption or community social and economic activity.</p> <p><b>Policy:</b> Arrange land uses in a manner consistent with recognized seismic safety practice to promote the continuous services of governmental and emergency facilities and services.</p> <p><b>Objective:</b> Prevent property damage and loss of life due to landslides, rock falls, and erosion.</p>	<p><b>Consistent.</b> As discussed under Threshold 1, design of future structures within Village 9 would be in accordance with the Chula Vista Grading Ordinance, current seismic design specifications of the Structural Engineering Association of California, current CBC standards, and other regulatory requirements. Compliance with these regulatory requirements would ensure that potential seismic ground-shaking impacts to people or structures are less than significant.</p> <p><b>Consistent.</b> Site grading and construction would be in accordance with the CBC and the Structural Engineering Association of California to reduce the effect of seismic shaking to the extent possible. As discussed under Threshold 1, liquefaction is not a significant risk on the project site. Compliance with the geotechnical investigation recommendations would reduce potential risks from landslides and unstable soil to a less than significant level.</p> <p><b>Consistent.</b> Compliance with the geotechnical investigation recommendations would reduce potential risks from landslides and unstable soil to a less than significant level. As discussed under Threshold 2, compliance with applicable regulatory requirements would ensure that impacts regarding substantial erosion or topsoil loss during future on-site construction activities are less than significant.</p>
<b>Part II, Chapter 10 – Resource Protection, Conservation and Management</b>	
<p><b>Goal:</b> Minimize soil loss due to development.</p> <p><b>Objective:</b> Identify development activities, which present a large potential to create excessive runoff or erosion.</p> <p><b>Policy:</b> Reduce soil loss through slope stabilization, vegetation protection, revegetation and other techniques.</p>	<p><b>Consistent.</b> As discussed under Threshold 2, compliance with applicable regulatory requirements would ensure that impacts regarding substantial erosion or topsoil loss during future on-site construction activities are less than significant. Techniques would include slope stabilization, vegetation protection, and revegetation.</p>
<p><b>Goal:</b> Reduce impacts to environmentally sensitive and potential geologically hazardous areas associated with steep slopes.</p> <p><b>Objective:</b> Research existing slope conditions prior to land development activities.</p> <p><b>Policy:</b> Provide geotechnical investigations with each SPA plan.</p>	<p><b>Consistent.</b> Compliance with the geotechnical investigation recommendations would reduce potential risks from landslides and unstable soil to a less than significant level. The geotechnical investigation is provided as Appendix G to this EIR.</p>



**F. Threshold 6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for disposal of wastewater.**

All development under the SPA Plan and TM would be served by sewer service by the City of Chula Vista. Chula Vista operates and maintains its own sanitary sewer collection system that connects to the San Diego Metropolitan Sewerage System. Proposed sewer facilities that will serve Village 9 are shown on Figure 3-12, Sewer System. Therefore, septic tanks and alternative wastewater disposal systems would not be required and no impact would occur.

## **5.8.4 Level of Significance Prior to Mitigation**

### **A. Exposure to Seismic Related Hazards**

The exposure of people and structures to moderate-to-severe ground shaking generated from potential earthquakes along active faults in the region is considered to be a less than significant impact due to the regulatory requirements that minimize risks from damage to structures to the extent feasible. However, grading activities could result in slope instabilities or landslides within the project site. This is considered a potentially significant impact.

### **B. Soil Erosion or Topsoil Loss**

Impacts associated with soil erosion and topsoil loss during and following project construction would be potentially significant. Compliance with applicable regulatory requirements would ensure that impacts associated with erosion and loss of topsoil would be minimized during construction activities. Following construction, implementation of the proposed drainage plan would reduce the long-term potential for erosion.

### **C. Slope Stability**

The Otay formation and surficial units (alluvium, undocumented fill, and topsoil) within Village 9 could become unstable as a result of the project. As a result, there is the potential for landsliding, lateral spreading, and/or collapse. These impacts are considered to be potentially significant.

### **D. Expansive Soils**

Clayey sand and sandy clay materials within the Otay Formation, as well as the other materials within Village 9 have high to very high expansion potential. Development of structures on these soils could create substantial risks to life or property. This is considered a potentially significant impact.

### **E. Consistency with Geotechnical Policies**

No significant impacts related to consistency with geotechnical policies have been identified for the project.

### **F. Septic Tanks/Waste Water Disposal Systems**

No significant impacts related to septic systems or alternative waste water disposal systems have been identified for the project.

## 5.8.5 Mitigation Measures

### A. Exposure to Seismic Related Hazards

- 5.8-1 **Geotechnical Recommendations.** Prior to the issuance of each mass grading permit for Village 9, the applicant shall verify that the applicable recommendations in the Geotechnical Investigation prepared by Advanced Geotechnical Solutions, Inc., dated November 9, 2010, have been incorporated into the final project design and construction documents to the satisfaction of the City Engineer. These recommendations address issues including but not limited to site grading, backdrain systems, undercuts, excavation and fill, monitoring, and soil testing. Geotechnical review of grading plans shall include a review of all proposed storm drain facilities to ensure the storm water runoff would not interfere with the proposed geotechnical recommendations.
- 5.8-2 **Slope Factor of Safety.** All graded slopes shall have a minimum factor of safety of 1.5. Strategies to increase stability may include, but are not limited to, a stability buttress or sheer pins. All slopes stability strategies shall be approved by the City Engineer.

### B. Soil Erosion or Topsoil Loss

Implementation of mitigation measures 5.11-1 through 5.11-5 in Section 5.11, Hydrology and Water Quality, would reduce impacts related to soil erosion and topsoil loss to a less than significant level.

### C. Slope Stability

Mitigation measures 5.8-1 and 5.8-2 would also reduce impacts related to slope stability.

### D. Expansive Soils

Mitigation measure 5.8-1, Geotechnical Recommendations, would also reduce impacts related to expansive soils.

### E. Consistency with Geotechnical Policies

No mitigation measures are required.

### F. Septic Tanks/Waste Water Disposal Systems

No mitigation measures are required.

## 5.8.6 Level of Significance After Mitigation

### A. Exposure to Seismic Related Hazards

With implementation of mitigation measure 5.8-1, seismic related hazards would be reduced to below a level of significance.

### **B. Soil Erosion or Topsoil Loss**

With implementation of mitigation measures 5.11-1 through 5.11-5, geology and soil impacts related to soil erosion and topsoil loss would be reduced to below a level of significance.

### **C. Slope Stability**

With implementation of mitigation measure 5.8-1, slope stability impacts related to the project would be reduced to below a level of significance.

### **D. Expansive Soils**

With implementation of mitigation measure 5.8-1, expansive soil impacts related to the project would be reduced to below a level of significance.

### **E. Consistency with Geotechnical Policies**

Impacts would be less than significant without mitigation.

### **F. Septic Tanks/Waste Water Disposal Systems**

Impacts would be less than significant without mitigation.

## 5.9 Public Services

This section describes the public services that would serve Village 9 and evaluates the potential for impacts to public services due to implementation of the project. This section of the EIR includes a subsection for each public service. Fire and emergency medical services are addressed in subsection 5.9.1; police services are addressed in subsection 5.9.2; schools in subsection 5.9.3; libraries in subsection 5.9.4; and parks, recreation, open space, and trails in subsection 5.9.5.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). Section 5.7, Public Services of the Final SEIR for the GPA/GDPA (EIR 09-01) addressed existing conditions, potential impacts, and mitigation measures related to public services that would result from implementation of the land uses proposed in the GPA/GDPA, including Village 9. The SEIR concluded that impacts to fire, police, school, library, and parks and recreation services would be less than significant with compliance with General Plan and GDP policies that require public services to be provided concurrent with need. The public service analyses in this section update the applicable information in the SEIR, which is incorporated by reference.

### 5.9.1 Fire and Emergency Medical Services

#### 5.9.1.1 Existing Conditions

##### A. Regulatory Framework

###### 1. *City of Chula Vista General Plan*

The General Plan recognizes that fire protection and emergency services will need to expand as the city's population grows. The Public Facilities and Services Elements includes objectives to maintain sufficient levels of fire protection and emergency medical service to protect public safety and property (Objective PFS 5) and provide adequate fire protection services to newly developing and redeveloping areas of the city (Objective PFS 6). Additionally, Growth Management Objective GM 1 and Policy GM 1.11 encourage withholding discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards for fire and emergency medical services.

The General Plan identifies the current and planned fire station locations in Otay Ranch. Fire Station #7 at 1640 Santa Venetia Street is the closest existing station to Village 9. Fire Station #10 is proposed within the EUC.

###### 2. *Otay Ranch General Development Plan*

The purpose of the fire protection and emergency facility section of the Otay Ranch GDP is to establish goals, objectives, policies, standards, and processing requirements for the timely provision of these facilities. As stated therein, the goal is to provide protection to the Otay Ranch project area and surrounding communities from loss of life and property due to fires and medical emergencies. The GDP also identified several fire stations necessary to serve the Otay Ranch Project Area at build-out. In accordance with ongoing demand, one station (Fire Station #7) has been developed to serve Otay Ranch. The Otay Ranch GDP also shows a fire station located within the EUC (Fire Station #10). Fire Station #10 is designated to meet projected growth within the Otay Ranch under the build-out of the

EUC and other villages within the vicinity. This station is not yet built. One GDP policy pertains to fire service:

- **Objective:** Provide sufficient fire and emergency services facilities to respond to calls within the Otay Ranch urban communities: within a 7-minute response time in 85 percent of the cases.
- **Policies:**
  - Otay Ranch SPA plans shall include Emergency Disaster Plans to become operative during periods of major emergency.
  - Otay Ranch shall participate in cooperative agreements with urban and rural emergency services providers.
  - Incorporate the Otay Ranch Project Area into existing regional disaster preparedness programs.
  - Otay Ranch shall site fire and emergency services facilities consistent with the following factors:
    - Ability to meet travel/response time policies;
    - Proximity to a pool of volunteer firefighters for service within the unincorporated areas, when appropriate;
    - Ability of the site to support the appropriate facility to serve current and future development in the intended service area;
    - Distances from other fire stations, including those operated by neighboring districts;
    - Safe access to roadways in emergency responses;
    - Special needs for fire suppression, and emergency services, including needs created by recreation areas and industrial land uses;
    - Avoid close proximity to fault traces; and
    - Ability to meet any adopted local community facility level standard, if appropriate.
  - Consideration shall be given to shared law enforcement and fire service facilities such as public safety "storefronts" within village centers, training rooms and equipment storage.
  - Otay Ranch shall evaluate the provision of fire suppression sprinkler systems for residential development within the project area as part of SPA plans.
  - Fire protection and emergency services facilities shall be available or will be available concurrent with need.
  - In areas lacking local public structural fire protection and within the sphere of influence of a fire protection agency, approval of Otay Ranch discretionary applications shall be conditioned on the annexation to that agency.

### **3. Fire Station Master Plan**

The existing Fire Station Master Plan (FSMP), dated 1997, establishes six guidelines to assess alternative fire station needs and networks. These guidelines address travel time, response time, cost, and relative workloads among stations. The FSMP recommends 1.5-acre sites for all fire stations and calls for a total of nine fire stations in the City. An updated FSMP has been prepared and proposes three additional fire stations located on the Chula Vista Bayfront, in the EUC, and/or in Village 8 West. The draft FSMP is pending review and approval by the City Council.



#### **4. Chula Vista Municipal Code Growth Ordinances**

CVMC Section 19.80.030 (Controlled Residential Development) is intended to ensure that new development would not degrade existing public services and facilities below acceptable standards for fire and other public services. The preparation of a PFFP is required in conjunction with the preparation of the SPA Plan for the project to ensure that the development of the project is consistent with the overall goals and policies of the General Plan and would not degrade public services. Similarly, Section 19.09 of the CVMC (Growth Management) provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040B specifically requires that “properly equipped and staffed fire and medical units shall respond to calls throughout the city within 7 minutes in 80 percent of the cases.” Section 19.09 also requires a PFFP and the demonstration that public services, such as fire services, meet the growth management program’s quality of life threshold standards.

#### **B. Existing Fire Protection and Emergency Services**

Fire protection and emergency services for the city of Chula Vista are provided by the CVFD. The CVFD employs 134 people including firefighters and administrative staff. There are currently nine fire stations which service a population of approximately 230,397 people (SANDAG 2011) and an area covering over 52 square miles. According to the *GMOC 2012 Annual Report*, in fiscal year 2011, the CVFD received approximately 9,916 calls for service (City of Chula Vista 2012f). Of these calls, 78.1 percent were responded to within 7 minutes during the 2011 fiscal year. The current GMO threshold standard for emergency fire response is 7 minutes or less in 80 percent of calls. The CVFD did not meet the GMO threshold standard in fiscal year 2011.

Table 5.9-1 lists the locations of CVFD stations. Table 5.9-2 summarizes staffing for the department. Village 9 is currently located within the response district of Fire Station #7, which is located at 1640 Santa Venetia Road in Otay Ranch Village 2, approximately 1.5 miles from the northern border of Village 9. Distances to interior locations within Village 9 increase as much as a mile due to the geographic size of the project site. CVFD Fire Station #7 serves the communities of Otay Ranch, Village of Heritage, Heritage Hills, and the Village of Countryside. At the present time, a total of 24 firefighters, which includes three Battalion Chiefs, operate out of Fire Station #7 (City of Chula Vista 2009b), which is equipped with one fire engine, one fire truck, as well as one reserve fire engine and one reserve fire truck. During a typical 24-hour shift there are 36 line firefighters and two Battalion Chiefs on constant duty spread among the City's nine fire stations. Each station has a captain, engineer, and one firefighter. Fire Station #7 is the current battalion headquarters for the eastern part of the City. The CVFD indicates that Village 9 would ultimately be served by the future Fire Station #10 planned for the EUC (CVFD 2012).

The CVFD currently has mutual aid agreements with Bonita-Sunnyside, Imperial Beach, National City, San Diego, and San Diego County. Emergency medical services for the city of Chula Vista are contracted to the American Medical Response. The American Medical Response ambulance station located closest to the project area is at 861 Otay Lakes Road. Currently, two full-time units are stationed within city limits and are dedicated to Chula Vista, while two other full-time units are shared with other cities (City of Chula Vista 2009b).

**Table 5.9-1 City of Chula Vista Fire Station Facilities**

Station	Location	Service Area	Equipment
<b>Current Facilities<sup>(1)</sup></b>			
Station #1	447 F Street Chula Vista, CA 91910	Downtown, Bay Front, Northwest City, I-5, I-54 & I-805/North	Engine 51; Truck 51; Battalion 51
Station #2	80 East J Street Chula Vista, CA 91910	Central City, I-805/Central, Hilltop, Country Club	Engine 52/Reserve 52
Station #3	1410 Brandywine Avenue Chula Vista, CA 91911	Sunbow, I-805 South, Woodlawn Park, East/Main Street	USAR 53; USAR 53 Tender/Trailer
Station #4	850 Paseo Ranchero Chula Vista, CA 91910	Rancho Del Rey, Bonita Long Canyon, Southwestern College	Engine 54
Station #5	391 Oxford Street Chula Vista, CA 91911	Montgomery, Harborside, Otay, I-5/ South Southwest City, West/Main Street	Engine 55/Reserve 53
Station #6	605 Mt. Miguel Road Chula Vista, CA 91914	East Lake, Rolling Hills Ranch, San Miguel Ranch	Engine 56; Brush 52
Station #7	1640 Santa Venetia Road Chula Vista, CA 91913	Otay Ranch, Village of Heritage, Heritage Hills, Village of Countryside	Engine 57; Truck 57; Battalion 52
Station #8	1180 Woods Drive Chula Vista, CA 91914	East Lake, Rolling Hills Ranch, San Miguel Ranch, Tour De Elegance, The Woods	Engine 58
Station #9	291 East Oneida Street Chula Vista, CA 91911	Sunbow, I-805 South, Woodlawn Park, East/Main Street	Engine 59
<b>Planned Facilities<sup>(2)</sup></b>			
Station #10	Eastern Urban Center	Otay Ranch	EUC Engine; EUC Truck
Bayfront Fire Station	North East corner of Bay Boulevard and J Street	Chula Vista Bayfront	Bayfront Engine; Bayfront Truck
Sources: <sup>(1)</sup> CVFD 2012; <sup>(2)</sup> City of Chula Vista 2010a			

**Table 5.9-2 Chula Vista Fire Department Staffing**

Position	Number of Employees
Administrative Secretary	1
Battalion Chief	6
Deputy Fire Chief	3
Division Chief	1
Facility & Supply Specialist	1
Fire Captain	35
Fire Chief	1
Fire Engineer	34
Fire Inspector I/II	5
Fire Engineer/Investigator	1
Firefighter	42
Office Specialist	1
Public Safety Analyst	1
Secretary	1
Senior Fire Inspector/Investigator	1
<b>Total</b>	<b>134</b>
Source: City of Chula Vista 2012b	

### 5.9.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the City of Chula Vista, impacts to fire and emergency medical services would be significant if the proposed project would:

- **Threshold 1:** Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency services.
- **Threshold 2:** Further reduce the ability of properly equipped and staffed fire and medical units to respond to calls throughout the city within 7 minutes in 80 percent of the calls.
- **Threshold 3:** Be inconsistent with General Plan, GDP, and other objectives and policies regarding fire protection and emergency medical services thereby resulting in a significant physical impact.

### 5.9.1.3 Impacts Analysis

#### **A. Threshold 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency services.**

The project would result in an increase in demand for fire services because the land use is changing from vacant land to developed conditions that would require fire protection and emergency services. The project does not specifically propose any new fire protection or emergency medical service facilities; however, a temporary fire station may be constructed in the Neighborhood Edge, Neighborhood General, Urban Neighborhood, Urban Center, or Town Center Zones to serve Village 9 until permanent facilities off-site in the EUC, and potentially Village 8 West, are constructed (see analysis for Threshold 2). The environmental impact of construction of the EUC fire station is addressed in the Otay Ranch EUC SPA Plan EIR (SCH #2007041074). Development of Village 8 West is addressed in the Otay Ranch Village 8 West SPA Plan and Tentative Map EIR (SCH #2010062093). At this time, no fire station is planned in Village 8 West. However, fire stations are a conditionally permitted use in all development areas of Village 8 West. The Village 9 SPA Plan does not specify the construction of government facilities, but does not preclude them. Construction impacts from general development in Village 9 would be similar to impacts resulting from construction of a temporary fire facility and are evaluated in the various topical sections in Chapter 5, Environmental Impact Analysis, of this EIR along with mitigation measures to address any significant impacts. Physical impacts from project construction would be less than significant for air emissions from building construction, noise, cultural resources, biological resources, hydrology, and water quality with implementation of the mitigation measures identified in this EIR. Significant and unavoidable construction air emissions from mass grading, surface improvements, and simultaneous construction would occur as a result of development across the entire site and would occur whether or not the proposed development includes civic facilities. At this time the location and design of the potential temporary facility is unknown. Further environmental review would be required if a specific facility is ultimately proposed for construction.

**B. Threshold 2: Further reduce the ability of properly equipped and staffed fire and medical units to respond to calls throughout the city within 7 minutes in 80 percent of the calls.**

The CVFD did not meet the Chula Vista Growth Management Program's Fire and Emergency Medical Services GMO threshold standard of responding to 80 percent of calls within 7 minutes in fiscal year 2011. According to the 2012 GMO Annual Report, the CVFD responded to 78.1 percent of calls within 7 minutes in fiscal year 2011. Project build-out would result in a residential population of approximately 10,923 people and approximately 1.5 million square feet of non-residential uses. This increase in residences and commercial facilities would result in an increase in demand for fire and emergency medical services, and an increase in demand for water for fire protection. An increase in demand for fire and emergency medical services could also increase response times.

The SPA Plan has been prepared in coordination with the CVFD in order to meet the GMO threshold. A Fire Service Analysis was completed for Village 9 that determined when provision of new fire station facilities would be required in order to serve Village 9 and comply with the GMO threshold standard for response times (ESCi 2013). Development in Village 9 would trigger the need for new fire service facilities because it would increase the response area of the CVFD, and would also increase structure density and height relative to development in other areas of the city. Mid-rise and high-rise buildings require more resources to combat fire events (ESCi 2013). The Fire Service Analysis determined that development of the first structure over four stories in height, development of more than three structures that are three or more stories in height, or construction of the first structure over 104,000 square feet in the Urban Center would require service from proposed off-site Fire Station #10 in the EUC. Any construction in the Urban Neighborhood, Town Center, or Neighborhood Center would require service from either Fire Station #10 or an off-site fire station in Village 8 West. Any development in the Neighborhood Edge or Neighborhood General zones would require service from a fire station in Village 8 West.

The timing of construction of the off-site permanent stations is not known at this time. The Fire Service Analysis also concluded that construction of a temporary fire station in Village 9 with staffing and configuration that is acceptable to the Fire Chief would be adequate to serve Village 9 until permanent facilities are constructed. Therefore, as discussed under Threshold 1, a temporary may be constructed in the Neighborhood Edge, Neighborhood General, Urban Neighborhood, Urban Center, or Town Center Zones of Village 9. In accordance with the Fire Service Analysis, the temporary facility would be constructed if any of the above triggers for service from Fire Station #10 or the Village 8 West facility would be met prior to operation of these permanent facilities.

Fire services and implementation of the CVFD's Fire Station Master Plan, including Fire Station #10, are funded through development impact fees collected as part of the Chula Vista Public Facilities Development Impact Fee (PFDIF) Program. Implementation of the project would require the collection of the PFDIF. The PFDIF addresses the project's proportional impact on capital facilities, such as structures and equipment, associated with the fire protection. It does not address the impact associated with operations and maintenance for those facilities. It is the City's policy to use public funds such as property taxes, sales taxes, and fees generated by the project to cover the incremental costs associated with providing fire services. Development within Village 9 would be required to pay the PFDIF, as well as all future taxes and fees adopted by the City to cover fire protection services.

The Chula Vista City Council, as part of the City's Growth Management Program, adopted quality of life threshold standards for eleven public facility and service topics, including fire and emergency medical

services. Adherence to these citywide standards is intended to preserve and enhance both the environment and residents' quality of life as growth occurs. The GMOC was created to provide an independent, annual, review of the effectiveness of the General Plan in regard to development and growth-oriented issues; to make determinations in regard to the impact of development of the "quality of life" in Chula Vista, using adopted threshold criteria as a basis; and to publish findings and make recommendations. Should the GMOC determine that the growth management threshold standard is not being satisfied because of the impacts of growth, the City Council shall consider adopting measures to bring the condition into conformance, prior to issuing further building permits.

The City's Growth Management Program also requires new development to pay its fair share to maintain the quality of life standards for the city. The PFFP includes a fiscal impact analysis for Village 9 to determine the revenues and costs expected to be generated by the development. Net revenues are used to finance costs associated with operations and maintenance associated with the public services required to serve the project. Additional fire equipment, staff and facilities required to serve the increased population proposed by the project is identified in the PFFP. The PFFP ensures that project development will not adversely impact the City's quality of life standards.

A combination of PFDIF fees from the applicant, implementation of the PFFP, and compliance with existing City policies and mechanisms would ensure that the GMO threshold standard is achieved. This impact would be potentially significant if these mechanisms are not enforced. Therefore, mitigation is required.

The project would create demand for water for fire protection that would result in an adverse impact if adequate water supply would not be available to provide the necessary fire flows for the site. The project's water demand is addressed in Section 5.15.1, Water. As discussed in this section, required fire flows and durations are included in the total water demand calculated for the project (1.35 mgd). The OWD approved a WSAV in November 2010 for Village 9. The WSAV determined that sufficient water supplies are planned for and are intended to be available over a 20-year planning horizon, under normal conditions and in single-dry and multiple-dry water years to meet the projected demand of the proposed Village 9 project and the existing and other planned development projects to be served by OWD. Furthermore, fire flow requirements for each building within the SPA Plan area will be a function of building design including height and structure type.

As required by mitigation measure 5.15.1-2, the applicant is required to prepare and obtain approval of a SAMP which, among other things, addresses fire flow requirements (e.g. flow rate, duration, hydrant spacing, etc.). As part of the building permit process, the City of Chula Vista will evaluate the fire flow requirements for each project in accordance with adopted Fire Code and approved SAMP. Approval of the SAMP prior to approval of the first final map will ensure that adequate and appropriate infrastructure is developed to serve the project's water needs, including fire flows for individual buildings. Therefore, impacts related to fire flows would be less than significant.

**C. Threshold 3: Be inconsistent with General Plan, GDP, and other objectives and policies regarding fire protection and emergency medical services thereby resulting in a significant physical impact.**

Table 5.9-3 evaluates the consistency of the project with the applicable General Plan objectives and, as shown in this table, the project would be consistent with policies that would specifically apply to the project. This impact would be less than significant with implementation of the PFFP, PFDIF, and compliance with applicable City policies. Table 5.9-4 evaluates the consistency of the project with the applicable GDP policies and, as shown in this table, the project would be consistent with applicable



policies. This impact would be less than significant with implementation of the PFFP, PFDIF, and compliance with applicable City policies.

**Table 5.9-3 Project Consistency with Applicable General Plan Fire Service Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective LUT 76:</b> Provide public services and facilities to meet the needs of the Otay Ranch residents.</p> <p><b>Policy LUT 76.1:</b> Services and facilities will be conveniently located and efficiently managed and provided to Otay Ranch residents concurrent with needs.</p>	<p><b>Consistent.</b> As discussed in Section 5.9, Public Services, the project would provide the public services necessary to meet the needs of Otay Ranch residents. Compliance with the City GMO and implementation of the PFFP would ensure that services are provided concurrently with development. Services and facilities would be conveniently concentrated in the Urban Center and Town Center, which would be accessible by all modes of transportation. Park facilities would be provided throughout the project area, including a neighborhood park, pedestrian parks, and town squares. Fire Station #10 is planned for the EUC and would serve Village 9.</p>
<p><b>Objective PFS 5:</b> Maintain sufficient levels of fire protection, emergency medical service and police services to protect public safety and property.</p> <p><b>Policy PFS 5.1:</b> Continue to adequately equip and staff the Fire Department to ensure that established service standards for emergency calls are met.</p> <p><b>Policy PFS 5.2:</b> Upgrade fire and emergency medical equipment, as required, to protect the public from hazards and to ensure the safety of firefighters.</p> <p><b>Policy PFS 5.3:</b> Support the provision of new fire stations, as deemed necessary through the existing or updated FSMP.</p> <p><b>Policy PFS 5.7:</b> Prior to approval of any discretionary projects, ensure that construction is phased with provision of police and fire protection services such that services are provided prior to or concurrent with need.</p>	<p><b>Consistent.</b> With implementation of the PFFP, the project would be consistent with this objective and supporting policies. The PFFP for Village 9 identifies the public facilities needed to support the project including fire, police and emergency medical services. The PFFP identifies when these services will be required and the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel are operational prior to or concurrent with need.</p>
<p><b>Objective PFS 6:</b> Provide adequate fire and police protection services to newly developing and redeveloping areas of the City.</p> <p><b>Policy PFS 6.1:</b> Continue to require new development and redevelopment projects to demonstrate adequate access for fire and police vehicles.</p> <p><b>Policy PFS 6.2:</b> Require new development and redevelopment projects to demonstrate adequate water pressure to new buildings.</p>	<p><b>Consistent.</b> With implementation of the PFFP, the project would be consistent with this objective and supporting policies. See Objective PFS 5, above. As discussed in Section 5.15.1, Water, according to the WSAV prepared for the SPA Plan, adequate water would be available to support the project. Through approval of a SAMP, new development would be required to demonstrate adequate fire protection requirements such as flow rate, duration, hydrant spacing, etc.</p>
<p><b>Objective GM 1:</b> Concurrent public facilities and services.</p> <p><b>Policy GM 1.9:</b> Require that all major development projects prepare a PFFP that articulates infrastructure and public facilities requirements and costs and funding mechanisms.</p> <p><b>Policy GM 1.11:</b> Establish the authority to withhold discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards.</p>	<p><b>Consistent.</b> With implementation of the PFFP, the SPA Plan would be consistent with this General Plan objective and policies because the PFFP will identify the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel are operational prior to or concurrent with need. The City Council has the authority to withhold discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards.</p>
<p><b>Objective GM 3:</b> Create and preserve vital neighborhoods.</p> <p><b>Policy GM 3.3:</b> Assure that all new and infill development within existing urban areas pays its proportional share of the cost for urban infrastructure and public facilities required to maintain the threshold standards, as adopted for its area of impact.</p>	<p><b>Consistent.</b> See analysis for Objective GM 1.</p>

**Table 5.9-4 Project Consistency with Applicable GDP Fire Service Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans</b>	
<p><b>Goal:</b> Provide protection to the Otay Ranch project area and surrounding communities from the loss of life and property due to fires and medical emergencies.</p> <p><b>Objective:</b> Provide sufficient fire and emergency service facilities to respond to calls within the Otay Ranch urban communities within a 7-minute response time in 85 percent of the cases.</p> <p><b>Policy:</b> Otay Ranch SPA plans shall include emergency disaster plans to become operative during periods of major emergency.</p> <p><b>Policy:</b> Otay Ranch shall participate in cooperative agreements with urban and rural emergency services providers.</p> <p><b>Policy:</b> Incorporate the Otay Ranch project area into existing regional disaster preparedness programs.</p> <p><b>Policy:</b> Otay Ranch shall site fire and emergency services facilities consistent with the following factors:</p> <ol style="list-style-type: none"> <li>Ability to meet travel/response time policies;</li> <li>Proximity to a pool of volunteer firefighters for service within the unincorporated areas, when appropriate;</li> <li>Ability of the site to support the appropriate facility to serve current and future development in the intended service area;</li> <li>Distances from other fire stations, including those operated by neighboring districts;</li> <li>Safe access to roadways in emergency responses;</li> <li>Special needs for fire suppression, and emergency services, including needs created by recreation areas and industrial land uses;</li> <li>Avoid close proximity to fault traces; and</li> <li>Ability to meet any adopted local community facility level standard, if appropriate.</li> </ol> <p><b>Policy:</b> Consideration shall be given to shared law enforcement and fire service facilities such as public safety storefronts within village centers, training rooms and equipment storage.</p> <p><b>Policy:</b> Otay Ranch shall evaluate the provision of fire suppression sprinkler systems for residential development within the project area as part of SPA plans.</p> <p><b>Policy:</b> Fire protection and emergency services facilities shall be available or will be available concurrent with need.</p> <p><b>Policy:</b> In areas lacking local public structural fire protection and within the sphere of influence of a fire protection agency, approval of Otay Ranch discretionary applications shall be conditioned on the annexation to that agency.</p> <p><b>Policy:</b> Otay Ranch shall cooperate in the development of a strategy to address emergency medical service facilities and responsibilities in areas lacking a local provider of these services.</p>	<p><b>Consistent.</b> The CVFD did not meet the GDP Objective of responding to 85 percent of calls within 7 minutes in fiscal year 2011. The increase in residential and employment population in Village 9 would result in an increase in demand for fire and emergency medical services, which could also increase response times. However, the combination of PFDIF fees from the applicant, implementation of the PFFP, and existing City policies and mechanisms would reduce impacts associated with fire safety operations and maintenance to less than significant by providing the funding for adequate services to ensure that the response time standards for the city are met. Implementation of the PFFP and compliance with the City's GMO would ensure that fire protection and emergency services facilities will be available concurrent with need. Fire stations are a permitted use throughout the SPA Plan.</p> <p>If the CVFD determines that Village 9 would be an appropriate area for a fire station via an approved Fire Facilities Master Plan, siting of the facility would be subject to the siting requirements in the Otay Ranch GDP. Due to the project's proximity to a planned facility in the EUC, an additional station in Village 9 is not anticipated. Additionally, the Otay Ranch GDP polices in support of this objective require SPA plans to include emergency disaster plans to become operative during periods of major emergency and evaluate the provision of fire suppression sprinkler systems for residential development within the project area as part of SPA plans. As discussed in Section 3.3.1.5, SPA Elements, the SPA Plan for Village 9 includes an emergency disaster plan by implementing the plans already developed for the area. On January 1, 2011, the 2010 California Building Standards Codes went into effect, which require all new one- and two-family dwellings and townhouses constructed in California to include fire sprinklers. Therefore, all residences constructed in Village 9 would be required to install fire suppression sprinklers. The project would consistent with the GDP objective and policies related to fire services with implementation of the PFFP, PFDIF, and compliance with applicable City policies.</p> <p>Additionally, the SPA Plan includes a fire protection plan to minimize wildfire risk. Public safety storefronts are an allowable use in the Town Center. As discussed in Section 5.15, Utilities, adequate water supply would be available for the project's fire flow demand.</p>

**Table 5.9-4 Project Consistency with Applicable GDP Fire Service Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Policy:</b> Otay Ranch shall work with affected fire protection agencies to cooperatively develop guidelines for appropriate water provision requirements necessary for fire protection in ground water dependent areas.</p> <p><b>Policy:</b> Otay Ranch shall participate in fire mitigation fee or development impact fee programs to enable fire protection agencies to meet the facility and equipment needs generated by Otay Ranch.</p>	

Additionally, implementation of Village 9 would not interfere with implementation of the fire station guidelines in the existing FSMP. An updated FSMP has been prepared and identifies three additional planned facilities, but is pending review and approval by the City Council. Development in Village 9 would be required to conform to any approved Fire FSMP and meet the triggers for fire facilities as set forth in the Fire Service Analysis. Therefore, the proposed project would not result in any conflict with the FSMP.

#### **5.9.1.4 Level of Significance Prior to Mitigation**

##### **A. Fire and Emergency Medical Facilities**

No significant impacts related to fire and emergency medical facilities have been identified for the project.

##### **B. Fire Protection Service Standard and Consistency with Fire and Emergency Medical Service Policies**

The anticipated increase in residential population of 10,923 people and the employment base from 1.5 million square feet of commercial and office development would increase demand on fire and emergency medical services. The increase in demand would be significant if fully operational and appropriately equipped and staffed fire stations are not provided commensurate with the demand on fire and emergency medical services.

##### **C. Consistency with Fire and Emergency Medical Service Policies**

The increase in fire and emergency medical service demand associated with the project would be significant if fully operational and appropriately equipped and staffed fire stations are not provided commensurate with the demand on fire and emergency medical services.

#### **5.9.1.5 Mitigation Measures**

##### **A. Fire and Emergency Medical Facilities**

No mitigation measures are required.

##### **B. Fire Protection Service Standard**

**5.9.1-1 Public Facilities Development Impact Fees.** Prior to the approval of each building permit, the applicant shall pay Public Facilities Development Impact Fee in accordance with the fees in

effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan. Subject to approval of the City Council, in lieu of paying the required impact fee, the applicant may satisfy that requirement through a written agreement, by which the applicant agrees to either pay the fee or build the facility in question, pursuant to the terms of the agreement.

- 5.9.1-2 **Growth Management Program’s Fire and Emergency Medical Service Threshold Standard.** The City of Chula Vista shall continue to monitor the Chula Vista Fire Department responses to emergency fire and medical calls and report the results to the Growth Management Oversight Commission on an annual basis.
- 5.9.1-3 **Fire Code Compliance.** Prior to the approval of each building permit and to the satisfaction of the City of Chula Vista Fire Marshal, the project shall meet the provisions of the current City-adopted California fire code. In meeting said provisions, the project shall meet the minimum fire flow requirements based upon construction type and square footage.
- 5.9.1-4 **Fuel Modification Easements.** Prior to approval of a Final Map requiring off-site fuel modification, as determined the City Fire Marshal, the applicant shall secure any required permits and/or access easements necessary to perform the required brush abatement activities contained in the Village 9 Fire Protection Plan (Village 9 SPA Plan, Appendix F), to the satisfaction of the City’s Fire Marshal and Development Services Director.

### **C. Consistency with Fire and Emergency Medical Service Policies**

Mitigation measures 5.9.1-1 through 5.9.1-4 would also reduce impacts related to consistency with fire and emergency medical service policies.

#### **5.9.1.6 Level of Significance After Mitigation**

##### **A. Fire and Emergency Medical Facilities**

Impacts would be less than significant without mitigation.

##### **B. Fire Protection Service Standard**

With implementation of mitigation measures 5.9.1-1 through 5.9.1-4 identified above, fire protection service standard impacts related to implementation of the SPA Plan and TM would be mitigated to less than significant.

##### **C. Consistency with Fire and Emergency Medical Service Policies**

With implementation of mitigation measures 5.9.1-1 through 5.9.1-4 identified above, fire and emergency medical services impacts related to implementation of the SPA Plan and TM would be mitigated to less than significant.

## 5.9.2 Police Services

### 5.9.2.1 Existing Conditions

#### A. Regulatory Framework

##### 1. *City of Chula Vista General Plan*

The Chula Vista General Plan recognizes that police services will need to expand as the city's population grows. The Public Facilities and Services Element of the General Plan includes objectives to maintain sufficient levels of police service to protect public safety and property (Objective PFS 5) and to provide adequate police protection services to newly developing and redeveloping areas of the city (Objective PFS 6). Additionally, Growth Management Objective GM 1 and Policy GM 1.11 encourage withholding discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards for police services.

##### 2. *Otay Ranch General Development Plan*

The purpose of the Law Enforcement Facilities section of the Otay Ranch GDP is to establish goals, objectives, policies, standards, and processing requirements for the timely provision of law enforcement facilities. As stated therein, the goal is to protect life and property and prevent the occurrence of crime. The Otay Ranch GDP also states that one central police station, located in the EUC, is necessary to serve the Otay Ranch project area at build-out.

##### 3. *Chula Vista Municipal Code Growth Ordinance*

CVMC Section 19.80.030 is intended to ensure that new development would not degrade existing public services and facilities below acceptable standards for police protection. The preparation of a PFFP is required in conjunction with the preparation of a SPA Plan to ensure that the development of the project is consistent with the overall goals and policies of the General Plan and would not degrade public services. Similarly, Section 19.09 (Growth Management) of the CVMC provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040A specifically requires that properly equipped and staffed police units shall respond to 81 percent of Priority One emergency calls within 7 minutes and maintain an average response time to all Priority One emergency calls of 5.5 minutes or less. Section 19.09 also requires that properly equipped and staffed police units shall response to 57 percent of Priority Two urgent calls within 7 minutes and maintain an average response time of 7 minutes and 30 seconds or less. Finally, Section 19.09 requires a PFFP and the demonstration that public services, such as police services, meet the Growth Management Program's quality of life threshold standards.

#### B. Existing Police Services

The Chula Vista Police Department (CVPD) provides police protection services for the Otay Ranch area from its existing police facility at 315 Fourth Avenue in downtown Chula Vista, approximately 7.5 miles from Village 9. The CVPD is currently authorized for 307 employees (City of Chula Vista 2012b), a ratio of approximately one sworn personnel per 1,000 residents. Village 9 is located in Beats 24 and 32 (City of Chula Vista 2002a). At least one patrol car serves each beat in the city 24 hours a day. As the City continues to grow and the demand for police services increases, the CVPD regularly evaluates beat structure. In addition, the CVPD participates in regional mutual aid agreements (City of Chula Vista 2009b).



The 2012 GMOC Annual Report indicates that the CVPD responded to 85.7 percent of Priority One emergency calls within 7 minutes and maintained an average response time for Priority One calls of 4 minutes 40 seconds during fiscal year 2011. This met the GMO threshold standard requiring properly equipped and staffed police units to respond to 81 percent of Priority One emergency calls within 7 minutes with an average response time of 5 minutes 30 seconds. During the same period addressed in the 2012 GMOC Annual Report, the CVPD responded to 49.8 percent of Priority Two urgent calls within 7 minutes and maintained an average response time for Priority Two calls of 10 minutes 06 seconds. This did not meet the GMO threshold standard that requires properly equipped and staffed police units to respond to 57 percent of Priority Two urgent calls within 7 minutes with an average response time of 7 minutes and 30 seconds.

### 5.9.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would result in a significant impact to police protection services if it would:

- **Threshold 1:** Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services.
- **Threshold 2:** Exceed the City's growth management threshold standard to respond to Priority One emergency calls throughout the city (within 7 minutes in 81 percent of the cases and an average response time to all Priority One calls of 5.5 minutes or less); and/or exceed the City's growth management threshold standard to respond to Priority Two urgent calls throughout the city (within 7 minutes in 57 percent of cases and an average response time to all Priority Two calls of 7.5 minutes or less).
- **Threshold 3:** Be inconsistent with General Plan objectives and policies regarding police protection thereby resulting in a significant physical impact.

### 5.9.2.3 Impact Analysis

#### **A. Threshold 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services.**

The project would result in an increase in demand for police services. While the SPA Plan conditionally permits civic facilities, such as a police station, the project does not specifically include the development of a police station or facilities. The construction impacts of general development in the SPA would be generally similar to impacts from construction of a police facility and are evaluated in the various topical sections in Chapter 5, Environmental Impact Analysis, of this EIR, along with mitigation measures to address significant impacts. As discussed in this EIR, project construction impacts would be less than significant for air emissions from building construction, noise, cultural resources, biological resources, hydrology, and water quality. Significant and unavoidable construction air emissions from mass grading, surface improvements, and simultaneous construction would occur as a result of development across the entire site and would occur whether or not the proposed development would include civic facilities.

Further environmental review would be required if a specific facility is proposed, but such facilities are not proposed as part of the Village 9 SPA Plan.

**B. Threshold 2: Exceed the City's growth management threshold standard to respond to Priority One emergency calls throughout the City (within 7 minutes in 81 percent of the cases and an average response time to all Priority One calls of 5.5 minutes or less); and/or exceed the City's growth management threshold standard to respond to Priority Two urgent calls throughout the City (within 7 minutes in 57 percent of cases and an average response time to all Priority Two calls of 7.5 minutes or less).**

The CVPD met the growth management response time threshold for Priority One calls, but not Priority Two calls in Fiscal Year 2011. Development of the project would increase the demand for police services as a result of increased population and development density. Demand for police services would increase response times due to a potential increase in the frequency of police calls and contacts. Although population is only one factor of many that generate a demand for police services, it is the best estimate for the project's need for police services given current available information. To estimate the calls for service for different land use types, the CVPD uses local or regional per acre (or per unit) averages for similar properties or areas.

The central police station at Fourth Avenue and F Street is sufficient to meet the law enforcement needs created by the increased demand associated with the project because patrol officers respond to calls for service from the field rather than a fixed station. Although police substations would be a permitted use in the SPA Plan, construction is not required for several reasons. A substation would not reduce service response times because patrol officers respond to calls for service from the field rather than from a fixed station. Additionally, the cost to build a substation was estimated at over \$15 million (City of Chula Vista 2009b).

The CVPD does not currently meet the GMO response time thresholds for Priority Two calls. The project would incrementally increase Priority Two calls, which could make meeting the priority threshold more difficult. Additional staffing and equipment would be required to bring the CVPD in compliance with the Priority Two call threshold.

Implementation of the project would require the collection of PFDIF. The PFDIF addresses the project's proportional impact on capital facilities, such as structures and equipment, associated with the police protection. It does not address the impact associated with operations and maintenance for those facilities. Public funds such as property taxes, sales taxes, and fees generated by the project would be used to cover the incremental costs associated with providing police services. The PFFP for Village 9 includes a fiscal impact analysis to determine the revenues and costs expected to be generated by the development. Net revenues are used to finance costs associated with operations and maintenance associated with the public services required to serve the project.

The physical design and features of a project can also reduce demand on police services by affecting the ability of the police to respond to reported activities or reduce/ increase the potential for accidents or criminal activity. As the design of the project would affect the impact of the project on police services, all building plans would be submitted to the CVPD for review to determine the use of crime prevention through environmental design (CPTED) features. Crime prevention in Village 9 is addressed through optimization of community interaction and street activity and a minimization of secluded areas that

could foster crime. CPTED features that are encouraged in the SPA Plan development guidelines and regulations include:

- Requiring parks to provide maximum public visibility (SPA Section 4.8.5, Community Use Landscaping)
- Enhanced pedestrian visibility in the Town Center, Neighborhood Center, and Urban Center (SPA Section 5.8, Traffic Calming)
- Bicycle parking facilities shall be located in highly visible areas to the greatest extent feasible (SPA Section 3.3.1, General Regulations Applying to all Zones)
- For residential courtyards, requiring the pedestrian entrance to be visible from the public street frontage (SPA Section 3.4, Building Configurations)
- Orienting of residences to provide a front door that is visible from the street. Internally, buildings would be oriented toward common open space areas and major pathways whenever possible (SPA Section 4.5, Attached and Mixed Use Residential Design Guidelines, and Section 4.6, Detached Residential Design Guidelines)
- Maintaining landscaping to avoid overgrown trees and shrubs (SPA Section 3.6, Performance Standards)
- Use of urban couplets to promote activity and visibility in the Town Center (Section 5.4, Vehicular Circulation Network)
- Orienting community-use buildings and buildings toward public streets, pedestrian pathways and/or active spaces (Section 4.3, Urban Center Design Guidelines; Section 4.4, Town Center Design Guidelines; SPA Section 4.7, Community Use Facility Design Guidelines)
- Providing clear walkways to residential and commercial entrances from parking areas, common areas and the street (Section 3.0, Development Code)
- Lighting and landscape elements would be used if the front entry location of a multi-family residents is not immediately obvious due to building configuration (SPA Section 4.5, Attached and Mixed Use Residential Design Guidelines)
- Lighting would be provided at activity areas, parking lots, and along major pathways (SPA Section 4.7, Community Use Facility Design Guidelines)
- Allow fencing in residential areas (SPA Section 3.5, Frontage Types)
- Incorporating streetscape features such as lights, signs, and decorative features to create a sense of a dedicated community (SPA Chapter 4, Community Design)
- Allowing a variety of uses in the commercial areas to ensure people are present at all hours (SPA Section 4.1.1, Community Character)
- Encourage surveillance by providing on-street parking and slower vehicle speeds (Chapter 5, Circulation and Corridor Design)

As listed above, the SPA Plan requires safety features such as clearly defined and readily identifiable pedestrian entrances to parking structures, stairwells, and elevators. These areas would be designed to be safe and user-friendly and to allow effective surveillance. Additionally, the use of construction materials and design approaches that reduce interior noise levels in habitable rooms may reduce calls to the police for activities that generate a high noise level, such as parties, outdoor events, or people conversing in the street. Noise reducing features that would be implemented under the SPA Plan and TM include dual-glazed windows and sound attenuation walls where necessary to meet City noise standards (see Section 5.5 Noise).

The combination of PFDIF fees from the applicant, implementation of the PFFP, existing City policies and mechanisms, and incorporation of CPTED principles would ensure that implementation of the 9 does not incrementally decrease the CVPD's ability to meet the GMO threshold standard for Priority Two calls, or maintain compliance with the threshold for Priority One calls. If these mechanisms are not implemented this impact would be potentially significant. Therefore, mitigation is required.

### **C. Threshold 3: Be inconsistent with General Plan objectives and policies regarding police protection thereby resulting in a significant physical impact.**

The proposed SPA Plan is compared to the applicable General Plan objectives and policies in Table 5.9-5. Table 5.9-6 compared the project to the applicable GDP goals and objectives. As shown in Tables 5.9-5 and 5.9-6, the project would be consistent with all applicable General Plan and GDP policies related to police protection.

**Table 5.9-5 Project Consistency with Applicable General Plan Police Service Policies**

<b>Applicable Policies</b>	<b>Evaluation of Consistency</b>
<p><b>Objective PFS 5:</b> Maintain sufficient levels of fire protection, emergency medical service and police services to protect public safety and property.</p> <p><b>Policy PFS 5.4:</b> Provide adequate law enforcement staff and equipment pursuant to Police Department strategic plans to meet established service standards.</p> <p><b>Policy PFS 5.5:</b> Explore the need to establish local, community-based satellite or storefront police offices to enhance community well-being.</p> <p><b>Policy PFS 5.6:</b> Encourage crime watch programs in all neighborhoods.</p> <p><b>Policy PFS 5.7:</b> Prior to approval of any discretionary projects, ensure that construction is phased with provision of police and fire protection services such that services are provided prior to or concurrent with need.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these relevant policies. The PFFP for the SPA Plan identifies the public facilities needed to support the project including police services. The PFFP identifies when these services will be required and the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel are operational prior to or concurrent with need. The SPA Plan permits police substations. Crime watch programs will be encouraged in all neighborhoods and the SPA Plan would implement CPTED principles.</p>
<p><b>Objective PFS 6:</b> Provide adequate fire and police protection services to newly developing and redeveloping areas of the city.</p> <p><b>Policy PFS 6.1:</b> Continue to require new development and redevelopment projects to demonstrate adequate access for fire and police vehicles.</p> <p><b>Policy PFS 6.3:</b> Encourage CPTED techniques in new development and redevelopment projects.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these relevant policies. Refer to Objective PFS 5.</p> <p>The circulation design of Village 9 facilitates emergency vehicle access to all areas of the village. As part of the process to obtain a Certificate of Occupancy, new buildings in Village 9 would be required to demonstrate that the building site provides adequate access for police vehicles.</p> <p>The SPA Plan has incorporated several features that encourage CPTED, listed above under Threshold 2.</p>
<p><b>Objective GM 1:</b> Concurrent public facilities and services.</p> <p><b>Policy GM 1.9:</b> Require that all major development projects prepare a PFFP that articulates infrastructure and public facilities requirements and costs and funding mechanisms.</p>	<p><b>Consistent.</b> With implementation of the PFFP, Village 9 would be consistent with this policy because the PFFP will identify the police staffing requirements for the SPA Plan, when these services will be required and the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel are operational prior to or concurrent with need.</p>
<p><b>Objective GM 3:</b> Create and preserve vital neighborhoods.</p> <p><b>Policy GM 3.3:</b> Assure that all new and infill development within existing urban areas pays its proportional share of the cost for urban infrastructure and public facilities required to maintain the threshold standards, as adopted for its area of impact.</p>	<p><b>Consistent.</b> See analysis for Objective GM 1.</p>

**Table 5.9-6 Project Consistency with Applicable GDP Police Service Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans</b>	
<p><b>Goal:</b> Prevent injury, loss of life and damage to property resulting from crime occurrence through the provision of justice facilities.</p> <p><b>Objective:</b> Make provisions for justice facilities, including jails, courts, and police facilities adequate to serve the Otay Ranch project area.</p>	<p><b>Consistent.</b> The SPA Plan does not contain justice facilities but police facilities area permitted use in the mixed-use Urban Center and Town Center.</p>
<p><b>Goal:</b> Prevent injury, loss of life and damage to property by having adequate justice facilities to serve Otay Ranch residents.</p> <p><b>Objective:</b> Cooperate with the County to identify an equitable funding method for the development of justice facilities based on the needs of Otay Ranch and their benefit to Otay Ranch residents.</p> <p><b>Objective:</b> Justice facilities serving Otay Ranch residents will be sited in appropriate locations and in a timely manner, irrespective of jurisdictional boundaries.</p> <p><b>Objective:</b> Enhance public safety by utilizing land use and site design techniques to deter criminal activity.</p>	<p><b>Consistent.</b> The SPA Plan does not propose any justice facilities; however, the design of Village 9 fosters community interaction and awareness that deters criminal activity. Design techniques include “eyes on the street” orientation of commercial, mixed use, and residential uses towards the street and placement of parks and paths as focal points in the community. These techniques minimize hidden locations where criminal activity may occur.</p>
<p><b>Goal:</b> Protection of life and property and prevention of crime occurrence.</p> <p><b>Objective:</b> Make provisions for criminal justice facilities, including jails, courts, and police facilities adequate to serve the Otay Ranch project area.</p> <p><b>Objective:</b> Enhance conditions for public safety by utilizing land use and site design techniques to deter criminal activity and promote law enforcement.</p> <p><b>Objective:</b> Site law enforcement facilities to appropriate locations in order to serve the population.</p> <p><b>Policy:</b> Urban Service: Provide properly equipped and staffed law enforcement units to respond to 84 percent of Priority One emergency calls within 7 minutes and maintain an average response time of all Priority One emergency calls of 4.5 minutes or less.</p> <p><b>Policy:</b> Urban Service: Provide properly equipped and staffed law enforcement units to respond to 62 percent of Priority Two urgent calls within 7 minutes and maintain an average response time to all Priority Two calls of 7 minutes or less.</p>	<p><b>Consistent.</b> As discussed above, police facilities may be located in the Urban Center or Town Center. The design of Village 9 fosters community interaction and awareness that deters criminal activity. With implementation of the PFFP, the proposed SPA Plan would be consistent with the GDP goal pertaining to police services because the PFFP will identify the police staffing requirements for Village 9, when these services will be required and the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel are operational prior to or concurrent with need. In addition, the proposed SPA Plan includes CPTED features that will reduce the demand on police services police substations would be permitted in the SPA.</p>

### 5.9.2.4 Level of Significance Prior to Mitigation

#### A. Police Service Facilities

No significant impacts related to police service facilities have been identified for implementation of the project.



## **B. Police Service Standard**

The project would not result in significant impacts associated with the provision of new or expanded police facilities. The project would result in a potentially significant increase demand on police protection if additional police officers are not provided commensurate with demand.

## **C. Consistency with Police Service Policies**

The project would conflict with police service policies if additional police officers are not provided commensurate with demand.

### **5.9.2.5 Mitigation Measures**

#### **A. Police Service Facilities**

No mitigation measures are required.

#### **B. Police Service Standard**

The following mitigation measures have been identified to reduce police service impacts associated with the project to below a level of significance.

- 5.9.2-1 **Public Facilities Development Impact Fees.** Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall pay Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan, unless stated otherwise in a separate development agreement.
- 5.9.2-2 **Growth Management Program's Police Threshold Standard.** The City of Chula Vista shall continue to monitor the Chula Vista Police Department responses to emergency calls and report the results to the Growth Management Oversight Commission on an annual basis.
- 5.9.2-3 **Crime Prevention Through Environmental Design Features.** Prior to the issuance of each building permit, site plans shall be reviewed by the Chula Vista Police Department (or their designee) to ensure the incorporation of Crime Prevention through Environmental Design features and other recommendations of the Chula Vista Police Department, including, but not limited to, controlled access points to parking lots and buildings; maximizing the visibility along building fronts, sidewalks, and public parks; and providing adequate street, parking lot, and parking structure visibility and lighting.

#### **C. Consistency with Police Service Policies**

Mitigation measures 5.9.2-1 through 5.9.2-3 would also reduce impacts related to consistency with police service policies.

### **5.9.2.6 Level of Significance After Mitigation**

#### **A. Police Service Facilities**

Impacts would be less than significant without mitigation.

## **B. Police Service Standard**

With implementation of mitigation measures 5.9.2-1 through 5.9.2-3 identified above, police service standard impacts would be reduced to below a level of significance.

## **C. Consistency with Police Service Policies**

With implementation of mitigation measures 5.9.2-1 through 5.9.2-3 identified above, impacts related to consistency with police service policies would be reduced to below a level of significance.

## **5.9.3 Schools**

### **5.9.3.1 Existing Conditions**

#### **A. Regulatory Framework**

##### **1. California Senate Bill 50**

Two public school districts provide primary and secondary school facilities and services for the city of Chula Vista: the Chula Vista Elementary School District (CVESD) (kindergarten through sixth grade) and the Sweetwater Union High School District (SUHSD) (seventh through twelfth grade). Senate Bill (SB) 50, enacted in 1998, allows both the CVESD and the SUHSD to levy a fee, charge, dedication, or other requirement against any development project within its boundaries for the purpose of funding the construction or reconstruction of school facilities. Pursuant to Government Code Section 65996, the payment of these fees by a developer serves to fully mitigate all potential project impacts on school facilities to less than significant levels.

##### **2. City of Chula Vista General Plan**

The General Plan recognizes that demand for school facilities will continue to increase as the city's population grows and states that it is the intent of the City of Chula Vista to facilitate the efforts of the districts to provide school services. The Public Facilities and Services Element includes objectives to efficiently locate and design school facilities (Objective PFS 10).

##### **3. Otay Ranch General Development Plan**

The purpose of the school Facility Section of the GDP is to establish goals, objectives, policies, and processing requirements to ensure the timely provision of local school facilities. As stated therein, the goals of the GDP with respect to school facilities is to provide high quality educational facilities for Otay Ranch residents by coordinated planning of school facilities with the appropriate school district and to coordinate the planning of adult educational facilities with the appropriate district. In addition, the GDP states that buildout of the Otay Ranch GDP would generate a demand for 13 elementary schools, two middle schools, and two high schools.

The GDP also includes a list of criteria for siting schools within the individual villages. The siting criteria address site size, location in proximity to residential development and parks and accessibility to all modes of transportation including pedestrian, bicycle and vehicular traffic, topographic and soils considerations, proximity to high-level noise generators, accessibility to utilities and services, and distance to Brown Field. The GDP notes that while it is unlikely that every site can meet all the criteria, each site should meet most of the listed criteria. One GDP objective relates to schools:

- **Objective:** School facilities shall be provided concurrently with need and integrated with related facility needs, such as childcare, health care, parks, and libraries, where practical.
- **Policies:**
  - Coordinate the planning and siting of schools, recreational facilities, childcare centers, libraries and other related public facilities.
  - Additional facilities needed to serve children generated by the new development shall be provided concurrent with need, and shall be of the quality and quantity sufficient to meet, at a minimum, California Department of Education standards.

#### **4. Chula Vista Municipal Code Growth Ordinances**

CVMC Section 19.80.030 (Controlled Residential Development) is intended to ensure that new development would not degrade existing public services and facilities below acceptable standards for schools and other public services. The preparation of a PFFP is required in conjunction with the preparation of the SPA Plan for the project to ensure that the development of the project is consistent with the overall goals and policies of the General Plan and would not degrade public services. Similarly, Section 19.09 (Growth Management) of the CVMC provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040.C requires that the City annually provide the two local school districts with a 12- to 18-month development growth forecast and requests an evaluation from the districts of their ability to accommodate the forecast and continuing growth. The districts must address the following:

1. Amount of current capacity now used or committed;
2. Ability to absorb forecast growth in affected facilities;
3. Evaluation of funding and site availability for projected new facilities;
4. Other relevant information the district(s) desire(s) to communicate to the City and the GMOC.

The growth forecast and school district response letters are delivered to the GMOC for inclusion in its review. Section 19.09 also requires a PFFP and the demonstration that public services, including schools meet the growth management program's quality of life threshold standards. The analysis of school services provided in this section, along with the PFFP to ensure funding for any needed expansion of services, ensure that schools will be provided commensurate with development and demand.

### **B. Existing School Conditions**

The CVESD, established in 1892, is the largest kindergarten through sixth grade school district in California, and serves approximately 27,500 students in 44 elementary schools with approximately 2,525 employees (both certified and classified) district wide. Kindergarten through third grade classrooms have a capacity of 20 students (CVESD 2010). Elementary schools are planned for Village 11 and Village 2. The school in Village 11 is under construction and anticipated to open in July 2013 (CVESD 2012). The elementary school in Village 2 was expected to commence construction in 2011; however, construction has not begun and no construction update is available.

Founded in 1920, the SUHSD serves more than 42,000 students in middle and high school (grades 7-12) and more than 32,000 adult learners at 32 campuses. Olympian High School was opened in 2006 within Village Seven of Otay Ranch, and has a capacity of 2,600 students. A middle school and high school are planned for Otay Ranch Village 11. The middle school is scheduled to commence construction in 2010

and construction of the high school was scheduled to commence in 2011 (City of Chula Vista 2009a); however, these projects have not been completed and no update is available.

There are five elementary schools in the CVESD that now serve students residing within the Otay Ranch GDP area. These include Heritage Elementary, McMillin Elementary, Hedenkamp Elementary, Veterans Elementary, and Wolf Canyon Elementary. Secondary schools include Otay Ranch and Olympian High Schools. Enrollment and capacity in these schools are shown in Table 5.9-7.

**Table 5.9-7 Project Area Schools**

School	Enrollment	Capacity
Heritage Elementary	989	863
McMillin Elementary	855	845
Hedenkamp Elementary	1,021	1,045
Veterans Elementary	856	850
Wolf Canyon Elementary	942	849
Otay Ranch High School	2,603	2,432
Olympian High School	1,720	1,942
Source: City of Chula Vista 2012f		

Currently, the district-wide student enrollment is stable. However, according to the 2012 GMOC Annual Report, both the CVESD and the SUHSD have indicated that facilities will be required to accommodate growth in the next five years, and that the facilities are constructed when funding is available (City of Chula Vista 2011b). In 2012, the CVESD began construction of a new elementary school in Village 11.

### 5.9.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the Otay Ranch GDP, the project would result in a significant impact to schools if it would:

- **Threshold 1:** Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for educational facilities services.
- **Threshold 2:** Locate schools in areas where disturbing factors such as traffic hazards, airports, or other incompatible land uses are present; in areas where they are not integrated into the system of alternative transportation corridors, such as bike lanes, riding and hiking trails, and mass transit; where private elementary and secondary schools are not spaced far enough from public schools and each other to prevent a concentration of school impacts; with at least 10 usable acres for an elementary school; without a central location to residential development; adjacent to a street or road which cannot safely accommodate bike, foot, and vehicular traffic; in areas not adjacent to parks, thereby discouraging joint field and recreation facility uses; at an unsafe distance from contaminants or toxins in the soil or groundwater from landfills, fuel tanks, agricultural areas, power lines, utility easements, and so on; or inside of floodplains; on unstable soils; or near fault lines.
- **Threshold 3:** Be inconsistent with General Plan, GDP, and other objectives and policies regarding school services thereby resulting in a significant physical impact.

### 5.9.3.3 Impact Analysis

**A. Threshold 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for educational facilities services.**

While governmental facilities are not specifically planned for Village 8 West, the SPA Plan does not preclude them. Government facilities do not, in and of themselves, generate school children. The residential uses including single-family and multi-family dwelling units would generate school age children. Potential environmental impacts related to traffic generated by the proposed schools are addressed in Section 5.3, Transportation/Traffic.

#### 1. *Elementary Schools*

The CVESD has estimated that buildout of the proposed SPA Plan's 4,000 residential units would generate approximately 890 elementary school students, as shown in Table 5.9-8. To provide for future elementary school demand, two alternative elementary school sites have been reserved in the SPA Plan in Planning Areas G and W. Either of these sites may be developed as an elementary school if selected by the school district. The primary school site, reserved as Planning Areas W on Figure 3-3, Site Utilization Plan, consists of 11.9 acres of land located in the Urban Neighborhood Zone. An alternative site, reserved as Planning Area G, consists of 7.9 acres of land located in the Town Center. If either site is selected by the Chula Vista Elementary School District, each site will be large enough to accommodate approximately 750 students. Construction timing of the schools would be determined by the school district. Until the schools are completed, students residing within Village 9 would attend schools in neighboring villages as determined by the school district. Currently, the CVESD's inventory consists of 45 elementary schools including six charter schools, with a total capacity for approximately 29,212 students. Projected enrollment for October 2010 was 27,484 students. Therefore, the CVESD currently has excess capacity and could accommodate 1,728 additional elementary school students.

#### 2. *Middle Schools*

The project would generate approximately 327 middle school students, as shown in Table 5.9-8. Middle School students residing in Village 9 would attend the planned Middle School for Otay Ranch, located in Village 11 or in Village 8 West. Until such time that this school would be completed, students residing within Village 9 would attend schools in neighboring villages as determined by the school district. According to the SUHSD, the Village 9 project is within the Eastlake Middle School attendance area. Historically, enrollment at this school has met or exceeded capacity (SUHSD 2012). Therefore, the increase in students as a result of Village 9 would result in a significant temporary impact on neighboring middle schools until completion of the new middle school.

#### 3. *High Schools*

The project would generate approximately 488 high school students, as shown in Table 5.9-8. According to the SUHSD, the project site is within the Olympian High School attendance area. Olympian High School was constructed according to the GDP in order to accommodate planned growth in the area surrounding the school, including Village 9. However, this high school does not have the capacity to



accommodate all of the high school students from Village 9. In the future, high school students from Village 9 may be able to attend the proposed school in Village 11. Another high school is being planned at the intersection of Hunte Parkway and Eastlake Parkway. Until such time that another school would be completed, the project would result in temporary impact on Olympian High School.

**Table 5.9-8 School Obligations**

	Units	Elementary School <sup>(1)</sup>		Middle School <sup>(2)</sup>		High School <sup>(2)</sup>	
		Rate	Students	Rate	Students	Rate	Students
Mixed Use	3,734	x 0.2091	781	x 0.0810	302	x 0.1171	437
Single-Family (Attached/Cluster)	161	x 0.4114	66	x 0.0936	15	x 0.1939	31
Single-Family Detached	105	x 0.4114	43	x 0.0936	10	x 0.1939	20
<b>Total</b>	<b>4,000</b>		890		327		488

<sup>(1)</sup> Elementary school generation rates were negotiated with the Chula Vista Elementary School District.

<sup>(2)</sup> High school and middle school student generation rates were negotiated with Sweetwater Union High School District.

Source: Otay Land Company 2012

Provisions for continuing education are not required; however, the project site is located approximately three miles from Southwest College and adjacent to a proposed university. In addition, the CPF would provide an opportunity for educational facilities, which could include on-going education.

**B. Threshold 2: Locate schools on sites that are not appropriate for school facilities, including areas where:**

- **Disturbing factors such as traffic hazards, airports, or other incompatible land uses are present;**
- **They are not integrated into the system of alternative transportation corridors, such as bike lanes, riding and hiking trails, and mass transit;**
- **Private elementary and secondary schools are not spaced far enough from public schools and each other to prevent a concentration of school impacts;**
- **Less than 10 usable acres are available for an elementary school;**
- **A central location to residential development is not provided;**
- **An adjacent street or road is not available which can safely accommodate bike, foot, and vehicular traffic;**
- **Parks are not located adjacent to the site, thereby discouraging joint field and recreation facility uses;**
- **The school would be within an unsafe distance from contaminants or toxins in the soil or groundwater from landfills, fuel tanks, agricultural areas, power lines, utility easements, and so on; or**
- **Risks from floodplains, unstable soils, and nearby fault lines exist.**

Two potential elementary school sites are identified in Village 9: an 11.9-acre school located in the southwest area of the site north of Otay Valley Road (Planning Area W), and a 7.9-acre middle school located in the Town Center in the northeast portion of the project site, south of Main Street (Planning Area G). Only one of these sites would ultimately be developed with an elementary school. With respect

to proximity to airports, the project site is located approximately one mile to the north of the boundary of Brown Field within the airport's area of influence. Village 9 is located within the FAA Height Notification Boundary and Airport Overflight Notification Area; therefore, development on the project site is required to provide proper notification in compliance with the Brown Field ALCUP. Compliance with the ALCUP would reduce potential safety impacts to a less than significant level. Additionally, due to height limitations established in the SPA Plan, it is not anticipated that development would result an obstruction to air traffic (see Section 5.13, Hazards and Hazardous Materials, regarding safety of structures within this distance). Therefore, the proposed schools would not be an incompatible land use with Brown Field.

Regarding traffic hazards, the elementary school in the Town Center (Planning Area G) is bounded by Street A, Street B, Street C, and Street D. Adjacent to the school, Street A would be a two-lane urban couplet, and would include bike lanes, a sidewalk, and parking on the side of the road adjacent to the school. Street B would be a two-lane town center street with a sidewalk on both sides of the street. Street C and Street D would also be two-lane town center streets but would include sidewalks, bike lanes, and parking on both sides of the street. Therefore, the roadways would all be separated from the school by pedestrian facilities, and in most cases bike lanes and parking. Additionally, these streets are low-speed streets. The posted speed limit would be 35 mph on Street A and 25 mph on the other streets. The second elementary school site (Planning Area W) would be bounded by Street A, Street I, and Otay Valley Road. Adjacent to the school, Street A would be a two-lane urban couplet, and would include bike lanes, a sidewalk, and parking on the side of the road adjacent to the school. Street I would also a two-lane town center street and would include sidewalks, bike lanes, and parking on both sides of the street. Otay Valley Road would be a four-lane major roadway adjacent to the school, but would include sidewalks, bike lanes, parking to separate the school from traffic. A landscape buffer would also be provided between the sidewalk and parking lane. Additionally, no access to the school would be provided on the side of the school adjacent to Otay Valley Road. Therefore, the roadways that would surround the proposed schools would be separated from the schools by pedestrian facilities and/or low speed limits to minimize traffic hazards surrounding the schools.

As discussed above, bicycle lanes and pedestrian facilities are available on the streets surrounding both schools. Additionally, both schools would be located within 0.25 mile of a transit stop. As such, the proposed alternative transportation network would support the future elementary school, and adjacent traffic would safely accommodate bicycle, pedestrian, and vehicle traffic. The proposed elementary schools site (Planning Area W) is 11.9 acres; therefore, the proposed school site meets the minimum site requirement of 10 acres. The alternative proposed school site (Planning Area G) is 7.9 acres; however, this site is not the preferred location. Additionally, the alternative site is adjacent to the Town Square and Neighborhood Park, which may provide additional facilities for the elementary school to reach the 10 acre requirement in an urban setting.

Private schools are conditionally permitted throughout Village 9. However, no private schools are proposed as part of the project, and it is unknown if, and in what location, future private schools would be built. As a conditionally permitted use, a proposed private school would not be permitted in close proximity to an incompatible use, such as a public school. The elementary school sites are both located adjacent to a town square and residential planning areas. Therefore, the schools are located in central residential areas in Village 9, adjacent to parks.

The proposed school site must comply with the CVESD and state standards regarding health and safety issues, including the potential for toxins in the soil and exposure to toxic air contaminants from SR-125. As discussed in Section 5.13, Hazards and Hazardous Materials, the possible presence of pesticide/

herbicides has been detected in on-site soils in some areas of the project. As such, additional testing would occur prior to grading and any contaminated soils would be remediated in accordance with County of San Diego Department of Environmental Health and RWQCB requirements. Implementation of mitigation measure 5.13-1, which requires the remediation of any contaminated soils, would reduce this potential conflict with the school site. As discussed in Section 5.8, Geology and Soils, and Section 5.11, Hydrology and Water Quality, Village 9 is not within a floodplain or on a fault line, but unstable soils could occur on site and the region is seismically active. Implementation of mitigation measure 5.8-1, which requires conformance with site-specific geotechnical studies, would reduce this school site consideration to below significance. Additionally, as discussed in Section 5.4, Air Quality, exposure to TACs at the reserved elementary schools sites would be below cancer and non-cancer risk criteria. Therefore, the potential Village 9 SPA Plan schools sites are not located in areas with significant health and safety issues.

**C. Threshold 3: Be inconsistent with General Plan, GDP, and other objectives and policies regarding school services thereby resulting in a significant physical impact.**

The proposed SPA Plan would be consistent with the Chula Vista General Plan and GDP objectives and policies pertaining to schools, as shown in Tables 5.9-9 and 5.9-10.

**Table 5.9-9 Project Consistency with Applicable General Plan School Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective PFS 9:</b> Develop schools that cultivate and educate people of all ages, that meet the needs of the workforce, and that serve as community centers.</p> <p><b>Policy PFS 9.1:</b> Coordinate with local school districts during review of applicable discretionary approval to provide adequate school facilities, to meet needs generated by development, and to avoid overcrowding, in accordance with the guidelines and limitations of Government Code 65996(b).</p> <p><b>Policy PFS 9.3:</b> Assist school districts in identifying and acquiring school sites for new construction in needed timeframes.</p>	<p><b>Consistent.</b> The SPA Plan and TM are consistent with these General Plan policies. The applicant and City have been coordinating with the CVESD in the site selection for an elementary school within Village 9 to serve future residents. Two potential sites have been identified: an 11.7 acre elementary school site in the Urban Neighborhood Zone and a 10.3 acre site in the Town Center. Middle school students generated by Village 9 would attend Eastlake Middle School until the school in Village 11 or in Village 8 West is constructed. High school students generated by Village 9 would attend Olympian High School in Village 7.</p>
<p><b>Objective PFS 10:</b> Efficiently locate and design school facilities.</p> <p><b>Policy PFS 10.3:</b> Require that proposed land uses adjacent to a school site be planned in such a manner as to minimize noise impacts and maximize compatibility between the uses.</p> <p><b>Policy PFS 10.6:</b> Consider siting elementary schools adjacent to neighborhood parks, where feasible, to allow for expanded use of the school grounds and classrooms by the general public and the park area by the school children.</p>	<p><b>Consistent.</b> The SPA Plan and TM are consistent with these General Plan policies. In coordination with the school district, the applicant has identified two potential sites for an elementary school: an 11.7 acre elementary school site in the Urban Neighborhood Zone and a 10.3 acre site in the Town Center.</p> <p>As discussed in Section 5.5, Noise, all potential noise impacts to schools that would potentially result from implementation of Village 9 would be mitigated to a less than significant level with implementation of mitigation measures 5.5-4 and 5.5-6. Section 5.4, Air Quality, includes a discussion of potential TAC exposure on the school sites as a result of SR-125. As discussed in this section, exposure over the 9 year period for all school receptors would be below the risk criteria of 10 in a million, and the maximum increase in non-cancer risk would be below the risk criteria of 1.</p>

**Table 5.9-9 Project Consistency with Applicable General Plan School Policies (continued)**

Applicable Policies	Evaluation of Consistency
	With the implementation of General Plan policies to require the coordination of siting needs with the CVESD, including compliance with siting requirements in CCR Title 5, School Facilities Construction, compatibility issues related to the school site would be reduced to below significance.

**Table 5.9-10 Project Consistency with Applicable GDP School Policy**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans</b>	
<p><b>Goal:</b> Provide high quality, kindergarten through twelfth educational facilities for Otay Ranch residents by coordinated planning of school facilities with the appropriate school district.</p> <p><b>Goal:</b> Coordinate the planning of adult educational facilities with appropriate district.</p> <p><b>Objective:</b> School facilities shall be provided concurrently with need and integrated with related facility needs, such as childcare, health care, parks, and libraries, where practical.</p> <p><b>Objective:</b> Provide school district with 12- to 18-month development plan and 3- to 5-year development forecasts so that they may plan and implement school building and/or allocation programs in a timely manner.</p>	<p><b>Consistent.</b> Two potential school sites are provided within Village 9 to fulfill the demand for education facilities in the area. Adult education facilities can be accommodated in the mixed use and CPF sites or as a shared use with the public schools.</p>

### 5.9.3.4 Level of Significance Prior to Mitigation

#### A. School Facilities

Project implementation would result in a significant impact to middle schools and high schools unless construction of schools coincides with student generation and associated service demands.

#### B. Schools Siting

The potential exists for pesticides/herbicides to occur at the future school site and for potential unstable soils to occur on site. Impacts would be potentially significant.

#### C. Consistency with School Policies

No significant impacts related to consistency with schools policies have been identified for the project.

### 5.9.3.5 Mitigation Measures

#### A. School Facilities

5.9.3-1 **School Service Fees.** Prior to the issuance of each building permit, the applicant(s) shall provide the City with evidence or certification by the Chula Vista Elementary School District and Sweetwater Unified High School District that any fee charge, dedication, or other

requirement levied by the school district has been complied with or that the district has determined the fee, charge, dedication or other requirements does not apply to the construction.

- 5.9.3-2 **School Site Protection.** Prior to approval of a final map for private development on Planning Areas G or W, designated for a future school, the applicant shall provide evidence from the Chula Vista Elementary School District that the site has not been determined by the district to be needed for use as a school site.

## **B. Schools Siting**

Mitigation measure 5.8-1 in Section 5.8, Geology and Soils, and 5.13-1 in Section 5.13, Hazards and Hazardous Materials, would reduce impacts related to schools siting.

## **C. Consistency with School Policies**

No mitigation measures are required.

### **5.9.3.6 Level of Significance After Mitigation**

#### **A. Schools Facilities**

With implementation of mitigation measures 5.9.3-1 and 5.9.3-2 identified above, impacts related to school services related to the project would be reduced to below a level of significance.

#### **B. Schools Siting**

With implementation of mitigation measures 5.8-1, and 5.13-1, impacts related to school siting related to the project would be reduced to below a level of significance.

#### **C. Consistency with School Policies**

Impacts would be less than significant without mitigation.

## **5.9.4 Libraries**

### **5.9.4.1 Existing Conditions**

#### **A. Regulatory Framework**

##### **1. City of Chula Vista General Plan**

The 2005 Chula Vista General Plan recognizes that demand for library facilities will continue to increase as the City's population grows in the eastern areas of the City through new development, and that location is the most important reason residents choose to utilize a particular public library. The General Plan's Public Facilities and Services Element includes objectives for the City to provide a library system of facilities and programs that meets the needs of Chula Vista residents of all ages (Objective PFS 11) and to efficiently locate and design library facilities (Objective PFS 12). Additionally, Growth Management Objective GM 1 and Policy GM 1.11 encourage withholding discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards for library services.



## **2. Otay Ranch General Development Plan**

The purpose of the Library Facility section of the GDP is to establish goals, objectives, policies, standards, and processing requirements for the timely provision of library facilities. As stated therein, the goal is to provide sufficient libraries to meet the information and education needs of Otay Ranch residents. In addition, the GDP states that a library facility in the EUC is necessary to serve the Otay Ranch at build-out, and would serve as a main library for all residents of Otay Ranch. The GDP also states that expansion of other libraries may be necessary.

## **3. Chula Vista Public Library Strategic Facilities Plan**

The purpose of the Chula Vista Public Library Strategic Facilities Plan, currently in draft form, is to identify ways to improve the library service delivery to the community, particularly to residents of eastern Chula Vista. The plan determined that the additional needed library square footage can be developed as multiple smaller branches, or as one large library. Because the library's operating budget has been significantly reduced and capital funding is not currently available, the facilities plan does not decide which option would be implemented. The options will be evaluated when capital and operating funds become available. Additional measures such as mall outlets, book vending machines, a bookmobile, and service partnerships are identified as possible interim measures. An additional interim measure is the mall branch at Otay Ranch Town Center, which opened in April 2012.

## **4. Chula Vista Municipal Code Ordinances**

CVMC Section 19.80.030 (Controlled Residential Growth) is intended to ensure that new development would not degrade existing public services and facilities below acceptable standards for libraries and other public services. The preparation of a PFFP is required in conjunction with the preparation of the SPA Plan for the project to ensure that the development of the project is consistent with the overall goals and policies of the General Plan and would not degrade public services. Similarly, Section 19.09 (Growth Management) of the CVMC provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040D specifically requires "500 square feet (gross) of adequately equipped and staffed library facility per 1,000 population. The City of Chula Vista shall construct 60,000 gross square feet of additional library space, over the June 30, 2000, gross square feet total, in the area east of I-805 by buildout." The analysis of library services provided in this section, along with the PFFP are intended to ensure funding for any needed expansion of services, while also ensuring that library services will be provided commensurate with development and demand.

## **B. Existing Library Facilities**

The City of Chula Vista operates three library facilities: the South Chula Vista Branch Library, the Civic Center Branch Library, and the Otay Ranch Branch Library (City of Chula Vista 2010c, 2012d). The South Chula Vista Branch Library is located at 389 Orange Avenue, approximately six miles from the project site, and consists of approximately 37,000 square feet. This branch has two conference rooms seating approximately 25 and 50 each, three small study rooms for groups of two or more that may be reserved on-site, and the Rosemary Lane Galleria which acts as an exhibition space for local artists (City of Chula Vista 2009b). The Civic Center Branch Library is located at 365 F Street, approximately seven miles from the project site, and is the largest library facility, within the City, consisting of a two-story, 55,000 square foot building. It also has a 152-seat auditorium, a 26-seat conference room, and serves as a multi-use facility including storage for the Heritage Museum and limited exhibition space (City of Chula Vista 2009b). The Otay Ranch Branch Library is located at 2015 Birch Road in the Otay Ranch Town Center,

approximately three miles from the Village 9, and consists of approximately 3,500 square feet with one small study room.

In addition to the existing libraries described above, the current Library Facilities Master Plan calls for construction of the Rancho del Rey Library, which would be approximately 31,000 square feet in size, at the intersection of East H Street and Paseo Ranchero, approximately three miles from the project site. However, the Rancho del Rey Library has been delayed indefinitely due to budget constraints (City of Chula Vista 2011c).

The GMO threshold standard for libraries is 500 square feet of library space per 1,000 residents. According to the 2012 GMOC Annual Report, the service ratio for Fiscal Year 2011 was 414 square feet to every 1,000 residences, but dropped to 387 square feet to every 1,000 residents as a result of the closure of the Eastlake Branch (City of Chula Vista 2011b). Therefore, the City currently does not meet the GMO threshold standard for libraries.

#### 5.9.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would result in a significant impact to library services if it would:

- **Threshold 1:** Result in substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.
- **Threshold 2:** Fail to meet the City's growth management threshold standard of 500 gross square feet of library space, adequately equipped and staffed, per 1,000 population.
- **Threshold 3:** Be inconsistent with General Plan, GDP or other objectives and policies regarding library services thereby resulting in a significant physical impact.

#### 5.9.4.3 Impact Analysis

##### **A. Threshold 1: Result in substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.**

The project would result in an increase in demand for libraries that would have the potential to require the construction of new library facilities. The Chula Vista Library Master Plan establishes a standard of 500 square feet of adequately equipped and staffed library facilities per 1,000 residents. Based on the projected population, Village 9 would generate a demand for approximately 5,462 square feet of additional library facilities within the city. While the SPA Plan permits public community facilities such as libraries throughout the site, the project does not specifically include the development of a library. Construction impacts of development in the project area are evaluated in the various topical sections in Chapter 5, Environmental Impact Analysis, of this EIR, along with mitigation measures to address significant impacts. As discussed in this EIR, project construction impacts would be less than significant for air, noise, cultural resources, biological resources, hydrology, and water quality. Significant and unavoidable construction air emissions from mass grading, surface improvements, and simultaneous

construction would occur as a result of development across the entire site and would occur whether or not the proposed development would include civic facilities. Further environmental review would be required if a specific facility is proposed, but such facilities are not proposed as part of the Village 9 SPA Plan.

**B. Threshold 2: Fail to meet the City's threshold standard of 500 gross square feet of library space, adequately equipped and staffed, per 1,000 population.**

Village 9 would generate a demand for approximately 5,462 square feet of additional library facilities within the city. As discussed above, the city does not currently meet the GMO threshold standard of 500 square feet of library service for every 1,000 residents. As envisioned in Chula Vista's Library Facilities Master Plan, a future library is proposed in the EUC that would serve Village 9. Construction of the Rancho del Rey and the library facility proposed in the EUC would result in a total of 60,000 gross square feet of library space. This amount would accommodate the increase in population as a result of the development proposed in Village 9, and maintain acceptable service ratios. Library facilities would also be permitted throughout Village 9. The CPF site may be suitable for new library facilities, as identified in the SPA Plan; however, a library is not specifically proposed.

Implementation of the project would require the collection of the PFDIF. The PFDIF addresses the project's proportional impact on capital facilities, such as structures and equipment, associated with the library. It does not address the impact associated with operations and maintenance for those facilities. The City development impact fee program for library facilities assumes the construction of facilities sufficient to meet the service standard of 600 square feet of library space per 1,000 population, which is more conservative than the GMO standard of 500 square feet per 1,000 population. The funds are expended on a number of projects, but for the most part are being reserved for planned facilities yet to be constructed in eastern Chula Vista. These funds on account will be combined with the impact fees to be collected from future development, including Village 9. According to the draft Strategic Facilities Plan, these funds are anticipated to fully offset the cost of new library construction to meet the 600 square feet of library space per 1,000 population service threshold (CVPL 2011). Therefore, payment of the PFDIF would provide the SPA Plan's fair share contribution to meet the City threshold standard for library space.

It is the City's policy to use public funds such as property taxes, sales taxes, and fees generated by the project to cover the incremental costs, including operation and maintenance, associated with providing library services and other public services such as parks, police and fire protection, etc. The PFFP prepared for Village 9 includes a fiscal impact analysis to determine the revenues and costs expected to be generated by the development. Net revenues are used to finance costs associated with operations and maintenance associated with the public services required to serve the project. Additionally, as discussed in Section 5.9.1.3.B, the GMOC assesses, on an annual basis, compliance with the growth threshold standards. Should the GMOC determine that the library growth management threshold standard is not being satisfied because of the impacts of growth, the City Council shall consider adopting specific measures to bring the threshold into conformance. Funding for required facilities would be necessary to reduce impacts to operations and maintenance of library facilities to less than significant.

### C. Threshold 3: Be inconsistent with General Plan, GDP or other objectives and policies regarding library services thereby resulting in a significant physical impact.

Table 5.9-11 evaluates the consistency of the project with the applicable General Plan policies and Table 5.9-12 evaluates the project's consistency with the GDP. The project would be consistent with applicable policies. The Chula Vista Public Library Strategic Facilities Plan does not identify any library facilities for Village 9. As discussed under Threshold 1, no libraries are specifically planned for Village 9, but the SPA Plan does not preclude their development. Therefore, the project would not conflict with the library facilities plan.

**Table 5.9-11 Project Consistency with Applicable General Plan Library Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective GM 1:</b> Concurrent public facilities and services.</p> <p><b>Policy GM 1.9:</b> Require that all major development projects prepare a PFFP that articulates infrastructure and public facilities requirements and costs and funding mechanisms.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this policy because the PFFP will identify the library staffing requirements for the SPA Plan, when library services will be required and the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel are operational prior to or concurrent with need.</p>
<p><b>Objective GM 3:</b> Create and preserve vital neighborhoods.</p> <p><b>Policy GM 3.3:</b> Assure that all new and infill development within existing urban areas pays its proportional share of the cost for urban infrastructure and public facilities required to maintain the threshold standards, as adopted for its area of impact.</p>	<p><b>Consistent.</b> See analysis for Objective GM1.</p>

**Table 5.9-12 Project Consistency with Applicable GDP Library Policy**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans</b>	
<p><b>Goal:</b> Sufficient libraries to meet the information and education needs of Otay Ranch residents.</p> <p><b>Objective:</b> Provide high quality and contemporary library facilities and services, which meet the needs of the entire Otay Ranch project area.</p> <p><b>Objective:</b> City of Chula Vista: 500 square feet of adequately equipped and staffed library facilities per 1,000 populations.</p> <p><b>Objective:</b> County of San Diego: 350 square feet (gross) of adequately equipped and staffed regional/area library facilities per 1,000 populations.</p> <p><b>Objective:</b> Otay Ranch libraries will be equitably financed by all new development that will benefit from the facilities.</p>	<p><b>Consistent.</b> Library facilities are a permitted use on CPF designated sites and may be provided in conjunction as an ancillary use to any of the many schools within or immediately adjacent to the project area. In addition, all development within Village 9 is subject to a PDIF, which is used to fund improvements such as libraries and other public facilities. The PFFP will identify the library staffing requirements for the SPA Plan, when library services will be required and the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel are operational prior to or concurrent with need.</p>

#### **5.9.4.4 Level of Significance Prior to Mitigation**

##### **A. Library Facilities**

No significant impacts related to library facilities have been identified for the project.

##### **B. Library Service Standard**

The project would increase demand on library services, which would be significant if library resources are not provided commensurate with demand.

##### **C. Consistency with Library Policies**

No significant impacts related to consistency with library policies have been identified for the project.

#### **5.9.4.5 Mitigation Measures**

##### **A. Library Facilities**

No mitigation measures are required.

##### **B. Library Service Standard**

5.9.4-1 **Public Facility Development Impact Fees.** Prior to the issuance of each building permit for any residential dwelling units, the applicant shall pay required Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan.

5.9.4-2 **Growth Management Program's Libraries Threshold Standard.** The City of Chula Vista shall continue to monitor library facilities and services and report the results to the Growth Management Oversight Commission on an annual basis.

##### **C. Consistency with Library Policies**

No mitigation measures are required.

#### **5.9.4.6 Level of Significance After Mitigation**

##### **A. Library Facilities**

Impacts would be less than significant without mitigation.

##### **B. Library Service Standard**

With implementation of mitigation measures 5.9.4-1 and 5.9.4-2 identified above, library service impacts related to implementation of Village 9 would be reduced to below a level of significance.

##### **C. Consistency with Library Policies**

Impacts would be less than significant without mitigation.



## 5.9.5 Parks, Recreation, Open Space, and Trails

### 5.9.5.1 Existing Conditions

#### A. Regulatory Framework

##### 1. *City of Chula Vista General Plan*

The goals of the General Plan to provide and maintain infrastructure and public services and to improve sustainability of the city's natural resources are established in the Public Facilities and Services and Environmental Elements of the General Plan. The Public Facilities and Services Element contains objectives to provide new facilities for residents of new development (Objective PFS 15). The Environmental Element of the General Plan establishes the policy framework for improving sustainability through the responsible stewardship of the city's natural and cultural resources (Policy E.1.1), including the preservation of open space and development of connecting trails. Additionally, Growth Management Objective GM 1 and Policy GM 1.11 encourage withholding discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards for fire and emergency medical services.

##### 2. *Otay Ranch General Development Plan*

The parks and open space goal of the Otay Ranch GDP is to provide diverse park and recreational opportunities within Otay Ranch which meet the recreational, conservation, preservation, cultural, and aesthetic needs of project residents of all ages and physical abilities. The Otay Ranch GDP also establishes the following policies:

- Provide 15 acres of regional park and open space per 1,000 Otay Ranch residents.
- Provide a minimum of three acres of neighborhood and community park land (as governed by the Quimby Act) and 12 acres per 1,000 Otay Ranch residents of other active or passive recreation and open space areas.

In order to achieve these goals and policies, the GDP establishes a four tier system of parks to be provided throughout the community, including:

- Park amenities in town square parks;
- Active play facilities in neighborhood parks;
- Community-level playing fields in community parks, and
- Region-wide active and passive recreational areas in designated regional parks.

The GDP Parks and Open Space policies also state that parks will be established at the SPA Plan level.

##### 3. *Chula Vista Municipal Code and Growth Ordinances*

The City of Chula Vista park dedication policies are contained in CVMC Chapter 17.10, PLDO. The PLDO establishes requirements for parklands and public facilities, including regulations for the dedication of land and development of improvements for park and recreational purposes (Section 17.10.010); determination of park and recreational requirements (Section 17.10.020); area to be dedicated (Section 17.10.040); specifications for park improvements (Section 17.10.050); criteria for area to be dedicated (Section 17.10.060); procedures for in lieu fees for land dedication and/or park development improvements (Section 17.10.070); and, other regulations regarding park development and collection

and distribution of fees. The PLDO, which has a coefficient factor of 2.61 persons per multi-family household, requires the dedication of three acres of parkland per 1,000 people or a combination of land dedication, in-lieu fees, or park development improvements to be offered at the time of final map or in the case of a residential development that is not required to submit a final map, at the time of the first building permit application.

CVMC Section 19.80.030 (Controlled Residential Development) is intended to ensure that new development would not degrade existing public services and facilities below acceptable standards for parkland and other public services. The preparation of a PFFP is required in conjunction with the preparation of the SPA Plan for the project to ensure that the development of the project is consistent with the overall goals and policies of the General Plan and wouldn't degrade public services. Similarly, Section 19.09 (Growth Management) provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040 E specifically requires a population coefficient of "three acres of neighborhood and community park land with appropriate facilities per 1,000 residents east of I-805." Section 19.09 also requires a PFFP and the demonstration that public services, such as parks, meet the growth management program's quality of life threshold standard for parks and recreation.

#### **4. Greenbelt Master Plan**

The Chula Vista Greenbelt Master Plan provides guidance and continuity for planning open space and constructing and maintaining the Greenway Trail. For the purpose of the Greenbelt, there are two general types of trails, multi-use and rural. Multi-use trails are designed for a variety of users, such as bicyclists, equestrians, pedestrians, joggers and other non-motorized activities. According to the Greenbelt Master Plan, even a single-track pedestrian-only trail would be considered multi-use, since it could accommodate hikers, backpackers, runners, bird watchers, etc. Minimum standards for trails are set forth in the City landscape manual and in the Greenbelt Master Plan. A multi-use trail may also be improved with a variety of trail surfaces, with concrete and asphalt surfacing to accommodate the broadest range of users in an urban setting. A concrete multi-use trail would be 10 feet with two-feet of natural shoulders. However, variation in the minimum standards may be allowed, based on consideration of the number and types of trail users and environmental constraints. Other minimum standards include greenbelt trail signs.

The segment of the Greenway Trail applicable to the SPA Plan is the Otay Ranch Village greenway segment. The Village Greenway segment has been added to the Greenbelt Master Plan as a major trail linkage identified in the GDP. This trail presents an opportunity as a multi-use trail that would provide mobility for residents between several villages and connectivity between recreation areas in Village 9 and other future parks along the greenway. The Village Greenway is intended to connect active and passive users, provide users with the opportunity to stop and enjoy an enhanced open space area, and ensure connectivity to the Greenbelt Trail system. Additionally, the Greenbelt Master Plan identifies a connection through Otay Ranch that would ultimately provide a link from Village 9 to the Greenbelt trail system in the Otay Valley.

#### **5. Chula Vista Parks and Recreation Master Plan**

The Chula Vista Parks and Recreation Master Plan, adopted by City Council in 2002, describes a comprehensive parks and recreation system that services the community at large through the delivery of a variety of park sites containing a variety of recreational experiences. As stated in the document, each park within the system is viewed in the context of the whole park system to insure that it functions

properly in providing a balance of recreational opportunities. The document describes existing and future park sites and as such identifies parks within the Otay Ranch area. The plan does not include a community or neighborhood park acreage requirement for Village 9.

The City is currently in the process of updating the 2002 Parks and Recreation Master Plan in response to the 2005 update of the General Plan. A draft Park and Recreation Master Plan Update was released in December 2010. The 2010 Parks and Recreation Master Plan Update identifies a range of passive and active park elements to serve the residents of Village 9, including 12.5 acres of neighborhood parks, 5 acres of town squares, and 6.2 acres of pedestrian parks for Village 9. The plan also contains several policies that address the design and delivery of park sites.

## **B. Existing Parks and Recreational Facilities**

The City of Chula Vista park system contains 59 public parks and recreation facility sites, including nine community parks totaling 226 acres, 282 acres of neighborhood parks, 12 acres of urban and mini parks, one 3.4 acre special purpose park, four community centers, one senior center, four gymnasiums, and two swimming pools totaling approximately 530 acres (City of Chula Vista 2012d). The City currently meets the Growth Management Program's threshold standard of three acres of neighborhood and community parkland per 1,000 residents in east Chula Vista. The GMOC's 2012 Annual Report indicated a parkland ratio of 3.16 acres per 1,000 residents in eastern Chula Vista (City of Chula Vista 2012f).

There are ten existing parks located within two miles of the project site. These parks are Otay Lakes County Park, Heritage Park and Community Center, Sunset View Park, Chula Vista Community Park, Salt Creek Community Park, All Seasons Park, Santa Venetia Park, Cottonwood Park, Santa Cora Park, and Windingwalk Park. Public parks in the city are open to all of the area's citizens. Neighborhood parks generally serve a local adjacent or nearby residential neighborhood, while community parks serve the broader community and provide a greater range of services. Regional and County parks and the Otay Ranch Preserve are also located in eastern Chula Vista and adjacent San Diego County. As of 2004, Chula Vista had over 9,433 undeveloped acres of regional parks, including significant portions of the Sweetwater and Otay River Valleys and the Otay Reservoirs (City of Chula Vista 2005a). These facilities are described below.

### **1. Neighborhood Parks**

**Heritage Park and Community Center, 1381 Palomar Street:** This park encompasses 10.17 acres and is located approximately two miles northwest of Village 9. Facilities include an amphitheater, barbeque facilities, basketball courts, an open green space, a park shelter/gazebo, a picnic area, play equipment, recreation center, restrooms, a multi-purpose field, and skateboard park.

**Sunset View Park, 1390 South Greenview Drive:** This park encompasses 10 acres and is located approximately 1.4 miles north of Village 9. Facilities include multi-purpose fields, barbeque facilities, restrooms, a picnic area, a playground, a lawn games area, basketball courts, and a roller hockey court.

**Windingwalk Park, 1675 Exploration Street:** This park encompasses 7.1 acres and is located approximately 0.8 mile northeast of Village 9. Facilities include picnicking and barbeque facilities, an open green space, a park shelter/gazebo, play equipment, restrooms, a ball field, a basketball court, and a tennis court.

## 2. Community Parks

**Chula Vista Community Park, 1060 Eastlake Parkway:** This park is located approximately two miles north of Village 9. Facilities include barbeque facilities, ballfields, tennis courts, green space, shelters/gazebos, play equipment, restrooms, and a multi-purpose field.

**Salt Creek Community Park, 2710 Otay Lakes Road:** This park is located approximately two miles northeast of Village 9. Facilities include barbeque facilities, tennis courts, basketball courts, gymnasium, green space, shelters/gazebos, play equipment, recreation center, restrooms, a multi-purpose field, and a skateboard park.

## 3. Regional and County Parks and Preserve

**Otay Valley Regional Park.** This park is located coincident with the southern border of Village 9 and is bisected by the SR-125. The Otay Valley Regional Park will ultimately comprise 8,000 acres passing through the jurisdictions of the County of San Diego and cities of San Diego and Chula Vista. The regional park is located in the Multiple Habitat Planning Area of the city of San Diego and the preserve management area of the city of Chula Vista under each MSCP Subarea Plan and represents one of the major open spaces within southern San Diego County.

**Otay Lakes County Park.** This park is operated by the County of San Diego Department of Parks and Recreation, located approximately 1.5 miles east of Village 9. The approximately 78-acre park, which provides picnicking, playground, hiking trails, and a native plant/demonstration garden, will ultimately be the eastern gateway/staging area for the Otay Valley Regional Park.

**Otay Ranch Preserve.** This preserve will contain approximately 11,375-acres, all of which will be included in the MSCP Subregional Preserve. To date, approximately 3,000 acres of the Otay Ranch Preserve has been dedicated to Chula Vista and the County of San Diego. For every acre approved for development in Otay Ranch, 1.188 acres is dedicated to the Otay Ranch Preserve. The land developers contributing to this preserve have established a financing program to ensure funds are available to pay for the active management of the entire preserve system in perpetuity. The Preserve's dedicated conservation lands will connect large areas of open space through a series of wildlife corridors, including connections between large, regional open spaces, such as Otay Reservoir and San Miguel Mountain.

### 5.9.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would result in a significant impact to parks, recreation, open space, and trails if it would:

- **Threshold 1:** Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- **Threshold 2:** Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
- **Threshold 3:** Fail to meet the City's growth management threshold standard for parks and recreation of three acres of neighborhood and community parkland per 1,000 residents east of I-805.
- **Threshold 4:** Be inconsistent with General Plan, GDP or other relevant objectives and policies regarding parks thereby resulting in a significant physical impact.

### 5.9.5.3 Impact Analysis

#### **A. Threshold 1: Increases the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.**

The project would potentially increase use of existing and proposed regional and community parks. However, the project would provide parks and recreational facilities to serve the population of Village 9. According to the GDP and the Quimby Act, Village 9 would be required to provide three acres of neighborhood and community parkland for every 1000 residents. The projected population of Village 9 would be a maximum of 10,923 people, assuming 2.58 persons per household (pph) for the Town Center and Urban Center Zones, 3.1 persons per household for the remaining multi-family dwelling units, and 3.3 pph for single-family dwelling units. Therefore, approximately 32.8 acres of parkland would be required by the GDP under the Quimby Act. According to the City of CVMC Chapter 17.10, the method used to calculate the amount of actual required park space is 460 square feet developed park land per each single-family unit and 341 square feet per each multi-family unit. According to this method, Village 9 would be obligated to provide approximately 32 acres of parkland. The Village 9 SPA Plan provides 23 eligible acres of parks, which does not meet the requirements of the GDP, Quimby Act, or CVMC.

However, Village 8 West SPA would provide a total of 27.1 acres of parks, which exceeds its park requirement by 9.4 acres. Village 8 West is a separate project from Village 9; however, both are currently owned and controlled by the Village 9 project applicant. The applicant is proposing to meet a portion of the Village 9 park obligation (9 acres) within the boundaries of the Village 8 West project. The applicant is proposing to dedicate parkland acreage and pay applicable parkland development fees for the development of park sites located within the boundaries of Village 9 (a total of 23 acres) and dedicate 9 acres of parkland located within Village 8 West (and pay applicable parkland development fees) thereby meeting the overall Village 9 project park obligation. Parkland obligation dedication related to Village 9, located off site (9 acres) within Village 8 West, would need to occur prior to recordation of the first map for Village 9. Alternatively, the 9 acre off-site park obligation could be provided for through the dedication of parkland acreage in an alternate location acceptable to the Development Services Director.

In concert with the Park Land Dedication Ordinance (CVMC 17.10), the City of Chula Vista Parks and Recreation Master Plan (PRMP) recognizes the practice of aggregating park acreage obligation, from various development areas, to create and site community parks (typically 30 acres and larger in size). The PRMP establishes goals for the creation of a comprehensive parks and recreation system that meets the needs of the public by effectively distributing park types and associated recreation facilities and programs throughout the city. Consistent with PRMP, the Otay Ranch General Development Plan identifies a large scale Otay Ranch Community Park within the western sector of the Otay Ranch Otay Valley Parcel. Partially located within Villages Two, Four, and Eight West, the Otay Ranch community park represents the aggregation of park obligation from area Villages. The portion of the future community park currently located within Village 8 West represents aggregated park acreage obligation from Village 8 West and Village 9 and it is the intent of the Village 8 SPA Plan to obligate the dedication of such park acreage from Village 8 West to satisfy a portion of Village 9's park obligation as needed.

With the excess Village 8 West parkland, the Village 9 SPA Plan would meet the requirements of the GDP, Quimby Act, and CVMC. The project would also provide approximately 9.6 acres of open space. In addition to dedicating land for development of parks, development in Village 9 would also pay the PFDIF



for park facilities, which provides for development of major recreational facilities, including community centers and aquatic facilities.

The Village 9 SPA would provide 27.5 gross acres of parks, including a 14.8 acre Neighborhood Park; 5.1 acres of Town Squares, and 7.6 acres of pedestrian parks. The Neighborhood Park would be a medium sized park that would provide active and passive recreation for the surrounding neighborhood and include amenities such as small scale multi-purpose play fields, sport courts, age-appropriate play grounds, and picnic areas. A town square is a small plaza or open space located within a high-density area. These spaces provide relief from the urban fabric. The Town Squares in Village 9 would serve as central gathering places and would consist of flexible spaces that can be used for multiple functions such as farmer's markets, art shows, and other events. The town squares may also include gardens and urban spaces for quiet reflection. Pedestrian parks are small parks located within residential neighborhoods. Pedestrian parks are scattered throughout the community to provide shared green space, resting places for pedestrians, and visual identity for smaller groups of homes.

With implementation of the project and proposed parkland in Village 8 West, Village 9 would not increase the use of existing facilities such that substantial deterioration would not occur. Therefore, the proposed project would provide adequate parks and recreational facilities for new residents in Village 9 through the provision of parks in the Village 9 SPA Plan area and inclusion of excess parkland in Village 8 West. However, if construction of new parks would not coincide with development of residences in Village 9, a potentially significant impact would occur.

**B. Threshold 2: Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.**

The development of parks and trails is a component of the proposed SPA Plan and TM. Construction of the parks and open space would occur within the Village 9 and would not directly impact off-site areas, including adjacent villages or regional open space or habitat areas. Mitigation measures provided in Section 5.6, Biological Resources, and Section 5.11, Hydrology and Water Quality, would reduce potential direct and indirect impacts associated with construction of the Village 9 recreational facilities to a less than significant level. Construction air quality emissions would be minimized to the extent feasible with the mitigation proposed in Section 5.4, Air Quality, and only a small amount of total construction emissions would be attributable to recreational facility construction. The potential impacts development of recreational facilities in Village 8 West that would be used to meet the Village 9 parkland requirement are addressed in the EIR prepared for the Village 8 West SPA Plan. Payment of the PFDIF for park facilities would be used for the development of major recreational facilities, including community centers and aquatic facilities. Therefore, the project would have a less than significant impact associated with construction or expansion of recreational facilities.

**C. Threshold 3: Fail to meet City's growth management threshold standard for parks and recreation of three acres of neighborhood and community parkland per 1,000 residents east of I-805.**

As discussed above under Threshold 1, according to CVMC Chapter 17.10, the method used to calculate the amount of actual required park space is 460 square feet developed park land per each single-family unit and 341 square feet per each multi-family unit. According to this method, Village 9 would be obligated to provide approximately 32 acres of parkland. The Village 9 SPA would provide a total of 23 acres of parks, also described under Threshold 1. However, Village 8 West SPA would exceed its park requirement by 9.4 acres.

In concert with the Park Land Dedication Ordinance (CVMC 17.10), the City of Chula Vista Parks and Recreation Master Plan (PRMP) recognizes the practice of aggregating park acreage obligation, from various development areas, to create and site community parks (typically 30 acres and larger in size). The PRMP establishes goals for the creation of a comprehensive parks and recreation system that meets the needs of the public by effectively distributing park types and associated recreation facilities and programs throughout the city. Consistent with PRMP, the Otay Ranch General Development Plan identifies a large scale Otay Ranch Community Park within the western sector of the Otay Ranch Otay Valley Parcel. Partially located within Villages Two, Four, and Eight West, the Otay Ranch community park represents the aggregation of park obligation from area Villages. The portion of the future community park currently located within Village Eight West represents aggregated park acreage obligation from Village 8 West and Village 9 and it is the intent of the Village 8 SPA Plan to obligate the dedication of such park acreage from Village 8 West to satisfy a portion of Village 9's park obligation as needed. The excess park acreage from Village 8 West shall be applied to Village 9 to meet the park obligation in Village 9 SPA. However, if construction of new parks would not coincide with development of residences in Village 9, a potentially significant impact would occur.

**D. Threshold 4: Be inconsistent with General Plan, GDP or other relevant objectives and policies regarding parks thereby resulting in a significant physical impact.**

**1. General Plan**

Table 5.9-13 evaluates the consistency of the project with the applicable General Plan objectives. As shown in Table 5.9-13, the project would be consistent with policies that would specifically apply to the project.

**2. Otay Ranch General Development Plan**

Table 5.9-14 evaluates the consistency of the project with the applicable GDP objectives. As shown in Table 5.9-14, the project would be consistent with policies that would specifically apply to the project.

**3. Greenbelt Master Plan**

The proposed project includes a village trail that will begin in the neighborhood park at the western edge of the project site, follow the alignment of Campus Boulevard, and will connect to the proposed University and Village 8 East. The trail would be open to bicycles, pedestrians, and other non-motorized modes of transportation. Connections to this trail would be provided within the Town Center and the Neighborhood Park. The village greenway would ultimately connect to several other villages, and provide connectivity to the Greenbelt Trail System. The village pathway proposed in the Village 9 SPA Plan would implement the portion of the Otay Ranch Village Greenway Segment for Village 9. The pathway would be constructed of decomposed granite or concrete, and would be a minimum of 10 feet wide, subject to City review and approval. An additional regional greenbelt trail would occur along the southerly side of Otay Valley Road. This section of trail would extend under SR-125 and also connect to Village 8 East to the west and will extend into the University to east. The regional trail would include an extension from Otay Valley Road south, along the westerly edge of the SPA, through the pedestrian park and open space, and may ultimately connect to the Salt Creek Trail as part of the Otay Valley Regional Park system. A second regional trail in the northeast corner of Village 9 would connect the town square in Planning Area P to the pedestrian bridge in the EUC. All Greenbelt trails would conform to the Chula Vista Greenbelt Master Plan, and are subject to City review and approval.

**Table 5.9-13 Project Consistency with Applicable General Plan Park Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective PFS 15:</b> Provide new park and recreation facilities for residents of new development, City-wide.</p> <p><b>Policy PFS 15.1:</b> Continue to pursue a city-wide standard for the provision of developed parkland for new development projects of three acres per estimated one thousand new residents.</p> <p><b>Policy PFS 15.7:</b> Work with proponents of new development projects and redevelopment projects at the earliest stages to ensure that parks; recreation; trails; and open space facilities are designed to meet City standards and are built in a timely manner to meet the needs of residents they will serve.</p>	<p><b>Consistent.</b> The project would be consistent with these policies. As discussed under Threshold 3, the proposed project would meet the city-wide standard of three acres per estimated one thousand new residents following implementation of the proposed parks in the Village 9 and Village 8 West SPA Plans. The City would have discretionary approval of the SPA Plan and future development, including the proposed parks, trails, and other recreational facilities.</p>
<p><b>Objective PFS 16:</b> Develop active and passive recreational uses within portions of the Otay Valley Regional Park located within the city of Chula Vista, in accordance with the MSCP.</p>	<p><b>Consistent.</b> The project is consistent with this objective because the SPA Plan proposes a Greenbelt trail connection to the Otay Valley Regional Park. The proposed open space preserve allows for habitat preserves and passive recreation such as hiking and nature trails pursuant to the regulations of the MSCP, the RMP, and the Regional Park Concept Plan. As discussed in Section 5.6, Biological Resources, the project would be consistent with the MSCP and RMP.</p>
<p><b>Objective PFS 18:</b> Allow the appropriate joint-use of school and park facilities.</p> <p><b>Policy PFS 18.3:</b> Consider siting elementary schools adjacent to neighborhood parks, where feasible, to allow for expanded use of the school grounds and classrooms by the general public and the park area by the school children.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and policy because the proposed elementary school sites are located adjacent to proposed recreational facilities.</p>
<p><b>Objective E 11:</b> Improve Chula Vista’s open space and trails network, including the provision of additional internal connections between the various elements of the network.</p> <p><b>Policy E 11.1:</b> Provide an integrated network of open space areas, as needed, throughout the city to serve residents, as well as to serve as a regional asset and attractor of visitors (e.g., on the bayfront and within the Otay River Valley).</p> <p><b>Policy E 11.2:</b> Plan for the long-term preservation and enhancement of open space within the Chula Vista greenbelt.</p> <p><b>Policy E 11.5:</b> Encourage the creation of connected trails between community activity areas and enhance with kiosks and rest stations.</p> <p><b>Policy E 11.7:</b> Expand upon and encourage urban community-based green infrastructure that is distinct from habitat conservation (e.g., community, neighborhood, and pocket parks, disturbed canyons, community and roof gardens, and vegetated drainages) and ensure that such facilities are integrated into new development and redevelopment in western Chula Vista.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this objective and supporting policies. The SPA Plan includes a greenbelt trail, consistent with the Greenbelt Master Plan and the Otay Valley Regional Park Concept Plan, which would ultimately connect Village 9 to the regional trail system. The SPA Plan also includes an open space preserve area consistent with the RMP to provide a comprehensive open space area in the Otay River Valley. Additionally, Village 9 proposes a village pathway on Campus Boulevard that connects the activity areas in the Town Center, as well as connects the Town Center to the surrounding neighborhoods and villages. As discussed in Section 5.10, Global Climate Change, Village 9 would be subject to the California Green Building Standards. Additionally, Village 9 proposes a neighborhood park, town squares, pedestrian parks, and would accommodate additionally smaller parks. The parks would potentially accommodate gardens. Community gardens would be permitted within all residential, mixed-use, park, and CPF sites.</p>
<p><b>Objective E 12:</b> Provide connections between Chula Vista’s open space and trails network and the regional network.</p> <p><b>Policy E 12.1:</b> Collaborate with San Diego County, the City of San Diego, and other applicable agencies to provide connections between Chula Vista’s open space and trails network and the regional network, in accordance with the Chula Vista MSCP Subarea Plan and Otay Valley Regional Park Concept Plan.</p>	<p><b>Consistent.</b> The SPA Plan proposes a Greenbelt trail that would ultimately connect Village 9 to the regional trail system. The regional trail along Otay Valley Road and village pathway along Campus Boulevard would provide regional connections to surrounding villages.</p>

Table 5.9-14 Project Consistency with Applicable GDP Park Policies

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 4 – Parks, Recreation, Open Space</b>	
<p><b>Goal:</b> Provide diverse park and recreational opportunities within Otay Ranch which meet the recreational, conservation, preservation, cultural, and aesthetic needs of project residents of all ages and physical abilities.</p> <p><b>Objective:</b> Identify park, recreational and open space opportunities, where appropriate, to serve the South County region and San Diego County as a whole.</p> <p><b>Policy:</b> Provide 15 acres of regional park and open space per 1,000 Otay Ranch residents.</p> <p><b>Policy:</b> Plan for the development of multi-use trail facilities in the regional park and open space setting with appropriate connections to adjacent parks and facilities.</p> <p><b>Objective:</b> Maximize conservation, joint uses and access and consider safety in the design of recreational facilities.</p> <p><b>Policy:</b> Encourage public transit service to regional parks and provide access to handicapped and disabled persons, in accordance with the latest federal guidelines.</p> <p><b>Policy:</b> Commercial recreation opportunities may be permitted within town square, community and regional parks to generate revenue to defray park operational expenses.</p> <p><b>Policy:</b> Utilize conservation measures including reclaimed water, efficient irrigation systems and drought tolerant plant material in the development of public and private parks where allowed.</p> <p><b>Policy:</b> Minimize park operation and maintenance costs and identify funding sources for continued operation and maintenance of all Otay Ranch parks and open space land.</p> <p><b>Objective:</b> Provide neighborhood and community park and recreational facilities to serve the recreational needs of local residents.</p> <p><b>Policy:</b> Provide a minimum of three acres of neighborhood and community parkland (as governed by the Quimby Act) and 12 acres per 1,000 Otay Ranch residents of other active or passive recreation and open space area.</p> <p><b>Policy:</b> Encourage the design of park sites adjacent to public schools and other public lands where co-location of facilities is feasible. Joint use agreements with school districts are encouraged.</p>	<p><b>Consistent.</b> The SPA Plan proposes diverse park and recreational opportunities to meet the recreational, conservation, preservation, cultural, and aesthetic needs of all residents. The Village 9 parks, pathways, and trails would be located in several areas throughout Village 9, as shown in Figure 3-15, Parks and Open Space. The distribution of the parks and plazas in Village 9 is intended to facilitate pedestrian access, with each unit in the Village 9 no more than a few minutes to walk from a public park, and to serve as neighborhood focal elements. The SPA would be served by transit and the system of pathways and trails would connect the transit stops to recreational resources.</p> <p>The SPA Plan includes a preserve area and open space to conserve natural resources. The proposed parks would be available for a variety of uses. The town squares would be the site of community gatherings and events. The neighborhood park is a medium sized park that provides active and passive recreation for the surrounding neighborhood and includes amenities such as multi-purpose play fields, lighted sport courts, age-appropriate play grounds, and picnic areas. Pedestrian parks are scattered throughout the community to provide shared green space, resting places for pedestrians, and visual identity for smaller groups of homes. Additional common areas would be provided in the residential districts, as required in the SPA Plan.</p> <p>The SPA would incorporate park amenities in town square parks and active play facilities in neighborhood parks; incorporate a pedestrian open space/trail corridor across Village 9 which ties parks and other land uses together; provide a network of pedestrian spaces, plazas, malls, promenades, and squares to create a pedestrian oriented environment that integrates pedestrian plazas with individual buildings and building clusters; and incorporate fountains or artistic features as visual focus. Town squares, pedestrian parks, and neighborhood parks are proposed in the project area. The regional trail would traverse Village 9 and directly connect to a pedestrian park and open space. The SPA Plan includes design guidelines to develop pedestrian oriented development, including pedestrian spaces, and focal objects and other forms of architectural relief. As discussed in Section 5.3, Transportation/Traffic, pedestrian facilities are available to connect all uses in the SPA.</p> <p>Village 9 would use recycled water for landscape irrigation, including medians, parks, open space, and common landscaped areas. Landscaping on the project site would be required to comply with the Landscape Water Conservation Ordinance (CVMC Section 20.12). The PFFP for the project identifies the funding required for park maintenance.</p>

**Table 5.9-14 Project Consistency with Applicable GDP Park Policies (continued)**

Applicable Policies	Evaluation of Consistency
	<p>Approximately 32.8 acres of parkland would be required by the GDP under the Quimby Act. The project would exceed the requirements of the GDP and Quimby Act by applying excess parkland acreage provided in Village 8 West. Village 9 would provide 23 acres of eligible parkland, and Village 8 West would provide an additional 9.4 acres in excess of its parkland requirement.</p> <p>The SPA Plan does not include a joint use with schools districts; however, the proposed elementary school sites are located adjacent to proposed recreational facilities.</p>

As presented in Table 5.9-15, the project would be consistent with the Master Plan goal to establish a greenbelt system that would visually reinforce the character of the community and integrate cultural resources, to ensure public access through an active and passive recreation park system with trails connecting each segment, to accommodate a wide range and number of users, to offer a variety of active and passive recreation experiences, to provide disability access, and to provide other amenities that enhance the greenbelt system. Therefore, the project would be consistent with the applicable policies of the Greenbelt Master Plan. As the project would be consistent with the standards of the Greenbelt Master Plan, it would have a less-than-significant impact with respect to the City threshold standards.

**Table 5.9-15 Comparison of the SPA Plan to the Applicable Goals and Policies of the Greenbelt Master Plan**

Greenbelt Master Plan Goal	Proposed Project Consistency
<p><b>Goal 1.0:</b> To establish a comprehensive and coordinated greenbelt system that visually reinforces the natural character of the community and integrates unique historic and cultural resources, open space areas, creeks and trails.</p>	<p><b>Consistent.</b> The SPA Plan and TM would implement the village pathway, connecting Village 9 with Village 8 East and the University. Ultimately, a trail would connect Village 9 to the Greenbelt Trail System to the south of Village 9. Along these routes through Village 9, these trails would connect parks, a proposed school site, the open space along the southern borders of the SPA, residences, and the proposed University. The width of the trails and connectivity to several park areas would accommodate and allow access to destination uses and activity areas in Village 9. Trails would consist of decomposed granite outside the Town Center. In the Town Center, the village pathway would be a paved trail and more consistent with the urban character of the area. These trails would accommodate pedestrians and bicyclists.</p>
<p><b>Goal 2.0:</b> To provide connected open space surrounding Chula Vista to enhance the natural beauty and to preserve native biological and cultural resources as well as sensitive habitats.</p>	<p><b>Consistent.</b> The project would incorporate a segment of the village greenway through implementation of the village pathway, the regional trail, and greenbelt trails that would ultimately provide connectivity between the village and to the natural habitats in Salt Creek, Wolf Canyon, and the Otay Valley Regional Park.</p>



**Table 5.9-15 Comparison of the SPA Plan to the Applicable Goals and Policies of the Greenbelt Master Plan (continued)**

Greenbelt Master Plan Goal	Proposed Project Consistency
<b>Policy 2.1:</b> The City of Chula Vista will strive to ensure the protection of the natural habitat from encroachment of trail users through education, fencing, signing, and design.	<b>Consistent.</b> As discussed in Section 5.6, Biological Resources, the proposed trail adjacent to the preserve area would be consistent with the requirements of the Chula Vista MSCP and Otay Ranch RMP to protect natural habitat. Additionally, the trail would be paved to clearly designate its alignment. Landscaping and signage along the trail would also discourage encroachment into the surrounding natural area.
<b>Policy 2.5:</b> The City will locate trails in areas that avoid or minimize conflicts with natural resources.	<b>Consistent.</b> The mitigation measures identified in Section 5.6, Biological Resources, would reduce all impacts to sensitive natural resources from buildout of Village 9 to a less than significant level, including proposed trails. The proposed trail in the Village 9 open space avoids the Preserve area and would be consistent with the requirements of the Chula Vista MSCP and Otay Ranch RMP to protect adjacent natural habitat.
<b>Policy 2.6:</b> All proposed trails shall adhere to guidelines contained within the City's adopted MSCP as well as stipulations contained in other mitigation agreements.	<b>Consistent.</b> As discussed in Section 5.6, Biological Resources, the proposed trail in the Village 9 avoids the preserve area and would be consistent with the requirements of the Chula Vista MSCP and Otay Ranch RMP to protect adjacent natural habitat.
<b>Policy 2.7:</b> Impervious trails should be avoided in watershed and flood plain areas where potential contamination of resources could occur.	<b>Consistent.</b> Although the segment of the village greenway passing through Village 9 would be paved and impervious, Village 9 is not located within a floodplain. As discussed in Section 5.11, Hydrology and Water Quality, potentially significant contamination of resources would not occur because all surface water runoff would be collected in a storm water drainage system and routed to master drainage facilities.
<b>Goal 3.0:</b> To establish a Greenbelt that ensures public access within the Greenbelt through an active and passive recreation park system with trails connecting each segment.	<b>Consistent.</b> The Village Pathway, sidewalks, and regional trails through Village 9 would connect and provide public access to the Urban Center, Town Center, schools, residential neighborhoods, and the parks within the SPA Area. The pathway would support the City-wide trail system by providing connections to on-site and off-site parks and recreational sites, including the Otay Valley Regional Park and segments of the Chula Vista Greenbelt trail outside of Village 9.
<b>Policy 3.1:</b> The City will actively pursue open space programs and develop trail links connecting to parks and regional trails.	<b>Consistent.</b> The proposed project would support this policy through the provision of a segment of the village pathway and other on-site sidewalks and trails, as previously discussed under Goal 3.0.
<b>Policy 3.2:</b> The City will design trails that will accommodate a wide range of number of users anticipated.	<b>Consistent.</b> Please refer to Goal 1.0, above.
<b>Policy 3.3:</b> The City will develop a greenbelt system that offers a variety of active and passive recreation experiences.	<b>Consistent.</b> Please refer to Goal 1.0, above.
<b>Policy 3.4:</b> The City will develop trails, wherever possible, which provide for accessibility for all, including those with disabilities.	<b>Consistent.</b> As the village pathway and regional trails would take the form of major pathways through Village 9, these facilities would be consistent with all state-mandated ADA requirements, as feasible.

**Table 5.9-15 Comparison of the SPA Plan to the Applicable Goals and Policies of the Greenbelt Master Plan (continued)**

Greenbelt Master Plan Goal	Proposed Project Consistency
<b>Policy 3.5:</b> The City will locate staging areas, parking areas, and other amenities in areas that enhance the greenbelt system.	<b>Consistent.</b> The village pathway would pass through the Town Center, where visitor parking areas would be readily available. Other amenities, including access to the Town Center and other commercial areas, schools, and parks would enhance the greenbelt system by providing an interesting destination or stop-over, in which passing users may lunch, rest, or shop.
<b>Goal 4.0:</b> To provide a greenbelt system that receives the necessary resources for open space acquisition, park and trail development, maintenance, and to establish volunteer programs.	<b>Consistent.</b> The SPA Plan and conditions of approval provide the necessary resources for acquisition and development of the City's greenbelt system as applicable in Village 9. The proposed Village Pathway would implement the portion of the City-wide Greenbelt system identified in Village 9. The Village Pathway through Village 9 would be privately developed concurrently with the phased development of Village 9, would be acquired by the City as public sidewalks. Maintenance districts or other mechanisms may be established to ensure proper management and maintenance. Therefore, the Village 9 SPA Plan supports the City's goal by providing a Village Pathway consistent with the Master Plan and establishing mechanisms for acquisition, development, and maintenance.
<b>Policy 4.4:</b> The City will collaborate with private organizations for constructing, maintaining, and monitoring trails.	<b>Consistent.</b> The project would support this policy through the private development of a segment of the Village pathway, as discussed under Goal 4.0.

#### **4. Chula Vista Parks and Recreation Master Plan**

The Chula Vista Parks and Recreation Master Plan does not specifically identify any recreational facilities within Village 9 to serve the future residents since the 2002 Parks and Recreation Master Plan envisioned a university site in the Village 9 SPA Plan area. The 2010 draft of the updated Parks and Recreation Master Plan identifies 12.5 acres of neighborhood parks, 5 acres of town squares, and 6.2 acres of pedestrian parks for Village 9. The Village 9 SPA Plan would provide a total of 27.5 acres of parks, a 14.8 acre Neighborhood Park, 5.1 acres of Town Squares, and 7.6 acres of pedestrian parks. Therefore, the proposed project would be consistent with the existing Master Plan's overall goal of providing recreational facilities, and the specific park requirements identified in the draft Master Plan. The project is compared to the applicable Parks and Recreation Master Plan regulations in Table 5.9-16. As shown in this table, the project would be consistent with all applicable policies of the Parks and Recreation Master Plan. Impacts would be less than significant.

**Table 5.9-16 Project Consistency with Parks and Recreation Master Plan**

Parks and Recreation Master Plan Policy	Project Consistency
<p><b>Policy 1.1:</b> The City of Chula Vista will actively pursue opportunities, such as state and federal bonds/grants, in order to acquire land for the development of new parks in previously developed portions of the city, that were not subject to the requirements of new subdivision development.</p>	<p><b>Consistent.</b> The project would be consistent with Policy 1.2 because it would provide opportunities for 27.5 acres of new parks.</p>
<p><b>Policy 1.16:</b> Neighborhood park is redefined as a seven-acre (minimum net-useable area) to a twelve-acre (maximum net-useable area) sized park that primarily provides for the daily recreation needs of residents within walking distance (approximately 1/2 to 3/4 mile) of the park. Typical facilities contained in a neighborhood park include children's play area, picnic facilities, restroom facilities, informal field areas, hard courts, and parking spaces. The field areas provided shall be of a flexible design so they can be scheduled for informal use, but also for practice games and competition games. Where possible a neighborhood park site should adjoin a school district site to enable the development of joint use policies.</p> <p><b>Policy 1.18:</b> The city will require the following Primary facilities and support facilities to be located in future neighborhood parks:</p> <p><b>Primary Facilities:</b> Athletic field(s), hard court(s), picnic shelters, picnic tables, play area with play equipment, restrooms</p> <p><b>Support Facilities:</b> Open lawn areas, paved walkways with lighting, maintenance building</p>	<p><b>Consistent.</b> The SPA Plan would be consistent with Policies 1.16 and 1.18 because the Neighborhood Park would be more than seven acres in size and would provide of the daily recreation needs of residents. Allowable facilities would include athletic fields, sports courts, picnic areas, play equipment, restrooms, open play areas, and walkways.</p>
<p><b>Policy 1.19:</b> Neighborhood parks will be sited adjacent to elementary and middle schools where feasible.</p>	<p><b>Consistent.</b> The SPA Plan would be consistent with Policy 1.19 because the Neighborhood Park is proposed adjacent to the proposed elementary school site in Planning Area G.</p>
<p><b>Policy 1.21:</b> The city will promote and facilitate the integration of public art in Chula Vista parks.</p>	<p><b>Consistent.</b> The project would be consistent with Policy 1.21 because the SPA Plan promotes the use of public art in public areas of the Town Center, Urban Center, Urban Neighborhood, and community use facilities, such as parks.</p>

#### 5.9.5.4 Level of Significance Prior to Mitigation

##### A. Deterioration of Facilities

The project would increase demand on recreational facilities, which would be significant if the proposed parks and recreational facilities are not provided commensurate with demand.

##### B. New Recreational Facilities

No significant impacts related to new recreational facilities have been identified for the project.

### C. Parks and Recreation Growth Management Threshold Standard

The project would increase demand on recreational facilities, which would be significant if the proposed parks and recreational facilities are not provided commensurate with demand.

### D. Consistency with Park Policies

No significant impacts related to consistency with park policies have been identified for the project.

#### 5.9.5.5 Mitigation Measures

##### A. Deterioration of Facilities

- 5.9.5-1 **Public Facility Development Impact Fees.** Prior to the issuance of each building permit for any residential dwelling units, the applicant shall pay recreation facility development impact fees (part of the Public Facility Development Impact Fee) in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Village 9 Public Facilities Finance Plan, subject to approval of the Director of Recreation.
- 5.9.5-2 **Park Acquisition and Development Fees.** Prior to the approval of each final map for the project, or, for any residential development project within Village 9 that does not require a final map, prior to building permit approval, the applicant shall pay applicable Park Acquisition and Development in-lieu fees for the area covered by the final map(s). The payment of in-lieu fees shall be in accordance with the phasing indicated in the Project's approved SPA Plan, and a park agreement, if any, subject to approval of the Director of Recreation. In-lieu fees shall be based on the Park Acquisition and Development fees in effect at the time of issuance of building permits, unless stated otherwise in a parks or development agreement.
- 5.9.5-3 **Growth Management Program's Parks and Recreation Threshold Standard.** The City of Chula Vista shall continue to monitor parks and recreation services and report the results to the Growth Management Oversight Commission on an annual basis.
- 5.9.5-4 **Dedication of Parkland.** Prior to approval of the first final map for the project, the applicant shall offer for dedication all public parkland identified in the Project's approved SPA Plan, or as approved by the Director of Recreation. Park facilities such as Town Squares and privately owned/mini pedestrian parks identified as being required to meet the overall park obligation shall be identified on the first final map and shall be publically accessible.
- 5.9.5-5 **Town Square Parks and Pedestrian Parks.** Prior to issuing a total of 192 residential building permits from either Planning Area M, N, P, or Q, or in a combination thereof, the Town Square Park in Planning Area I shall be completed to the satisfaction of the Director of Recreation. Prior to issuing a total of 460 residential building permits from Planning Area A, B-1 or B-2, or in a combination thereof, the Town Square Park in Planning Area C shall be completed to the satisfaction of the Director of Recreation. Prior to the issuance of the 719<sup>th</sup> residential building permit south of Street H, the Pedestrian Parks in Planning Areas GG, HH, and II, including the pedestrian trail through OS-3 connecting Planning Areas HH and II, shall be completed to the satisfaction of the Director of Recreation.

- 5.9.5-6 **Off-site Park Obligation.** Prior to the approval of the first final map, the applicant shall have offered for dedication to the City a 9.0 acre park site within Village 8 West or other suitable off-site parkland subject to the satisfaction of the Development Services Director.
- 5.9.5-7 **Park Development Agreement.** Prior to the approval of the first final map for Village 9 the applicant shall enter into an agreement with the City that provides the following: dedication of public park sites, payment of Park Development Agreement Fees, schedule for completion of improvements, including utilities to streets adjacent to the park sites, all to the satisfaction of the Director of Recreation and Development Services Director. Under the current method for delivery of new parks the City will award a design-build contract for the Project's neighborhood park. The agreement will include provisions that in the event the City chooses not to go forward with a design-build contact, the applicant will be obligated to fully comply with the Parkland Ordinance and park threshold standards by constructing the parks in accordance with all City standards and under a time schedule as specified in the agreement.

## **B. New Recreational Facilities**

No mitigation measures are required.

## **C. Parks and Recreation Growth Management Threshold Standard**

Mitigation measures 5.9.5-1 through 5.9.5-7 would also reduce impacts related to the parks and recreation growth management threshold standard.

## **D. Consistency with Park Policies**

No mitigation measures are required.

### **5.9.5.6 Level of Significance After Mitigation**

#### **A. Deterioration of Facilities**

With implementation of mitigation measures 5.9.5-1 through 5.9.5-7 identified above, deterioration impacts related to implementation of the SPA Plan and TM would be reduced to below a level of significance.

#### **B. New Recreational Facilities**

Impacts would be less than significant without mitigation.

#### **C. Parks and Recreation Growth Management Threshold Standard**

With implementation of mitigation measures 5.9.5-1 through 5.9.5-7 identified above, impacts related to the parks and recreation growth management threshold standard would be reduced to below a level of significance.

#### **D. Consistency with Park Policies**

Impacts would be less than significant without mitigation.



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## 5.10 Global Climate Change

This section describes the existing setting related to global climate change and evaluates the potential for GHG emission impacts due to implementation of the project.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). This analysis tiers from the program-level Global Climate Change Analysis prepared by RECON Environmental, Inc. (2012) in support of the SEIR for the GPA/GDPA (SEIR 09-01). The GPA/GDPA area consists of Village 8 West, Village 9, and the RTP. RECON's Global Climate Change Analysis is included as Appendix H1. The program-level Global Climate Change Analysis concluded that implementation of the land uses proposed in the GPA/GDPA would not result in significant GHG emissions. This analysis uses the same generation rates and reduction estimates as the program-level RECON report to determine the project-level GHG emissions that would be generated by Village 9. The project-specific calculations are provided as Appendix H2.

### 5.10.1 Regulatory Framework

#### A. Regulatory Framework

##### 1. Federal

##### a. GHG Emissions Intensity Reduction Programs

The GHG Emissions Intensity is the ratio of GHG emissions to economic output. In 2002, the U.S. GHG Emissions Intensity was 183 metric tons per million dollars of gross domestic product (EPA 2007). In February 2002, the United States set a goal to reduce this GHG emissions intensity by 18 percent by 2012 through various reduction programs. A number of ongoing voluntary programs have thus been instituted to reduce nationwide GHG emissions. These include the Energy Star program, which was established in 1992 by the EPA and became a joint program with the U.S. Department of Energy in 1996. Energy Star is a program that labels energy efficient products with the Energy Star label. Energy Star enables consumers to choose energy efficient and cost saving products.

##### b. Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standards determine the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, the CAFE standards were increased for new light-duty vehicles to 35 miles per gallon (mpg) by 2020. In May 2009, President Obama announced further plans to increase CAFE standards to require light duty vehicles to meet an average fuel economy of 35.5 mpg by 2016. With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel.

##### 2. State

##### a. Executive Order S-3-05 – Statewide GHG Emission Targets

Executive Order (EO) S-3-05 signed by Governor Schwarzenegger on June 1, 2005, established the following GHG emission reduction targets for California:

- by 2010, reduce GHG emissions to 2000 levels;

- by 2020 reduce GHG emissions to 1990 levels; and
- by 2050 reduce GHG emissions to 80 percent below 1990 levels.

This order also directs the secretary of the CalEPA to oversee the efforts made to reach these targets, and to prepare biannual reports on the progress made toward meeting the targets and on the impacts to California related to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. With regard to impacts, the report shall also prepare and report on mitigation and adaptation plans to combat the impacts. The first Climate Action Team Assessment Report was produced in March 2006 and has been updated biennially.

#### **b. Assembly Bill 32 – California Global Warming Solutions Act**

In response to EO S-3-05, the California legislature passed AB 32, the California Global Warming Solutions Act of 2006, which was signed by the governor on September 27, 2006. It requires the California Air Resources Board (CARB) to adopt rules and regulations that would reduce GHG emissions to 1990 levels by 2020. The CARB is also required to publish a list of discrete GHG emission reduction measures.

Some of the key requirements of AB 32, the California Global Warming Solutions Act of 2006, require CARB to:

- **Establish a statewide GHG emissions cap for 2020, based on 1990 emissions by January 1, 2008.** In December 2007, CARB approved a 2020 emission limit of 427 million metric tons of CO<sub>2</sub> equivalent (MMT CO<sub>2</sub>e).
- **Adopt mandatory reporting rules for significant sources of GHGs by January 1, 2009.** In December 2007, CARB adopted regulations requiring the largest industrial sources to report and verify their GHG emissions.
- Adopt a plan by January 1, 2009 indicating how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms and other actions. A Climate Change Scoping Plan was approved on December 12, 2008.

#### **c. Climate Change Scoping Plan**

As directed by AB 32, the Climate Change Scoping Plan prepared by CARB in December 2008 includes measures to reduce statewide GHG emissions to 1990 levels by 2020. A list of these measures is included in Appendix H1 and includes implementation of the programs described below, such as the Pavley Standards. CARB identified these reductions as necessary to reduce forecasted business as usual (BAU) 2020 emissions by approximately 174 MMT CO<sub>2</sub>e. BAU conditions represent a standard development scenario that does not incorporate any features that would result in reductions of vehicle trips or utility demand. CARB will update the Scoping Plan at least once every five years to allow evaluation of progress made and to correct the plan's course where necessary.

The majority of the reductions are to come from the two sectors that generate the most GHG emissions statewide: transportation and electricity generation. Transportation-related GHG emissions account for approximately 38 percent of the forecasted BAU 2020 emissions and over 36 percent of the targeted total reductions. Energy-related emissions (including those from electric power generation, commercial and residential energy use, and industrial oil and natural gas refineries) account for approximately 48 percent of the forecasted BAU 2020 emissions and more than 29 percent of the targeted total reductions.

Transportation accounts for the largest share of the state's GHG emissions. Accordingly, a large share of the reduction of GHG emissions from the recommended measures comes from this sector. To address emissions from vehicles, CARB is proposing a comprehensive three-prong strategy: reducing GHG emissions from vehicles, reducing the carbon content of the fuel these vehicles burn, and reducing the miles these vehicles travel.

The majority of these reductions in transportation-related and energy-related GHG emissions are to be achieved through statewide regulatory mandates affecting vehicle and fuel manufacture, public transit, and public energy utilities. The remaining reductions are to be achieved through direct regulation and price incentive measures affecting oil and gas extraction industries, forestry practices (including increased tree planting programs), landfill methane capture, and restrictions on high global warming potential gases (used in select industries).

CARB lists several recommended measures which will contribute toward achieving the 2020 statewide reduction goal, but whose reductions are not (for various reasons, including the potential for double counting) additive with the other recommended measures. These include state and local government operations measures, green building, mandatory commercial recycling and other additional waste and recycling measures, water sector measures, and methane capture at large dairies.

**d. Assembly Bill 1493 – Pavley Greenhouse Gas Vehicle Standards**

AB 1493 (Pavley) enacted July 2002, directed CARB to adopt vehicle standards that lowered GHG emissions from passenger vehicles and light duty trucks to the maximum extent technologically feasible, beginning with the 2009 model year. CARB planned to adopt a second, more stringent, phase of the Pavley regulations, termed Pavley II, sometime in 2010; however, to date this has not occurred. CARB estimates that implementation of Pavley I and II would reduce 2020 statewide emissions by 31.7 MMT CO<sub>2</sub>e or nearly 18 percent of the total reductions needed.

**e. Executive Order S-01-07 – Low Carbon Fuel Standard**

This executive order signed by Governor Schwarzenegger in January 2007, directed that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through a Low Carbon Fuel Standard (LCFS). CARB adopted the LCFS as a discrete early action measure pursuant to AB 32 in April 2009 and includes it as a reduction measure in its scoping plan. The LCFS is a performance standard with flexible compliance mechanisms intended to incentivize the development of a diverse set of clean, low-carbon transportation fuel options. Its aim is to accelerate the availability and diversity of low-carbon fuels such as biofuels, electricity and hydrogen, by taking into consideration the full life cycle of GHG emissions. A 10 percent reduction in the intensity of transportation fuels is expected to equate to a reduction of 16.5 MMT CO<sub>2</sub>e in 2020. However, in order to account for possible overlap of benefits between LCFS and the Pavley GHG standards, CARB has discounted the contribution of LCFS to 15 MMT CO<sub>2</sub>e (CARB 2008).

**f. Scoping Plan Regional Transportation-Related GHG Targets**

This measure included in the scoping plan identifies policies to reduce transportation emissions through changes in future land use patterns and community design, as well as through improvements in public transportation that reduce vehicle miles traveled and corresponding GHG emissions. CARB expects that this measure will reduce transportation-related GHG emissions by about 5 MMT CO<sub>2</sub>e or 4 percent of the total statewide reductions attributed to the capped sectors. Specific regional reduction targets

established through SB 375 will determine more accurately what reductions can be achieved through this measure.

#### **g. Senate Bill 375 – Regional Emission Targets**

SB 375 was signed in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan measure described above. Its purpose is to align regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation to reduce GHG emissions by promoting high-density, mixed-use developments around mass transit hubs. To help achieve the goals of AB 32, SB 375 requires the metropolitan planning organizations in California to update their regional transportation plans to adopt a sustainable communities strategy or alternative planning strategy that prescribes land use allocations which promote smart growth development. Enhanced public transit service combined with incentives for land use development that provides a better market for public transit will play an important role in the strategy.

CARB, in consultation with SANDAG, released a staff report on the proposed reduction target for San Diego County, which was subsequently approved by CARB on September 23, 2010. The San Diego region will be required to reduce GHG emissions from cars and light trucks 7 percent per capita by 2020 and 13 percent by 2035 (SANDAG 2010b). The reduction targets are to be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets.

Once reduction targets are established, SB 375 requires the metropolitan planning organizations to demonstrate how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning. After the SCS is adopted by the planning organizations, the strategies will be incorporated into that region's federally enforceable regional transportation plan. SANDAG has completed work on the 2050 Regional Transportation Plan, the first such plan in the state that includes an SCS (CARB 2010c; SANDAG 2010b). CARB is also required to review each final SCS to determine whether it would achieve the GHG emission reduction target for its region. If the measures in the SCS do not meet the region's target, SANDAG would need to prepare a separate alternative planning strategy to meet the target.

#### **h. Renewables Portfolio Standard**

The renewables portfolio standard promotes diversification of the state's electricity supply. Its purpose is to achieve 33 percent renewable energy mix statewide; providing 33 percent of the state's electricity needs met by renewable resources by 2020. The portfolio standard is included in the CARB scoping plan list of reduction measures. Increasing the portfolio standard to 33 percent is designed to accelerate the transformation of the electricity sector, including investment in the transmission infrastructure and systems changes to allow integration of large quantities of intermittent wind and solar generation. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector. CARB estimates that full achievement of the portfolio standard would decrease statewide GHG emissions by 21.3 MMT CO<sub>2</sub>e.



### **i. Million Solar Roofs Program**

This program was created in 2006 and includes the California Public Utility Commission’s California Solar Initiative and California Energy Commission’s (CEC) New Solar Homes Partnership. It requires publicly owned utilities to adopt, implement and finance solar incentive programs to lower the cost of solar systems and help achieve the goal of installing 3,000 MW of new solar capacity by 2020.

### **j. SB 1368 – Public Utility Emissions Standards**

SB 1368, passed in 2006, requires the CEC to set GHG emission standards for entities providing electricity in the state. The bill further requires that the California Public Utilities Commission prohibit electricity providers and corporations from entering into long-term contracts if those providers and corporations do not meet the CEC’s standards.

### **k. Title 24, Part 6 - California Energy Code**

By reducing California’s energy consumption, emissions of statewide GHGs may also be reduced. Originally enacted in 1978 in response to legislative mandates, CCR Title 24, Part 6 establishes energy efficiency standards for residential and non-residential buildings in order to reduce California’s energy consumption. The code is updated periodically to incorporate and consider new energy efficiency technologies and methodologies as they become available. The most recent amendments to the code, known as Title 24 2008, or the 2008 Energy Code, became effective January 1, 2010. Title 24 2008 requires energy savings of 15 to 35 percent above the former Title 24 2005 energy code. At a minimum, residential buildings must achieve a 15 percent reduction in their combined space heating, cooling and water heating energy compared to the Title 24 2005 standards. Incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum 15 percent reduction over Title 24 2005. The reference to Title 24 2005 is relevant in that many of the state’s long-term energy and GHG reduction goals identify energy saving targets relative to Title 24 2005.

New construction and major renovations must demonstrate their compliance with the current energy code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The compliance reports must demonstrate a building’s energy performance through use of CEC-approved energy performance software that shows iterative increases in energy efficiency given selection of various HVAC, sealing, glazing, insulation, and other components related to the building envelope. Title 24 governs energy consumed by the built environment and by the major building envelope systems such as space heating, space cooling, water heating, some aspects of the fixed lighting system, and ventilation. Non-building energy use or “plug-in” energy use (such as appliances, equipment, electronics, plug-in lighting) is independent of building design and not subject to Title 24.

### **l. Title 24, Part 11 – California Green Building Standards**

In 2007, Governor Schwarzenegger directed the California Building Standards Commission to work with state agencies on the adoption of green building standards for residential, commercial and public building construction for the 2010 code adoption process. The CalGreen standards took effect January 2011 and instituted mandatory minimum environmental performance standards for all new construction of commercial, low-rise residential and state-owned buildings, as well as schools and hospitals. The mandatory standards require:

- 20 percent mandatory reduction in indoor water use relative to baseline levels;

- 50 percent construction/demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring and particle boards.

The voluntary standards require:

- **Tier I** – 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, cool/solar reflective roof; and
- **Tier II** – 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, cool/solar reflective roof.

Similar to the compliance reporting procedure described above for demonstrating energy code compliance, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms for both commercial and low-rise residential buildings. The water use compliance form must demonstrate a minimum 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

### **3. Local**

#### **a. ICLEI Cities for Climate Protection**

In 1992, the City of Chula Vista participated in the Cities for Climate Protection Program which was aimed at developing municipal action plans for the reduction of GHGs. This program was sponsored and developed by the International Council of Environmental Initiatives (ICLEI) and the United Nations Environment Program in response to the United Nations Framework Convention on Climate Change, while recognizing that all local planning and development has direct consequences on energy consumption and cities exercise key powers over urban infrastructure, including neighborhood design and over transportation infrastructure such as roads, streets, pedestrian areas, bicycle lanes and public transport.

#### **b. Chula Vista Carbon Dioxide (CO<sub>2</sub>) Reduction Plan**

Each participant in the ICLEI program was to create local policy measures to ensure multiple benefits to the city and at the same time identify a carbon reduction goal through the implementation of those measures. The carbon reduction goal was to fit within the realm of international climate treaty reduction goals. In its Carbon Dioxide Reduction Plan, developed in 1996 and officially adopted in 2000, Chula Vista committed to lowering its carbon dioxide emissions by diversifying its transportation system and using energy more efficiently in all sectors. To focus efforts in this direction, Chula Vista adopted the international carbon dioxide reduction goal of returning to pre-1990 levels by 2010. In order to achieve this goal, eight actions were identified, which when fully implemented, were anticipated to save 100,000 tons of carbon dioxide each year.

As a result of the 2005 GHG Emissions Inventory Report, in May 2007 staff reported to City Council that citywide GHG emissions had increased by 35 percent (mainly due to residential growth) from 1990 to

2005, while emissions on a per capita basis and from municipal operations decreased by 17 percent and 18 percent, respectively. The City Council directed staff to convene a climate change working group to develop recommendations to reduce the community's GHGs in order to meet city 2010 GHG emissions reduction targets.

### **c. Climate Change Working Group**

The Climate Change Working Group, which is composed of residents, businesses, and community organization representatives, helps the city in developing climate-related programs and policies. In 2008, the group reviewed over 90 carbon reduction measures and ultimately chose seven measures to recommend to City Council, which the council subsequently adopted. The measures were designed to reduce or mitigate climate change impacts by reducing GHG emissions within Chula Vista to 20 percent below 1990 levels in keeping with its Carbon Dioxide Reduction Plan and United Nations Framework Convention on Climate Change goals. In October 2009, the City Council directed the group to evaluate how the city could adapt to potential climate change impacts. The group met throughout 2011 to develop recommendations based on the city's vulnerabilities and risks to climate change. In May 2011, the group adopted the Climate Adaptation Strategies – Implementation Plans, described below.

### **d. Chula Vista Climate Adaptation Strategies – Implementation Plans**

The Climate Adaptation Strategies – Implementation Plans document developed by the Climate Change Working Group includes eleven strategies to adapt Chula Vista to the potential impacts of global climate change related to energy and water supply, public health, wildfires, ecosystem management, coastal infrastructure, and the local economy sectors. The strategies include cool paving, shade trees, cool roofs, local water supply and reuse, storm water pollution prevention and reuse, education and wildfires, extreme heat plans, open space management, wetlands preservation, sea level rise and land development codes, and green economy. For each strategy, the plans outline specific implementation components, critical steps, costs, and timelines. In order to limit the necessary staffing and funding required to implement the strategies, the plans were also designed to build upon existing municipal efforts rather than create new, stand-alone policies or programs. Initial implementation of all eleven strategies is intended to be phased in over a three year period from plan adoption.

### **e. Chula Vista Climate Protection Measures**

On July 10, 2008, the City Council adopted implementation plans for seven climate protection measures to reduce GHG emissions to 20 percent below 1990 levels by 2012. The implementation plans outline the detailed strategy for initiating, funding, and tracking the following measures:

- *Clean Vehicle Replacement Policy for City Fleet:* When city fleet vehicles are retired, they will be replaced through the purchase or lease of alternative fuel or hybrid substitutes. In addition, the city fleet will begin to pursue installing new fuel tanks to allow heavy-duty vehicles to convert to biodiesel fuel immediately.
- *Clean Vehicle Replacement Policy for City-Contracted Fleets:* As contracts for City-contracted fleet services (such as transit buses, trash haulers and street sweeper trucks) are renewed, the City will encourage contractors to replace their vehicles with alternative fuel or hybrid substitutes through the contract bid process. In addition, the City will pursue implementing two hydrogen vehicle demonstration projects.
- *Business Energy Assessments:* Although not mandatory, businesses will be encouraged to participate in a no cost energy assessment of their facilities to help identify opportunities for

them to reduce monthly energy costs. The business assessment will be integrated into the existing business licensing process and codified through a new municipal ordinance.

- *Green Building Standard:* Chula Vista will implement a citywide, mandatory green building standard for new construction and major renovations. The new standard will have three main components: 1) a minimum energy efficiency (carbon equivalent) requirement of 15 percent above the 2005 Title 24, 2) the early adoption of the new California Green Building Standards for all residential and commercial projects, and 3) a carbon offset fee available for projects not meeting the 15 percent above Title 24 threshold.
- *Solar and Energy Efficiency Conversion Program:* The City will create a community program to provide residents and businesses a streamlined, cost effective opportunity to implement energy efficiency improvements and to install solar/renewable energy systems on their properties. The City will develop a funding mechanism to allow program participants to voluntarily choose to place the improvement costs on their property's tax rolls, thereby avoiding large upfront capital costs. In addition, the program will promote vocational training, local manufacturing, and retail sales opportunities for environmental products and services. To help stimulate the private-sector renewable market and lower the cost for installing renewable energy systems on new homes, the City will require all new residential buildings to include pre-wiring and pre-plumbing for solar photovoltaic and solar hot water systems, respectively.
- *Smart Growth Around Trolley Stations:* The City will continue to implement the smart growth design principles, which promote mixed-use and walkable and transit-friendly development, particularly in and around the E, H, and Palomar trolley stations. These principles were emphasized in the revised Chula Vista General Plan and the Urban Core Specific Plan. In particular, the City will initiate site planning, design studies and specific area plan development to further support smart growth development that complements GHG reductions.
- *Turf Lawn Conversion Program:* The City will create a community program to provide residents and businesses a streamlined, cost-effective opportunity to replace their turf lawns with water-saving landscaping and irrigation systems. Some municipal turf lawn areas (such as medians, fire stations and non-recreational park areas) will also be converted to act as public demonstration sites and to reduce monthly water costs. The City will establish the model for water-wise landscaping for new development through an update of the Chula Vista Municipal Landscape Ordinance and WCP guidelines.

#### **f. Chula Vista Green Building Standards**

Consistent with measure 4 of the Chula Vista Climate Protection Measures, the City Council adopted the Green Building Standards (GBS) Ordinance (Ordinance No. 3140) on October 6, 2009, which became effective November 5, 2009. The GBS ordinance includes standards for energy efficiency, pollutant controls, interior moisture control, improved indoor air quality and exhaust, indoor water conservation, storm water management, and construction waste reduction and recycling.

Building permit applications are required to indicate on project construction plans and specifications the GBS measures that comply with the ordinance. Prior to final building approval or issuance of a certificate of occupancy the Building Official reviews the information submitted by the applicant and determines whether the applicant has constructed the project in accordance with the permitted plans and documents, and whether the plans are in compliance with the GBS.

### **g. Chula Vista Increased Energy Efficiency Standards**

On January 26, 2010, the City Council adopted the Increased Energy Efficiency Standards ordinance (Ordinance No. 3149). This ordinance became effective February 26, 2010 as Section 15.26 of the municipal code. Permit applications are required to comply with these new energy efficiency standards.

Section 15.26.030 of the Municipal Code requires permit applications to comply with increased energy efficiency standards that achieve 15 to 20 percent greater efficiency than the requirements of the Title 24 2008 standards, depending on climate zone. The city falls within two climate zones, Zone 7 and Zone 10. The Village 9 project site is within climate zone 7. For Zone 7, the code requires:

- All new low-rise residential building or additions, remodels or alterations to existing low-rise residential buildings where the additions, remodels or alterations are greater than 1,000 square feet of conditional floor area, shall use at least 15 percent less energy than the 2008 Title 24 Building Energy Efficiency Standards allow; and
- All new non-residential, high-rise residential or hotel/motel buildings, or additions, remodels or alterations to existing non-residential, high-rise residential or hotel/motel buildings where the additions, remodels or alterations are greater than 10,000 square feet of conditioned floor area, shall use at least 15 percent less energy than the 2008 Title 24 Building Energy Efficiency Standards.

No city building permit shall be issued unless the permit application demonstrates to the Building Official compliance with the requirements of Section 15.26.030. Compliance is to be demonstrated based on a performance approach, using a CEC-approved energy compliance software program, as specified in the Title 24 2008 Building Energy Efficiency Standards.

### **h. City of Chula Vista Mandatory Construction and Demolition Debris Recycling Ordinance**

CVMC Section 8.25.095 requires that 90 percent of inert materials and a minimum of 50 percent of all other materials be recycled and/or reused from certain covered projects. Covered projects include:

- Any project requiring a permit for demolition or construction, which has a project valuation of \$20,000 or more.
- Housing subdivision construction or demolition and/or any sequenced development will be considered a project in its entirety and not a series of individual projects.
- Individually built single-family homes.
- All City projects.

Covered projects must submit a waste management plan to the Chula Vista Public Works Department, Environmental Services Division, which must be reviewed and approved prior to the issuance of a demolition or building permit. The waste management plan will indicate how the applicant will recycle and/or reuse 90 percent of inert materials and at least 50 percent of the remaining construction and demolition debris generated from the project.

## **B. Existing GHG Conditions**

### **1. Understanding Global Climate Change**

Global climate change is an alteration in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux



with periodic warming and cooling cycles. For most of the earth's geologic history, these periods of warming and cooling have been the result of many complicated, interacting natural factors. However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone. With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, natural gas, and biomass. Industrial processes have also created emissions of substances that are not found in nature. This in turn has led to a marked increase in the emissions of gases that have been shown to influence the world's climate. These gases, termed GHGs, influence the amount of heat that is trapped in the earth's atmosphere. Because recently observed increased concentrations of GHGs in the atmosphere are related to increased emissions resulting from human activity, the current cycle of "global warming" is generally believed to be largely due to human activity.

## **2. Greenhouse Gases of Primary Concern**

GHGs include water vapor, hydrofluorocarbons, perfluorocarbons, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone (O<sub>3</sub>), nitrous oxide (N<sub>2</sub>O), and sulfur hexafluoride (SF<sub>6</sub>). Carbon dioxide is the most abundant GHG in the atmosphere. GHGs are the result of both natural and anthropogenic activities. Methane and nitrous oxide are also produced by both natural and anthropogenic sources. The remaining gases occur solely as the result of human processes. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

Hydrofluorocarbons are synthetic, man-made chemicals used as substitutes for ozone-depleting chloroflourocarbons in automobile air conditioners and refrigerants. Perfluorocarbons are used primarily in aluminum production and semiconductor manufacture. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment. These gases are not of primary concern to the project.

Carbon dioxide, methane, and nitrous oxide are the GHGs of concern in this analysis. Carbon dioxide would be emitted by uses allowed under the SPA Plan during the combustion of fossil fuels in vehicles, from electricity generation and natural gas consumption, and from solid waste disposal. Smaller amounts of methane and nitrous oxide would be emitted from the same sources. More information on the background of global warming and GHGs can be found in the Global Climate Change Analysis, included as Appendix H1.

The atmospheric lifetime of the GHG is the average time the molecule stays stable in the atmosphere. Most GHGs have long atmospheric lifetimes, staying in the atmosphere hundreds or thousands of years. The potential of a gas to trap heat and warm the atmosphere is measured by its global warming potential. Table 5.10-1 identifies the potential and atmospheric lifetimes of the GHGs of primary concern in this analysis. The reference gas for global warming potential is carbon dioxide. GHG potential and emissions are compared in relation to carbon dioxide. The carbon dioxide equivalent (CO<sub>2</sub>e) is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent measure. Carbon dioxide has a global warming potential of one; by comparison, the global warming potential of methane is 21. This means that methane has a greater global warming effect than carbon dioxide on a molecule per molecule basis.

**Table 5.10-1 Global Warming Potentials and Atmospheric Lifetimes**

Gas	Atmospheric Lifetime (years)	100-year Global Warming Potential	20-year Global Warming Potential	500-year Global Warming Potential
Carbon Dioxide	50-200	1	1	1
Methane	12 ± 3	21	56	6.5
Nitrous Oxide	120	310	280	170

Source: RECON 2012

### 3. Greenhouse Gas Emissions Inventories

#### a. Global

Worldwide anthropogenic emissions of GHG in 2006 were approximately 49,000 MMT CO<sub>2</sub>e, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (i.e., deforestation, biomass decay) (IPCC 2007). Carbon dioxide emissions from fossil fuel use accounts for 56.6 percent of the total emissions of 49,000 MMT CO<sub>2</sub>e. All carbon dioxide emissions are 76.7 percent of the GHG total. Methane emissions account for 14.3 percent and nitrous oxide emissions for 7.9 percent of GHG (IPCC 2007).

#### b. United States

The EPA publication, *Draft Inventory of U.S. GHG Emissions and Sinks: 1990-2009*, provides a comprehensive emissions inventory of the nation's primary anthropogenic sources and sinks of GHG. Overall, total emissions in the United States had risen by 13 percent from 1990 to 2008, while the gross domestic product had increased by 65 percent over the same period. Emissions decreased from 2008 to 2009, decreasing by six percent to 6,640 MMT CO<sub>2</sub>e. Gross domestic product also decreased by three percent from 2008 to 2009. The publication indicated that the following factors were primary contributors to this decrease: 1) a decrease in economic output resulting in a decrease in energy consumption across all sectors; and 2) a decrease in the carbon intensity of fuels used to generate electricity due to fuel switching as the price of coal increased, and the price of natural gas decreased significantly (EPA 2011).

#### c. State

The state of California is a substantial contributor of GHG as it is the second largest contributor in the United States and the 16th largest in the world. According to the CARB, California generated 478 MMT CO<sub>2</sub>e in 2008 (RECON 2011). Table 5.10-2 provides CARB data on California GHG emissions by sector in 2008. GHG emissions in California are mainly associated with fossil fuel consumption in the transportation sector (37 percent). Electricity generation is the second-largest source of GHG emissions (24 percent). Industrial processes, agriculture, forestry, commercial, recycling and waste, and residential activities comprise the balance of California's GHG emissions. Emissions of GHG were offset slightly in 2008 by the sequestration (intake) of carbon within forests, reducing the overall emissions by 3.98 MMT CO<sub>2</sub>e, resulting in net emissions of about 474 MMT CO<sub>2</sub>e.

**Table 5.10-2 State of California GHG Emissions by Sectors in 2008**

Sector	Total Emissions (MMT CO <sub>2</sub> e)	Percent of Total Emissions
Agriculture	28.06	6
Commercial	14.68	3
Electricity Generation	116.35	24
Forestry (excluding sinks)	0.19	<1
High Global Warming Potential Emitters	15.65	3
Industrial	92.66	19
Recycling and Waste	6.71	1
Residential	28.45	6
Transportation	174.99	37
<b>Total (Gross) Emissions</b>	<b>477.74</b>	<b>100</b>
MMT CO <sub>2</sub> e = Million metric tons carbon dioxide equivalent Source: RECON 2012		

**d. Regional**

A San Diego County regional emissions inventory was prepared by the University of San Diego that took into account the unique characteristics of the region. The 2006 emissions inventory for San Diego County is duplicated below in Table 5.10-3. The sectors included in this inventory are somewhat different than those in the statewide inventory. Similar to the statewide emissions, transportation-related GHG emissions contributed the most GHG emissions countywide, followed by emissions associated with energy use.

**Table 5.10-3 County of San Diego GHG Emissions by Category (2006)**

Sector	Total Emissions (MMT CO <sub>2</sub> e)	Percent of Total Emissions
Agriculture/Forestry/Land Use	0.7	2
Waste	0.7	2
Electricity	9	25
Natural Gas Consumption	3	8
Industrial Processes & Products	1.6	5
On-Road Transportation	16	45
Off-Road Equipment & Vehicles	1.3	4
Civil Aviation	1.7	5
Rail	0.3	1
Water-Borne Navigation	0.127	0.5
Other Fuels/Other	1.1	3
<b>Total</b>	<b>35.5</b>	<b>100</b>
MMT CO <sub>2</sub> e = Million metric tons carbon dioxide equivalent Note: Numbers may not total to 100 percent due to rounding Source: RECON 2012		

#### e. Local

As part of monitoring its progress in attaining the goals of its Carbon Dioxide Reduction Plan, discussed below under Regulatory Framework, the City of Chula Vista inventoried citywide GHG emissions in 2005 and 2008. The *2005 GHG Emissions Inventory* was the first formal evaluation of the city's progress in reaching its emissions goals, and the *2008 GHG Emissions Inventory* was the second formal evaluation (City of Chula Vista 2005, 2008a).

In 2008, community GHG emissions in the city totaled 934,630 MT CO<sub>2</sub>e. Transportation and mobile sources accounted for approximately 44 percent of this total. This is 29 percent higher than 1990 levels and 17 percent higher than 2005 levels citywide and is attributed to population growth.

#### f. Existing Project Site GHG Emissions

Village 9 is located in the south central portion of the Otay Ranch GDP area. The Otay Ranch GDP area is former agricultural ranch land historically used for ranching, grazing, and dry farming. It is currently vacant of development and is thus not a source of anthropogenic GHGs.

### 4. Climate Change Effects

Statewide GHG emissions are projected to increase over 23 percent (from 2004) by 2020 given current trends (RECON 2011). The 2008 University of San Diego School of Law Energy Policy Initiative Center study predicts a countywide increase to 43 MMT CO<sub>2</sub>e or roughly 20 percent (from 2006) by 2020, given a BAU trajectory. Global GHG emissions forecasts also predict similar substantial increases, given a BAU trajectory.

The potential consequences of global climate change on the San Diego region are far reaching. The Climate Scenarios report, published in 2006 by the California Climate Change Center, uses a range of emissions scenarios to project a series of potential warming ranges (low, medium or high temperature increases) that may occur in California during the 21st century. Throughout the state and the region, global climate and local microclimate changes could cause an increase in extreme heat days; higher concentrations, frequency and duration of air pollutants; an increase in wildfires; more intense coastal storms; sea level rise; impacts to water supply and water quality through reduced snowpack and saltwater influx; public health impacts; impacts to near-shore marine ecosystems; reduced quantity and quality of agricultural products; pest population increases; and altered natural ecosystems and biodiversity.

## 5.10.2 Thresholds of Significance

Climate change is a global phenomenon which is cumulative by nature, as it is the result of combined worldwide contributions of GHG to the atmosphere over many years. Therefore, the discussion of the project's potential global climate change impacts can only be addressed as a cumulative impact. The project would result in a cumulatively considerable impact related to global climate change if it would:

- **Threshold 1:** Conflict with or obstruct goals or strategies of the California Global Solutions Act of 2006 (AB 32) or related executive orders.

To conform to AB 32 and related executive orders, a project would have to provide the same proportional reduction relative to BAU that the Climate Change Scoping Plan identifies for implementation of its quantifiable measures. The BAU scenario represents GHG emissions that would occur without the implementation of GHG reduction measures. The Climate Change

Scoping Plan measures would reduce statewide emissions by approximately 20 percent compared to projected BAU emissions. Therefore, according to the City's threshold, a project would be considered to result in a less than significant impact related to GHGs if it would result in a 20 percent reduction in the project's overall GHG emissions compared to its BAU scenario emissions.

- **Threshold 2:** Result in substantially increased exposure of the project from the potential adverse effects of global warming identified in the California Global Warming Solutions Act of 2006 (AB 32).

### 5.10.3 Impact Analysis

#### A. Threshold 1: Conflict with or obstruct goals or strategies of the California Global Solutions Act of 2006 (AB 32) or related executive orders.

This analysis incorporates the methodology and emission factors used in the Global Climate Change Analysis prepared for the 2013 GPA/GDPA SEIR (09-01). A more detailed description of methodology and complete list of assumptions utilized in the Global Climate Change analysis are available in Appendix H1.

Emission estimates were calculated for the three GHGs of primary concern (CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O) that would be emitted from the construction of Village 9, and five sources of operational emissions: on-road vehicular traffic, electricity generation, natural gas consumption, water usage, and solid waste disposal. The method of quantifying GHG emissions in this analysis was based on recommendations from the SCAQMD and CARB.

To evaluate the projected emissions from development in Village 9 relative to the BAU forecast for the proposed land uses, emissions of each source of GHGs were estimated first for a project-equivalent under BAU conditions. The BAU forecast was consistent with the Climate Change Scoping Plan and assumes building energy efficiency in accordance with the 2005 Title 24 energy code, water conservation in accordance with the current plumbing code, and solid waste disposal quantities in accordance with current statewide legislation. A 20 percent reduction of this amount was then calculated in order to identify the targeted cap in GHG emissions attributable to Village 9. Lastly, emissions of each source of GHGs were estimated for the proposed land uses assuming building energy and water efficiencies required in City ordinances and general plan policies.

The analysis included buildout of Village 9, including the ultimate buildout of 4,000 residential units and 1.5 million square feet of office and commercial uses. Complete emission calculations are contained in Appendix H2. The emission factors used to calculate vehicle, electricity, and natural gas GHG emissions are shown in Table 5.10-4. Emissions estimated for each of the emission sources are summed and expressed in terms of total MMT CO<sub>2</sub>e.

Vehicle emissions were estimated using emission factors developed by the Bay Area Air Quality Management District (BAAQMD) and EPA that takes into consideration engine fuel consumption expressed in units of pounds of GHG per gallon of transportation fuel; the total quantity of fuel consumed per year; and the global warming potential of each GHG. In the BAU analysis, annual fuel consumption is based on the traffic study prepared for the 2013 GPA/GDPA SEIR (LLG 2010). The SEIR traffic analysis is conservative compared to the project-specific traffic analysis prepared for Village 9 because it does not take into account the trip reductions that would occur as a result of smart growth development included in the SPA Plan. The traffic study for the 2013 GPA/GDPA SEIR estimates that the



proposed buildout of Village 9 would generate 56,123 ADT (LLG 2011). Based on the regional average trip length of 5.8 miles and an average fuel economy of 18.80 mpg for 2020, a total of 325,513 vehicle miles would be traveled each day and 17,315 gallons of vehicle fuel would be consumed each day under BAU conditions.

**Table 5.10-4 GHG Emission Factors**

Gas	Vehicle Emission Factors (pounds/gallon gas)	Electricity Generation Emission Factors (pounds/MWh)	Natural Gas Combustion Emission Factors (pound/million ft <sup>3</sup> )
Carbon Dioxide	19.564	1,340	120,000
Methane	0.00055	0.0111	2.3
Nitrous Oxide	0.0002	0.0192	2.2
Source: RECON 2012			

Construction emissions were estimated by multiplying the proposed residential and commercial quantities by annual construction emission rates of 0.077 MT CO<sub>2</sub>e per dwelling unit and 0.006 MT CO<sub>2</sub>e per square foot of office/commercial use. These values were obtained through review of other project-level analyses completed for the city of San Diego (RECON 2012).

GHG emissions associated with electricity use and natural gas were calculated by multiplying the total number of dwelling units, office/commercial, and industrial square footage by average electricity use rates obtained from the U.S. Energy Information Administration and by the electricity and natural gas generation emission factors contained in Table 5.10-4. Statewide monthly average electricity and natural gas consumption were obtained from the Energy Information Administration and SCAQMD to calculate BAU emissions.

The GHG emissions associated with water use result from the energy required to transport water to the project site. As discussed in Section 5.15, Public Utilities, Village 9 would result in a water demand of approximately 1.3 mgd. Energy estimates from water use were obtained from the California Energy Commission. The energy use was then converted to GHG emissions using the emission factors shown in Table 5.10-4.

A countywide average waste disposal rate obtained from the California Department of Resources Recycling and Recovery (CalRecycle) was used to estimate solid waste generation. Generation rates of 8.6 pounds per unit per day for residential and 0.046 pounds per square foot per day for office/commercial and industrial uses were used to determine the total volume of waste by weight. For These values were then multiplied by emission factors used in the EPA Waste Reduction Model.

The Village 9 GHG emissions from solid waste are based on the proportion attributable to the project compared to total generated by buildout within the entire SEIR project area. For the landfill estimates, landfill gas recovery for energy was assumed, and for both the landfill and recycling estimates, a truck haul distance of 20 miles and frequency of once per week. Local recycling and disposal (to landfill) percentages (of total waste generated) were also obtained from CalRecycle and reflect current waste disposal practice in accordance with the statutory 50 percent diversion mandate.

### 1. Business-as-Usual Village 9 Emissions

As noted earlier, the BAU condition represents a standard development scenario that does not incorporate any features that would result in reductions of vehicle trips or utility demand. The BAU scenario does assume compliance with adopted statewide programs to reduce GHG emissions, such as the Title 24 energy efficiency requirements; the national CAFE Standards which would increase average vehicle fuel economy to 35 mpg by 2020; the state Pavley GHG Vehicle Emissions Standards which set increasingly stringent emissions limits on vehicles, requiring improvement in vehicle engine technologies; and the state LCFS which reduces the carbon content of vehicle fuels. Based on the methodology described above, BAU emissions for the development proposed in the project are summarized in Table 5.10-5. As shown in this table, BAU emissions associated with buildout of Village 9 is 126,809 MT CO<sub>2</sub>e. The greatest source of emissions is from transportation, accounting for 44 percent of the total. The second greatest source is electricity, accounting for approximately 28 percent of BAU emissions.

**Table 5.10-5 Annual Business as Usual Village 9 GHG Emissions**

Emissions Source	BAU Emissions (MT CO <sub>2</sub> e)	Percent of Total Emissions
Transportation	56,293	44
Electricity	35,380	28
Natural Gas	12,770	10
Water Use	2,641	2
Solid Waste	3,435	3
Construction <sup>(1)</sup>	16,290	13
<b>Total</b>	<b>126,809</b>	<b>100</b>
<sup>(1)</sup> Total construction impacts (not annual). MT CO <sub>2</sub> e = Metric tons carbon dioxide equivalent. Source: Atkins 2012		

### 2. Village 9 Emissions with Project GHG Reduction Features

A number of features included in the SPA Plan result in reduced GHG emissions compared to the BAU scenario. For example, a mix of residential, commercial, and recreational uses would be provided within Village 9. The proximity of the different uses would encourage walking and biking and relatively short local vehicle trips. Measures listed in Appendix B of the Village 9 SPA Plan, Air Quality Improvement Plan, include the following that would reduce vehicular emissions:

1. Provide shower and locker facilities at offices with more than ten occupants to encourage bicycle use.
2. Design parking lots to promote use of mass transit and car pools.
3. Synchronize the traffic lights included as part of an individual development project with previously installed traffic lights in order to reduce traffic congestion.

SANDAG verified a trip length for Village 9 that was shorter than the regional average (RECON 2012). Compared to the regional average daily vehicle trip length of 5.8 miles, the ADT length for Village 9 would be 5.08 miles.

Buildout of the SPA Plan and TM would be subject to the CVMC GBS and Increased Energy Efficiency ordinances. The following measures listed in Appendix B of the Village 9 SPA Plan, Air Quality

Improvement Plan, would assist development in Village 9 in achieving the GBS and Increase Energy Efficiency standards:

1. Utilize solar heating technology as practical. Generally, solar panels can be cost-effectively used to heat water for domestic use and for swimming pools. Advances in solar technology in the future may make other applications appropriate.
2. Enhance energy efficiency in building designs and landscaping plans.

These two ordinances would achieve a 30 percent reduction in electricity and natural gas use compared to BAU assumptions and a 20 percent reduction in potable water consumption (and associated embodied energy) compared to BAU assumptions (RECON 2012). Emissions would likely be lower due to the implementation of renewable energy portfolio standards; however, emission reduction quantification is not available at this time.

While construction in Village 9 would implement lumber and other materials conservation in accordance with the City GBS and likely generate less landfill waste than BAU, these savings cannot be estimated at this time. Therefore, Village 9 was considered to generate the same amount of waste and associated GHG emissions as that under BAU. Construction emissions were also assumed to remain unchanged from the BAU condition.

The estimated GHG emissions for Village 9 shown in Table 5.10-6 take into consideration the project-specific features described above that result in GHG reductions associated with transportation and utility efficiencies. Based on the estimated annual BAU emissions of 126,809 MT CO<sub>2</sub>e each year, the development proposed in the SPA Plan and TM would be required to reduce annual GHG emissions to below 101,447 MT CO<sub>2</sub>e each year in order to reduce GHG emissions by 20 percent or more compared to BAU. Therefore, the land uses proposed in the SPA Plan and TM are considered to be consistent with the Climate Change Scoping Plan and AB 32 Year 2020 goals if the total annual emissions resulting from electricity, natural gas and water use, solid waste disposal and construction activities, would be equal to or less than 101,447 MT CO<sub>2</sub>e. As shown, emissions associated with buildout of Village 9 including the project-specific reduction features would be 90,056 MT CO<sub>2</sub>e. The greatest source of emissions is from transportation (38 percent), and the second greatest source is electricity (28 percent).

**Table 5.10-6 Annual Village 9 GHG Emissions with Reduction Features**

Emissions Source	Buildout Emissions (MT CO <sub>2</sub> e)	Percent of Total Emissions
Transportation	34,514	38
Electricity	24,766	28
Natural Gas	8,939	10
Water Use	2,113	2
Solid Waste	3,435	4
Construction <sup>(1)</sup>	16,290	18
<b>Total</b>	<b>90,056</b>	<b>100</b>
<sup>(1)</sup> Total construction impacts, not annual. MT CO <sub>2</sub> e = Metric tons carbon dioxide equivalent. Source: Atkins 2012		

Estimated annual BAU and project GHG emissions are compared in Table 5.10-7. As shown, the project would result in annual GHG emissions that are reduced by 29 percent compared to BAU. Therefore, GHG emissions for Village 9 are consistent with AB 32 and would result in a less than significant impact.

**Table 5.10-7 Village 9 Annual GHG Emissions Comparison**

Emissions Source	BAU Emissions (MT CO <sub>2</sub> e)	Project Emissions with Reduction Features (MT CO <sub>2</sub> e)	Percent Reduction Compared to BAU
Transportation	56,293	34,514	39
Electricity	35,380	24,766	30
Natural Gas	12,770	8,939	30
Water Use	2,641	2,113	20
Solid Waste	3,435	3,435	0
Construction <sup>(1)</sup>	16,290	16,290	0
<b>Total</b>	<b>126,809</b>	<b>90,056</b>	<b>29</b>

<sup>(1)</sup> Total construction impacts, not annual.  
Source: RECON 2012; Atkins 2012.

**B. Threshold 2: Result in substantially increased exposure of the project from the potential adverse effects of global warming identified in the California Global Warming Solutions Act of 2006 (AB 32).**

As discussed above under Threshold 1, the estimated GHG emissions from the project would be consistent with the goals of AB 32. Therefore, GHG emissions as a result of the project would not substantially increase the risk of potential adverse effects of global warming. However, buildout of the SPA Plan and TM would have the potential to result in other environmental impacts that exacerbate the adverse effects of climate change. Additionally, new development on Village 9 would have the potential to result in increased exposure to adverse effects. The potential for the proposed project to increase exposure to hazards related to climate change are addressed below.

**1. Exacerbation of Air Quality Problems**

The San Diego Air Basin is currently in non-attainment for ozone, as discussed in Section 5.4, Air Quality. However, as discussed in Section 5.4 under Threshold 1, operation of the project would have to potential to exceed the significance thresholds for ozone precursors (nitrogen oxides or reactive organic gases), particularly as a result of vehicular emissions. The applicable mitigation measures of the 1993 Program EIR for the GDP (EIR 90-01), 2005 GPU EIR, and 2013 SEIR for the GPA/GDPA (SEIR 09-01), such as provision of bike lanes, providing services near residences, and providing transit support facilities such as bus stops, have already been incorporated into the project to reduce vehicle trips and are accounted for in the estimated ADT for the project. There are no other feasible mitigation measures available at the project level to reduce vehicular emissions other than reducing vehicle trips.

The project trip generation rates account for the approximately 40 percent reduction in vehicle trips that would occur as a result of the features proposed as part of the SPA Plan. Some measures cannot be implemented at the SPA level, such as providing video-conference facilities in work places or requiring flexible work schedules. There are no feasible mitigation measures currently available to reduce area sources of emissions without regulating the purchases of individual consumers. Therefore, it cannot be guaranteed that emissions of ozone precursors would be reduced to a less than significant level. Therefore, implementation of the project would have the potential to result in additional ozone in the basin that would contribute to increased exposure to ozone-related ailments.

## **2. Reduction in the Quality and Supply of Water**

As discussed in Section 5.15, Public Utilities, climate change due to global warming creates uncertainties that may significantly affect California's water resources over the long term. However, the OWD prepared a WSAV for Village 9 based on the most recent water supply information available. The WSAV is provided in Appendix K1. The WSAV determined that sufficient water supplies are planned for and are intended to be available over a 20-year planning horizon, under normal conditions and in single-dry and multiple-dry water years to meet the estimated demand of Village 9 and the existing and other planned development projects to be served by the OWD.

The Chula Vista Landscape Water Conservation Ordinance calls for greater water conservation efforts and more efficient use of water in landscaping. The requirements of this ordinance would be implemented into the design of the SPA Plan. In addition, through implementation of the project's WCP, the project would promote water conservation by implementing mandatory and non-mandatory conservation measures. These include, but are not limited to, the use of low water use plumbing fixtures and recycled water for the irrigation of parks, open space slopes, schools, parkway landscaping, and the common areas of multi-family residential and commercial sites; the installation of pressure-reducing valves; and the use of recycled water. Therefore, implementation of the project would not substantially increase potential water supply shortages or result in the increased exposure to water supply shortages.

## **3. Rise in Sea Levels**

Village 9 is located approximately 10 miles inland and is separated from the Pacific Ocean and San Diego Bay by hilly topography. Elevations within the project site range from 300 feet AMSL to 600 feet AMSL. Therefore, Village 9 would not be inundated by an increase in sea level rise and buildout of the project would not result in increased exposure to sea level rise. Additionally, the project would not result in a significant contribution to sea level rise. As discussed under Threshold 1, the project would result in annual GHG emissions that are reduced by 29 percent compared to BAU and are consistent with AB 32. The project would not result in significant GHG emissions that would increase the likelihood that a rise in sea levels would occur due to global warming and associated climate change effects.

## **4. Damage to Marine Ecosystems and the Natural Environment**

As discussed in Section 5.11, Hydrology and Water Quality, runoff from Village 9 would ultimately discharge to San Diego Bay. However, the project would minimize impacts on receiving water quality by incorporating post-construction BMPs into project design, including LID site design, source control, and treatment control. Implementation of the SPA Plan and TM is subject to site design and source control BMPs that apply to the entire project area, as outlined in Section 3.6.2 of the Development Storm Water Manual. Mitigation measures 5.11-1 through 5.11-5 would require the implementation of planning area-specific measures to ensure that water quality impacts would be less than significant. Therefore, the project would not result in a substantial increase in damage to marine ecosystems. Additionally, as discussed in Section 5.6, Biological Resources, with the implementation of mitigation measures 5.6-1 through 5.6-19, all impacts to biological resources associated with buildout of the project would be reduced to a less than significant level, including compliance with the MSCP Subregional Plan. Therefore, the project would not result in a substantial increase in damage to the natural environment.

## **5. Increase in the Incidences of Health Problems**

Vector-borne diseases are most likely to increase in areas with high humidity or stagnant, polluted water (EPA 2010b). The climate of southern California is predicted to become increasingly drier, not more



humid (CEC 2009). Village 9 is not located adjacent to a stagnant body of water and does not propose any new bodies of water that would be stagnant and attract disease-carrying insects. Several water quality and drainage basins are proposed as part of the project. However, the water in these basins would not be stagnant; it would evaporate or flow off the site to the Otay River and continue downstream. Therefore, proposed project would not result in increased exposure to vector-borne diseases.

Cases of dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat would also be expected to increase due to rising temperatures associated with climate change. However, the homes developed with Village 9 would be designed to stay cool and protect residents from rising temperatures. The Non-Renewable Energy Conservation Plan for Village 9, a SPA component, discusses features that would reduce energy demand. The SPA Plan proposes narrow street width and street trees. Narrow street widths and the resulting reduction in pavement area reduce the heat absorption and radiation from pavement and thus the demand for air conditioning. The street tree program also provides shade that enhances the reduction of heat from roadways. The Urban Center and Town Center would be oriented primarily on a north–south and east–west axis to take advantage of solar orientation. Passive solar design including the orientation of buildings can take advantage of the sun's warmth in winter to assist with heating as well as minimize heat gain in summer months to assist with cooling. Therefore, the project would not result in a significant increase in exposure to heat-related ailments.

#### **5.10.4 Level of Significance Prior to Mitigation**

##### **A. Compliance with AB 32**

No significant impacts related to compliance with AB 32 have been identified for implementation of the project.

##### **B. Potential Effects of Global Climate Change**

The project would have significant impacts related to regional and local air quality resulting from vehicular emissions of ozone precursors. The project would result in a less than significant impact regarding water supply, marine and natural environment, sea level rise, and human health hazards.

#### **5.10.5 Mitigation Measures**

##### **A. Compliance with AB 32**

No mitigation measures are required.

##### **B. Potential Effects of Global Climate Change**

The applicable mitigation measures from previous EIRs have already been incorporated into the project to reduce emissions and energy consumption that would contribute to global climate change. However, some measures cannot be implemented at the SPA level, such as providing video-conference facilities in work places or requiring flexible work schedules, as discussed under Exacerbation of Air Quality Problems under Threshold 2. There are no feasible mitigation measures currently available to reduce area sources of emissions without regulating the purchases of individual consumers. Therefore, emissions of ozone precursors that would potentially exacerbate air quality problems would be significant and unavoidable.

## **5.10.6 Level of Significance After Mitigation**

### **A. Compliance with AB 32**

Impacts related to compliance with AB 32 would be less than significant without mitigation.

### **B. Potential Effects of Global Climate Change**

The potential to exacerbate air quality problems as a result of ozone precursor emissions remains significant. No mitigation measures are available to reduce this impact to below a level of significance without regulating the habits and purchases of individuals. This impact remains significant and unavoidable.

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## 5.11 Hydrology and Water Quality

This section describes the hydrological setting of evaluates the potential for changes in drainage, runoff, and water quality due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR did not address hydrology and water quality but relies on analysis in the 1993 Program EIR for the GDP (EIR 90-01). Section 3.9, Water Resources and Water Quality, of the Otay Ranch GDP Program EIR (EIR 90-01) analyzed the potential impacts and identified mitigation measures related to hydrology and drainage for the entire Otay Ranch GDP. The Otay Ranch GDP concluded that implementation of the GDP would result in significant and mitigable environmental impacts upon regional hydrology and drainage. The analysis and discussion of hydrology contained in the Otay Ranch GDP Program EIR are incorporated by reference. The following discussion is also based on the Master Water Quality Technical Report for Otay Ranch Village 9 Tentative Map (herein referred to as the Water Quality Report), revised August 10, 2011, and the TM Drainage Study for Otay Ranch Village 9 (herein referred to as the Drainage Study), revised August 22, 2011, both prepared by Hunsaker & Associates. These reports are provided as Appendices I1 and I2 in this EIR and update the applicable information contained in the previously certified EIRs.

### 5.11.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Federal

##### a. National Pollution Discharge Elimination System Permits

In California, the SWRCB and its RWQCB administer the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit system was established in the CWA to regulate both point source discharges and nonpoint source discharges to surface waters of the U.S. The NPDES program characterizes receiving water quality, identifies harmful constituents, targets potential sources of pollutants, and implements a comprehensive storm water management program. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The RWQCB also issues waste discharge requirements that serve as NPDES permits under the authority delegated to the RWQCBs, under the CWA. In November 1990, under Phase I of the urban runoff management strategy, the EPA published NPDES permit application requirements for municipal, industrial, and construction storm water discharges. These requirements are implemented through permits issued by the SWRCB or the local RWQCB in which the project is located (California RWQCB San Diego Region, herein San Diego RWQCB), and/or the governing municipality where the project is located (City of Chula Vista).

##### 2. State

##### a. California General Construction Activity Permit

Storm water runoff from construction activity that results in soil disturbances of at least one acre of total land area (and projects that meet other specific criteria) is governed by the SWRCB under Water Quality Order 2010-0014-DWQ, NPDES Permit #CAS000002. These regulations prohibit discharges of polluted storm water from construction projects that disturb one or more acres of soil unless the

discharge complies with the general NPDES permit requirements. The nine individual RWQCBs enforce the general construction permits for projects within their region. The San Diego RWQCB oversees permits in the project area. It is the responsibility of the landowner to obtain coverage under the general construction permit prior to commencement of construction activities. To obtain coverage, the owner must file a NOI with a vicinity map and the appropriate fee to the SWRCB. The general permit outlines the requirements for preparation of a SWPPP.

SWPPPs are prepared and BMPs identified in the SWPPPs are implemented for construction sites greater than one acre, which reduce the likelihood of alterations in drainage to result in water quality impacts. Typical BMPs include the following:

- **Minimizing disturbed areas.** Clearing of land is limited to that which will be actively under construction in the near term, new land disturbance during the rainy season is minimized, and disturbance to sensitive areas or areas that would not be affected by construction is minimized.
- **Stabilizing disturbed areas.** Temporary stabilization of disturbed soils is provided whenever active construction is not occurring on a portion of the site, and permanent stabilization is provided by finish grading and permanent landscaping.
- **Protecting slopes and channels.** Outside of the approved grading plan area, disturbance of natural channels is avoided, slopes and crossings are stabilized, and increases in runoff velocity caused by the project is managed to avoid erosion to slopes and channels.
- **Controlling the site perimeter.** Upstream runoff is diverted around or safely conveyed through the project and is kept free of excessive sediment and other constituents.
- **Controlling internal erosion.** Sediment-laden waters from disturbed, active areas within the site are detained.

### 3. Local

#### a. Development Storm Water Manual

New development and redevelopment projects in the City are subject to the requirements of the Chula Vista Development Storm Water Manual (January 2011). The development storm water manual meets the hydromodification control requirements of the NPDES Municipal Permit issued to Chula Vista by the San Diego RWQCB. New development and redevelopment projects are to minimize impacts on receiving water quality and habitat by incorporating construction and post-construction BMPs in their project design. Construction BMPs typically include erosion control, sediment control, non-storm water management, and material management practices. The applicant is required to prepare a SWPPP which identifies all applicable construction BMPs. Post-construction BMPs include low impact development site design, source control, treatment control, and hydromodification control practices. The manual provides guidance and establishes standards and criteria to meet those requirements.

According to Section 3.6.1.b of the manual, pollutants generated by a project that exhibit one or more of the following characteristics are considered pollutants of concern:

- Current loadings or historical deposits of the pollutant are impairing the beneficial uses of a receiving water;
- Elevated levels of the pollutant are found in water or sediments of a receiving water and/or have the potential to be toxic to or bioaccumulate in organisms therein; and
- Inputs of the pollutants are at a level high enough to be considered potentially toxic.



This section of the manual also states that any anticipated pollutants to be generated by the project, which also are on the 2006 CWA Section 303(d) List of Water Quality Limited Segments (303(d) list) of impairments for the receiving waters of the project site, shall be considered as pollutants of concern.

**b. City of Chula Vista Municipal Code Section 14.20, Storm Water Management and Discharge Control**

The purpose of this ordinance is to promote the health, safety, and general welfare of the citizens of the City of Chula Vista by prohibiting non-storm water discharges to the storm water conveyance system, preventing discharges to the storm water conveyance system from disposal of materials other than storm water, reducing pollutants in storm water discharges to the maximum extent practicable, and reducing pollutants in storm water discharges in order to achieve applicable water quality objectives for surface waters in San Diego County. This ordinance states that it is unlawful for any person to cause, either individually or jointly, any discharge into or from the storm water conveyance system that results in or contributes to a violation of any NPDES permit. Any person engaged in activities that may result in pollutants entering the storm water conveyance system shall, to the maximum extent practical, undertake all measures to reduce the risk of illegal discharges. The following requirements apply:

- **Best Management Practices Implementation.** It is unlawful for any person not to comply with BMPs and pollution control requirements established by the City or other responsible agency to eliminate or reduce pollutants entering the City storm water conveyance system. BMPs shall be complied with throughout the life of the activity.
- **Storm Water Pollution Prevention Plan.** When the enforcement official determines that a business or business-related activity causes or may cause an illegal discharge to the storm water conveyance system then the enforcement official may require the business to develop and implement a SWPPP. Businesses which may be required to prepare and implement a SWPPP include, but are not limited to, those which perform maintenance, storage, manufacturing, assembly, equipment operations, vehicle loading, and/or cleanup activities partially or wholly out of doors.
- **Coordination with Hazardous Materials Response Plans and Inventory.** Any activity subject to the hazardous materials inventory and response program, pursuant to Chapter 6.95 of the California Health and Safety Code, shall include provisions for compliance with this chapter in its hazardous materials response plan, including prohibitions of unlawful non-storm water discharges and illegal discharges, and provisions requiring the use of BMPs to reduce the discharge of pollutants in storm water.
- **Impervious Surfaces.** Persons owning or operating a parking lot or an impervious surface (including, but not limited to, service station pavements or paved private streets and roads) used for automobile-related or similar purposes shall clean those surfaces as frequently and as thoroughly as is necessary, in accordance with BMPs, to prevent the discharge of pollutants to the City storm water conveyance system. Sweepings or cleaning residue from parking lots or impervious surfaces shall not be swept or otherwise made or allowed to go into any storm water conveyance, gutter, or roadway, but must be disposed of in accordance with regional solid waste procedures and practices.
- **Compliance with NPDES Permit for Storm Water Discharges.** Each discharger subject to any NPDES permit for storm water discharges shall comply with all requirements of such permit.

The Chula Vista Development Storm Water Manual is incorporated into this ordinance by reference. The ordinance states that no land owner or development project proponent in Chula Vista shall receive any City permit or approval for land development activity or significant redevelopment activity unless the project meets or will meet the requirements of the manual.

#### **c. City of Chula Vista General Plan**

The Chula Vista General Plan Public Facilities and Services and Environmental Elements address reliable drainage facilities and the protection of water quality. The Public Facilities and Services Element includes objectives to increase efficiencies in handling storm water runoff through use of alternative technologies (Objective PFS 2). Additionally, Objective E 2 in the Environmental Element is to protect and improve water quality within surface water bodies and groundwater resources within and downstream of Chula Vista.

#### **d. Zoning Code and Growth Management Ordinance**

Zoning Code Section 19.80.030 is intended to ensure that new development would not degrade existing public services and facilities below acceptable standards for storm water collection and other public services. The preparation of the PFFP is required in conjunction with the preparation of the SPA Plan for the project to ensure that the development of the project is consistent with the overall goals and policies of the General Plan. Similarly, Section 19.09 (Growth Management) provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09 H specifically requires that: 1) storm water flows and volumes shall not exceed City engineering standards as set forth in the subdivision manual and 2) the GMOC shall annually review the performance of the City storm drain system to determine its ability to meet the goals and objectives of the subdivision manual. Section 19.09 also requires a PFFP and the demonstration that public services meet the GMO quality of life threshold standards. The analysis of storm drain systems provided in this section, along with the PFFP to ensure funding for any needed expansion of services, confirm that storm drain systems will be provided commensurate with development and demand.

### **B. Hydrological Setting**

The project is located within the Otay Hydrologic Unit, which encompasses the Otay River watershed. The Otay River watershed encompasses approximately 160 square miles in southwest San Diego County and is one of the three hydrologic units that discharge to San Diego Bay. The watershed consists largely of unincorporated areas in the County of San Diego, but also includes portions of the cities of Chula Vista, Imperial Beach, Coronado, National City, and San Diego. From east to west, the watershed is made up of the Coronado, Otay Valley, and Dulzura hydrologic areas. Village 9 is within the Otay Valley hydrologic area (Basin #910.20). The major inland hydrologic features, Upper and Lower Otay Lakes, are two water supply reservoirs that also provide important habitat and recreational opportunities. Village 9 is located downstream of the Otay Lakes. San Diego Bay, located west of Village 9, and Otay River, located south of Village 9, are the other major water bodies in the watershed. Approximately 36 square miles of the watershed are within MSCP conservation areas (Project Clean Water 2011).

The receiving waters of Village 9 are Otay River and the San Diego Bay. Drainage from Village 9 flows directly to Otay River. Otay River is a tributary to San Diego Bay. Otay River is located approximately 0.5 mile south of Village 9. San Diego Bay is located approximately 10 miles west of Village 9.

### **1. On-site Hydrology**

The site is currently compared of three drainage areas (western, central and eastern). An additional basin was analyzed as part of the proposed project at the intersection of Hunte Parkway and Eastlake Parkway (referred to as the Hunte/Eastlake Basin) to address the proposed construction of Main Street. The existing drainage areas are shown in Figure 5.11-1. The western basin is a 168.7-acre drainage area, the central basin is a 59.9-acre drainage area, the eastern basin is a 75.4-acre drainage area, and the Hunte/Eastlake Basin is a 59.6-acre drainage area. Natural channels convey the flow through these drainage areas. All four drainage areas ultimately flow southerly to the Otay River, but the Hunte/Eastlake Basin drains southeasterly first to the future university site rather than traversing Village 9.

On the western side of the project site, the majority of the flows from SR-125 bypass Village 9 via an existing off-site storm drain. However, flows from SR-125 produced by the man-made slopes along the western edge of the project site drain through Village 9. Man-made slopes are also located in the northeastern corner of the project site, which were created with the construction of the Eastlake and Hunte Parkway intersection. There is an existing 30-inch reinforced concrete pipe storm drain at this intersection that connects to an existing storm drain. This storm drain bypasses the project site and outlets to the University site.

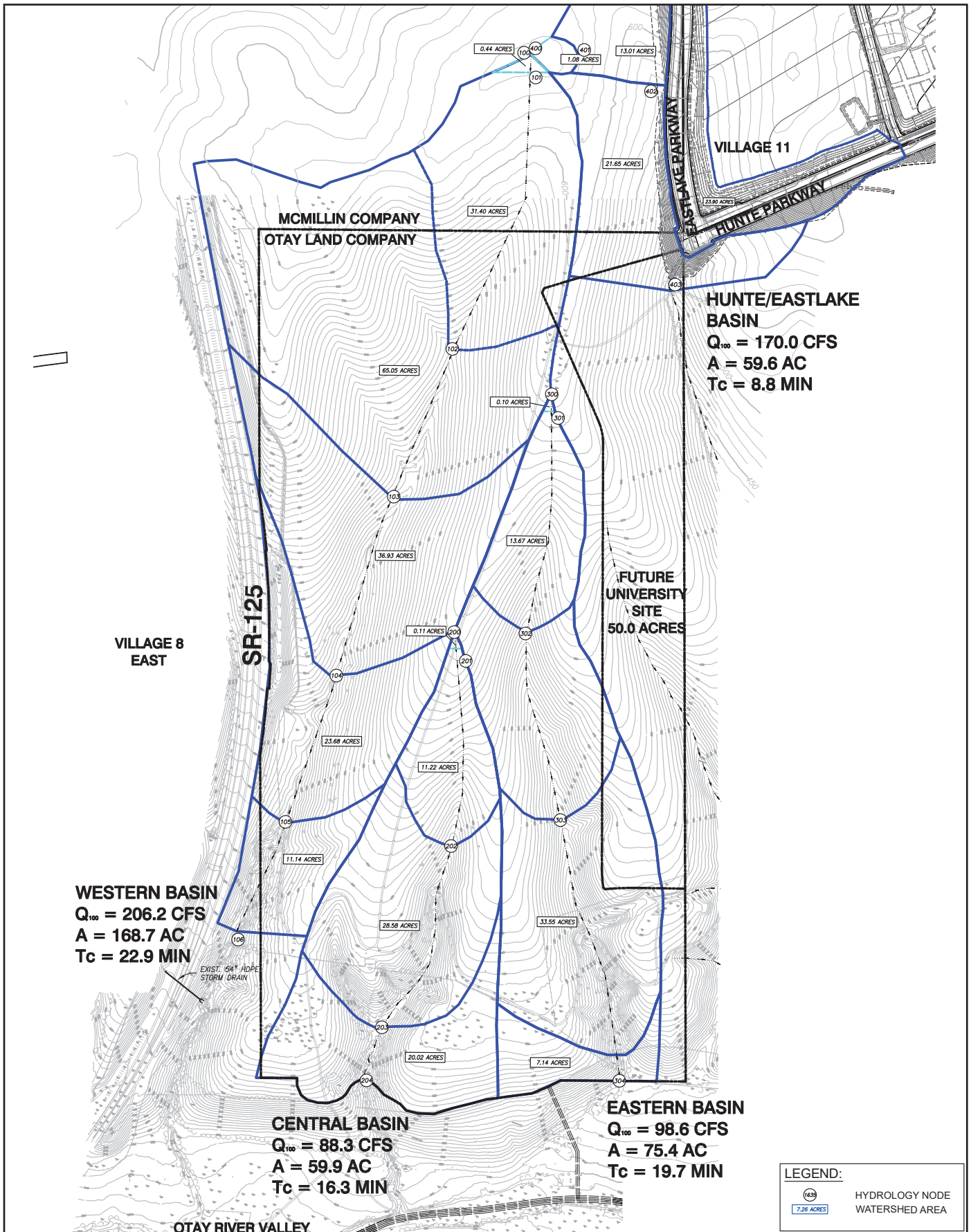
### **2. Water Quality**

#### **a. Surface Water Quality**

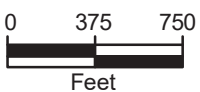
The Porter-Cologne Act establishes a comprehensive program for the protection of the waters of the state. California Water Code Section 13050(f) describes the beneficial uses of surface and ground waters that may be designated by the State or Regional Board for protection as follows: "Beneficial uses of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves." Twenty-three beneficial uses are now defined statewide and are designated within the San Diego Region. The complete list of the beneficial uses and their definitions for Otay River and San Diego Bay are provided in the water quality report in Appendix I1. On October 25, 2006, the SWRCB approved the 303(d) list. Subsequently on November 30, 2006, the EPA approved the SWRCB's inclusion of all waters and pollutants identified for the San Diego region in its 2006 List of Water Quality Limited Segments. Within the Otay Hydrologic Unit, the San Diego Bay is impaired for pollution from organic compounds. Otay River is not on the 303(d) list.

#### **b. Groundwater**

Groundwater in the Otay Valley hydrologic area has been identified for the following beneficial uses: municipal and domestic water supply, agricultural water supply, and industrial service water supply. However, active springs or surface seeps have not been observed on Village 9. It is possible that seasonal groundwater associated with precipitation intermittently occurs in on-site drainages (Advanced Geotechnical Solutions, Inc. 2010).



Source: Hale Engineering 2011



**EXISTING DRAINAGE AREAS**  
**FIGURE 5.11-1**



## 5.11.2 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, impacts regarding hydrology and water quality would be significant if the project would:

- **Threshold 1:** Violate any water quality standards or waste discharge requirements, including City of Chula Vista engineering standards for storm water flows and volumes.
- **Threshold 2:** Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- **Threshold 3:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off the site or City of Chula Vista Engineering Standards for storm water flows and volumes.
- **Threshold 4:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off the site.
- **Threshold 5:** Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- **Threshold 6:** Otherwise substantially degrade water quality.
- **Threshold 7:** Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- **Threshold 8:** Place structures within a 100-year flood hazard area which would impede or redirect flood flows.
- **Threshold 9:** Be inconsistent with General Plan, GDP or other objectives and policies regarding water quality thereby resulting in a significant physical impact.
- **Threshold 10:** Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- **Threshold 11:** Result in a substantial increase in risk of exposure to inundation by seiche, tsunami, or mudflow.

## 5.11.3 Impact Analysis

### A. Threshold 1: Violate any water quality standards or waste discharge requirements, including City of Chula Vista Engineering Standards for storm water flows and volumes.

#### 1. Construction

The project would result in sources of polluted runoff during construction which would have short-term impacts on surface water and groundwater quality through activities such as demolition, clearing and grading, excavation of undocumented fill materials, stockpiling of soils and materials, concrete pouring, painting, and asphalt surfacing. Construction activities would involve various types of equipment such



as dozers, scrapers, graders, loaders, compactors, dump trucks, cranes, water trucks, and concrete mixers. Additionally, soils and construction materials are typically stockpiled outdoors.

Pollutants associated with construction would degrade water quality if they were washed by storm water or non-storm water into surface waters. Sediment is often the most common pollutant associated with construction sites because of the associated earth-moving activities and areas of exposed soil. Sediment that is washed off site can result in turbidity in surface waters, which can impact aquatic species. In addition, when sediment is deposited into receiving water it can smother species, alter the substrate and habitat, and alter the drainage course. Hydrocarbons such as fuels, asphalt materials, oils, and hazardous materials such as paints and concrete slurries discharged from construction sites could also impact aquatic plants and animals downstream. Debris and trash could be washed into existing storm drainage channels to downstream surface waters and could impact aquatic wildlife, wetland or riparian habitat and aesthetic value. Construction activities would potentially result in a significant change in local receiving water quality if BMPs are not put in place to prevent polluted runoff from entering Otay River.

The NPDES General Construction Permit program requires a SWPPP to be prepared for the project prior to construction. For coverage by the General Construction Permit, the applicant is required to submit to the SWRCB a NOI and develop a SWPPP describing BMPs to be used to prevent discharge of sediment and other pollutants. The BMPs may include, but are not limited to, silt fences, fiber rolls, gravel bags, temporary desilting basins, velocity check dams, temporary ditches or swales, storm water inlet protection, or soil stabilization measures such as erosion control mats. The SWPPP is required to be prepared to the satisfaction of the City Engineer and the Director of Public Works prior the issuance of grading permits.

Additionally, all construction activities would comply with the Chula Vista Development Storm Water Manual. In addition to the requiring compliance with a project-specific SWPPP and General Construction Permit, the manual requires proper inspection, monitoring, and maintenance of construction BMPs during dry and wet weather conditions. A qualified person who is trained and competent in the use of BMPs is required to be on site daily, although not necessarily full time, to evaluate the conditions of the site with respect to storm water pollution prevention.

In accordance with the Manual, the City of Chula Vista would evaluate the adequacy of the owner's/contractor's site management for storm water pollution prevention, inclusive of BMP implementation on construction sites based on performance standards for storm water BMPs. Ineffective BMPs would be replaced with more effective BMPs. The Manual lists specific BMPs that must be implemented seasonally during wet and dry season. Additionally, the Manual sets limitations specific to grading activities. The area that can be cleared or graded and left exposed at one time is limited to the amount of acreage that the owner/contractor can adequately protect prior to a predicted rainstorm. At no time is disturbed soil area of the project site allowed to be more than 100 acres for an individual grading permit or a combination of grading permits under an associated TM. Construction sites that pose an exceptional threat to water quality from sediment are required to implement advanced treatment to eliminate or minimize the discharge of sediment from the construction site to storm drainage systems and/or receiving waters.

The project meets the Manual criteria for a potential threat to water quality because it would disturb more than five acres; therefore, advanced treatment would be implemented for the project in accordance with the manual requirements. Runoff generated by any interim mass graded building pads in Village 9 would drain to a desilt basin to be sized and located for each pad. For mass graded pads, the

only potential pollutant of concern generated by these pads is sediment. Desilt basins would target this sole pollutant prior to discharging flows to the receiving storm drain system. The desilt basin would reduce water quality impacts between grading of the project site and building construction.

Compliance with applicable regulatory requirements, which is prescribed as mitigation for the project, and the recommended desilt basins described above would ensure that potentially significant water quality impacts during on-site construction would be reduced to a less than significant level.

## 2. Operation (Post-Construction)

Equipment and hazardous materials associated with construction activities would be removed from the project site after buildout is complete, which would reduce the potential for pollutants to be discharged. However, there are multiple pollutants associated with operations of land uses proposed in Village 9. The pollutants of concern for the project are listed in Table 5.11-1 and are described below.

**Table 5.11-1 Pollutants Potentially Generated by the Project**

Priority Project Categories	General Pollutant Categories <sup>(1)</sup>								
	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oils & Grease	Bacteria & Viruses	Pesticides
Detached Residential	X	X			X	X	X	X	X
Attached Residential	X	X			X	p <sup>(2)</sup>	p <sup>(3)</sup>	P	X
Commercial (> 1 ac)	p <sup>(2)</sup>	p <sup>(2)</sup>		p <sup>(3)</sup>	X	p <sup>(6)</sup>	X	p <sup>(4)</sup>	p <sup>(6)</sup>
Auto Repair Shops			X	X <sup>(5)(6)</sup>	X		X		
Restaurants					X	X	X	X	
Hillside Development (>5,000 S.F.)	X	X			X	X	X		X
Parking Lots	p <sup>(2)</sup>	p <sup>(2)</sup>	X		X	p <sup>(2)</sup>	X		p <sup>(2)</sup>
Streets	X	p <sup>(2)</sup>	X	X <sup>(5)</sup>	X	p <sup>(6)</sup>	X		

<sup>(1)</sup> X = Anticipated Pollutants, P = Potential Pollutants  
<sup>(2)</sup> A potential pollutant if landscaping exists on site  
<sup>(3)</sup> A potential pollutant if the project includes uncovered parking areas  
<sup>(4)</sup> A potential pollutant if land use involved food or animal waste products  
<sup>(5)</sup> Including petroleum hydrocarbons  
<sup>(6)</sup> Including solvents  
Source: Hunsaker & Associates 2011

**Sediment.** Sediments are soils or other surface materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.

**Nutrients.** Nutrients are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils from landscaping. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as cultural eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.

**Heavy Metals.** Metals are raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Primary sources of metal pollution in storm water are typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. At low concentrations naturally occurring in the soil, metals are not toxic. However, at higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated ground water resources, and bioaccumulation of metals in fish and shellfish.

**Organic Compounds.** Organic compounds are carbon-based. Commercially available or naturally occurring are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also absorb levels of organic compounds that are harmful or hazardous to aquatic life.

**Trash and Debris.** Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products. The presence of trash and debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality. In addition, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.

**Oxygen Demanding Substances.** This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.

**Oil and Grease.** Oil and grease are characterized as high-molecular weight Organic Compounds. The primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies are very possible due to the wide uses and applications of some of these products in municipal, residential, and commercial areas. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality.

**Bacteria and Viruses.** Bacteria and viruses are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed, such as pet waste. Water, containing excess bacteria and viruses can alter the aquatic habitat and create a harmful environment for humans and aquatic life. Also, the decomposition of organic waste causes increased growth of undesirable organisms in the water.

**Pesticides.** Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.

Generally, the constituents described above are referred to as non-point source pollutants. As stated in the Development Storm Water Manual, any anticipated pollutants potentially generated by the project that are on the 303(d) list are considered pollutants of concern. The San Diego Bay is impaired for

organic compounds. Therefore, organic compounds are a pollutant of concern associated with the project. Increased runoff from the development of future land uses as designated in the project area, and an associated increase in impervious surfaces, would potentially result in the contribution of non-point source pollution, including organic compounds, into Wolf Canyon and Otay River, and ultimately San Diego Bay, that would degrade water quality.

### **3. Operational Best Management Practices**

As required by the development storm water manual, implementation of the project would minimize impacts on receiving water quality by incorporating post-construction BMPs into project design, including low impact development site design, source control, and treatment control BMPs. Implementation of the project is subject to site design and source control BMPs that apply to the entire project site, as outlined in Section 3.6.2 of the Development Storm Water Manual. Additionally, individual land uses types are subject to additional requirements specific to the activities associated with that land use.

Impervious surfaces and associated runoff would increase with urban development of Village 9. However, development of the project would be designed to minimize directly connected impervious surfaces and to promote infiltration using low impact development techniques. Flows generated by the paved streets, sidewalks and other impervious areas for the development of Village 9 would receive treatment via bioretention-based Integrated Management Practices (IMPs), filtering out sediments, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances and oil/hydrocarbons. Once flows have been filtered via these bioretention IMPs, treated flows would be discharged into the on-site storm drain system.

The bioretention facilities would be integrated with the landscape design and would be in the form of tree wells, vegetated areas and linear swales. Tree wells would be located in all public streets, with the exception of Otay Valley Road and single-family residential streets. Runoff from the public streets and the adjacent impervious surfaces would be captured along the gutter with intermittent curb cuts that would direct flows to tree wells and bio-retention areas. Campus Boulevard would also have an inverted crown section that allows street flows to drain to a 6-foot-wide median consisting of pervious pavement. Linear bioretention areas behind the curb are proposed for the treatment of flows generated by Otay Valley Road. The flows generated by the sidewalks, driveway aprons, and public streets in the single-family residential neighborhoods would be captured along the gutter with intermittent curb cuts that direct flows to bioretention areas behind the curb. Bioretention facilities are proposed for the residential lots in the single-family neighborhoods and would be designed as dictated by the County Standard Urban Stormwater Mitigation Plan (SUSMP). Roof drains would drain to the vegetated swales surrounding the building that will ultimately drain to the proposed bioretention facilities in each lot.

The BMPs identified in the water quality report would also minimize, to the maximum extent practicable, the introduction of pollutants and conditions of concern into the storm water conveyance system. The water quality report identifies the following low impact development and site design BMPs that would be implemented for the project:

- **Conserve Natural Areas**
  - Incorporate open space areas and vegetation throughout the development.
- **Minimize Impervious Footprint**
  - Increase building density (number of stories above or below ground), where applicable;

- Construct walkways, trails, patios, overflow parking lots and alleys and other low-traffic areas with permeable surfaces, such as pervious concrete, unit pavers, and granular materials, where applicable;
- Construct streets, sidewalks and parking lot aisles to the minimum width necessary, provided that public safety and a walkable environment for pedestrians are not compromised;
- Minimize the use of impervious surfaces in the landscape design.
- **Minimize Directly Connected Impervious Areas**
  - Where landscaping is proposed, drain rooftops into adjacent landscaping where it is safe and appropriate and will not cause damage or adverse impacts to any existing and proposed structures, slopes, pavements, or other features prior to discharging to the storm water conveyance system;
  - Where landscaping is proposed, drain impervious parking lots, sidewalks, walkways, trails, and patios into adjacent landscaping where it is safe and appropriate and will not cause damage or adverse impacts to any structures, slopes, pavements, or other features.
  - Pervious pavements in the form of pavers (i.e. Aqua Bric Bio-Aquifer Storm System manufactured by Orco Paving Stones) and vegetated parkways adjacent to roadways and sidewalks, are incorporated within the project site design in order to mitigate treatment flows and associated pollutants of concern generated via the proposed pavement and sidewalks. Pervious pavement is proposed for the median at Campus Boulevard to capture flows from the proposed inverted section.
  - **Minimize Soil Compaction in Landscape Areas** - Prior to final landscape installation in areas disturbed due to construction and where landscaping will be placed, the subsoils below the topsoil layer shall be scarified at least six inches. If upper layers of topsoil exist or are imported, incorporate the upper or topsoil material to avoid stratified layers.
  - **Soil Amendments** - Landscape top soil improvements play a significant role in maintaining plant and lawn health and improve the soil's capacity to retain moisture, which will reduce runoff from the water quality design storm and improve water quality. San Diego Landscape regulations will be adhered to for landscaped areas.
- **Protect Slope and Channels & Energy Dissipation/Erosion Control**
  - Use of natural drainage systems to the maximum extent practicable.
  - Stabilize permanent channel crossings.
  - Planting native or drought tolerant vegetation on slopes.
  - Energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels.

Source-control BMPs are activities, practices, and procedures that are designed to prevent urban runoff pollution. These measures either reduce the amount of runoff from the site or prevent contact between potential pollutants and storm water. Source-control BMPs are often the best method to address non-storm (dry-weather) flows. The following source-control BMPs would be required for implementation of the SPA Plan and TM:

- **Design Trash Storage Areas to Reduce Pollution Introduction.** All outdoor trash storage areas shall meet the following requirements per Design Concept SC-3 in the Chula Vista Development



Storm Water Manual dated March 2010. Some detached residential homes would be excluded from these requirements.

- Paved with an impervious surface, designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash;
- Covered with a roof, awning or trash lid to minimize direct precipitation; and
- Designed in accordance with CVMC Section 19.58.340

- **Integrated Pest Management Principles.** Integrated Pest Management is an ecosystem-based pollution prevention strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitation manipulation, modification of cultural practices, and use of resistant plant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. The following IMP principles would be incorporated into Village 9 development:

- Eliminate and/or reduce the need for pesticide use in the project design by planting pest-resistant or well-adapted plant varieties such as native plants and discouraging pests by modifying the site and landscaping design. In order to achieve this source control BMP objective, native vegetation would be used throughout the project site in accordance with the landscape architects plans.
- Distribute Integrated Pest Management educational materials to future site residents/tenants that would, at a minimum, address the following topics. Homeowners would be made aware of the aforementioned RWQCB regulations through a homeowners' education program.
- Keeping pests out of buildings and landscaping using barriers, screens, and caulking;
- Physical pest elimination techniques, such as, weeding, squashing, trapping, washing, or pruning out pests;
- Relying on natural enemies to eat pests;
- Proper use of pesticides as a last line of defense.

- **Efficient Irrigation Systems and Landscaping Design.** In compliance with the Water Conservation in Landscaping Act, the following methods to reduce excessive irrigation runoff shall be considered, and incorporated and implemented where determined applicable and feasible by the City of Chula Vista:

- Employ rain shutoff devices to prevent irrigation during and after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Use flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- All maintained landscaped areas will include rain shutoff devices to prevent irrigation during and after precipitation. Flow reducers and shutoff valves triggered by pressure drop will be used to control water loss from broken sprinkler heads or lines.

- **Storm Water Conveyance Systems Stenciling and Signage.** Proposed development will incorporate concrete stamping, or equivalent, of all storm water conveyance system inlets and catch basins within the project area with prohibitive language such as “No Dumping – I Live Downstream”, satisfactory to the City Engineer. Stamping may also be required in Spanish.

Post-construction treatment control BMPs provide treatment for storm water emanating from Village 9. These BMPs are also known as structural BMPs. Implementation of the NPDES General Permit requires the use of permanent post-construction BMPs to protect water quality throughout the life of the project. Structural BMPs are an integral element of post-construction storm water management and include storage, filtration, and infiltration practices. BMPs have varying degrees of effectiveness versus different pollutants of concern. The pollutant of concern for the project is organic compounds. Other anticipated pollutants for the project are sediments, nutrients, heavy metals, trash and debris, and oil and grease. Bioretention facilities are a BMP that has a high pollutant removal efficiency for organic compounds, meets the maximum extent practicable standard for all other anticipated pollutants, is relatively inexpensive to construct and maintain, can be incorporated into the proposed landscaping, has a low probability of ground water contamination, and requires a relatively small footprint for treatment. As specified the SPA Plan, bioretention facilities would be incorporated into the project.

Lot-specific structural BMPs would also be implemented as parcels are developed that would meet the numeric sizing standards set forth in the Chula Vista Development Storm Water Manual. BMP design calculations are provided in the water quality report, provided as Appendix I1 to this EIR. The report also includes an inspection, operation, and maintenance plan for the BMPs to ensure their effectiveness during operation of the project. Implementation of the BMPs outlined in the water quality report would ensure that mass grading of Village 9 and development of infrastructure would comply with the manual.

In conclusion, with implementation of the proposed storm water BMPs, including the BMPs identified in the water quality report that are prescribed as mitigation measures for the project, potentially significant impacts to downstream drainage facilities identified as conditions of concern in this analysis would be reduced to a less than significant level.

**B. Threshold 2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).**

Groundwater on Village 9 is seasonal and results from rainwater or runoff that is trapped along joints or rock beds (Advanced Geotechnical Solutions, Inc. 2010). The project does not propose to use groundwater during construction or operation. Additionally, operation of the project is anticipated to result in an increase in groundwater as a result of infiltration basins and low impact development BMPs. This increase would be beneficial by raising the water table slightly, thus improving the quality of water in the watershed (Advanced Geotechnical Solutions, Inc. 2013). Therefore, development of Village 9 would not interfere with groundwater recharge or deplete groundwater supplies such that there would be a net deficit in aquifer volume or lowering of the local groundwater table. This impact is less than significant.

**C. Threshold 3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off site or Chula Vista Engineering Standards for storm water flows and volumes.**

As shown in Figure 5.6-3, Jurisdictional Delineation Results, several natural drainages traverse the project site. Otay River is located approximately one-quarter mile south of the project site. However, there are no stream or rivers on the project site or immediately adjacent to Village 9. No alteration of the course of a stream or river would result from implementation of Village 9. However, natural channel flow occurs on site and development of Village 9 would alter the existing drainage pattern of the site, as discussed below.

**1. Post-Project Drainage Conditions**

A drainage study has been prepared to determine the drainage system requirements to support the proposed development. As discussed above under the discussion of On-site Hydrology, Village 9 is currently composed of four drainage areas that flow directly to Otay River. Following implementation of the project, the site would be divided into two drainage basins. The proposed drainage system is shown in Figure 3-12, Hydrologic Basins and Proposed Drainage System. The northeastern corner of the site in the Hunte/Eastlake basin would drain to the Otay River via the University site. The remainder of the site, and a portion of the future EUC site, would drain to the Otay River via one of two discharge points from the site. Storm drains are proposed to convey the majority of the post-project flows to the Otay River discharge point at the southern edge of Village 9. The remaining post-project flows would be conveyed by storm drains to another discharge point located on the western boundary of Village 9, adjacent to Otay Valley Road. No change in the existing natural drainage pattern is proposed for the open space areas; therefore, the project would not alter the existing drainage pattern in these areas.

**2. Post-Project Drainage Flows**

The Modified Rational Method was used to determine pre- and post-project flow rates. Refer to the Drainage Study in Appendix I2 for additional information regarding the study methodology. Pre-project and post-project flows to Otay River are shown in Table 5.11-2.

**Table 5.11-2 Pre- and Post-Project Drainage to Otay River**

Pre-Project Conditions			Post Project (cubic feet per second)		
Discharge Location	Drainage Area (acres)	100-year Peak Flow (cubic feet per second)	Discharge Location	Drainage Area (acres)	100-year Peak Flow (cubic feet per second)
Western Basin	168.7	206.2	Western Basin	24.4	61.6
Central Basin	59.9	88.3	Otay River	278.6	823.0
Eastern Basin	75.4	98.6			
Hunte/Eastlake Basin	59.6	170.0	Hunte/Eastlake Basin	58.6	172.4
Total Flow to Otay River		563.1			1,057.0
<sup>(1)</sup> Includes area of the EUC that would flow to Village 9. Flows from the EUC site would be the same whether or not the EUC is ultimately developed. Source: Hunsaker and Associates 2011					

As shown in Table 5.11-2, the post-project peak flow from the projects to Otay River is anticipated to increase up to approximately 88 percent over existing flows from Village 9. However, an Otay River Watershed Assessment Technical Report, prepared in August 2004 by Aspen Environmental Group, determined that the Savage Dam at the Lower Otay Reservoir impounds runoff from over 60 percent of the Otay River's tributary Watershed and, as such, the flow capacity for the Otay River downstream of the dam is approximately 22,000 cubic feet per second for the 100-year storm event. The attenuation provided by the Savage Dam on 60 percent of the overall watershed reduces flows in the river such that even with the increase in flows from development downstream of the dam, including flows from Village 9, total flow would still be reduced compared to the flows prior to the dam construction.

Detention for any development below the dam would be ineffective as the peak flows from these smaller watersheds would pass through the river well before the reservoir would fill to the point that flows would overtop the spillway. Village 9 is located downstream of the Savage Dam. The Otay River Watershed Assessment Technical Report also notes that the existing Otay River downstream of the dam is starved for sediment and peak flows, stating that an increase in peak flow would tend to counteract the degradation trends by replacing water impounded by the reservoir. In addition, there would be substantial lag time (over 19 hours for the 100-year storm event) between the time the peak flows from Village 9 reach Otay River and time the peak flows upstream of the project along the Otay River reach the Village 9 outlet locations. This is because the tributary area to the Otay River is over 100 square miles. Due to this lag time, there is no net increase of peak flows in the Otay River from the development of Village 9 when compared to existing conditions. Therefore, no detention basins are proposed or required for this project other than bioretention and/or extended detention basins proposed as water quality BMPs.

The project is not required to reduce post-project flows to pre-project conditions because Otay River is exempt from hydromodification requirements. A hydromodification management plan was approved by the County of San Diego in July 2010. Characteristics of the Otay River, including low gradients, significant natural peak flow attenuation, and wide floodplain areas result in this system having a low potential for channel erosion. Consequently, the Otay River System is exempt from hydromodification requirements (see Appendix I2). Therefore, flows from Village 9 to the Otay River are exempt from the hydromodification requirements and the project is not required to reduce post-project flows to pre-project conditions. A concrete energy dissipater and rip-rap apron would be constructed to reduce the velocity of discharge to the Otay River, and minimize the potential for erosion. The drainage study concluded that the alteration to the existing Otay River drainage pattern associated with project implementation would result in a less than significant impact with respect to increases in erosion and siltation.

An additional hydromodification analysis is included in the Water Quality Report (Appendix I1) for the Western Basin and Hunte/Eastlake Basin discharge points that do not outlet directly to the Otay River. Due to the reduction in tributary area to the discharge points as a result of redirection of flows, as well as on-site mitigation for water quality, such as the bioretention linear swales on Main Street, the post-development flows at these discharge points do not exceed existing flows by more than ten percent. Peak flows at the Western Basin discharge point would be reduced by 70 percent from 206.2 cfs to 61.6 cfs under post-project conditions because most of the existing western basin area would be diverted to the Otay River discharge location on the southern boundary of Village 9. Therefore, the potential for erosion from the Western Basin would be greatly reduced. Additionally, a rip-rap energy dissipater per San Diego Regional Standard Drawing D-40 would also be installed at this discharge point to reduce the velocity of discharge to the canyon downstream of the discharge point. At the

Hunte/Eastlake Basin discharge point, the pre- and post-developed conditions would be very similar. Flows and tributary areas would vary less than 2 percent for both conditions. Therefore, the proposed project would not result in a substantial increase in flows or erosion at this discharge location.

In conclusion, drainages serving the project site would be susceptible to increased erosion resulting from increased peak flow rates, increased runoff volumes, and duration, which would result in a potentially significant impact. Installation of the proposed drainage facilities at construction would minimize these impacts to a less than significant level. However, mitigation would be required to ensure that the facilities are implemented and monitored throughout buildout of the project.

**D. Threshold 4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.**

Village 9 currently consists almost entirely of permeable surfaces. The project, which would involve the replacement of the permeable surfaces and exposed soils with urban development, would substantially change the amount of impervious surface area on the project site. As discussed under Threshold 3, site-generated surface water runoff would be directed from Village 9 to off-site drainage facilities or directly to Otay River. The post-project drainage conditions were designed to adequately convey post-project flows off site during a 100-year storm event. However, if these facilities are not implemented concurrently with development and monitored throughout buildout of Village 9, impacts would be potentially significant.

The project would result in an increase in flows to Otay River (see Table 5.11-2). However, as discussed under Threshold 3, the project's contribution to peak river flow is negligible. The Otay River has a 100-year design flow of 20,000 cubic feet per second. The project would result in an increase in runoff during the 100-year storm of only 494 cubic feet per second. The Savage Dam attenuates regional impacts downstream of the dam such that the increase in the amount of runoff from Village 9 would not result in flooding along the Otay River. The post-project flows from the site would not increase the total flow to above pre-dam construction conditions. Additionally, due to differences in timing, the peak flows with the river and those from the Village 9 discharge points would not coincide during the 100-year storm event. Therefore, the proposed project would not substantially increase the rate or amount of surface runoff that would result in an increase in flooding along Otay River.

In conclusion, drainages serving the southern basin would be susceptible to increased peak flow rates and increased runoff volumes, which would result in a potentially significant flooding impact. Installation of the proposed drainage facilities at construction would minimize these impacts. However, mitigation would be required to ensure that the facilities are implemented and monitored throughout buildout of the project.

**E. Threshold 5: Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.**

As discussed under Threshold 3, a drainage system has been designed for the project with the capacity to convey post-project flows during the 100-year storm event and includes energy dissipaters to minimize the potential for erosion. The project would not result in an increase in siltation or erosion because of increased flows to Otay River. The project would not result in runoff water that would



exceed the capacity of drainage systems. Even though the project includes features to reduce the amount and rate of runoff to a less than significant level, these features are also prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.

**F. Threshold 6: Otherwise, substantially degrade water quality.**

As discussed under Threshold 1, the project is required to comply with the Chula Vista Development Storm Water Manual and the General Construction Permit. Implementation of a project-specific SWPPP during construction in accordance with these regulations would ensure that significant impacts to water quality would not occur as a result of runoff from Village 9. Management, inspections, and maintenance are required for both construction and operation impacts to ensure that BMPs are operating efficiently.

Additionally, as discussed under Threshold 3, a drainage system has been designed for the project with the capacity to convey post-project flows during the 100-year storm event and includes energy dissipaters to minimize the potential for erosion. The proposed project would not result in an increase in siltation or erosion as a result of increased flows to Otay River. The BMPs proposed in the water quality report would ensure that runoff associated with development of infrastructure and mass grading of the site would not result in a substantial source of polluted runoff that would degrade water quality. The proposed drainage system would not result in an increase in erosion or siltation off site. However, supplemental water quality studies are required to identify which site-specific BMPs identified in the water quality technical report would be necessary for individual development projects to comply with the manual. Therefore, impacts related to water quality would be potentially significant.

**G. Threshold 7: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, and**

**Threshold 8: Place structures within a 100-year flood hazard area which would impede or redirect flood flows.**

The 100-year flood hazards boundary of the Otay River, as designated by the Federal Emergency Management Agency (FEMA), is shown on the proposed drainage plan provided in the Drainage Report (Appendix I2). Village 9 is not within a 100-year or 500-year floodplain as mapped by FEMA (DWR 2011), as the flood hazard boundary is located approximately 0.1 mile (530 feet) south of the project site. The southern segment (approximately 100 feet) of the proposed off-site access road would be within the 100-year flood hazard area; however, the road does not include any structures or other components for which flooding would be a hazard. Therefore, the project would not place housing or other structures within a 100-year flood hazard area. No impact would occur.

**H. Threshold 9: Be inconsistent with General Plan, GDP or other objectives and policies regarding water quality thereby resulting in a significant physical impact.**

Table 5.11-3 evaluates the consistency of the project with the applicable General Plan objectives and policies and Table 5.11-4 evaluates the consistency of the project with the applicable GDP goals and objectives. As shown in Table 5.11-3 and Table 5.11-4, the project would be consistent with the General Plan and GDP policies that pertain to hydrology and water quality.

**Table 5.11-3 Project Consistency with Applicable General Plan Drainage and Water Quality Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective PFS 2:</b> Increase efficiencies in water use, wastewater generation and its re-use, and handling of storm water runoff throughout the City through use of alternative technologies.</p> <p><b>Policy PFS 2.2:</b> As part of project construction and design, assure that drainage facilities in new development incorporate storm water runoff and sediment control, including state-of-the-art technologies, where appropriate.</p> <p><b>Policy PFS 2.3:</b> In designing water, wastewater, and drainage facilities, limit the disruption of natural landforms and water bodies. Encourage the use of natural channels that simulate natural drainage ways while protecting property.</p>	<p><b>Consistent.</b> The project would be consistent with these policies regarding drainage. As discussed under Threshold 2, the drainage study for Village 9 outlines the drainage infrastructure required for detention of storm runoff and sediment control, including incorporation of energy dissipaters to minimize potential erosion. Additionally, as discussed under Threshold 1, the water quality report outlines the proposed water quality BMPs including low impact development to encourage the use of natural channels that simulate natural drainage ways. Implementation of the project would not disrupt any natural water bodies.</p>
<p><b>Objective E 2:</b> Protect and improve water quality within surface water bodies and groundwater resources within and downstream of Chula Vista.</p> <p><b>Policy E 2.4:</b> Ensure compliance with current federal and state water quality regulations, including the implementation of applicable NPDES requirements and the City's Pollution Prevention Policy.</p> <p><b>Policy E 2.5:</b> Encourage and facilitate construction and land development techniques that minimize water quality impacts from urban development.</p>	<p><b>Consistent.</b> The project would be consistent with these applicable water quality policies. As discussed under Threshold 1, prior to construction a site-specific SWPPP would be prepared in accordance with the NPDES General Construction Permit. The Chula Vista Development Storm Water Manual requires the project to meet site-specific performance standards, site management requirements, seasonal requirements, limitation of grading, and potential advanced treatment for any identified sedimentation. Section 3 of the manual has been followed in order to identify pollutants of concern for the project, and to determine BMP requirements. Low impact development BMPs have been proposed to meet treatment requirements.</p>
<p><b>Objective E 15:</b> Minimize the risk of injury and property damage associated with flood hazards.</p> <p><b>Policy E 15.1:</b> Prohibit proposals to subdivide, grade, or develop lands that are subject to potential flood hazards, unless adequate evidence is provided that demonstrates that such proposals would not be adversely affected by potential flood hazards and that such proposals would not adversely affect surrounding properties. Require site-specific hydrological investigations for proposals within areas subject to potential flood hazards; and implement all measures deemed necessary by the City Engineer to avoid or adequately mitigate potential flood hazards.</p>	<p><b>Consistent.</b> Village 9 is not located in a floodplain or dam inundation hazard area, with the exception of the off-site access road that would not be adversely affected by flooding. Implementation of Village 9 would include a drainage system that adequately conveys flows from the project area.</p>

**Table 5.11-4 Project Consistency with Applicable GDP Drainage and Water Quality Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section C –Public Facility Plans</b>	
<p><b>Goal:</b> Provide protection to the Otay Ranch project area and surrounding communities from fire, flooding and geologic hazards.</p> <p><b>Objective:</b> Individual projects will provide necessary improvements consistent with the National Flood Insurance Program, drainage master plan(s) and engineering standards.</p> <p><b>Policy:</b> Storm drain runoff should be managed to minimize water degradation, to reduce the waste of fresh water, to protect wildlife and to reduce erosion.</p>	<p><b>Consistent.</b> As discussed under Threshold 3, the grading and drainage plans for Village 9 meet these goals and objectives by sizing drainage facilities appropriately to convey the generated flows and detain run-off as required. The development limits would avoid encroachment into floodways. The plans provide for protection of adjacent sensitive habitats by directing flows away from habitat to drain directly into Otay River.</p>
<p><b>Objective:</b> Storm water flows shall be controlled and conveyed based on statistical models and engineering experience, as specified in the City engineering standards consistent with NPDES BMPs.</p>	<p><b>Consistent.</b> As discussed under Threshold 1, development would comply with NPDES and other regulatory requirements, including implementation of BMPs.</p>
<p><b>Objective:</b> Reduction in the need for construction of flood control structures.</p> <p><b>Objective:</b> Preservation of the floodplain environment from adverse impacts due to development.</p>	<p><b>Consistent.</b> As discussed under Thresholds 7, 8, 10, and 11, Village 9 is not located in a flood hazard area. The proposed drainage system would prevent flooding on site.</p>
<p><b>Objective:</b> Require on-site detention of storm water flows such that existing downstream structures will not be overloaded.</p> <p><b>Policy:</b> Require measures to decrease the adverse impacts created by increased quantity and degradation in the quality of runoff from urban areas.</p>	<p><b>Consistent.</b> As discussed under Threshold 3, the proposed drainage system would include a hydromodification detention basin and other facilities to detain storm water to prevent overloading downstream facilities.</p>
<p><b>Goal:</b> Ensure that water quality within the Otay Ranch project area is not compromised.</p> <p><b>Objective:</b> Ensure that water quality within the Otay Ranch project area is not compromised, consistent with NPDES BMPs, and the RWQCB Basin Plans.</p> <p><b>Policy:</b> Discretionary land development applications dependent on imported water will only be approved if the service provider reasonably expects that water facilities will be available concurrent with need, and that all appropriate requirements will be met through conditions placed on project approval.</p>	<p><b>Consistent.</b> As discussed under Threshold 1 and Threshold 3, a drainage plan has been prepared for Village 9 that would adequately provide for management and containment of urban runoff, and development would comply with all applicable City and regional water quality protection standards.</p>
<b>Part II, Chapter 8 – Safety</b>	
<p><b>Goal:</b> Promote public safety and provide public protection from fire, flooding, seismic disturbances, geologic phenomena and manmade hazards in order to preserve life, health and property; continue government functions and public order; maintain municipal services; and rapidly resolve emergencies and return the community normalcy and public tranquility.</p>	<p><b>Consistent.</b> As discussed under Thresholds 7, 8, 10, and 11, Village 9 is not located in a flood hazard area, with the exception of the southern end of the off-site access road. As discussed under Threshold 3, the proposed drainage system would prevent flooding on site. Hazards and fire are addressed in Section 5.13, Hazards and Hazardous Materials, and seismic disturbances and geologic phenomena are addressed in Section 5.8, Geology and Soils.</p>

**Table 5.11-4 Project Consistency with Applicable GDP Drainage and Water Quality Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Objective:</b> Prevent property damage and loss of life due to seiches, dam failure and heavy rains.</p> <p><b>Objective:</b> Preservation of the floodplain environment from adverse impacts due to development.</p>	<p><b>Consistent.</b> As discussed under Thresholds 7, 8, 10, and 11, Village 9 is not located in a floodplain or flood hazard area. As discussed under Threshold 3, The proposed drainage system would prevent flooding on site, including during heavy rain events.</p>
<b>Part II, Chapter 10 – Resource Protection, Conservation and Management</b>	
<p><b>Goal:</b> Preserve floodways and undisturbed flood plain fringe areas.</p> <p><b>Objective:</b> Restore and enhance highly disturbed floodways and flood plains to regain former wildlife habitats and retain/restore the ability to pass 100-year flood flows.</p> <p><b>Objective:</b> Preserve floodways and undisturbed flood plain fringe areas in their natural state where downstream development will not be adversely affected.</p>	<p><b>Consistent.</b> The development limits in the SPA Plan would avoid encroachment into floodplain areas. The proposed drainage system would detain storm water on site and direct project storm water flows directly to Otay River. The project would not significantly impact a floodplain area. As discussed under Threshold 3, Otay River Valley in the proximity of the project has been degraded by lack of flows, and an increase in peak flow from the project would tend to counteract the trend by replacing water impounded by the reservoir.</p>

**I. Threshold 10: Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.**

As discussed under Threshold 8, Village 9 is not located within a 500-year floodplain, with the exception of the southernmost 100 feet of the proposed off-site access road. Additionally, according to the EIR prepared for the Chula Vista General Plan and the inundation map for the Savage Dam, Village 9 is not located within a potential dam inundation area (City of Chula Vista 2005b, City of San Diego 1974). Therefore, the project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. No impact would occur.

**J. Threshold 11: Result in a substantial increase in risk of exposure to inundation by seiche, tsunami, or mudflow.**

Seismically induced hazards such as tsunamis and seiches are not considered significant hazards because Village 9 is located more than ten miles inland, the development area is outside of the 500-year floodplain, and is not within the potential dam inundation of the Otay Lakes. Additionally, the Geotechnical Investigation determined that seismically induced landslides, which include mudflows, are not considered a significant concern for Village 9. Therefore, the project would not result in a substantial increase in risk of exposure to inundation by seiche, tsunami, or mudflow. No impact would occur.

## 5.11.4 Level of Significance Prior to Mitigation

### A. Water Quality Standards

Even though the project includes features and would implement BMPs to reduce the amount and rate of runoff to a less than significant level, these features are also prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.

## **B. Groundwater Supplies and Recharge**

No significant impacts related to groundwater supplies and recharge have been identified with implementation of Village 9.

## **C. Erosion or Siltation**

Even though the project includes features and would implement BMPs to reduce the amount and rate of runoff to a less than significant level, these features are also prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.

## **D. Surface Runoff**

Even though the project includes features and would implement BMPs to reduce the amount and rate of runoff to a less than significant level, these features are also prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.

## **E. Exceed Drainage Capacity**

Even though the project includes features and would implement BMPs to reduce the amount and rate of runoff to a less than significant level, these features are also prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.

## **F. Degradation of Water Quality**

Even though the project includes features and would implement BMPs to reduce the amount and rate of runoff to a less than significant level, these features are also prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.

## **G. 100-Year Flood Hazards**

No significant impacts related to 100-year flood hazards have been identified with the project.

## **H. Consistency with Water Quality Policies**

No significant impacts related to consistency with water quality policies have been identified with the project.

## **I. Flooding**

No significant impacts related to flooding have been identified with the project.

## **J. Inundation**

No significant impacts related to inundation have been identified with the project.

### **5.11.5 Mitigation Measures**

#### **A. Water Quality Standards**

5.11-1 **Storm Water Pollution Prevention Plan.** Prior to issuance of each grading permit for Village 9 or any land development permit, including clearing and grading, the project applicant shall submit



a notice of intent and obtain coverage under the National Pollutant Discharge Elimination System permit for construction activity from the State Water Resources Control Board. Adherence to all conditions of the General Permit for Construction Activity is required. The applicant shall be required under the State Water Resources Control Board General Construction Permit to develop a Storm Water Pollution Prevention Plan and monitoring plan that shall be submitted to the City Engineer and the Director of Public Works. The Storm Water Pollution Prevention Plan shall be incorporated into the grading and drainage plans and shall specify both construction and post-construction structural and non-structural best management practices on the site to reduce the amount of sediments and pollutants in construction and post-construction surface runoff before it is discharged into off-site storm water facilities. Section 7 of the City's Storm Water Manual outlines construction site best management practice requirements. The Storm Water Pollution Prevention Plan shall also address operation and maintenance of post-construction pollution prevention measures, including short-term and long-term funding sources and the party or parties that will be responsible for said measures. The Storm Water Pollution Prevention Plan shall incorporate construction and post-construction best management practices as outlined in the Village 9 Edge Plan. The grading plans shall note the condition requiring a Storm Water Pollution Prevention Plan and monitoring plans.

- 5.11-2 **Supplemental Water Quality Report.** Prior to issuance of each grading permit, the applicant shall submit a supplemental report to the Master Water Quality Technical Report for Village 9 prepared by Hunsaker & Associates dated August 10, 2011 that identifies which on-site storm water management measures from the Water Quality Technical Report have been incorporated into the project to the satisfaction of the City Engineer. If a storm water management option is chosen by the planning area owner that is not shown in the water quality technical report, a project-specific water quality technical report shall be prepared for the planning area, referencing the Master Water Quality Technical Report for Village 9 for information relevant to regional design concepts (e.g., downstream conditions of concern) to the satisfaction of the City Engineer.
- 5.11-3 **Post-Construction/Permanent Best Management Practices.** Prior to issuance of each grading permit, the City Engineer shall verify that parcel owners have incorporated and will implement post-construction best management practices in accordance with current regulations. In particular, applicants are required to comply with the requirements of Section 2c of the City of Chula Vista's Standard Urban Storm Water Management Plan, the Chula Vista Development Storm Water Manual, and the Master Water Quality Technical Report for Village 9 or any supplements thereto to the satisfaction of the City Engineer. Specifically, the applicant shall implement low impact development best management practices in the preparation of all site plans and incorporate structural on-site design features into the project design to address site design and treatment control best management practices as well as requirements of the hydromodification management plan. The applicant shall monitor and mitigate any erosion in downstream locations that may occur because of on-site development.
- 5.11-4 **Limitation of Grading.** The project applicant shall comply with the Chula Vista Development Storm Water Manual limitation of grading requirements, which limit disturbed soil area to 100 acres, unless expansion of a disturbed area is specifically approved by the Director of Public Works. With any phasing resulting from this limitation, if required, the project applicant shall provide, to the satisfaction of the City Engineer, erosion and sediment control best management practices in areas that may not be completed, before grading of additional area begins.

5.11-5 **Hydromodification Criteria.** The project applicant shall comply, to the satisfaction of the City Engineer, with City hydromodification criteria or the hydrograph modification management plan, as applicable, addressed regionally at the SPA Plan level concurrent with grading and improvement plans for the project.

5.11-6 **Outfall Erosion.** Developer shall monitor any erosion at the project's outfall at the Otay River and, prior to the last building permit for the project, obtain approval for and complete any reconstructive work necessary to eliminate any existing erosion and prevent future erosion from occurring, all to the satisfaction of the Development Services Director.

## **B. Groundwater Supplies and Recharge**

No mitigation measures are required.

## **C. Erosion or Siltation**

Mitigation measures 5.11-1 through 5.11-6 would reduce impacts related to erosion or siltation.

## **D. Surface Runoff**

Mitigation measures 5.11-1 through 5.11-6 would reduce impacts related to surface runoff.

## **E. Exceed Drainage Capacity**

Mitigation measures 5.11-1 through 5.11-6 would reduce impacts related to drainage capacity.

## **F. Degradation of Water Quality**

Mitigation measures 5.11-1 through 5.11-6 would reduce impacts related to degradation of water quality.

## **G. 100-Year Flood Hazards**

No mitigation measures are required.

## **H. Consistency with Water Quality Policies**

No mitigation measures are required.

## **I. Flooding**

No mitigation measures are required.

## **J. Inundation**

No mitigation measures are required.

## 5.11.6 Level of Significance After Mitigation

### A. Water Quality Standards

With implementation of mitigation measures 5.11-1 through 5.11-65 identified above, impacts related to water quality would be reduced to below a level of significance.

### B. Groundwater Supplies and Recharge

Impacts would be less than significant without mitigation.

### C. Erosion or Siltation

With implementation of mitigation measures 5.11-1 through 5.11-65 identified above, impacts related to erosion would be reduced to below a level of significance.

### D. Surface Runoff

With implementation of mitigation measures 5.11-1 through 5.11-65 identified above, impacts related to runoff related to implementation of the project would be reduced to below a level of significance.

### E. Exceed Drainage Capacity

With implementation of mitigation measures 5.11-1 through 5.11-65 identified above, impacts related to runoff related to implementation of the project would be reduced to below a level of significance.

### F. Degradation of Water Quality

With implementation of mitigation measures 5.11-1 through 5.11-65 identified above, impacts related to water quality would be reduced to below a level of significance.

### G. 100-Year Flood Hazards

Impacts would be less than significant without mitigation.

### H. Consistency with Water Quality Policies

Impacts would be less than significant without mitigation.

### I. Flooding

Impacts would be less than significant without mitigation.

### J. Inundation

Impacts would be less than significant without mitigation.

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## 5.12 Agricultural Resources

This section describes the agricultural setting of Village 9 and evaluates the potential for changes in agricultural land use due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR did not address agricultural resources, but relies on the analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01). Section 3.7, Agricultural Resources, of the Otay Ranch GDP Program EIR (90-01) analyzed impacts relating to agricultural resources for the entire Otay Ranch and concluded that implementation of the Otay Ranch GDP would result in significant cumulative effects on agricultural resources. The Otay Ranch GDP Program EIR includes a mitigation measure that requires the preparation of an Agricultural Plan as a condition of approval for Village 9. However, even with implementation of this mitigation the permanent loss of agricultural land was determined to be a significant and unmitigable effect of the Otay Ranch GDP. The analysis and discussion of agricultural resources contained in the Otay Ranch GDP Program EIR are incorporated by reference. The agricultural resources evaluation in this section also updates information in Section 5.7 of the 2005 GPU EIR pertaining to the Village 9 site and off-site locations. The analysis and discussion of agricultural resources contained in the 2005 GPU EIR is incorporated by reference.

### 5.12.1 Existing Conditions

#### A. Regulatory Framework

##### 1. State

##### a. Farmland Mapping and Monitoring Program

In response to a critical need for assessing the location, quality, and quantity of agricultural lands and conversion of these lands over time, the California Department of Conservation established the Farmland Mapping and Monitoring Program (FMMP) in 1982. The goal of the FMMP is to provide consistent and impartial data to decision makers for use in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. A basic purpose of the FMMP is to produce Important Farmland Maps and statistical data for California's agricultural resources. Important Farmland Maps identify the location and quality of agricultural land across the state. The quality of agricultural lands, which is rated on soil quality and irrigation status, is classified into five categories as described below: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land. The minimum mapping unit for all categories is ten acres unless otherwise specified. In addition, the FMMP identifies non-agricultural lands as either urban and built-up land or other land. Important Farmland Maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance. The FMMP is a non-regulatory program.

##### Prime Farmland

Prime Farmland is land that has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management. Prime farmland must have been used for the production of irrigated crops at some time during the two update cycles to the mapping date.



### **Farmland of Statewide Importance**

Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to hold and store moisture. Farmland of Statewide Importance must have been used for the production of irrigated crops at some time during the two cycles prior to the mapping date.

### **Unique Farmland**

Unique Farmland is land of lesser quality soils used for the production of specific high economic value crops (as listed in *California Agriculture* produced by the California Department of Food and Agriculture) at some time during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. Unique Farmland is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Examples of crops on Unique Farmland include oranges, olives, avocados, rice, grapes, and cut flowers.

### **Farmland of Local Importance**

Farmland of Local Importance is important to the local agricultural economy, as determined by the County of San Diego Board of Supervisors and a local advisory committee. The County defines Farmland of Local Importance as land with the same characteristics as Prime Farmland and Farmland of Statewide Importance.

### **Grazing Land**

Grazing Land is land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock. The minimum unit for grazing land is 40 acres.

### **Urban and Built-Up Land**

This classification consists of land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

### **Other Land**

Other land consists of land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land that is greater than 40 acres and surrounded on all sides by urban development is mapped as other land.

#### **b. Williamson Act Program**

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space

uses as opposed to full market value. The goal of the Williamson Act is to encourage the preservation of California's agricultural land and to prevent its premature conversion to urban uses. Currently, there are no active Williamson Act contracts or properties, which are established agricultural preserves, within Chula Vista (City of Chula Vista 2005b).

## **2. Local**

### **a. City of Chula Vista General Plan**

According to the Chula Vista General Plan, through the early 1990s, the last of the large-scale agricultural operations were located primarily on large landholdings within the eastern portion of the city. Agricultural production has been historically constrained due to the limited availability of water for irrigation and the high cost of water where it has been available.

Although the city does not contain any lands specifically designated for agricultural uses within its General Plan area, the potential for agricultural uses to occur within certain portions of the city on both an interim and long-term basis still exists.

A limited number of parcels in the city retain agricultural zoning, which is considered a holding zone, pending development proposals in conformance with the applicable land use plans. Agricultural production associated with these areas is not significant in terms of countywide agricultural value. Long-term agricultural use is not planned for the General Plan area, but is allowed where it is consistent with the Chula Vista MSCP Subarea Plan and zoning, including within portions of the Chula Vista Greenbelt open space system.

The Chula Vista General Plan Environmental Element includes Objective E 4 which is to maintain the opportunity for limited agricultural and related uses to occur as an interim land use within planned development areas and as a potential permanent land use within appropriate locations.

### **b. Otay Ranch Grazing Ordinance**

The Otay Ranch Grazing Ordinance (CVMC Chapter 17.30) has been prepared as one of several Chula Vista MSCP Subarea Plan implementing ordinances. The purpose of the ordinance is to implement the goals and recommendations of the range management plan for the Otay River Valley Management Area. The ordinance states that it is unlawful to conduct grazing activities in Chula Vista on land designated by the Otay Ranch GDP as Otay Ranch Preserve, except as provided in the ordinance. Ordinance regulations apply to all land designated by the Otay Ranch GDP as Otay Ranch Preserve and as 100 percent conservation area in the Chula Vista MSCP Subarea Plan. As shown on Figure 5.6-1, Vegetation Communities, two areas in the southern portion of Village 9 are located in the 100 percent conservation area and the Otay Ranch Preserve. Additionally, for areas where interim grazing is allowed, the draft grazing ordinance establishes controls or provides for grazing to be phased out in highly sensitive areas (i.e., riparian areas), unless grazing is determined to be biologically beneficial. For areas designated for restoration, cessation of grazing is required for a period of time prior to initiation of restoration activities to facilitate soil preparation and exotic plant control.

### **c. Otay Ranch General Development Plan**

The Otay Ranch GDP establishes goals, objectives and policies related to the protection of agricultural resources. While these are general in nature, they are intended to be applicable to the entire Otay Ranch GDP area, including Village 9. The applicable GDP objectives and policies related to agricultural resources are listed below.

- **Objective:** Preserve sensitive and significant biological, cultural, paleontological, flood plain, visual, and agricultural resources.
- **Policies:**
  - Provide opportunities for demonstration agricultural activities within the Preserve. A site, which supports prime or statewide important soils, should be located near proposed composting facilities and Bird Ranch. A plan for the size and operation of the demonstration agricultural activities will be subject to review and approval of the Preserve Owner/Manager and/or the Otay Valley Regional Park management and shall be submitted concurrent with the conveyance for this area or prior to adoption of the last SPA on the Otay Valley parcel, whichever occurs first. In addition to the demonstration agricultural site, sites should be made available for smaller community gardens adjacent to or within individual villages. Some community gardens may be located within open space areas being maintained by an open space maintenance district, with specific design and maintenance issues to be addressed at the SPA Plan review.
  - Existing agricultural uses, including cultivation and grazing, shall be permitted to continue as an interim activity only where they have occurred historically and continually. No increase in irrigation shall be allowed, except for temporary irrigation that may be installed as part of restoration plans. Grazing by sheep and goats shall not be allowed. Cattle grazing shall be phased out in accordance with the conveyance program and range management plan.
- **Objective:** Encourage effective utilization of agricultural soils located within the Preserve.
- **Policies:**
  - Provide opportunities for an agricultural activity area within the Preserve.
  - Allow historical agricultural uses during project build-out within the Preserve except on the Otay Valley parcel, where all grazing shall cease upon approval of the Otay Ranch GDP/SRP.
  - The Preserve Manager shall determine a grazing policy for parcels conveyed to the Preserve.
  - Allow historical agricultural uses during project build-out within areas subject to development during project phases.
  - Important agricultural soils shall be further evaluated at the SPA level and placed in open space or if contiguous to, added to the Preserve where feasible.
  - Establish a composting program for the Otay Ranch that utilizes lost reclaimed water nutrients mixed with dry shredded landscape trimmings and other similar materials.
  - Policies and guidelines shall be developed at the SPA level for community gardens adjacent to or within individual villages. Some community gardens may be located within open space areas being maintained by an open space maintenance district, with specific design and maintenance issues to be addressed during SPA Plan review.

#### d. Otay Ranch Resource Management Plan

Chapter 3 of the Otay Ranch RMP contains several objectives and policies related to agriculture. The single unifying goal of the RMP is the establishment of an open space system that will become a permanent preserve dedicated to the protection and enhancement of environmental resources. In conformance with the RMP, a range management plan for Otay Ranch was subsequently prepared. In general, the range management plan recommendations and implementing actions provide for ongoing managed grazing activities on conveyed lands if the activity is shown not to negatively affect biological resources.

## B. Existing Agricultural Operations

The 2005 GPU EIR identifies the entire Otay Ranch area as important potential agricultural land. However, the General Plan EIR also acknowledges that agricultural opportunities in the area are becoming less feasible. The land utilized for agricultural activities in areas surrounding the Otay Ranch has decreased over the years. Factors that have led to the decrease in agricultural use include the conversion of farmland to urban uses as a result of land value. The high cost of importing water for irrigation has also resulted in many agricultural activities becoming cost prohibitive.

The project site contains farmlands of local importance and grazing land according to the FMMP, which is described in greater detail below in Section 5.12.2 (DOC 2007). Farmland of Local Importance is important to the local agricultural economy, as determined by the County Board of Supervisors and a local advisory committee. Grazing land is land on which the existing vegetation is suitable for browsing of livestock. Historical agricultural uses within the project site include farming as well as cattle and sheep ranching. Crop production was limited to the “dry farming” of hay and grains due to the lack of water. No cattle or farming activities are currently active on the site; however, interim agricultural activity is permitted.

### 5.12.2 Thresholds of Significance

According to the CEQA Guidelines, Appendix G, impacts to agricultural resources would be significant if the project would:

- **Threshold 1:** Convert prime farmland, unique farmland, or farmland of statewide importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use.
- **Threshold 2:** Conflict with existing zoning for agricultural use or a Williamson Act contract.
- **Threshold 3:** Be inconsistent with General Plan agricultural resource policies thereby resulting in a significant physical impact.

### 5.12.3 Impact Analysis

#### A. Threshold 1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

Based on the 1993 Otay Ranch GDP EIR, any conversion of agricultural land to non-agricultural use in Otay Ranch is considered a significant direct impact due to an incremental and irreversible regional loss or impairment of agricultural land. Development of the SPA Plan and TM would not convert prime farmland, unique farmland, or farmland of statewide importance to non-agricultural use, based on the maps prepared by the California Department of Conservation pursuant to the FMMP (DOC 2008). The project would, however, convert approximately 190 acres of farmland of local importance and grazing land to urban uses resulting in a countywide incremental loss of agricultural land. Once fully developed, the project would eliminate the potential for agricultural activity to occur on site; however, portions of Village 9 may continue to be used for grazing or dry farming while adjacent uses are developed. Agricultural use of Village 9 is currently constrained because of the lack of a reliable and affordable source of water. Additionally, the General Plan states that agricultural production in Chula Vista is not significant in terms of countywide agricultural value and is not a major factor in the local economy. Long-term agricultural uses are not planned for the City. Nevertheless, the project will contribute to an

incremental loss of grazing land. Consistent with earlier findings in the 1993 Otay Ranch GDP Program EIR, this is considered a potentially significant impact.

Additionally, if agricultural activities occur on site, the potential for land use conflicts between agricultural land uses and the proposed urban land uses may increase. The incompatibility was associated with noise, odor, rodents, and chemical applications and was identified as a short-term impact in the 1993 Otay Ranch GDP Program EIR. Conflicts would cease upon completion of Village 9 construction because agricultural land uses would be phased out during development.

The 1993 Otay Ranch GDP Program EIR requires the preparation of an agriculture plan concurrent with the processing and approval of an SPA plan where existing or future on-site agricultural uses may affect contemplated development. The Findings of Fact require that the agricultural plan indicate the type of agriculture activity allowed as an interim use and that it includes guidelines designed to minimize land use interface impacts related to noise, odors, dust, insects, rodents, and chemicals that may be produced or used by agricultural activities or operations. An Agricultural Plan has been prepared as part of the Village 9 SPA Plan in accordance with the mitigation identified in the 1993 Otay Ranch GDP Program EIR. The plan would allow for interim agricultural activity within Village 9 and the adjacent ownership area, and prevent potential land conflicts by providing separation between urban uses and adjacent agricultural uses. The Agriculture Plan includes a requirement for notification of adjacent property owners of pesticide use and other potentially harmful activities, as well as physical barriers, if warranted. Implementation of the Agricultural Plan would reduce impacts associated with incompatible land uses to a less than significant level.

### **B. Threshold 2: Conflict with existing zoning for agricultural use or a Williamson Act contract.**

The project would not affect Williamson Act contract lands because there is not land under a Williamson Act Contract within Chula Vista. No impact related to Williamson Act contracts would occur.

Agricultural activities in the city are allowed on lands zoned for Agriculture (A-8, A-X), and Planned Community (P-C) on an interim basis. Although the project site is zoned as a planned community and interim agricultural land uses are allowed, no agricultural activities currently take place on the site. Interim agricultural activities would continue to be permitted on the project site during the phased development of the project, but would cease upon full project buildout. Development is not required to maintain the potential for agricultural land used in the planned community zone. Therefore, implementation of the project would not conflict with existing zoning and this impact would be less than significant. Refer to the analysis under Threshold 1 for a discussion of the potential for the project to convert farmland to non-agricultural use and the potential for interim conflicts between agricultural and urban land uses to occur.

### **C. Threshold 3: Be inconsistent with General Plan agricultural resource policies thereby resulting in a significant physical impact.**

The comparison of the project with the relevant agriculture objective and policies of the General Plan is provided in Table 5.12-1. As shown in Table 5.12-1, the project would be consistent with all applicable General Plan policies.



**Table 5.12-1 Project Consistency with Applicable General Plan Agriculture Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 4:</b> Maintain the opportunity for limited agricultural and related uses to occur as an interim land use within planned development areas and as a potential permanent land use within appropriate locations</p> <p><b>Policy E 4.1:</b> Allow historical agricultural uses to continue within planned development areas as an interim land use in accordance with the MSCP Subarea Plan.</p> <p><b>Policy E 4.2:</b> Allow agricultural uses on privately-owned property within the Chula Vista Greenbelt and elsewhere, provided the use is consistent with the provisions of the Chula Vista MSCP Subarea Plan, as well as the zoning of the property.</p> <p><b>Policy E 4.3:</b> Encourage the development of community gardens and similar related uses within appropriate, compatible locations throughout the City.</p>	<p><b>Consistent.</b> The SPA Plan and TM is consistent with these relevant policies. Although no agricultural uses currently exist on the site, agricultural activity would be permitted in the interim phases until the project is fully developed in accordance with the Agricultural Plan. Should agricultural activities occur on site, there is the potential for land use conflicts with adjacent ownership areas. An Agricultural Plan has been prepared as part of the SPA Plan in accordance with the mitigation identified in the 1993 Otay Ranch GDP Program EIR. The plan would allow for interim agricultural activity within Village 9, and would prevent potential land use impacts between developed land and ongoing agricultural activities by providing separation between urban uses and adjacent agricultural uses.</p> <p>No impacts regarding Williamson Act contract lands, or conflicts with existing zoning for an agricultural use would occur.</p> <p>Community gardens would be permitted within all residential, mixed use, parks, and CPF sites.</p>

The Otay Ranch Grazing Ordinance applies to the project because it states that it is unlawful to conduct grazing activities in Otay Ranch Preserve. For areas where interim grazing is allowed, the grazing ordinance establishes controls or provides for grazing to be phased out in highly sensitive areas. Agricultural activities in Village 9 would be phased out as the project is developed, consistent with this ordinance. No agricultural activities would be permitted in the Preserve. Access to the Preserve would be limited to the proposed public access trails. Therefore, the proposed project would be consistent with the Otay Ranch Grazing Ordinance.

The Otay Ranch GDP also establishes goals, objectives and policies related to the protection of agricultural resources. The consistency of the SPA Plan with the applicable GDP objectives and policies is provided in Table 5.12-2. As shown in this table, the project is consistent with the Otay Ranch GDP policies because the project would phase out interim agricultural activities on the project site, but agricultural opportunities would continue to be provided through community gardens.

## 5.12.4 Level of Significance Prior to Mitigation

### A. Direct Conversion of Agricultural Resources

Development of Village 9 would not result in significant land uses conflicts that would result in the conversion of agricultural resource. However, implementation of the SPA Plan and TM would result in a significant impact to agricultural resources, due to the on-site loss of approximately 190 acres of farmland of local importance and grazing land. Short-term land use incompatibility issues from ongoing agricultural activities adjacent to urban land uses would be significant without implementation of the Agricultural Plan.

**Table 5.12-2 Project Consistency with Applicable GDP Agriculture Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective:</b> Preserve sensitive and significant biological, cultural, paleontological, flood plain, visual, and agricultural resources.</p> <p><b>Policy:</b> Provide opportunities for demonstration agricultural activities within the Preserve. A site, which supports prime or statewide important soils, should be located near proposed composting facilities and Bird Ranch. A plan for the size and operation of the demonstration agricultural activities will be subject to review and approval of the Preserve Owner/ Manager and/or the Otay Valley Regional Park management and shall be submitted concurrent with the conveyance for this area or prior to adoption of the last SPA on the Otay Valley Parcel, whichever occurs first. In addition to the demonstration agricultural site, sites should be made available for smaller “community gardens” adjacent to or within individual villages. Some community gardens may be located within open space areas being maintained by an open space maintenance district, with specific design and maintenance issues to be addressed at the SPA Plan review.</p> <p><b>Policy:</b> Existing agricultural uses, including cultivation and grazing, shall be permitted to continue as an interim activity only where they have occurred historically and continually. No increase in irrigation shall be allowed, except for temporary irrigation that may be installed as part of restoration plans. Grazing by sheep and goats shall not be allowed. Cattle grazing shall be phased out in accordance with the conveyance program and Range Management Plan.</p>	<p><b>Consistent.</b> The project is not located near the Bird Ranch Area and the SPA plan does not include a site for demonstration agricultural activities. Community gardens are permitted in Village 9 within all residential, mixed use, parks, and CPF sites.</p> <p>As discussed under Threshold 1, interim agricultural uses would continue to be permitted within the project site during the phased construction of Village 9 in accordance with the Agricultural Plan, but would cease upon project buildout.</p>
<p><b>Goal:</b> Recognize the presence of important agricultural soils both in areas subject to development and within the Preserve.</p> <p><b>Objective:</b> Encourage effective utilization of agricultural soils located within the Preserve.</p> <p><b>Policy:</b> Provide opportunities for an agricultural activity area within the Preserve.</p> <p><b>Policy:</b> Allow historical agricultural uses during project build-out within the Preserve except on the Otay Valley parcel, where all grazing shall cease upon approval of the Otay Ranch GDP/SRP.</p> <p><b>Policy:</b> The Preserve Manager shall determine a grazing policy for parcels conveyed to the Preserve.</p> <p>Allow historical agricultural uses during project build-out within areas subject to development during project phases.</p> <p><b>Policy:</b> Important agricultural soils shall be further evaluated at the SPA level and placed in open space or if contiguous to, added to the Preserve where feasible.</p> <p>Establish a composting program for the Otay Ranch that utilizes lost reclaimed water nutrients mixed with dry shredded landscape trimmings and other similar materials.</p> <p><b>Policy:</b> Policies and guidelines shall be developed at the SPA level for community gardens adjacent to or within individual villages. Some community gardens may be located within open space areas being maintained by an open space maintenance district, with specific design and maintenance issues to be addressed during SPA Plan review.</p>	<p><b>Consistent.</b> As discussed under Threshold 1, interim agricultural uses would continue to be permitted in the project area until project buildout in 2030 in accordance with the Agricultural Plan. Village 9 is designated as grazing and farmland of local importance; however, agricultural activities on the site are constrained by access to water and do not currently occur on the site. Therefore, the project site does not contain agricultural soils that would be considered important for conservation. A portion of Village 9 contains land designated as MSCP Preserve; however, with implementation of the SPA Plan, no agricultural activities would be permitted in this area. Opportunities for agricultural activity on the site would be provided through community gardens, which would be permitted in all residential, mixed use, parks, and CPF sites.</p>

## **B. Land Use Zoning Conflicts**

Impacts related to land use zoning conflicts and consistency with agricultural resource policies would be potentially significant if the Agriculture Plan is not implemented concurrent with development.

## **C. Agricultural Resource Policies**

No significant impacts related to agricultural resources policies have been identified for implementation of the SPA Plan and TM.

### **5.12.5 Mitigation Measures**

#### **A. Direct Conversion of Agricultural Resources**

No feasible mitigation measures are available for the loss of farmland of local importance and grazing land. The following measure would reduce impacts related to short-term land use incompatibility issues.

5.12-1 **Agricultural Plan.** The Agricultural Plan included in the SPA Plan shall be implemented as development proceeds in Village 9. The following measures shall be implemented to the satisfaction of the Chula Vista Development Services Director (or their designee):

- i. Prior to approval of each building permit, the applicant shall ensure that a 200-foot fenced buffer shall be maintained between development and any ongoing agricultural operations on the property.
- ii. In those areas where pesticides are to be applied, the farmland owner shall utilize vegetation to shield adjacent urban development (within 400 feet) from agricultural activities. Use of pesticides shall comply with federal, state, and local regulations.
- iii. If permitted interim agricultural uses require the use of pesticides, the farmland owner shall notify adjacent developed property owners of potential pesticide application a minimum of 10 days prior to application through advertisements in newspapers of general circulation. Limits shall be established as to the time of day and type of pesticide applications that may be used. The use of pesticides shall comply with federal, state, and local regulations.

## **B. Land Use Zoning Conflicts**

Mitigation measure 5.12-1 would also reduce impacts related to land use zoning conflicts.

## **C. Agricultural Resource Policies**

No mitigation measures are required.

### **5.12.6 Level of Significance After Mitigation**

#### **A. Direct Conversion of Agricultural Resources**

The incremental loss of agricultural lands (farmland of local importance, grazing land), which was considered a significant impact in the 1993 Otay Ranch GDP Program EIR, remains significant. No mitigation measures are available to reduce this impact to below a level of significance without

restricting the development proposed in the Village 9 SPA Plan and TM to allow interim agricultural uses to continue in perpetuity. This incremental loss remains significant and unavoidable. With implementation of mitigation measure 5.12-1, agricultural impacts related to short-term land use incompatibilities would be reduced to below a level of significance.

### **B. Land Use Zoning Conflicts**

With implementation of mitigation measure 5.12-1, agricultural impacts related to land use zoning conflicts would be reduced to below a level of significance.

### **C. Agricultural Resource Policies**

Impacts would be less than significant without mitigation.

## 5.13 Hazards and Hazardous Materials

This section describes existing hazards and hazardous materials in Village 9 and surrounding area and evaluates the potential for hazards and hazardous materials impacts due to implementation of the SPA Plan and TM.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR does not address hazards and hazardous materials, but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01). The following evaluation of hazards and risk of upset is based on the project level Phase I Environmental Site Assessment Report (Phase I ESA), prepared by Geocon Incorporated (March 2011). The Phase I ESA updates the applicable information contained in these previously certified EIRs. This site-specific study is contained in Appendix J of this EIR.

### 5.13.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Federal

###### a. Environmental Protection Agency

The EPA enforces a mandated National Hazardous Waste Management Program, as established by the Federal Resources Conservation and Recovery Act (RCRA). Under RCRA regulations, hazardous wastes must be tracked from the time of generation to the point of disposal. The RCRA program also sets out standards for hazardous waste treatment, storage and disposal units in a manner that minimizes the present and future threat to the environment and human health. The EPA also sets forth regional preliminary remediation goals, which establish contamination values for residential land uses. The EPA Region 9 remediation goals combine current EPA toxicity values with standard exposure factors to estimate contaminated concentrations in environmental media (soil, air, and water) that are considered protective of humans, including sensitive groups, over a lifetime.

###### b. Federal Aviation Administration

The FAA, which oversees airport safety and rules associated with development that may present a safety concern near existing airports, requires that Form 7460-1, Notice of Proposed Construction or Alteration, be filed with the FAA regional office prior to construction of buildings that are 200 feet or higher above the graded terrain. Minimum FAA safety standards include the marking or lighting of any structures 200 feet in height or greater from the graded terrain.

##### 2. State

###### a. California Environmental Protection Agency Department of Toxic Substances Control

The CalEPA Department of Toxic Substances Control (DTSC) is the primary regulatory agency administering RCRA and non-RCRA hazardous waste programs. Under CCR Title 22, Division 4.5, wastes are classified as California hazardous, if 1) the total constituent content exceeds the total threshold limit concentration, or 2) the soluble constituent content exceeds the soluble threshold limit concentration based on a waste extraction test. If transported off site, California hazardous wastes require management as a hazardous waste and disposal at a Class 1 disposal facility.



### **b. California Environmental Protection Agency Office of Environmental Health Hazard**

The CalEPA Office of Environmental Health Hazard sets forth the California Human Health Screening Levels (CHHSLs), a standard minimum level for risk-based concentrations of various chemicals on contaminated properties. The CHHSL values are non-regulatory and do not necessarily imply that adverse effects to human health would occur if concentrations were above the respective CHHSL.

### **c. CCR Title 5, Division 1, Chapter 13, Subchapter 1 – School Facilities Construction**

CCR Title 5, Division 1, Chapter 13, Subchapter 1 establishes minimum standards for the siting of schools and school construction to provide safety for students and staff. The regulation establishes minimum distances that schools can be located from potential hazards such as power line easements, and sets screening distances for other hazards that would require a safety study, such as a railroad track easement. Section 14010(h) states that schools shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study. Section 14010(t) states that if the proposed site is on or within 2,000 feet of a significant disposal of hazardous waste, the school district shall contact the Department of Toxic Substance Control for a determination of whether the property should be considered a hazardous waste property or border zone property and unsuitable for school development.

## **3. Regional**

### **a. Regional Water Quality Control Board**

The RWQCB implements the California Water Code which regulates waste discharges to land. If a discharge of waste threatens the waters of the state, a report of waste discharge or an application for a waiver of a Report of Waste Discharge, must be filed with the RWQCB. The RWQCB accomplishes its permitting responsibility by issuing either a general or site-specific permit (Waste Discharge Permit) or a waiver of a permit.

## **4. Local**

### **a. Brown Field Airport Land Use Compatibility Plan**

The purpose of an ALUCP is to provide for the orderly growth of airports and the areas surrounding the airports, and to safeguard the general welfare of inhabitants within an airport's vicinity. An ALUCP addresses compatibility between airport operations and future land uses that surround them by providing policies and criteria for noise, safety, airspace protection, and overflight. An ALUCP serves to both minimize the public's exposure to excessive noise and safety hazards within an Airport Influence Area and preserve the viability of airport operations. The 2004 Brown Field ALUCP was revised and adopted by the County ALUC on December 20, 2010.

### **b. Existing Emergency Response Plans**

#### **San Diego County Emergency Plan**

This comprehensive emergency management system provides for a planned response to disaster situations associated with natural disasters, technological incidents, and nuclear defense operations. The plan includes operational concepts relating to various emergency situations, identifies components of the emergency management organization, and describes the overall responsibilities for protecting life

and property and assuring the overall well-being of the population. The plan also identifies the sources of outside support that might be provided (through mutual aid and specific statutory authorities) by other jurisdictions, state and federal agencies, and the private sector.

#### **San Diego County Multi-Jurisdiction Hazard Mitigation Plan**

The San Diego County Multi-Jurisdiction Hazard Mitigation Plan was prepared in July 2010 to meet federal and state requirements for disaster preparedness to make the county eligible for funding and technical assistance from state and federal hazard mitigation programs. The plan includes a risk assessment to enable local jurisdictions to identify and prioritize appropriate mitigation actions that will reduce losses from potential hazards, including flooding, earthquakes, fires, and man-made hazards. To address potential hazards, the plan then incorporates mitigation goals and objectives, mitigation actions and priorities, an implementation plan, and documentation of the mitigation planning process for each of the twenty-one participating jurisdictions, including Chula Vista.

#### **California Disaster and Civil Defense Master Mutual Aid Agreement**

As provided for in the California Emergency Services Act, this agreement was developed in 1950 and adopted by all 58 California counties. This statewide mutual aid system is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation. San Diego County is located in Mutual Aid Region 6 of the state system, which also includes Imperial, Riverside, San Bernardino, Inyo, and Mono counties.

#### **Unified County Emergency Services Organization**

The City of Chula Vista has comprehensive agreements with the Bureau of Land Management, California Department of Forestry, California Conservation Corps, Urban Search and Rescue Corps, San Diego County Fire Mutual Aid, and other agencies in conjunction with the California Disaster and Civil Defense Master Mutual Aid Agreement. Village 9 is incorporated into Chula Vista's existing emergency disaster programs, including all fire and emergency services and mutual aid agreements.

#### **Community Emergency Response Team Program**

The City of Chula Vista provides a CERT program that offers training to citizens to teach them how to effectively and efficiently respond to emergency situations without placing themselves or others in unnecessary danger. CERT training includes lessons on managing utilities, putting out small fires, providing basic emergency medical aid, searching and rescuing victims safely, effectively organizing volunteers, and collecting disaster information to support first responders.

#### **c. City of Chula Vista General Plan**

The goals of the General Plan to remediate future development sites in accordance with applicable state and federal standards and to manage household hazardous waste are to minimize the risk of injury and property damage associated with wildland fire hazards (Objective E 16) and ensure that adequate remediation of contaminated sites as redevelopment occurs in order to protect public health and safety (Objective E 17).

## B. Hazardous Site Database Record Search

The Phase I ESA for Village 9 evaluated current environmental conditions and the presence of hazardous materials or substances. As part of the Phase I ESA, a search of standard environmental regulatory databases was conducted to determine if any listed hazardous sites are located within one mile of Village 9. The Phase I ESA reviewed a broad range of standard federal, state, and local environmental regulatory databases, as well as additional environmental record sources to supplement the standard databases. The project site itself is not listed in any of the standard regulatory databases; however, the search identified three sites within one mile of Village 9 listed in the DTSC Site Mitigation and Brownfields Reuse Program's (SMBRP) EnviroStor database and one site depicted on the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website, and three sites on file with the San Diego County Department of Environmental Health (DEH), described below.

Otay Ranch Village 7, approximately 3,500 feet northwest of Village 9, is included in the EnviroStor database with a status listed as "no further action" as of December 2, 2008. Village 7 is also listed in the database as a school investigation site as part of the SMBRP. Past uses of this property are reported as agricultural. The school investigation is also listed as "no further action" as of March 8, 2007.

A potential school site listed as Otay Ranch Village 11 S-1, approximately 3,000 feet northeast of Village 9, is also listed in the database as a school investigation site as part of the SMBRP. Past uses of this property are reported as educational. Reportedly, multiple phases of investigation were conducted related to the presence of methane in fill soil at this property. The school site is listed as "no further action" as of April 7, 2007.

The facility listed as Middle School No. 12/High School 14, now the High Tech High campus, is located approximately 500 feet northeast of Village 9. The site is listed in the database as a school investigation site as part of the SMBRP and the DTSC's school sites database. Past uses of this property are reported as agricultural. Reportedly, multiple phases of investigation were conducted related to the presence of fill soils at this property. The school site is listed as "no further action" as of December 28, 2006.

The DOGGR identifies one active well approximately 2.5 miles north of Village 9 adjacent to Olympic Parkway and Eastlake Parkway. The well is operated by Todd & Clark and is listed as a production well.

The DEH has three files on record for the project area for Olympian High School, located approximately 0.25 mile west of the project site. The first DEH file indicates that Olympian High School has a permit to generate 200 pounds per month of medical or biohazardous waste, the second file is a violation for not having a cap on a container, and the third file updates the emergency contacts for the permit.

Geocon also reviewed the *Final Site Inspection Report Former Brown Field Bombing Range, San Diego County, California*, prepared by Parsons dated December 2007. Included in the report are site plans that depict the location of the former bombing range, the bomb and aerial rocket target boundaries, and the extent of the formerly used defense site property boundary. The site features of the former bombing range are located a minimum of approximately 1,600 feet and the defense site is located approximately 650 feet from Village 9. No environmental concerns associated with the range were identified within Village 9.

### **1. Conditions Associated with Existing Uses**

Village 9 is currently unoccupied, undeveloped, and covered with vegetation. Several existing potable water pipelines, associated air valves, and cables traverse the site. An old concrete water trough is located within a fenced area in the southern portion of the site. Several dirt access roads extend across the southern and central portions of the site. A wood and barbed-wire fence also extends across the site. Geocon did not observe other wells or utilities associated with the project site with the exception of the San Diego-Otay pipeline. The Phase I ESA did not identify any current conditions of concern on the project site, such as stained soil, evidence of pits, storage tanks, underground utilities of concern, or stressed vegetation.

### **2. Conditions Associated with Prior Uses**

Prior uses of Village 9 include cultivated agricultural fields at various times between 1953 and 2009. The Phase I ESA concluded that potential soil contamination may be present on Village 9 from residual concentrations of pesticides and herbicides, due to similar conditions found on the EUC site (directly north of Village 9). In the EUC site, organochlorine pesticides were detected in the upper three feet of soil. Concentrations of toxaphene, dichlorodiphenyldichloroethane (DDD), dichlorodiphenyl-trichloroethane (DDT), and dichlorodiphenyldichloroethylene (DDE) were above their respective residential preliminary remediation goals.

### **3. Conditions Associated with Adjacent Uses**

Paved roads and residential developments are present northwest, north, and northeast of Village 9. An area graded for future school development is present immediately northeast of the site beyond Hunte Parkway. East of Village 9 is agricultural land, Olympic High School, and residential development. The area of the proposed off-site improvements currently consists of former agricultural and undeveloped land. Beyond the agricultural land is Wiley Road. West of the site is SR-125, undeveloped land, former agricultural fields, Olympian High School, and a City of San Diego water supply reservoir. The Phase I ESA did not identify any activities of environmental concern associated with these adjacent uses.

## **C. Other Potential Environmental Hazards**

The 1993 Otay Ranch GDP Program EIR identifies land uses surrounding the Otay Ranch, including the Otay Landfill, Brown Field, and Rock Mountain Quarry, that could potentially create a hazard or risk of upset. According to the EIR prepared for the EUC (City of Chula Vista 2009b), the Otay Landfill, located approximately three miles west of Village 9, is the site of a former hazardous waste reprocessing operation and continues to provide disposal waste services. The Rock Mountain Quarry, located approximately 1.5 miles to the southwest of Village 9, represents a potential source of contamination from waste oil, fuel spillage, residual blasting chemicals, and air emissions. The Phase I ESA did not identify any conditions of concern to Village 9 associated with these adjacent uses.

Brown Field, a municipal airport operated by the City of San Diego, may also present a risk due to flights occurring over Village 9. The manager of Brown Field wrote a comment letter on the Village 9 EIR NOP that expressed the concern that Village 9 would be subject to over flight operations due to its location in relation to the POGGI VORTAC, located approximately 2,500 feet west to the project site. A copy of the letter is provided in Appendix A. Currently, there is an instrument approach procedure which brings aircraft to Brown Field from the north and terminates at POGGI. Once at POGGI, pilots must be able to see the airport visually, and then circle to land. Aircraft fly the approach in any weather condition, day or night, 24 hours a day. According to the ALCUP for Brown Field, the northern portion of the project

site is located within the Airport GPS approach and Airport Composite Circling Approach and would be subject to overflights.

Village 9 is not located within any safety zone for the airport, including the traffic pattern zone, as defined in the Brown Field ALUCP. However, the project site is located within the FAA Height Notification Boundary, Part 77 Airspace Surfaces, Airport Overflight Notification Area for residential development, and Review Area 2 of the Airport Influence Area. Review Area 2 consists of locations within the airspace protection and/or overflight notification areas. Limits on the heights of structures, particularly in areas of high terrain, are the only restrictions on land uses within Review Area 2.

### 5.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts from hazards and hazardous materials would be significant if the project:

- **Threshold 1:** Creates a significant hazard to the public or environment through the routine transport, use or disposal of hazardous materials.
- **Threshold 2:** Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- **Threshold 3:** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- **Threshold 4:** Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, a significant hazard to the public or the environment is created.
- **Threshold 5:** Is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would result in a safety hazard for people residing or working in the project area.
- **Threshold 6:** Is located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area.
- **Threshold 7:** Impairs implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan.
- **Threshold 8:** Exposes people or structures to a significant risk or loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
- **Threshold 9:** Be inconsistent with General Plan, GDP, and other objectives and policies regarding hazards thereby resulting in a significant physical impact.
- **Threshold 10:** Result in an increase in the uses, transport, storage, and disposal of hazardous waste materials and an associated increase in the risk of an upset condition in the area; and/or the historic use of pesticides would result in soil contamination and health effects.



### 5.13.3 Impact Analysis

**A. Threshold 1: Creates a significant hazard to the public or environment through the routine transport, use or disposal of hazardous materials, and**

**Threshold 2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.**

Construction activities in Village 9 would involve the use of common but potentially hazardous materials, including vehicle fuels, paints, cleaning materials, and caustic construction compounds. While these substances could pose a potential health risk to construction workers and to the general public during transport, handling of these common, potentially hazardous materials would occur in accordance with California Occupational Safety and Health Administration (Cal/OSHA) guidelines and would be disposed of in accordance with state and county regulations. Adherence to federal, state and local regulations regarding the use and disposal of hazardous materials and wastes would reduce potential impacts on human health and safety from handling and transport of hazardous construction materials to less than significant.

Occupation of proposed commercial and residential development and maintenance of parks and other public facilities would also involve the use or storage of common hazardous materials, including cleaning solvents typically used in multi-family residential and commercial development, pesticides and related chemicals associated with landscaping maintenance, and paints and solvents. Certain permitted land uses, such as dry cleaners and gas stations, also require the use, storage, and transport of hazardous chemicals or materials, which are regulated by current federal and state regulations, such as RCRA. Health clinics and urgent care facilities would have the potential to generate hazardous medical wastes; however, these facilities would also be regulated by federal and state regulation. Compliance with all applicable regulations would reduce impacts to a less than significant level.

Other commercial, residential, and park land uses are not subject to the same regulatory oversight as land uses that routinely generate hazardous waste. However, Allied Waste Management Services provides solid waste services to Village 9 and operates drop-off facilities that accept paint, batteries, computers, television sets, and other electronics and household hazards. Allied Waste offers curbside pickup for used oil and electronic waste. Additionally, the South Bay Regional Household Hazardous Waste Collection facility is located approximately 3.5 miles west of Village 9 at 1700 Maxwell Road. These facilities would encourage proper disposal of household hazardous wastes. Compliance with manufacturers' instructions and existing regulations is anticipated and would reduce potential exposure of the public and the environment to hazardous materials. Due to the limited amounts and frequency of use of hazardous materials in the proposed land uses, the frequency and severity of exposure to hazardous materials and waste as a result of the commercial, residential, and park land uses proposed for the project site would be less than significant.

As stated in the Phase I ESA, the potential exists for pesticide residue to be uncovered in the soils on the site that could result in an exposure risk to construction workers and future residents of Village 9. This potential impact is addressed below under Threshold 10.

**B. Threshold 3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

Village 9 includes two potential elementary school sites: a site consisting of 11.7 acres of land located in the Urban Neighborhood Zone, and a site consisting of 10.3 acres of land located in the Town Center. Prior to approval of the future school, conditions on the site will be required to comply with Chula Vista Elementary School District and state standards for health and safety issues, including School Facilities Construction requirements in CCR Title 5. In addition, Village 9 is located within 0.25 mile of Olympian High School, located west of SR-125 and the project site, and Wolf Canyon Elementary School, which is located just north of Olympian High School.

As discussed under Threshold 2, use of hazardous materials during construction or operation of the project land uses would not result in a significant risk to the public from the use, transport or disposal of hazardous materials and wastes. However, due to past agriculture activities on the project site, the Phase I ESA identified the potential for pesticide residue in soils that could result in exposure to schools during grading or, if left exposed, during operation of the proposed schools. Therefore, this impact is considered potentially significant.

**C. Threshold 4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, a significant hazard to the public or the environment is created.**

A search of standard environmental regulatory databases was conducted to determine if any listed hazardous sites are located on or within one mile of Village 9. Village 9 is not listed in any of the standard regulatory databases; however, Otay Ranch Village 7, approximately 3,250 feet northwest of Village 9, was listed in the EnviroStor database due to the presence of pesticide-contaminated soils on site. The facility listed as Otay Ranch Village 11 S-1, approximately 3,000 feet northeast of Village 9, was listed in the EnviroStor database for investigations conducted pertaining to the presence of methane in fill soil at this property. The facility listed as Middle School No. 12/High School 14, approximately 500 feet northeast of Village 9, is listed in the EnviroStor database due to multiple phases of investigation related to the presence of fill soils at this property. One active gas well listed in the DOGGR database is located approximately 2.5 miles north of the Village 9 adjacent to Olympic Parkway and Eastlake Parkway. Olympian High School, located approximately 0.25 mile west of the project site, has a permit to generate up to 200 pounds per month of medical or biohazardous waste. The Phase I ESA concluded that these sites do not present a risk to the project site. Therefore, no impacts with respect to this threshold would occur.

**D. Threshold 5: Is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would result in a safety hazard for people residing or working in the project area, and**

**Threshold 6: Is located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area.**

Village 9 is located approximately 1.75 miles to the northeast of Brown Field, a City of San Diego municipal airport. Village 9 is located within the approach area for Brown Field subject to overflights

from both Brown Field and the Tijuana Airport, a commercial facility, just over one mile to the south of Brown Field. Aircraft operations at Brown Field are required to comply with all applicable FAA regulations that are intended to ensure safe operation of aircraft. Flights to and from the Tijuana Airport in U.S. airspace over Village 9 are required to coordinate with FAA traffic controllers. Additionally, Mexico is rated Category 1, the top category, in FAA's International Aviation Safety Assessment Program (Air Safety Network 2011). This program focuses on a country's ability to adhere to international standards and recommended practices for aircraft operations and maintenance established by the United Nation's technical agency for aviation, the International Civil Aviation Organization (FAA 2010). With continued compliance with safety regulations and standards, it is not reasonably foreseeable that continued operations at Brown Field or the Tijuana Airport would result in a safety hazard to Village 9.

Village 9 is located within the Brown Field Airport FAA height notification boundary, a Part 77 Airspace Surface, and Airport Overflight Notification Area for residential development, and Review Area 2 of the Airport Influence Area. If the project results in development that would obstruct the flight approach paths for Brown Field, a potentially significant safety hazard from flight operations at Brown Field would occur. Exhibits III-3 and III-4 of the Brown Field ALUCP show the elevations above mean sea level that would penetrate an approach surface or FAA Part 77 Airspace Surface. Five FAR Part 7 Airport Surface height contours traverse the project area.

The lowest contour at 700 feet AMSL traverses Village 9 in the southwest corner the site, approximately through an area designated Neighborhood Edge Zone. After grading, the highest ground level in this area would be 400 feet AMSL. The maximum allowable building height in the Neighborhood Edge Zone under the SPA Plan would be 35 feet. Therefore, development in Village 9 would not penetrate the 700 feet AMSL Part 77 Airspace Surface contour.

The 750 feet FAR Part 77 Airport Surface contour traverses the southwest portion of the site, through areas designated as the Urban Neighborhood Zone, Neighborhood General Zone, and the Neighborhood Edge Zone. The maximum ground level height in this area would be 415 feet AMSL and the maximum allowable building height would be 45 feet in the Urban Neighborhood Zone. Therefore, development in Village 9 would not penetrate the 750 feet AMSL Part 77 Airspace Surface contour.

The 800 feet FAR Part 77 Airport Surface contour traverses the Neighborhood Park, the CPF site, and area designated as Urban Neighborhood Zone. The maximum ground level height in this area would be 490 feet AMSL and the maximum allowable building height would be 45 feet. Therefore, development in Village 9 would not penetrate the 800 feet AMSL Part 77 Airspace Surface contour.

The 850 feet FAR Part 77 Surface contour traverses the central portion of the site, through areas designated as the Urban Neighborhood Zone and the Town Center Zone. The maximum ground level in this area would be 560 feet AMSL and the maximum building height would be 60 feet in the Town Center. Therefore, development in Village 9 would not penetrate the 850 feet AMSL Part 77 Airspace Surface contour.

The fifth airspace surface contour at 876.3 feet AMSL traverses the northern portion of the site, through areas designated as the Urban Center Zone and the Town Center Zone. The maximum ground level elevation would be 610 feet AMSL in this area and the maximum allowable height would be 215 feet in the Urban Center Zone. Therefore, development in Village 9 would not penetrate any FAR Part 77 Airport Surface. The lowest airspace protection surface for an approach surface over the project site is 920 feet AMSL for the airport composite circling approach. This surface is higher than all of the FAR Part

77 Airport Surfaces; therefore, it would not be penetrated by the buildings in Village 9. Due to the limit height established in the Village 9 SPA Plan, it is not anticipated that development of the tallest structures would result in an obstruction to air traffic. However, because Village 9 is located within the FAA Height Notification Boundary and Airport Overflight Notification Area, proper notification in compliance with the Brown Field ALCUP is required to reduce this impact to a less than significant level.

**E. Threshold 7: Impairs implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan.**

As stated in Section 8.9.4 of the SPA Plan, Emergency Disaster Plan, the GDP requires all SPA plans to provide an “Emergency Disaster Plan” that addresses the various hazards that have the potential for disrupting communities, causing damage, and creating casualties within the area. These disaster situations are implemented by the regional plans available in the area, as listed in Section 3.3.1.3(J) of the Emergency Disaster Plan. The SPA Plan and TM would support the intent of local and regional emergency response and evacuation plans through accessibility to fire services from Fire Station #7, approximately 1.5 miles from the northern border of Village 9.

The project would not interfere with City emergency response plans because it would not obstruct any existing roadways of evacuation routes. The construction of Main Street and Otay Valley Road through the site would provide regional connectivity to both the I-805 and SR-125, and would reduce the potential for gridlock on the roadways that serve as evacuation routes during major disasters. The proposed circulation system would also facilitate evacuation and emergency response by providing multiple access points internally within the site as well as to the surrounding regional circulation system (see Figure 3-5, Roadway Circulation System).

Additionally, as discussed in Section 5.9, Public Services, the implementation of the PFFP prepared for Village 9, payment of the Public Facilities Development Impact Fee, and implementation of the GMO threshold standards would ensure that development of Village 9 will not adversely impact fire protection and emergency services. Therefore, impacts with respect to emergency preparedness and evacuation are less than significant.

**F. Threshold 8: Exposes people or structures to a significant risk or loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.**

Village 9 is located within an area designated at a high risk for wildland fire hazards (Figure 9-9 of the General Plan). The site has been used historically for agricultural purposes and is currently undeveloped. The project site is surrounded by undeveloped land, including the wildland in the Otay River Valley. The exposure of people and structures to wildland fires is greatest in areas located within or adjacent to wildlands; however, vacant lands in which weeds and brush have not been controlled in close proximity to occupied uses may also present a wildfire hazard. Upon project buildout, development along the western, eastern, and southern boundaries may be adjacent to undeveloped land. During the interim phases of project construction, occupied development may be adjacent to vacant areas within the site.

In accordance with the requirements of the City of Chula Vista Fire Department, Chapter 47 of the 2007 California Fire Code, the SPA Plan includes a Fire Protection Plan for all new development in the Urban Wildland Interface. The purpose of the Fire Protection Plan is to identify a fuel management strategy that would reduce the risk of fire and protect the life, safety, and property of residents living adjacent to

wildland areas that are susceptible to fire. The project Fire Protection Plan includes requirements for fuel management during all phases of project construction.

As the project site is constructed in phases, fuel management zones would be established for parcels within 100 feet of any structure under construction or existing. The fuel modification zones would be installed and maintained prior to any flammable material being brought to the parcel. Following buildout of Village 9 and the surrounding area, the plan requires a minimum of 150 feet of fuel management for development adjacent to the Preserve. The proposed fuel modification area is shown in Figure 3-13. The plan establishes standards for vegetation to be included in the fuel management area, planting guidelines, and maintenance requirements. With implementation of the Fire Protection Plan, the impact associated with the risk of wildland fires would be reduced to a less than significant level.

**G. Threshold 9: Be inconsistent with General Plan, GDP, and other objectives and policies regarding hazards thereby resulting in a significant physical impact.**

The project’s consistency with applicable policies of the Chula Vista General Plan is described in Table 5.13-1 and the project’s consistency with the GDP is described in Table 5.13-2. As shown in Tables 5.13-1 and 5.13-2, the project would meet the policy requirements of General Plan and GDP and impacts would be less than significant impact.

**Table 5.13-1 Project Consistency with Applicable General Plan Hazards Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective LUT 6:</b> Ensure adjacent land uses are compatible with one another.</p> <p><b>Policy LUT 6.8:</b> Require that any land use that handles, generates and/or transports hazardous substances, will not negatively impact existing or future sensitive receptors/land uses, as defined by state and federal regulations.</p>	<p><b>Consistent.</b> As discussed under Threshold 1, all future development would be required to comply with state and federal hazardous material regulations.</p>

**Table 5.13-2 Project Consistency with Applicable GDP Hazards Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Goal:</b> Promote public safety and provide public protection from fire, flooding, seismic disturbances, geologic phenomena and manmade hazards in order to preserve life, health and property; continue government functions and public order; maintain municipal services; and rapidly resolve emergencies and return the community normalcy and public tranquility.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this policy. Although Village 9 is located in a designated high hazard area (General Plan, Figure 9-9) and may be susceptible to fires, the implementation of a Fire Protection Plan as part of the SPA Plan would minimize wildland fire potential, as discussed above under Threshold 8. Additionally, as discussed under Threshold 1, Hazards and Hazardous Materials, all future development would be required to comply with state and federal hazardous material regulations. Therefore, the project would be consistent with this policy as it related to fire and manmade hazards. Flooding is addressed in Section 5.11, Hydrology and Water Quality, and seismic disturbances are addressed in Section 5.8, Geology and Soils.</p>



**Table 5.13-2 Project Consistency with Applicable GDP Hazards Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Objective:</b> Minimize social and economic dislocations resulting from injuries, loss of life and property damage.</p> <p><b>Policy:</b> Incorporate the Otay Ranch Project Area into existing regional disaster preparedness programs including mutual aid agreements.</p> <p><b>Policy:</b> Establish and maintain safe and effective evacuation routes.</p>	<p><b>Consistent.</b> As discussed under Threshold 7, the SPA Plan would implement the regional disaster plans available in the area, listed in Section 3.3.1.3(J) of the SPA Plan, Emergency Disaster Plan. The SPA Plan would support the intent of local and regional emergency response and evacuation plans through accessibility to fire services, connectivity to major arterials, and future connectivity to SR-125. Evacuation from and emergency response within Village 9 would be enhanced by the proposed circulation system. The project would not interfere with City emergency response plans because it does not interfere with any existing roadways of evacuation routes. The proposed Main Street and Otay Valley Road would provide regional connectivity to both the I-805 and SR-125, which would reduce the concentration of gridlock or blockage of either of these major highways, which would be needed to provide evacuation during major disasters.</p>
<p><b>Objective:</b> Prevent property damage and loss of life due to fire, crime or hazardous substances.</p> <p><b>Policy:</b> Arrange land uses in a manner consistent with recognized health, fire, crime prevention and protection practices.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this policy. Although Village 9 is located in a designated high hazard area (General Plan, Figure 9-9) and may be susceptible to fires, the implementation of a Fire Protection Plan as part of the SPA Plan would minimize wildland fire potential, as discussed above under Threshold 8. Health and crime prevention are addressed in Section 5.9, Public Services.</p>

**H. Threshold 10: Result in an increase in the uses, transport, storage, and disposal of hazardous waste materials and an associated increase in the risk of an upset condition in the area; and/or the historic use of pesticides would result in soil contamination and health effects.**

As discussed under Thresholds 2 and 3 above, impacts associated with the routine transport, use, or disposal of hazardous materials would be less than significant. This is because the project would be required to adhere to federal, state and local regulations pertaining to handling, storage and transport of hazardous materials, and the dose and frequency of exposure to household hazardous materials would be limited.

The Phase I ESA prepared for the Village 9 area identified the potential for the presence of pesticides/herbicides to occur in the shallow soil on the site from the historical agricultural use. In 2007, Geocon performed an assessment of shallow soil on the EUC site. That assessment identified organochlorine pesticides in shallow soil on that property. In addition, research conducted by the California Department of Food and Agriculture indicated that detectable concentrations of at least one of the toxaphene, dichlorodiphenyldichloroethane, dichlorodiphenyltrichloroethane, or dichlorodiphenyldichloroethylene compounds had been found in soil throughout California’s agricultural areas associated with the application of pesticides from 1944 to 1974. According to the San Diego County Department of Agriculture, Weights, and Measures permits, the pesticide 2,4-D Amine was applied to adjacent parcels to the west and east of the project. Elevated levels of pesticides in the soils could be disturbed from grading and trenching activities during project construction. This could result in an

increased health risk to construction workers, future residents and students, as well as potentially impact water quality through storm water runoff. This impact is potentially significant.

### **5.13.4 Level of Significance Prior to Mitigation**

#### **A. Routine Use and Accidental Release of Hazardous Materials**

Potentially significant impacts related to accidental release of hazardous materials could result from the exposure pesticide residue occurring in soils on the site during project construction. Impacts related to routine transport, use, and disposal would be less than significant.

#### **B. Hazards to Schools**

Potentially significant impacts associated with hazards to schools could result from the exposure of pesticide residue occurring in soils on the site during project construction.

#### **C. Existing Hazardous Materials Sites**

No significant impacts related to listed hazardous sites have been identified for the project.

#### **D. Airport Hazards**

Potentially significant impacts could result from the location of structures proposed in Village 9 within a FAA notification area.

#### **E. Emergency Response and Evacuation Plans**

No significant impacts related to emergency evacuation plans have been identified for the project.

#### **F. Wildland Fires**

No significant impacts related to wildland fire hazards have been identified for the project.

#### **G. Consistency with Hazard Policies**

Potentially significant impacts related to consistency with hazard policies could result from the exposure of construction workers, future residents, and schools to pesticide residue occurring in soils on the site.

#### **H. Historic Use of Pesticides**

Potentially significant impacts related to historic use of pesticides could result from the exposure of pesticide residue occurring in soils on the site during project construction.

### **5.13.5 Mitigation Measures**

#### **A. Routine Use and Accidental Release of Hazardous Materials**

5.13-1 **Soil Assessment.** Prior to issuance of a mass grade permit, the applicant shall prepare a soils assessment to the satisfaction of the City Engineer to determine if residual pesticides, herbicides, and/or arsenic are present on site. The assessment shall be prepared by a Registered Environmental Assessor in accordance with the Department of Toxic Substances

Control guidance document. The assessment shall include analysis for organochlorine pesticides that include compounds such as toxaphene, dichlorodiphenyldichloroethane, dichlorodiphenyltrichloroethane, and dichlorodiphenyldichloroethylene, which have been historically identified at properties in the site vicinity. The concentrations of the contaminants shall be compared to Department of Toxic Substances Control soil screening levels for residential land use. If levels of contamination exceeding the Department of Toxic Substances Control screening levels are found on site, a Soil Reuse Plan shall be prepared prior to construction on site. The Soil Reuse Plan shall include a determination of the suitability of the soils for on-site or off-site reuse, any special handling provisions that shall be incorporated as part of the site grading activities, and the procedure for the proper remediation and disposal of the contaminated soils, either on site or off site. The results of the limited soil assessment and the Soil Reuse Plan shall be submitted to the County of San Diego Department of Environmental Health, the Development Services Director (or their designee), and/or the Regional Water Quality Control Board for review and approval, prior to implementation.

## **B. Hazards to Schools**

Mitigation measure 5.13-1 would also reduce impacts associated with hazards to schools.

## **C. Existing Hazardous Materials Sites**

No mitigation measures are required.

## **D. Airport Hazards**

5.13-2 **Federal Aviation Administration Notification.** Prior to issuance of a building permit for the first structure and/or dwelling unit within the Airport Influence Area of Brown Field, the applicant shall prepare and file a Form 7460-1, Notice of Proposed Construction or Alteration, with the Federal Aviation Administration to ensure that no objects related to development in Village 9 would present a hazard to air navigation.

5.13-3 **Federal Aviation Administration Clearance.** Prior to the issuance of a building permit for the first structure and/or dwelling unit within the Airport Influence Area of Brown Field, the applicant shall obtain and provide proof of Federal Aviation Administration clearance to the satisfaction of the Development Services Director (or their designee).

5.13-4 **Airport Overflight Agreement.** Prior to approval of the first Final Map for those areas within the overflight notification area for Brown Field, the applicant shall record the Airport Overflight Agreement with the County Recorder's office, and provide a signed copy of the recorded Airport Overflight Agreement to the City's Development Service Director (or their designee).

## **E. Emergency Response and Evacuation Plans**

No mitigation measures are required.

## **F. Wildland Fires**

No mitigation measures are required.

### **G. Consistency with Hazard Policies**

Mitigation measure 5.13-1 would also reduce impacts related to consistency with hazard policies.

### **H. Historic Use of Pesticides**

Mitigation measure 5.13-1 would also reduce impacts related to historic use of pesticides.

## **5.13.6 Level of Significance After Mitigation**

### **A. Routine Use and Accidental Release of Hazardous Materials**

With the implementation of mitigation measure 5.13-1 identified above, hazards and hazardous materials impacts related to the historic pesticide use in Village 9 would be reduced to below a level of significance.

### **B. Hazards to Schools**

With the implementation of mitigation measure 5.13-1 identified above, hazards and hazardous materials impacts related to the historic pesticide use in Village 9 would be reduced to below a level of significance.

### **C. Existing Hazardous Materials Sites**

Impacts would be less than significant without mitigation.

### **D. Airport Hazards**

With the implementation of mitigation measures 5.13-2 through 5.13-4, impacts related to the airport hazards would be reduced to below a level of significance.

### **E. Emergency Response and Evacuation Plans**

Impacts would be less than significant without mitigation.

### **F. Wildland Fires**

Impacts would be less than significant without mitigation.

### **G. Consistency with Hazard Policies**

With the implementation of mitigation measure 5.13-1 identified above, hazards and hazardous materials impacts related to the historic pesticide use in Village 9 would be reduced to below a level of significance.

### **H. Historic Use of Pesticides**

With the implementation of mitigation measure 5.13-1 identified above, hazards and hazardous materials impacts related to the historic pesticide use in Village 9 would be reduced to below a level of significance.

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## 5.14 Housing and Population

This section describes the existing conditions in the project vicinity, and growth projections for Village 9 and the surrounding area, and evaluates the potential for impacts to housing and population due to implementation of the project.

As stated in Section 2.3, Purpose and Legal Authority, this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The SEIR addressed the GPA/GDPA development's growth-inducing effect on population, housing, and employment opportunities, and determined that implementation of the land uses proposed in the GPA/GDPA would not result in significant growth inducement. The analysis and discussion of population and housing issues contained in the 2013 GPA/GDPA SEIR is incorporated by reference.

### 5.14.1 Existing Conditions

#### A. Regulatory Framework

##### 1. Regional

##### a. SANDAG Regional Comprehensive Plan

SANDAG's RCP provides a growth management strategy for the region. In accordance with smart growth principles, the overall goal of the RCP is to strengthen the integration of local and regional land use, transportation, and natural resource planning. As stated in the RCP's Regional Housing Element, new housing should be located within already urbanized communities close to jobs and transit in order "to help conserve open space and rural areas, reinvigorate existing neighborhoods, and lessen long commutes" (SANDAG 2004).

In addition to stating the need for applying smart growth strategies in the location and development of new housing, the RCP's Regional Housing Element also includes the goal to provide more housing choices in all price ranges. The RCP states that homes need to be affordable to persons of all income levels and accessible to persons of all ages and abilities.

##### b. Regional Housing Needs Assessment

Based on a methodology that weighs a number of factors (i.e., projected population growth, employment, commute patterns, and available sites), SANDAG determined quantifiable needs for housing units in the region according to various income categories. In its final Regional Housing Needs Assessment (RHNA) figures, SANDAG allocated 12,861 housing units to the Chula Vista area for the 2010-2020 Housing Element Cycle, including 5,648 housing units for very low and low-income households (City of Chula Vista 2011). Since January 1, 2010, Chula Vista has produced a total of 1,546 new units, including 155 low and very low-income housing units. The City anticipated that its remaining development capacity would exceed the RHNA for Chula Vista. The City of Chula Vista anticipates that much of the new construction will result from building out the master planned communities in the East Planning Area such as Otay Ranch, infill development, and mixed-use development.

## 2. Local

### a. Chula Vista General Plan

The Chula Vista General Plan divides the city into three planning areas: 1) the Southwest Planning Area, 2) the Northwest Planning Area, and 3) the East Planning Area. Within the East Planning Area, Village 9 is located within the Eastern University District. The vision for the district in the General Plan is an urban center for the East Planning Area that would also serve much of the inland south San Diego County region. The district would provide needed, higher value employment opportunities along business and commercial services; cultural and entertainment services; and a multi-institutional university center or traditional university and related support uses. As a regional-serving center, residential development would be at a greater scale, intensity, and density than the surrounding villages and Town Centers located throughout Otay Ranch.

The intent of the General Plan is to meet housing demand, instead of “exporting” housing demand to neighboring regions. Therefore, the efforts of the Chula Vista General Plan to add mixed use and higher densities is consistent with the intent of the SANDAG RCP, which encourages local jurisdictions to add housing capacity to their general plans. The Chula Vista General Plan also incorporates a Housing Element (adopted October 24, 2006) that identifies strategies for expanding housing opportunities for the city’s various economic segments. Under the Housing Element, the provision of new housing opportunities within mixed-use areas and at higher density levels, particularly transit focus areas, is encouraged. A primary issue of the Housing Element is the shortfall of housing, particularly affordable housing, in Chula Vista and the region. To address this issue, the Housing Element requires that residential developments with fifty or more dwelling units provide 10 percent of total units for low and moderate-income households, with at least half of those (five percent) designated for low-income households.

The General Plan Housing Element includes objectives and policies to minimize impacts on housing choice that result from conversion or demolition of rental housing units (Objective H 4); encourage the provision of a wide range of housing choices (Objectives H 5 and H 6); facilitate affordable housing for lower and moderate-income households (Objective H 7); and ensure the availability of housing opportunities to persons regardless of race, color, ancestry, national origin, religion, sex, disability, marital status, and familial status, source of income or sexual orientation (Objective H 8).

### b. Otay Ranch General Development Plan

The Otay Ranch GDP established a 5-year objective that requires each village to proportionately assist the City to meet or exceed its 5-year regional allocation as described in the Chula Vista Housing Element. The Otay Ranch GDP requires that prior to or concurrent with the approval of a SPA plan, a housing plan shall be approved that addresses the type and location of housing to be provided pursuant to the regional share allocation. Relevant policies associated with this objective include the following:

- **Objective:** Each Otay Ranch Village will proportionately assist the appropriate land use jurisdiction to meet or exceed Otay Ranch's share of the 5-year regional share allocation as provided by each jurisdiction's Housing Element.
- **Policies:**
  - Encourage each "Urban Village" to offer a variety of housing types, densities and prices which will enable affordability within each income group under the regional share.

- Encourage housing opportunities for very low, low and moderate-income households, and the dispersal of such housing among Otay Ranch villages to promote a balanced community.
- Support the exploration and use of innovative and alternate building technologies and materials which reduce costs, increase affordability, and address environmental issues such as energy and water conservation, air quality improvements and recycling.

### c. Otay Land Company Affordable Housing Program

The OLC Affordable Housing Program determines the allocation of affordable housing units to each area of Otay Ranch. The City of Chula Vista requires that ten percent of proposed dwelling units be affordable. Five percent of those units must be affordable to households earning at or below moderate income (80 percent to 120 percent of the San Diego area median income) and the remaining five percent of those units must be affordable to households earning at or below low income (combined incomes do not exceed 80 percent of the San Diego area median income). The median income is adjusted annually. The OLC Affordable Housing Program Implementation Plan for Village 9 assigns an obligation of providing 400 affordable housing units.

## B. Existing Population and Housing

Village 9 has been used in the past for agricultural purposes. The site has not been formerly, nor is currently, occupied with residential uses. The following discussion focuses on projected population and housing growth in the San Diego region, the city of Chula Vista, and Otay Ranch.

### 1. Regional Setting

Trends important to determining future population growth in the San Diego region include birth and death rates, domestic and international migration, and major economic indicators such as proposed major new employment centers or a closure or expansion of a military base. In October 2011, the SANDAG Board of Directors adopted the 2050 Regional Growth Forecast, which incorporates data from the 2000 U.S. Census and the SANDAG Demographic and Economic Forecasting Model. The purpose of the 2050 Regional Growth Forecast is to provide a starting point for regional planning, specifically the 2050 Regional Transportation Plan. Table 5.14-1 presents the change in population for both the incorporated cities and the unincorporated areas of San Diego County from 2008 to 2050 based on the 2050 Regional Growth Forecast. Although the region's population will grow by over a million people over the forecast period, the rate of growth is slowing compared to the previous 40 years. The updated growth forecasts take into account the recent economic recession and reflect more current market conditions than the previous growth forecasts.

**Table 5.14-1 2050 Total Population Forecast**

Location	2008	2020	2030	2050	2008-2050 Change	
					Numeric Increase	Percent Increase
Incorporated Cities	2,641,594	2,989,591	3,253,630	3,691,950	1,050,356	40%
Unincorporated Area	489,958	545,409	616,370	692,917	202,959	41%
San Diego Region	3,131,552	3,535,000	3,870,000	4,384,867	1,253,315	40%

Source: SANDAG 2011

The region as a whole is anticipated to grow by 40 percent over the 42-year period. Table 5.14-1 indicates that the growth rates are similar between the unincorporated and incorporated areas of the

county. The incorporated cities, including Chula Vista, would accommodate the largest amount of population growth over the forecast period; however, the unincorporated area would experience a slightly higher growth rate compared to the region due to its relatively low existing population.

#### a. Employment and Housing

The forecast of total jobs for the region is shown in Table 5.14-2. The region is expected to add 501,958 jobs over the forecast period, a 33 percent increase. Similar to population forecasts, the incorporated cities account for the largest share of employment growth, accounting for approximately 90 percent of the total increase in jobs; however, the growth rate is higher in the unincorporated area.

**Table 5.14-2 2050 Regional Employment and Housing Forecast**

Location	2008	2020	2030	2050	2008-2050 Change	
					Numeric Increase	Percent Increase
<b>Jobs</b>						
Incorporated Cities	1,363,816	1,470,644	1,913,566	1,810,936	447,120	33%
Unincorporated Area	137,264	148,971	160,936	192,102	54,838	40%
San Diego Region	1,501,080	1,619,615	1,752,630	2,003,038	501,958	33%
<b>Housing</b>						
Incorporated Cities	973,772	1,082,028	1,166,983	1,306,712	332,920	34%
Unincorporated Area	166,882	180,460	202,824	222,378	55,516	33%
San Diego Region	1,140,654	1,262,488	1,369,807	1,529,090	388,436	34%
<b>Jobs to Housing Ratio</b>						
Incorporated Cities	1.4	1.3	1.6	1.4	NA	NA
Unincorporated Area	0.8	0.8	0.8	0.9	NA	NA
San Diego Region	1.3	1.3	1.3	1.3	NA	NA
Note: Includes Civilian and Military Employment						
NA = not available						
Source: SANDAG 2011						

The projected distribution of new housing units from 2008 to 2050 is shown in Table 5.14-2. Similar to population and job forecasts, the incorporated cities account for the largest share of housing growth. Comparing housing forecast to the job forecast, also shown in Table 5.14-2, the increase in jobs is greater than the increase in housing in the incorporated cities and the region as a whole. The jobs to housing ratio is slightly higher in the incorporated cities compared to the region as a whole because housing growth would be greater than job growth in the unincorporated area.

SANDAG anticipates that approximately 50 percent of regional future job and housing growth would be in the smart growth opportunity areas, such as Otay Ranch. In addition, this forecast projects that more than 70 percent of future job and housing growth will likely occur within the transit investment area, defined as the areas with highest priority for future transit investments. The Otay Ranch area is identified as a transit priority area in the 2050 Regional Growth Forecast Update. Therefore, regional forecasts anticipate intensified development in the smart growth areas, such as Village 9, compared to the region as a whole.

## 2. City of Chula Vista

### a. Population

Table 5.14-3 compares population growth in Chula Vista to the other surrounding south bay cities of Imperial Beach and National City, and the San Diego region based on the 2050 Regional Growth Forecast. Between 2008 and 2050, Chula Vista is anticipated to grow at a similar pace (43 percent) as the region (40 percent), a faster pace than Imperial Beach (30 percent), and a slower pace than National City (64 percent). The updated SANDAG project is similar to the population projection used in the Chula Vista General Plan.

**Table 5.14-3 Total Population by Jurisdiction**

Jurisdiction	2008	2020	2030	2050	2008-2050 Change	
					Numeric Increase	Percent Increase
Chula Vista	230,397	267,418	288,978	330,049	99,652	43%
Imperial Beach	28,092	28,233	30,216	36,125	8,033	30%
National City	56,144	62,058	68,808	92,137	35,993	64%
San Diego Region	3,131,552	3,535,000	3,870,000	4,384,867	1,253,315	40%

Note: Totals may be affected by rounding.  
Source: SANDAG 2011

### b. Employment and Housing

The forecast of total employment for the region and south bay cities is shown in Table 5.14-4. The region is expected to add about 501,958 jobs over the forecast period, a 33 percent increase. Chula Vista is projected to absorb the largest amount of this growth, increasing by 73 percent. Imperial Beach and National City would accommodate a similar percent increase as the region. As described above, SANDAG anticipates that approximately 50 percent of regional future job and housing growth would occur in the smart growth opportunity areas.

Table 5.14-4 shows the housing forecast for the region and south bay cities from 2008 to 2050. Chula Vista would experience more housing growth than the region as a whole; however, National City shows the largest projected increase in total housing units among the south bay cities (56 percent), and a faster growth rate compared to the region. The jobs-to-housing ratio in Chula Vista is expected to be slightly lower than the region, but would still be greater than one job per house. Imperial Beach would have a lower jobs-to-housing ratio than the region, less than one job per house, and National City would have a higher jobs-to-housing ratio compared to the region.

## 3. Otay Ranch

### a. Population

Build out of the entire Otay Ranch GDP will result in an additional estimated population of 86,245 persons (Otay Ranch Joint Planning Project 2005). The projected resident population of Village 9 is 10,923 persons, based on a population generation factor of 2.58 persons per household for the highest-density multi-family residential units in the Town Center, Urban Center, and Urban Neighborhood Zones, 3.1 persons per household for attached residential units in the Neighborhood Center Zone, and 3.3 persons per household for single-family residential units in the Neighborhood General and



Neighborhood Edge Zones. The population for each phase of Village 9 is provided in Table 5.14-5, based on these population generation factors.

**Table 5.14-4 Total Employment and Housing by Jurisdiction**

Location	2008	2020	2030	2050	2008-2050 Change	
					Numeric Increase	Percent Increase
<b>Jobs</b>						
Chula Vista	70,230	82,146	101,001	121,551	51,321	73%
Imperial Beach	7,543	8,835	9,560	10,240	2,697	36%
National City	28,743	29,677	32,831	37,668	8,925	31%
San Diego Region	1,501,080	1,619,615	1,752,630	2,003,038	501,958	33%
<b>Housing</b>						
Chula Vista	77,484	88,186	94,608	106,999	29,515	38%
Imperial Beach	9,851	9,866	10,389	12,148	2,297	23%
National City	15,773	17,052	18,685	25,272	9,499	60%
San Diego Region	1,140,654	1,262,488	1,369,807	1,529,090	388,436	34%
<b>Jobs to Housing Ratio</b>						
Chula Vista	0.9	0.9	1.1	1.1	NA	NA
Imperial Beach	0.8	0.9	0.9	0.8	NA	NA
National City	1.8	1.7	1.8	1.5	NA	NA
San Diego Region	1.3	1.3	1.3	1.3	NA	NA
Note: Includes Civilian and Military Employment NA = not available Source: SANDAG 2011						

**Table 5.14-5 Village 9 Population Projections**

Phase	Dwelling Units	Population
Orange phase	High Density: 274	1,291
	Multi-family: 34	
	Single-family: 145	
Blue phase	High Density: 935	3,354
	Multi-family: 304	
Yellow phase	High Density: 160	1,823
	Multi-family: 326	
	Single-family: 121	
Purple phase	High Density: 1,573	4,455
	Multi-family: 128	
Total	High Density: 2,942	10,923
	Multi-family: 792	
	Single-family: 266	
Source: Otay Land Company 2012		

### **b. Employment**

The Otay Ranch GDP proposes several major regional employment areas in the GDP area including the EUC, RTP, and the University site. Additionally, the town centers would provide local employment centers that would provide a balance between jobs and housing in the Otay Ranch area. Resident-serving commercial and retail uses permitted throughout the Otay Ranch area would provide additional employment opportunities near homes.

### **c. Housing**

The Otay Ranch GDP proposes a variety of single-family and multi-family residences. The 2013 GPA/GDPA included an additional 880 housing units beyond housing projections accounted for in the 2005 General Plan Updated, including 386 in Village 9. The Otay Ranch GDP, as amended, projects a total of 4,000 new homes in Village 9.

## **5.14.2 Thresholds of Significance**

According to Appendix G of the CEQA Guidelines, impacts to housing and population would be significant if the proposed project would:

- **Threshold 1:** Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere.
- **Threshold 2:** Be inconsistent with General Plan, GDP, and other objectives and policies regarding housing and population thereby resulting in a significant physical impact.

Appendix G of the CEQA Guidelines also states that impacts to housing and population would be significant, if the project induced substantial population growth in an area, either directly or indirectly. Growth inducement is discussed in Chapter 7, Growth Inducement.

## **5.14.3 Impact Analysis**

### **A. Threshold 1: Displace substantial numbers of existing households or people, necessitating the construction of replacement housing elsewhere.**

Village 9 is currently undeveloped; no existing or former residential uses occupy the site. As such, the project would not displace any existing households or people, or necessitate the construction of replacement housing elsewhere. Pursuant to state law, the Chula Vista General Plan Housing Element addresses the housing needs of the community. Consistent with those needs, the Housing Element identifies objectives, policies and related action programs pertaining to the provision of affordable housing. The Village 9 SPA and TM would be subject to the requirements of the Chula Vista Affordable Housing Program, which requires the SPA Plan and TM to provide a minimum of ten percent of the total residential units as low and moderate-income housing. The affordable housing program has assigned an obligation of 400 affordable units to Village 9. The SPA Plan includes an Affordable Housing Plan to meet this requirement. High-density housing in the Town Center, Urban Center, and Urban Neighborhood, and accessory second units allowed throughout the site provide opportunities for affordable housing. Therefore, the proposed project would have no impact associated with displacement of households or people.

**B. Threshold 2: Be inconsistent with General Plan, GDP, and other objectives and policies regarding housing and population thereby resulting in a significant physical impact.**

Table 5.14-6 compares the project to applicable housing policies and objectives of the General Plan and Table 5.14-7 evaluates the project’s consistency with applicable GDP goals. As shown in Tables 5.14-6 and 5.14-7, the project would be consistent with all applicable General Plan and GDP policies.

**Table 5.14-6 Project Consistency with Applicable General Plan Housing Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective H 4:</b> Minimize impacts on housing choice within each of the four geographic planning areas, especially to very low-and low-income residents, that result from conversion or demolition of rental housing units.</p> <p><b>Policy H 4.1:</b> Promote an equitable distribution of housing types (e.g., multi-family rental and owner occupied housing) based upon identified needs within the Northwest, Southwest, and East Planning Areas to provide a range of housing opportunities for all income levels.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this General Plan policy. The Chula Vista General Plan Housing Element addresses housing needs citywide. The city’s housing division monitors and ensures that housing opportunities for all income levels are provided. The SPA Plan includes an Affordable Housing Plan that will be reviewed and approved by the city prior to approval of the SPA. The SPA Plan includes a variety of housing types including single-family detached, single-family attached, and multi-family residential uses to provide housing opportunities for all income levels.</p>
<p><b>Objective H 5:</b> Encourage the provision of a wide range of housing choices by location, type of unit, and price level, in particular the establishment of permanent affordable housing for low-and moderate-income households.</p> <p><b>Policy H 5.1:</b> Balanced Communities-Affordable Housing: Require newly constructed residential developments to provide a portion of their development affordable to low-and moderate-income households.</p> <p><b>Policy H 5.2:</b> Encourage the development of sufficient and suitable new rental housing opportunities within each of the City’s four geographic Planning Areas, particularly for very low-and low-income households.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with these policies. The City’s affordable housing policy requires that ten percent of the total residential units be provided at affordable levels. An affordable housing program has been prepared for Village 9 to meet this requirement, and identifies that the obligations are through a combination of rental and for-sale housing, in compliance with affordability criteria as defined in the state, federal and City codes and policies. The Village 9 Affordable Housing Plan will be reviewed and approved by the City prior to approval of the SPA Plan. The SPA Plan also includes a wide range of housing choices for a variety of age groups and income levels. The SPA Plan includes opportunities for new retail housing, including high-density residential land use in the Town Center and Urban Center, and second dwelling units on lots greater than 4,000 square feet.</p>
<p><b>Objective H 6:</b> Promote the development of a variety of housing choices, coupled with appropriate services, to meet the needs of special population groups, including the homeless, those “at-risk” of becoming homeless, persons with physical and/or development disabilities, emancipated foster youth, students, athletes at the Olympic Training Center, single-parent households, farmworkers and seniors.</p> <p><b>Policy H 6.2:</b> Encourage the development of alternative housing types in locations with easy access to goods, services, transportation, recreation and other appropriate services to accommodate the special needs of seniors, persons with disabilities, emancipated foster youth, students, athletes, and single person households.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this General Plan policy. The Affordable Housing Plan identifies all areas of Village 9 as suitable for affordable housing, but encourages consideration of proximity and availability of amenities. Village 9 will further provide housing for all levels of the population, as discussed under Objective H 4 and Objective H 5, and would be designed to meet ADA requirements in accordance with law.</p>

**Table 5.14-6 Project Consistency with Applicable General Plan Housing Policies (continued)**

Applicable Policies	Evaluation of Consistency
<p><b>Objective H 7:</b> Facilitate the creation, maintenance, preservation and conservation of affordable housing for lower and moderate-income households through comprehensive planning documents and processes, and the provision of financial assistance and other incentives.</p> <p><b>Policy H 7.1:</b> Ensure Chula Vista’s plans and policies addressing housing, such as the Zoning Ordinance, Sectional Planning Area Plans, and Specific Plans, encourage a variety of housing product that responds to variations in income level, the changing livework patterns of residents and the needs of the City’s diverse population.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this General Plan policy. The development of Village 9 would respond to market conditions. The Affordable Housing Plan provides compliance with the balanced communities policy for affordable units and will have access to financial incentives and other assistance as provided for in the General Plan Housing Element and the City’s inclusionary housing policies.</p>
<p><b>Objective H 8:</b> Ensure the availability of housing opportunities to persons regardless of race, color, ancestry, national origin, religion, sex, disability, marital status, and familial status, source of income or sexual orientation.</p> <p><b>Policy H 8.1:</b> Ensure equal housing opportunities to prevent housing discrimination in the local housing market.</p>	<p><b>Consistent.</b> The SPA Plan is consistent with this General Plan policy. The Affordable Housing Plan for Village 9 provides a marketing plan to the City for proactive marketing of the low and moderate-income housing units. All development in Village 9 must comply with local, state and federal fair housing laws.</p>

**Table 5.14-7 Project Consistency with Applicable GDP Housing Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 1, Section D: Land Use Design, Character, and Policies, 1a. Village/Town Center Land Use Policies</b>	
<p><b>Goal:</b> Organize land uses based upon the village/town center concept to produce a cohesive, pedestrian friendly community. Encourage non-vehicular trips and foster interaction amongst residents.</p> <p><b>Policy:</b> Include a variety of uses and housing types within each village to meet the needs of residents.</p> <p><b>Policy:</b> Accessory units are permitted on single-family lots within Villages 1 through 11, consistent with the provisions of Chapter 3, Housing.</p>	<p><b>Consistent.</b> Proposed residential land uses within Village 9 include a wide range of densities and formats within multi-family and single-family residential uses which will accommodate a variety of housing types to meet the needs of all potential residents. Accessory units are a permitted use in the SPA Plan.</p>
<b>Part II, Chapter 3 – Housing, Section B, Balanced Community</b>	
<p><b>Goal:</b> Create a balanced community exemplified by the provision of a diverse range of housing styles, tenancy types and prices.</p> <p><b>Objective:</b> Provide a variety of housing opportunities sufficient to meet a proportionate share of the Regional Share allocation of housing.</p> <p><b>Objective:</b> Each Otay Ranch Village will proportionately assist the appropriate land use jurisdiction to meet or exceed Otay Ranch’s share of the 5-year regional share allocation as provided by each jurisdiction’s housing element.</p>	<p><b>Consistent.</b> The SPA Plan provides a wide variety of housing types, including affordable housing. Proposed housing includes apartments, townhomes, condominiums, attached housing (duplexes and/or triplexes), small lot single-family, and conventional lot single-family residential. The SPA Plan includes an Affordable Housing Plan to ensure that ten percent of units in the SPA would be affordable units. High-density development and accessory units would provide opportunities for affordable housing.</p>

**Table 5.14-7 Project Consistency with Applicable GDP Housing Policies (continued)**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 3 – Housing, Section B, Fair Housing and Special Housing Needs</b>	
<p><b>Goal:</b> The provision of sufficient housing opportunities for persons of all economic, ethnic, religious and age groups, as well as those with special needs such as the handicapped, elderly, single parent families and the homeless.</p> <p><b>Objective:</b> Ensure that the Otay Ranch provides housing opportunities sufficient to meet a proportionate share of identified special housing needs, and applies fair housing practices for all needs groups in the sale, rental, and advertising of housing units.</p> <p><b>Policy:</b> Ensure compliance with all state and federal statutes regarding barrier free environments and elimination of racial, age, religious, sexual and economic bias and discrimination in housing sales, rental, advertising and lending practices.</p> <p><b>Policy:</b> Include an adequate amount of land designated for community purpose facilities within Otay Ranch to provide for the location of facilities to shelter the homeless.</p>	<p><b>Consistent.</b> Village 9 would contain a wide variety of housing types ranging in density from low-medium to high. The variety of housing types would accommodate families, singles, and those with special housing needs, including the handicapped and the elderly. The project is required to meet all California handicap accessibility requirements. Fair housing practices would be employed in the sale, rental, and advertising of all units. In addition, an affordable housing program is included in the SPA Plan. Ten percent of all units within Village 9 would be income qualified homes.</p>

### 5.14.4 Level of Significance Prior to Mitigation

No significant impacts related to population and housing have been identified for implementation of the SPA Plan and TM.

### 5.14.5 Mitigation Measures

No mitigation measures are required.

### 5.14.6 Level of Significance After Mitigation

No significant impacts related to population and housing were identified for the project.



## 5.15 Public Utilities

This section describes the public utilities that would serve Village 9 and evaluates the potential for impacts to water, wastewater, recycled water, and energy services due to implementation of the project. Water services is addressed in subsection 5.15.1, including existing conditions, regulatory framework, and impact analysis. Wastewater is addressed in subsection 5.15.2, solid waste in subsection 5.15.3, recycled water in subsection 5.15.4, and energy in subsection 5.15.5.

As stated in Section 2.3, Purpose and Legal Authority, the analysis of public utilities in this EIR tiers from the 2013 GPA/GDPA SEIR (09-01). The 2013 GPA/GDPA SEIR and 2005 GPU EIR concluded that impacts related to water and energy would be significant and unavoidable because there is no assurance that water supply or energy will be available to adequately serve the projected increase in population resulting from development under the GPA/GDPA. The 2013 GPA/GDPA SEIR and 2005 GPU EIR concluded that impacts to wastewater would be less than significant because the City could withhold discretionary approvals and subsequent building permits from development that would cause the City to exceed its wastewater capacity. The 2013 GPA/GDPA SEIR and 2005 GPU EIR concluded that impacts related to solid waste would be less than significant.

The portions of this analysis related to water and sewer service are based on the Final Overview of Sewer Service and the Final Overview of Water Service for Otay Ranch Village 9, both prepared by Dexter Wilson Engineering, Inc. in December 2010. The analyses in this section pertaining to Village 9 updates the applicable information in these previously certified EIRs, which are incorporated by reference.

### 5.15.1 Water

The following discussion of water impacts is based on the 2005 Urban Watershed Management Plans (UWMP) adopted by the OWD and other relevant agencies. A 2010 UWMP was subsequently approved in 2011. The 2010 UWMP included the water demand for Village 9. However, this analysis is based on the 2005 UWMP because it was the most recent resource available at the time that the Notice of Preparation for this EIR was published (July 2010), and during preparation of the Final Overview of Water Service and the WSAV, discussed below.

#### 5.15.1.1 Existing Conditions

##### A. Regulatory Framework

###### 1. State

###### a. Senate Bills 610 and 221

SB 610 requires public water agencies, parties, or purveyors that may supply water to certain proposed development projects to prepare a water supply assessment for use by the planning agency in compliance with CEQA. The water supply assessment is required for any project that is subject to the CEQA Guidelines and proposes to construct 500 or more residential units or the equivalent. SB 221 requires proof of a sufficient water supply, while placing the initial burden of proof on the public water system. SB 221 requires a city, county, or local agency to include as a condition in any TM that includes a subdivision requirement that a sufficient water supply shall be available to serve the subdivision.

The availability of a sufficient water supply is based on written verification from a water supplier with more than 3,000 service connections (prior to or as a result of serving a subdivision) which may provide water to the project. "Sufficient water supply" is defined as the total water supplies available during normal, single-dry and multiple-dry water years within a 20-year projection that will meet the projected demand of a proposed subdivision. Moreover, and likely as an attempt to arrest reliance on "paper water" entitlements from the State Water Project (SWP), SB 221 further requires any verification of "projected" water supplies to be based on entitlement contracts, capital outlay programs, and regulatory permits and approvals regarding the right to and capability of delivering the projected supply. These statutes basically require that the water supplies be sufficient and meet projected demand, but do not specify a particular number of gallons that must be provided.

#### **b. Urban Water Management Planning Act**

In 1983, the California Legislature enacted the Urban Water Management Planning Act (California Water Code Sections 10610 through 10657). The Act requires that any urban water supplier that provides for municipal purposes, either directly or indirectly to more than 3,000 customers or supplies more than 3,000 acre-feet of water, prepare and annually update an UWMP at least once every five years.

The Act requires a description of specific water supply projects and implementation schedules to meet projected demands over the planning horizon; a description of the opportunities for the development of desalinated water; information on groundwater (where groundwater is identified as an existing or planned water source); description of water quality over the planning horizon; and description of water management tools that maximize local resources and minimize imported water supplies. Additionally, the Act requires evaluation of the reliability of a water supply as part of a development plan. This includes a water supply reliability assessment, a water shortage contingency plan, and development of a plan in case of an interruption of water supplies.

The Metropolitan Water District (MWD), San Diego County Water Authority (SDCWA), and OWD all play a role in supplying water to the proposed Village 9. All of these agencies have prepared and updated UWMPs in accordance with this statutory requirement.

#### **c. Memorandum of Understanding Regarding Urban Water Conservation in California**

The OWD is signatory to the Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California, which created the California Urban Water Conservation Council in 1991 in an effort to reduce California's long-term water demands. Water conservation programs are developed and implemented on the premise that water conservation increases the water supply by reducing the demand on available supply, which is vital to the optimal utilization of a region's water supply resources.

As one of the first signatories to the MOU Regarding Urban Water Conservation in California, OWD has made BMP implementation for water conservation the cornerstone of its conservation programs and a key element in its water resource management strategy. As a member of the SDCWA, OWD also benefits from regional programs performed on behalf of its member agencies. The BMP programs implemented by OWD and regional BMP programs implemented by the SDCWA that benefit all their member agencies are addressed in the OWD 2005 UWMP.

As a signatory to the MOU Regarding Urban Water Conservation in California, OWD is required to submit biannual reports that detail the implementation of current water conservation practices. The OWD voluntarily agreed to implement the fourteen water conservation BMPs beginning in 1992. The OWD submits its report to the California Urban Water Conservation Council every two years. The OWD

BMP reports for 2001 to 2004, as well as the BMP Coverage Report for 2003-04, are included in the OWD 2005 UWMP.

## **2. Local**

### **a. City of Chula Vista General Plan**

The Chula Vista General Plan recognizes that, in order to ensure adequate water service, water supplies and facilities need to be maintained and expanded as the city's population grows. The Chula Vista General Plan includes objectives and policies in the Public Facilities and Services Element that require development to plan for careful use of natural and man-made resources and services, and maximize opportunities for conservation while minimizing waste (Objective LUT 62); and increase efficiencies in water use through use of alternative technologies (Objective PFS 2). Additionally, the Housing Element includes Objective H 2 to promote efficient use of water through adopted standards and incentive-based policies to conserve limited resources and reduce long-term operational costs of housing. Growth Management Objective GM 1 and Policy GM 1.11 encourage withholding discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards for water service.

### **b. Chula Vista Landscape Water Conservation Ordinance**

In response to the new State Water Conservation in Landscaping Act (AB 1881), which required cities and counties to adopt landscape water conservation ordinances by January 1, 2010, the City of Chula Vista adopted the Chula Vista Landscape Water Conservation Ordinance (Chapter 20.12 of the Municipal Code). This ordinance calls for greater efforts at water conservation and more efficient use of water in landscaping.

### **c. Otay Water District Growth Management Oversight Commission Questionnaire**

Prepared by the OWD in support of the 2012 GMOC Annual Report, the GMOC Questionnaire responds to the issue of whether existing water systems are able to serve projected growth for Chula Vista. The questionnaire provided an opportunity for OWD to identify capital improvement programs required to serve the forecasted water demands. The questionnaire identified a list of capital improvement projects (CIPs) that would need to be implemented by the OWD in order to meet projected demand. The questionnaire concluded that the near-term water supply outlook remains "unsettled," while the city's long-term growth should be assured of a reliable water supply. The water supply is considered unsettled because water supply agencies throughout California continue to face climatological, environmental, legal, and other challenges that impact water source supply conditions. However, challenges such as these are expected to always be present, and the OWD nevertheless fully intends to have sufficient, reliable supplies to serve demands.

### **d. City of Chula Vista Growth Management Program**

Chula Vista's Growth Management Program's goal for water supply is to ensure that adequate supplies of quality water (appropriate for intended uses) are available to the City of Chula Vista. The Growth Management Program has two objectives regarding water supply and distribution: 1) ensure that adequate storage, treatment, and transmission facilities are constructed concurrently with planned growth; and 2) ensure that water quality standards are not jeopardized during growth and construction.

The growth management threshold standard for water supply and distribution states:

1. The applicant will request and deliver to the City a service availability letter from the water district for each project.
2. The City shall provide annually to the San Diego County Water Authority, the Sweetwater Authority and the Otay Municipal Water District a 12- to 18-month development forecast and request an evaluation of their ability to accommodate the forecast and continuing growth. The districts' replies should address the following:
  - a. Water availability to the city and planning area, considering both short-term and long-term perspectives;
  - b. Amount of current capacity, including storage capacity, now used or committed;
  - c. Ability of affected facilities to absorb forecast growth;
  - d. Evaluation of funding and site availability for projected new facilities; and
  - e. Other relevant information the district(s) desire(s) to communicate to the City and the GMOC. The growth forecast and water district response letters shall be provided to the GMOC for inclusion in its review.

The Chula Vista Growth Management Ordinance (CVMC Section 19.09.050C) requires a WCP to be submitted with all SPA Plans. In accordance with the Growth Management Program, WCPs must provide an analysis of water usage requirements of the project.

## **B. Existing Water Services**

### **1. Water Service Providers and Planning**

Water service to Village 9 would be provided by OWD. OWD purchases water from the SDCWA, which in turn imports water from the MWD. The projected supply and demand and planning documents for each of these agencies is described below.

#### **a. Metropolitan Water District**

MWD supplies water to approximately 19 million people in a 5,200-square mile service area that includes portions of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties. SDCWA is one of MWD's 27 member agencies. Supply and demand projection information for MWD is included in its 2005 UWMP. MWD gets its water from two sources. The first source is the Colorado River, which is connected to MWD's six-county service area through the 242-mile Colorado River Aqueduct. The second source is water from northern California, which supplies water through a series of dams, aqueducts, pipelines, and other facilities known as the SWP. The SWP is operated by the California Department of Water Resources.

Since 1996, MWD has operated under a 20-year resource plan designed to balance local and imported supplies. The 1996 Integrated Water Resources Plan called for investments in water conservation, recycling, groundwater treatment storage, and water transfers in order to diversify and stabilize MWD's water supplies. On November 8, 2005, the MWD adopted its 2005 Regional UWMP. In its 2005 UWMP, MWD evaluated water supply reliability over a 20-year period, for average, single-dry and multiple-dry water years. To complete its most recent water supply reliability assessment, MWD developed estimates of total retail demands for the region, factoring in the impacts of conservation. MWD's reliability assessment showed that MWD can maintain reliable water supplies to meet projected

demands through the year 2030. MWD also identified buffer supplies, including other SWP groundwater storage and transfers, which could serve to supply additional water needs. Appendix A-3 to the MWD 2005 Regional UWMP contains detailed justifications for the sources of supply projected to meet water demands in the region, including Colorado River Aqueduct deliveries (Colorado River supplies) and California Aqueduct deliveries (SWP supplies).

Additionally, MWD has comprehensive plans for stages of actions it would undertake to address up to a 50 percent reduction in its water supplies and a catastrophic interruption in water supplies through its Water Surplus and Drought Management and Water Supply Allocation Plans. MWD is working with the state to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region, such as a maximum probable seismic event in the Sacramento-San Joaquin Delta, a key water resource, which would cause levee failure and disruption of SWP deliveries.

#### **b. San Diego County Water Authority**

The SDCWA service area covers approximately 922,000 acres and encompasses the western third of San Diego County. SDCWA has 24 member agencies. The SDCWA is responsible for ensuring a safe and reliable water supply to support the region and the quality of life for three million residents. Because of the county's semi-arid climate and limited local water supplies, SDCWA imports between 70 and 95 percent of the water used in the San Diego region from MWD. In 2008, MWD provided 71 percent of the San Diego region's water supply. Historically, SDCWA has relied on imported water supplies purchased from the MWD to meet the needs of its member agencies. SDCWA is the largest MWD member agency in terms of deliveries, purchasing approximately 25 percent of MWD's water. SANDAG is responsible for providing and updating land use planning and demographic forecasts for San Diego County. MWD and SDCWA update their water demand and supply estimates based on the most recent SANDAG forecasts approximately every five years to coincide with preparation of the their respective UWMPs.

The SDCWA 2005 UWMP reports that the San Diego region conserved an average of 40,500 acre feet per year (AFY) over a five year period. In addition, in 2003, conserved agricultural transfer water from the Imperial Valley began flowing to the San Diego region, which will provide 200,000 AFY by 2021. This additional water supply is the result of SDCWA entering into the Quantification Settlement Agreement with other water agencies in October 2003, including the SDCWA/Imperial Irrigation District (IID) transfer agreement. Transfers from IID began in late 2003 with the signing of the settlement agreement. The SDCWA will receive up to 200,000 AFY after an initial ramp-up in water deliveries. A summary of projected imported water supply is provided in Table 5.15-1.

**Table 5.15-1 Projected Imported Water Supplies (AFY)**

<b>Water Source</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
IID Water Transfer	70,000	100,000	190,000	200,000	200,000
Supply from MWD	445,858	378,544	311,438	324,624	356,922
Coachella Canal and All American Canal Lining Projects	77,700	77,700	77,700	77,700	77,700
<b>Total Imported Supplies</b>	<b>593,558</b>	<b>556,244</b>	<b>579,138</b>	<b>602,324</b>	<b>634,622</b>
Source: Dexter Wilson Engineering, Inc. 2010					



On November 17, 2005, the SDCWA adopted its 2005 UWMP. Sections 4 and 5 of SDCWA's 2005 UWMP contain documentation of SDCWA's existing and planned water supplies, including MWD supplies, SDCWA supplies, and local member agency supplies. SDCWA supplies include: 1) IID water transfer supplies, 2) 77,770 AFY from conservation projects to line the All-American Canal and the Coachella Canal, located in Imperial and Coachella Valleys, and 3) development of a seawater desalination facility at the Encina Power Plant in Carlsbad, which is anticipated to produce 56,000 AFY of additional water supplies. Additionally, since 1980, five percent to 30 percent of the water used by SDCWA member agencies has come from local sources, primarily from surface water reservoirs. Recycled water and groundwater recovery projects are growing in importance in the region, and water conservation efforts have also made SDCWA member agencies less dependent on imported water. Projected local water supply is summarized in Table 5.15-2.

**Table 5.15-2 Projected Local Water Supplies (AFY)**

<b>Water Source</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Surface Water	59,649	59,649	59,649	59,649	59,649
Water Recycling	33,668	40,662	45,548	46,492	47,584
Groundwater	28,575	30,345	31,175	31,175	31,175
Seawater Desalination	0	56,000	56,000	56,000	56,000
<b>Total Local Supplies</b>	<b>121,892</b>	<b>186,656</b>	<b>192,372</b>	<b>193,316</b>	<b>194,408</b>

Source: Dexter Wilson Engineering, Inc. 2010

Based on the imported and member agency local water sources discussed above, SDCWA estimates there is available water to meet all of the region's anticipated demand, in average/normal and single-dry water years, as demonstrated in Tables 5.15-3, 5.15-4, and 5.15-5.

**Table 5.15-3 Average/Normal Year Supply and Demand (AFY)**

<b>Water Supplies</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
<b>Local Supplies</b>					
Surface Water	59,649	59,649	59,649	59,649	59,649
Water Recycling	33,668	40,662	45,548	46,492	47,584
Groundwater	28,575	30,345	31,175	31,175	31,175
Seawater Desalination	0	56,000	56,000	56,000	56,000
<b>Imported Supplies</b>					
IID Water Transfer	70,000	180,000	190,000	200,000	200,000
Supply From MWD	445,858	378,544	311,438	324,624	356,922
Coachella Canal and All American Canal Lining Projects	77,700	77,700	77,700	77,700	77,700
<b>Total Projected Supplies</b>	<b>715,450</b>	<b>742,900</b>	<b>771,510</b>	<b>795,640</b>	<b>829,030</b>
<b>Total Estimated Demands<sup>(1)</sup></b>	<b>715,450</b>	<b>742,900</b>	<b>771,510</b>	<b>795,640</b>	<b>829,030</b>
Difference	0	0	0	0	0

<sup>(1)</sup> With conservation.  
Source: Dexter Wilson Engineering, Inc. 2010

**Table 5.15-4 Average/Normal Year Supply and Demand (AFY)**

Water Supplies	Single Dry Water Year (2010)	Multiple Dry Years		
		Year 1 (2006)	Year 2 (2007)	Year 3 (2008)
<b>Local Supplies</b>		<b>56,670</b>	<b>60,230</b>	<b>80,900</b>
Surface Water and Groundwater	22,284	---	---	---
Water Recycling	33,668	---	---	---
Groundwater Recovery	22,238	---	---	---
<b>Imported Supplies</b>		<b>687,850</b>	<b>689,550</b>	<b>674,130</b>
IID Water Transfer	70,000	---	---	---
Supply From MWD	541,760	---	---	---
Coachella Canal and All American Canal Lining Projects	77,700	---	---	---
Total Projected Supplies	767,650	744,520	749,780	755,030
<b>Total Estimated Dry Year Demands</b>	<b>767,650</b>	<b>744,520</b>	<b>749,780</b>	<b>755,030</b>
Difference	0	0	0	0

Source: Dexter Wilson Engineering, Inc. 2010

**Table 5.15-5 MWD Demand/Supply Balance**

Scenario	Near Term <sup>(2)</sup>			Long Term <sup>(3)</sup>			
	2001	2002	2003	2005	2010	2015	2020
<b>Multiple Dry Years</b>							
<b>Demands</b>							
Retail	4.19	4.05	3.99	4.16	4.40	4.65	4.94
GW Replenishment	0.18	0.17	0.16	0.17	0.17	0.17	0.18
<b>Total Demands</b>	<b>4.37</b>	<b>4.22</b>	<b>4.15</b>	<b>4.33</b>	<b>4.57</b>	<b>4.82</b>	<b>5.12</b>
<b>Supply</b>							
Local	2.05	2.04	2.06	2.13	2.32	2.46	2.55
MWD <sup>(1)</sup>	2.32	2.18	2.09	2.20	2.25	2.36	2.57
<b>Total Supply</b>	<b>4.37</b>	<b>4.22</b>	<b>4.15</b>	<b>4.33</b>	<b>4.57</b>	<b>4.82</b>	<b>5.12</b>
<b>Single Dry Years<sup>(4)</sup></b>							
<b>Demands</b>							
Retail	4.04	---	---	4.21	4.46	4.71	5.03
GW Replenishment	0.17	---	---	0.17	0.17	0.18	0.19
<b>Total Demands</b>	<b>4.21</b>	<b>---</b>	<b>---</b>	<b>4.38</b>	<b>4.63</b>	<b>4.89</b>	<b>5.22</b>
<b>Supply</b>							
Local	2.28	---	---	2.47	2.66	2.80	2.90
MWD	1.93	---	---	1.19	1.97	2.09	2.32
<b>Total Supply</b>	<b>4.21</b>	<b>---</b>	<b>---</b>	<b>4.38</b>	<b>4.63</b>	<b>4.89</b>	<b>5.22</b>
<b>Average Years<sup>(5)</sup></b>							
<b>Demands</b>							
Retail	3.91	---	---	4.07	4.31	4.55	4.85
GW Replenishment	0.16	---	---	0.16	0.16	0.17	0.18
<b>Total Demands</b>	<b>4.07</b>	<b>---</b>	<b>---</b>	<b>4.23</b>	<b>4.47</b>	<b>4.72</b>	<b>5.03</b>
<b>Supply</b>							
Local	2.18	---	---	2.33	2.52	2.64	2.73
MWD	1.89	---	---	1.90	1.95	2.08	2.30
<b>Total Supply</b>	<b>4.07</b>	<b>---</b>	<b>---</b>	<b>4.23</b>	<b>4.47</b>	<b>4.72</b>	<b>5.03</b>

<sup>(1)</sup> MWD supplies include imported supplies, storage programs and transfers.  
<sup>(2)</sup> Multiple Dry Years for 2001-2003 are based on the worst three-year sequence from the historical hydrologic record (1990-1991-1992).  
<sup>(3)</sup> Multiple Dry Years for 2005-2020 are three-year average figures based on the worst three-year sequence from the historical hydrologic record (1990-1991-1992) ending in the year displayed.  
<sup>(4)</sup> Single Dry Year is based on the single worst year from the historical hydrologic record (1977).  
<sup>(5)</sup> Average Year is based on the average over all years in the historical hydrologic record (1922-1998). In average years, MWD will be adding water to storage, but the additional water supplies are reported in this table.

Source: Dexter Wilson Engineering Inc., 2010

SDCWA's Board of Directors prepared the 2008 Strategic Plan and the 2008 Business Plan to provide clear direction for the SDCWA to continue to increase the reliability of the water supply to meet the San Diego region's demands, and to ensure cost effective, environmentally sensitive, and safe delivery of those supplies. Since its adoption, SDCWA has adopted policies and programs in the areas of supply reliability, system infrastructure, finance, and outreach to help accomplish its mission to provide a safe and reliable water supply to its member agencies serving the San Diego region. SDCWA's long-term commitment also involves diversifying the region's water supplies portfolio, reducing the region's reliance on imported water, and optimizing facilities to provide the flexibility needed to respond to the region's ever-changing water needs.

To prepare the San Diego region for potential water shortages, in March 2008 the SDCWA released a Model Drought Response Ordinance to its member agencies. The Model Drought Response Ordinance has identified four drought response levels that contain water-use restrictions to help achieve demand reduction during water shortages. Member agencies are using the SDCWA's model to update their own ordinances to help provide consistency throughout the region on response levels and water use restrictions that may be taken to reduce water demand.

### **c. Otay Water District**

Potable water would be supplied to Village 9 by OWD, which currently relies on the SDCWA for its water supply. In San Diego County, OWD provides water services to southern El Cajon, La Mesa, Rancho San Diego, Jamul, Spring Valley, Bonita, eastern Chula Vista, the Eastlake community, Otay Ranch, and Otay Mesa along the U.S./Mexico international border. OWD covers 137 square miles and has approximately 38,870 meter connections. OWD has approximately 450 miles of pipelines, 21 pump stations, and 37 reservoirs with a total storage capacity of 190 million gallons. OWD provides 90 percent of its water service to residential land uses, and 10 percent to commercial, industrial, and other land uses. Average daily consumption for OWD is 40,324 acre feet. OWD maintains five major systems to supply and deliver water, which include Hillsdale, Regulatory, La Presa, Central, and Otay Mesa. OWD also operates the Ralph W. Chapman Water Recycling Facility.

On December 7, 2005, OWD's Board of Directors adopted the OWD 2005 UWMP. Section 2 of the 2005 UWMP contains OWD's water service reliability assessment. OWD is investigating the potential for developing local groundwater to reduce its dependence on imported water. OWD's UWMP identifies sources of water other than imported water that are being evaluated, including local groundwater supply, proposed regional seawater desalination project at the Encina Power Station, and recycled water programs. OWD currently does not use local groundwater to meet any of its demands. OWD maintains an active recycled water program and is actively pursuing conservation programs.

## **2. Water Supply Challenges**

Since adoption of the 2005 UWMPs, multiple events occurred that affected southern California's water supply. The Colorado River has experienced drought conditions for eight of the last nine years. Additionally, the SWP in northern California experienced three years (2006-2008) of drought conditions, which substantially depleted storage in reservoirs throughout the SWP system, including San Diego County. After a record dry spring that dramatically curtailed snow runoff from the Sierra Nevada Mountains, Governor Schwarzenegger declared an official statewide drought on June 4, 2008. In March 2011, Governor Jerry Brown proclaimed an end to the statewide drought.

In addition to extreme drought conditions, in August 2007, a U.S. District Court decision was issued to protect the endangered Delta smelt (fish). This federal court ruling set operational limits on pumping in

the Sacramento-San Joaquin Bay Delta from December 2007 to June 2008 to protect the Delta smelt. Since the SDCWA and its member agencies import water from MWD, their water supply was impacted by this Court ruling. Additionally, climate change due to global warming also creates uncertainties that may significantly affect California's water resources over the long term.

### **3. Existing Infrastructure**

The project would be served by the Central Service Area of the OWD. This area of the OWD is supplied water from Connection Numbers 10 and 12 to the SDCWA aqueduct, which fills the reservoirs in the 624 Zone. Water is then distributed within the 624 Zone and pumped to the 711 Zone and 980 Zone storage and distribution systems. The following paragraphs describe the existing potable water facilities located in the vicinity of the project.

#### **4. 624 Zone**

The 624 Zone has three existing storage reservoirs. The 624-2 Reservoir is located adjacent to the SDCWA aqueduct between Otay Lakes Road and East H Street, has a capacity of 8.0 million gallons and is supplied by Connection Number 10 to the SDCWA aqueduct. The 624-1 and 624-3 Reservoirs are supplied by Connection Number 12 and have a capacity of 12.4 million gallons and 30 million gallons, respectively. The 624-1 reservoir is located adjacent to the eastern boundary of Otay Ranch Village 5 and the 624-3 reservoir is located along Eastlake Parkway, just north of the Olympic Parkway. In the vicinity of Village 9, there are currently no 624 Zone facilities. Water will be supplied to the 624 Zone in this area by the 711 Zone system.

#### **5. 711 Zone**

There is currently one pump station in the 711 Zone, referred to as the Central Area Pump Station, which is located at the 624-1 Reservoir site adjacent to the eastern boundary of Otay Ranch Village 5. This station pumps water from the 624 Zone system into the 711 Zone distribution system and into two existing 711 Zone reservoirs located in the Eastlake Greens development. The 711 Zone Pump Station currently has five pumps (one standby), each rated for 4,000 gallons per minute (gpm) which results in a firm station capacity of 16,000 gpm. There are three existing reservoirs in the 711 Zone. Two reservoirs are located at the same site within the Eastlake Greens development and have capacities of 2.8 and 2.2 million gallons for a total of 5.0 million gallons. A 16.0 million gallon reservoir, 711-3, was constructed north of the Rolling Hills Ranch project. With the construction of this reservoir, the OWD now has enough storage within the 711 Zone to meet the demands from ultimate projected development in the Central Area.

The major 711 Zone pipelines in the vicinity of the Village 9 project include a 12-inch line in Eastlake Parkway and a 16-inch line in Hunte Parkway.

#### **6. 980 Zone**

There are two existing pump stations in the 980 Zone, the 980-1 Pump Station referred to as the Eastlake Pump Station, located on the south side of Otay Lakes Road at Lane Avenue and the new 980-2 Pump Station. The 980-1 Zone Pump Station, which currently has two active and one standby pumps that are all rated for 4,000 gpm and maintain a firm station capacity of 8,000 gpm, pumps water from the 711 Zone system into the 980 Zone distribution system, and into two existing 980 Zone reservoirs located in the OWD use area. The 980-2 Pump Station pumps water from the 624 Zone to the 980 Zone and currently has three duty pumps, one standby pump, and two empty pump cans for future expansion. All pumps are rated for 5,000 gpm which results in a firm pumping capacity of 15,000 gpm.

Both existing reservoirs in the 980 Zone are located at the same site within the OWD use area, north of Rolling Hills Ranch. These reservoirs each have a capacity of 5.0 million gallons, for a total of 10.0 million gallons. The major 980 Zone pipelines in the vicinity of Village 9 project include a 20-inch transmission line in Eastlake Parkway and water lines within Hunte Parkway to the northeast.

### 5.15.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would result in a significant impact to water services if it would:

- **Threshold 1:** Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- **Threshold 2:** Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.
- **Threshold 3:** Exceed City threshold standards which seek to ensure that adequate supplies of quality water, appropriate for intended uses, are available. The standards require the applicant must request and deliver to the City service availability letters from the appropriate water district for each project; the applicant is required to submit a Water Conservation Plan along with the SPA Plan application; and the project plans shall ensure an adequate supply of water on a long-term basis prior to the development of each Otay Ranch SPA.
- **Threshold 4:** Be inconsistent with General Plan, GDP or other relevant objectives and policies regarding water supply thereby resulting in a significant physical impact.

### 5.15.1.3 Impact Analysis

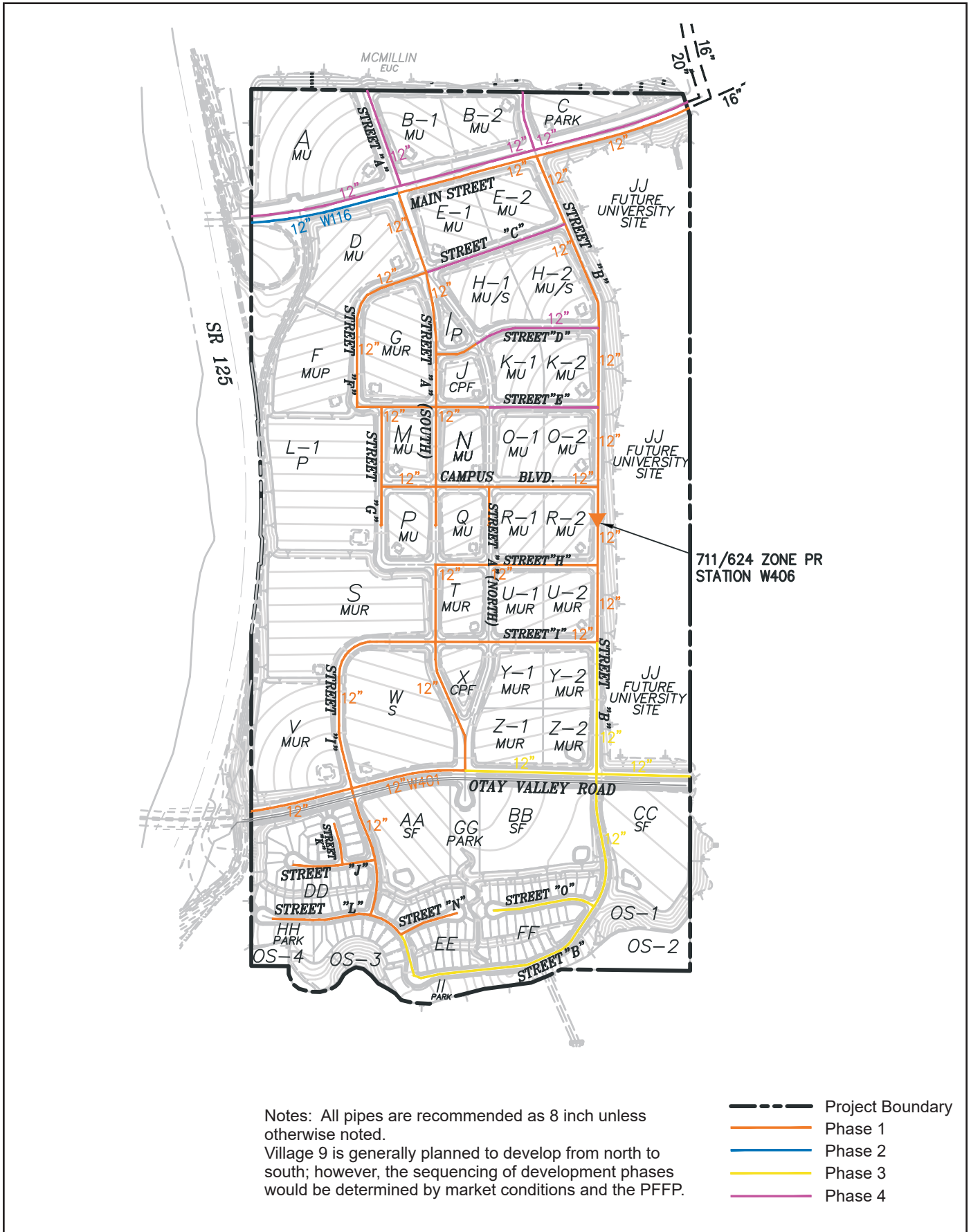
#### **A. Threshold 1: Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

Village 9 project would receive water service by expanding the existing 624, 711, and 980 Zone water systems, described above under Existing Infrastructure. Figure 3-9, Potable Water System, provides the recommended on-site potable water facilities for the project. In general, the project will be phased and must ensure that the OWD looping criteria is met during all phases of development. The proposed phasing for the potable water facilities is provided in Figure 5.15-1. Final location, sizing, phasing, and hydraulic modeling of the project water system will be presented in the final SAMP that is prepared for the project and submitted to OWD. A brief description of the facilities that would be required to serve Village 9, based on the SPA Plan and TM, is provided below.

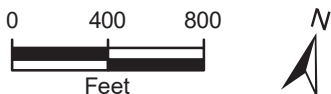
#### **1. 624 Zone**

The southern portion of the project would be served by the 624 Zone. The OWD Master Plan identifies a 711/624 Zone pressure reducing station that will supply this area. A 12-inch water line would be constructed from this pressure reducing station to the western project boundary at Otay Valley Road. Ultimately, a 624 Zone loop would be completed by constructing a 12-inch water line west to the existing line in Heritage Road. If the OWD projects have not been constructed and connected to the 624 Zone system prior to issuance of the final map containing the 70<sup>th</sup> equivalent dwelling units in the 624 Zone, temporary facilities such as pressure reducing stations would be constructed in Village 9 to meet OWD redundancy requirements (Nielsen 2012).





Source: Dexter Wilson Engineering 2010



**POTABLE WATER INFRASTRUCTURE PHASES**  
**FIGURE 5.15-1**

## **2. 711 Zone**

The OWD Master Plan identifies proposed 12-inch 711 Zone water lines that are planned to be routed in Main Street through Village 9 from Eastlake Parkway to the western project boundary. The 711 Zone will be extended south off this 12-inch line in Main Street to serve the planning areas in this area and to supply the 711/624 Zone pressure reducing station.

## **3. 980 Zone**

The OWD Master Plan identifies a 980 Zone line to be constructed in Main Street from Eastlake Parkway to the western project boundary. The planning areas north of Main Street are proposed to be served by the 980 Zone by extending off the line in Main Street. These lines will ultimately be connected to the 980 Zone system being constructed within the McMillin Companies portion of the EUC and would be sized to serve Village 9 and the projected EUC development.

## **4. Project Phasing**

Village 9 is anticipated to develop in four major phases. The order in which the facilities will develop is not known at this time. At the time the SAMP is prepared for the project, more detailed information on the project phasing will be presented. A description of the water facilities required to serve each individual phases of the project is described below. Figure 3-18, Development Phases, graphically shows the proposed phasing of the project.

### **a. Orange Phase**

The Orange phase is located in the central and southwest portion of the project. This area of the project is in the 624 Zone and 711 Zone. The 711 Zone development would be served by connecting to the existing 12-inch line and extending 711 Zone lines to the development area. The 624 Zone portion of the project would require a 711/624 Zone pressure reducing station and construction of the 624 Zone system.

### **b. Blue Phase**

The Blue phase is located in the western portion of the project. This area is within the 624 and 711 Zone and would be served by extending the 711 Zone system from the north and constructing a 711/624 Zone pressure reducing station.

### **c. Yellow Phase**

The Yellow phase is located in the southeast portion of the project. To provide water service to this area of the project, 12-inch 711 Zone water lines would need to be constructed in main street and extended to the planning areas and the 711/624 Zone pressure reducing station would be required.

### **d. Purple Phase**

The Purple phase is in the northern portion of the project. Development in this area is within the 980 and 711 zones and would require extensions of the 980 and 711 Zone systems from the north and east.

The proposed pipeline would be installed using conventional construction methods, either open trench excavation or a boring and jacking method. Installation of on-site and off-site water lines have the potential to generate vehicle and equipment emissions and dust, increase noise levels, impact undiscovered cultural resources, and cause contamination of groundwater and erosion. These issues have been addressed as part of the construction analyses presented in Sections 5.4 Air Quality,

5.6 Biological Resources, 5.7 Cultural Resources, 5.11 Hydrology and Water Quality, and 5.5 Noise of this EIR. Mitigation measures are proposed in these sections to reduce construction impacts to a less than significant level with the exception of air quality. Air pollutant emissions from installation of infrastructure are included in the trenching phase of construction in Table 5.4-6, Maximum Daily Emissions per Construction Activity. As shown in this table, all air pollutant emissions associated with the installation of the underground utilities would be less than significant. Therefore, installation of the water infrastructure required by buildout of Village 9 would not result in significant environmental effects and this impact would be less than significant.

## **B. Threshold 2: Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.**

Water service for the project would be provided by the OWD. Annexation into Improvement Districts 22 and 27 would be required prior to water service being provided. The OWD has existing and planned facilities in the vicinity of the project and water service can be provided by expanding the existing system, as detailed in the overview of water service (Appendix K2).

Water demand and required facilities for the project were determined based on the October 2008 OWD Water Resources Master Plan. This document was amended in November 2010 to include the current Village 9 development plan. Table 5.15-6 presents the factors used in projecting the total average day potable water demands. The required fire flows and durations are included in the total water demand. The City of Chula Vista utilizes the California Fire Code for determining required fire flows and durations for new development. The fire code utilizes a number of factors to determine the required fire flow for a building. These factors include building footprint, building construction materials, and whether or not the building has sprinklers. Since this level of detail is not known at the planning stage, this report uses the fire flow requirements utilized by the OWD in master planning storage, transmission, and distribution facilities throughout the OWD. The projected water demand for Village 9 is summarized in Table 5.15-7. Additional details, such as the projected water demand for each planning area, are available in the overview of water service (Appendix K2). As shown in Table 5.15-7, the total estimated potable water use is approximately 1.35 mgd, or 1,507 acre feet per year. Due to slight adjustments in school site and park acreages in the site plan following preparation of the overview of water service, the PFFP for Village 9 estimates that potable water use will be 1.34 mgd. Therefore, the overview of water service is a conservative estimate for the proposed project.

**Table 5.15-6 Water Demand Factors**

Land Use Designation	Unit Domestic Demand	Required Fire Flow (gpm)	Required Fire Flow Duration Hours
Single-family Medium (1-3 du/ac)	850 gpd/unit	1,500 <sup>(1)</sup>	2
Single-family High (3-8 du/ac)	500 gpd/unit	1,500 <sup>(1)</sup>	2
Multi-family (>8 du/ac)	255 gpd/unit <sup>(2)</sup>	2,500	2
Schools	1,428 gpd/acre <sup>(2)</sup>	5,000	4
Commercial	0.14 gpd/sf	3,500	3
Community Purpose Facility	714 gpd/acre <sup>(2)</sup>	3,500	3
Irrigation (Recycled Water)	2,155 gpd/acre	---	---

<sup>(1)</sup> Applies to single-family homes that are less than 3,600 square feet.  
<sup>(2)</sup> Demand factors for these land uses are from Table 4-27 of the OWD Master Plan, assuming the use of recycled water.  
gpd = gallons per day; sf = square feet  
Source: Dexter Wilson Engineering, Inc. 2010a

**Table 5.15-7 Village 9 Potable Water Demand**

Planning Area	Land Use <sup>1</sup>	Quantity <sup>(1)</sup>	Unit Demand	Total Demand (gpd)
<b>980 Zone</b>				
A	Retail	350,000 sf	0.14 gpd/sf	49,000
	Multi-family Residential	515 units	255 gpd/unit	131,330
B-1	Retail	145,000 sf	0.14 gpd/sf	20,300
	Multi-family Residential	160 units	255 gpd/unit	40,800
B-2	Retail	115,000 sf	0.14 gpd/sf	16,100
	Multi-family Residential	140 units	255 gpd/unit	35,700
C	Park	3.6 acre	---- <sup>(2)</sup>	1,230
<b>Subtotal 980 Zone</b>				<b>294,460</b>
<b>711 Zone</b>				
D	Retail	290,000 sf	0.14 gpd/sf	40,600
	Multi-family Residential	345 units	255 gpd/unit	87,975
E-1	Retail	145,000 sf	0.14 gpd/sf	20,300
	Multi-family Residential	180 units	255 gpd/unit	45,900
E-2	Retail	145,000 sf	0.14 gpd/sf	20,300
	Multi-family Residential	160 units	255 gpd/unit	40,800
F	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	135 units	255 gpd/unit	34,425
G	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	160 units	255 gpd/unit	40,800
H-1	School	4.7 acre	1,428 gpd/acre	6,710
H-2	School	5.6 acre	1,428 gpd/acre	7,995
I	Park	1.4 acre	---- <sup>(2)</sup>	1,030
J	Community Purpose Facility	2.3 acre	714 gpd/acre	1,640
K-1	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	148 units	255 gpd/unit	37,740
K-2	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	152 units	255 gpd/unit	38,760
L	Park	12.5 acre	---- <sup>(2)</sup>	6,990
M	Retail	29,000 sf	0.14 gpd/sf	4,060
	Multi-family Residential	80 units	255 gpd/ unit	20,400
N	Retail	52,000 sf	0.14 gpd/sf	7,280
	Multi-family Residential	57 units	255 gpd/unit	14,535
O-1	Retail	29,000 sf	0.14 gpd/sf	4,060
	Multi-family Residential	80 units	255 gpd/unit	20,400
O-2	Retail	29,000 sf	0.14 gpd/sf	4,060
	Multi-family Residential	80 units	255 gpd/unit	20,400
<b>Subtotal 711 Zone</b>				<b>527,160</b>
<b>624 Zone</b>				
P	Retail	29,000 sf	0.14 gpd/sf	4,060
	Multi-family Residential	80 units	255 gpd/unit	20,400
Q	Retail	52,000 sf	0.14 gpd/sf	7,280
	Multi-family Residential	57 units	255 gpd/unit	14,535

Table 5.15-7 Village 9 Potable Water Demand (continued)

Planning Area	Land Use	Quantity	Unit Demand	Total Demand (gpd)
R-1	Retail	29,000 sf	0.14 gpd/sf	4,060
	Multi-family Residential	80 units	255 gpd/unit	20,400
R-2	Retail	29,000 sf	0.14 gpd/sf	4,060
	Multi-family Residential	80 units	255 gpd/unit	20,400
S	Retail	0 acre	0.14 gpd/sf	0
	Multi-family Residential	285 units	255 gpd/unit	72,675
T	Retail	32,000 sf	0.14 gpd/sf	4,480
	Multi-family Residential	48 units	255 gpd/unit	12,240
U-1	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	70 units	255 gpd/unit	17,850
U-2	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	70 units	255 gpd/unit	17,850
V	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	165 units	255 gpd/unit	42,075
W	School	11.7 acre	1,428 gpd/acre	16,710
X	Community Purpose Facility	2.7 acre	714 gpd/acre	1,930
Y-1	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	65 units	255 gpd/unit	16,575
Y-2	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	60 units	255 gpd/unit	15,300
Z-1	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	75 units	255 gpd/unit	19,125
Z-2	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	55 units	255 gpd/unit	14,025
AA	Single-family Residential	72 units	500 gpd/unit	36,000
BB	Single-family Residential	89 units	500 gpd/unit	44,500
CC	Retail	0 sf	0.14 gpd/sf	0
	Multi-family Residential	152 units	255 gpd/unit	38,760
DD	Single-family Residential	47 units	500 gpd/unit	23,500
EE	Single-family Residential	26 units	500 gpd/unit	13,000
FF	Single-family Residential	32 units	500 gpd/unit	16,000
GG	Park	2.9 acre	---- <sup>(2)</sup>	3,500
HH	Park	1.3 acre	---- <sup>(2)</sup>	1,030
II	Park	3.4 acre	---- <sup>(2)</sup>	1,130
<b>Subtotal 624 Zone</b>				<b>523,450</b>
<b>Total</b>				<b>1,345,070</b>
<p><sup>(1)</sup> The site utilization proposed in the Village 9 SPA Plan has been revised since preparation of the Overview of Water Service (December 2010). Although the land uses for some individual planning areas in this table differ from the utilization shown in Figure 3-3, Site Utilization Plan, the total development, water demand by water system zone, and overall water demand is the same. No revision to the Overview of Water Service was required as a result of the updated utilization plan (Nielsen 2013).</p> <p><sup>(2)</sup> Planning Areas C, I, L, GG, HH, and II will be irrigated with recycled water. See Appendix K1 for potable water estimates for the park sites.</p> <p>gpd = gallons per day; sf = square feet</p> <p>Source: Dexter Wilson Engineering Inc. 2010a</p>				



The Village 9 SPA allows intensity transfer between planning areas provided that the overall target intensity of 4,000 residential units and 1.5 million square feet of non-residential floor area is not exceeded. A request for an intensity transfer must be accompanied by a variety of findings, one of which is that adequate infrastructure exists to support the transfer. This finding must be substantiated by an updated technical study (in this case a water study) that ensures adequate infrastructure exists to accommodate the transfer and that the target intensity is not exceeded. This provision in the SPA Plan ensures that while water demand by planning area may shift, the total water demand for Village 9 would not exceed 1,345,070 gpd. A mitigation measure has been added to enforce this SPA provision.

As previously discussed, the OWD currently relies on the SDCWA for its water supply, which relies on the MWD for 70 percent to 95 percent of its water supply. Therefore, this water supply overview relied on the MWD, SDCWA, and OWD 2005 UWMPs, all of which are incorporated herein by reference, to ensure that the project will have sufficient water supplies to meet demand for the project, in conjunction with other planned and future development within the SDCWA service area.

In accordance with SB 610 and SB 221, OWD approved a WSAV in November for Village 9. The WSAV includes, among other information, an identification of existing water supply entitlements, water rights, water services contracts and agreements relevant to the identified water supply needs for the proposed project. The WSAV evaluates water supplies that are or will be available during normal, single-dry and multiple-dry water years during a 20-year projection to meet existing demands, expected demands associated with the project, and reasonably foreseeable planned future water demands served by OWD. The WSAV incorporates by reference the UWMPs and other water resources planning documents of the OWD, SDCWA, and MWD. The WSAV determined that sufficient water supplies are planned for and are intended to be available over a 20-year planning horizon, under normal conditions and in single-dry and multiple-dry water years to meet the projected demand of Village 9 and the existing and other planned development projects to be served by the OWD.

Additionally, the Chula Vista Landscape Water Conservation Ordinance calls for greater water conservation efforts and more efficient use of water in landscaping. The SPA Plan requires landscaping to comply with this ordinance, and the requirements of the ordinance have been incorporated into the WCP included in the SPA Plan. The project would promote water conservation through the use of low water use plumbing fixtures and the use of recycled water for the irrigation of parks, open space slopes, schools, parkway landscaping, and the common areas of multi-family residential and commercial sites. Section 27.05 of the OWD Code of Ordinances also requires the implementation of water conservation BMPs for new development, including installation of high efficiency water fixtures and appliances and use of low water plants and smart irrigation controllers for landscaping. The OWD requirements have been incorporated into the project WCP. The project is also required to contribute to the development of alternative water supply projects through payment of the New Water Supply Fee adopted by the OWD in May 2010. The potential water supply projects, such as the Rosarito Ocean Desalination Facility, are in response to the regional water supply issues and are in various stages of the planning process.

Although the WSAV for the SPA Plan and the water supply and reliability studies from OWD identify adequate water supplies for Village 9, the WSAV cannot ensure that water resources will be available when needed. Conditions such as unanticipated drought conditions or delays in providing planned infrastructure would potentially interfere with projected water supply. As stated in the 2005 GPU EIR and 2013 GPA/GDPA SEIR, because a long-term water supply is not assured, increases in water demand would result in a significant impact. Therefore, because there is still no assurance of a long-term supply of water in the future, the increase in water consumption associated with Village 9 would be significant.

**C. Threshold 3: Exceed City threshold standard which seeks to ensure that adequate supplies of quality water, appropriate for intended uses, are available. The standard requires the applicant to request and deliver to the City service availability letters from the appropriate water district for each project; the applicant is required to submit a Water Conservation Plan along with the SPA Plan application; and the project plans shall ensure an adequate supply of water on a long-term basis prior to the development of each Otay Ranch SPA.**

The City of Chula Vista requires an applicant to provide service availability letters prior to issuance of a building permit. Individual developers would be required to obtain service availability letters prior to construction of land uses within Village 9. In addition, the SPA Plan includes a WCP to address water use during project construction and operation. The WCP provides an analysis of water usage requirements of the project, an overview of mandated water conservation measure, a detailed plan of proposed measures for water conservation, use of recycled water, other means of reducing per capita water consumption from the project, and a program to monitor compliance. The mandatory measures identified in the WCP for residences are as follows:

1. Insulate hot water pipes with 1-inch walled pipe insulation and separate of hot and cold water piping.
2. Set the maximum service pressure to 60 pounds per square inch to reduce any leakage present and prevent excessive flow of water from all appliances and fixtures.
3. Install Water Efficient Dishwashers.
4. Install dual flush toilets within the project.
5. Comply with the Chula Vista Landscape Water Conservation Ordinance to reduce outdoor water use. This will include selection of a more drought tolerant plant selection, including less turf area as well as installation of water efficient irrigation systems.

The mandatory measures identified in the WCP for non-residential land uses are as follows:

1. Insulate hot water pipes with 1-inch walled pipe insulation.
2. Comply with Division 5.3 of the California Green Building Standards Code in effect at the time of plan submittal.
3. Install pressure reducing valves.
4. Install dual flush toilets.
5. Install water efficient landscaping.

The project would also incorporate appliance efficiency regulations required by the state of California (CCR Title 20). These include maximum flow rates for all new showerheads, lavatory faucets, sink faucets, metering faucets in public restrooms, tub spout diverters, residential and commercial water closets, and flushometer valves. Also, under the WCP, the project would use recycled water in all common landscaped areas, in compliance with the recycled water requirements of the Chula Vista Landscape Manual and OWD ordinance. The use of recycled water would not reduce the irrigation demand for landscaping but would reduce potable water demand. The WCP is estimated to reduce total water demand for the project by 220,030 gpd, which is a 15.1 percent reduction in estimated water use compared to usage without the incorporation of the conservation measures. As the project would implement a WCP, it would be consistent with this threshold requirement.

Finally, as discussed above under Threshold 2, the WSAV prepared by the OWD describes current and long-range storage capacity and ensures that the OWD would be able to absorb the forecasted growth for Village 9. The WSAV also provided documentation of entitlements and contracts, and a financial analysis of OWD's maintenance and future water supplies. The WSAV report concludes that adequate long-term water supply will be available to the project. The Overview of Water Service prepared by Dexter Wilson Engineering also provides information that existing and OWD off-site conveyance and storage facilities would be adequate to serve the Village 9 project (see Appendix K2). However, future individual developers within Village 9 would be required to obtain service availability letters and submit SAMPs for OWD approval in order to ensure that the project is consistent with the City GMO thresholds. Therefore, this impact is potentially significant.

**D. Threshold 4: Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding water supply thereby resulting in a significant physical impact.**

Table 5.15-8 evaluates the consistency of the project with the applicable General Plan objectives and Table 5.15-9 evaluates the project's consistency with applicable GDP goals and objectives. As shown in Tables 5.15-8 and 5.15-9, the project would be consistent with applicable water supply policies.

**Table 5.15-8 Project Consistency with Applicable General Plan Water Service Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective LUT 62:</b> Require development to consider and plan for careful use of natural and man-made resources and services, and maximize opportunities for conservation while minimizing waste.</p> <p><b>Policy LUT 62.1:</b> Require developments within the East Planning Area to provide resource management plans for water; air quality; recycling; solid waste management; and energy.</p>	<p><b>Consistent.</b> The project is consistent with this General Plan objective and Policy 62.1 because the SPA plan includes a WCP. The WCP addresses state, federal and local water conservation requirements as well as on-site water conservation measures and estimated savings.</p>
<p><b>Objective LUT 94:</b> Ensure the coordination and sizing of infrastructure needs in proximity to Village 9, EUC and University.</p> <p><b>LUT 94.1:</b> Coordinate and size infrastructure needs such as sewer, water, roads and utilities jointly with the development of the University Village and University.</p> <p><b>LUT 94.3:</b> Independent of the University Campus development, phase and develop the RTP commensurate with residential development within the adjoining University Village, EUC and surrounding area.</p>	<p>The Village 9 infrastructure system has been designed in coordination with planning for the EUC and future University. As shown in Figure 5.15-1 and Figure 5.15-2, the planned water and sewer infrastructure systems include connections to the EUC and University. As stated above under Threshold 1, the planning areas north of Main Street are proposed to be served by the 980 Zone by extending off the line in Main Street. These lines will ultimately be connected to the 980 Zone system being constructed within the McMillin Companies portion of the EUC and would be sized to serve Village 9 and the projected EUC development. As described in Section 5.15.2.3 under Threshold 3, no flows from the EUC or other Villages are planned to be conveyed through Village 9. Therefore, all sewer lines within the project site have been sized to serve only Village 9. A sewer stub would be provided in Otay Valley Road to the eastern property boundary to accept future flows from the University site, if ultimately required, for further analysis at the time the University is proposed. As described in Section 5.3, the proposed project would implement its share of the regional circulation network through mitigation measures 5.3-1 through 5.3-20. Implementation of the Village 9 SPA Plan would provide up to 4,000 residences to support development of the RTP, EUC, and University.</p>

Table 5.15-8 Project Consistency with Applicable General Plan Water Service Policies (continued)

Applicable Policies	Evaluation of Consistency
<p><b>Objective PFS 2:</b> Increase efficiencies in water use, wastewater generation and its reuse, and handling of storm water runoff throughout the City through use of alternative technologies.</p> <p><b>Policy PFS 2.3:</b> In designing water, wastewater, and drainage facilities, limit the disruption of natural landforms and water bodies. Encourage the use of natural channels that simulate natural drainage ways while protecting property.</p>	<p><b>Consistent.</b> The project is consistent with this objective and Policy PFS 2.3. The proposed water distribution facilities would be placed underground. No new water storage facilities are required for the project.</p>
<p><b>Objective E 3:</b> Minimize the impacts of growth and development on water supply resources through the efficient use and conservation of water by residents, businesses, and city government.</p> <p><b>Policy E 3.2:</b> Promote the use of low water demand landscaping and drought tolerant plant materials in both existing and new development.</p>	<p><b>Consistent.</b> The project would be consistent with General Plan Policy E 3.2. The SPA Plan includes a WCP to promote water conservation.</p>
<p><b>Objective H 2:</b> Promote efficient use of water and energy through adopted standards and incentive-based policies to conserve limited resources and reduce long-term operational costs of housing.</p> <p><b>Policy H 2.1:</b> Encourage the efficient use and conservation of water by residents.</p>	<p><b>Consistent.</b> See the analysis for Objective E 3.</p>
<p><b>Objective GM 1:</b> Concurrent public facilities and services.</p> <p><b>Policy GM 1.1:</b> Maintain a set of quantitative levels of service measures (Growth Management Threshold Standards) as a tool to assess the relative impact of new facility and service demands created by growth and apply those standards as appropriate to approval of discretionary projects.</p>	<p><b>Consistent.</b> The GMO contains a threshold standard to ensure that the supply of water for existing and future residents is available at a level and quality necessary for its intended use. As discussed above, a WSAV has been prepared for the project. The WSAV verifies that adequate water would be available to serve the project. Should conditions change, this General Plan objective includes policies that require detailed forecasting of water demands, updating of threshold standards, and monitoring of development activities to impose limits on the rate of development to ensure water is available commensurate with need. Therefore, the project would be consistent with this objective.</p>
<p><b>Objective GM 3:</b> Create and preserve vital neighborhoods.</p> <p><b>Policy GM 3.3:</b> Assure that all new and infill development within existing urban areas pays its proportional share of the cost for urban infrastructure and public facilities required to maintain the Threshold Standards, as adopted for its area of impact.</p>	<p><b>Consistent.</b> See analysis for Objective GM 1.</p>

**Table 5.15-9 Project Consistency with Applicable GDP Water Service Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section C –Public Facility Plans</b>	
<p><b>Goal:</b> Ensure an adequate supply of water for build-out of the entire Otay Ranch project area; design the Otay Ranch project area to maximize water conservation.</p> <p><b>Objective:</b> Ensure an adequate supply of water on a long-term basis prior to the development of each phase of the Otay Ranch project area.</p> <p><b>Objective:</b> Ensure infrastructure is constructed concurrently with planned growth, including adequate storage, treatment, and transmission facilities, which are consistent with development phasing goals, objectives and policies, and the Service/Revenue Plan.</p>	<p><b>Consistent.</b> The project is consistent with this objective because it demonstrates that adequate water supply is available. The project would implement a WCP to reduce water use and help ensure long-term water supply. Implementation of mitigation measures 5.15.1-1 through 5.15.1-3 would ensure that water service is available to serve development prior to construction. The SPA Plan includes a Water Infrastructure Plan, provided in Appendix K2, which identifies the infrastructure required for each phase of development, and the project as a whole.</p>
<p><b>Objective:</b> Promote water conservation through increased efficiency in essential uses and use of low water demand landscaping.</p>	<p><b>Consistent.</b> Landscaping on the project site would be required to comply with the City’s Landscape Water Conservation Ordinance (CVMC §20.12). Additionally, the site would utilize recycled water to reduce potable water use for landscaping.</p>
<p><b>Goal:</b> Conserve water during and after construction of Otay Ranch.</p> <p><b>Objective:</b> Reduce CWA water use within Otay Ranch to a level that is 75 percent of county-wide 1989 per capita levels.</p> <p><b>Objective:</b> Create a comprehensive framework for the design implementation and maintenance of water conserving measures, both indoor and outdoor.</p> <p><b>Objective:</b> Comply with the water conservation standards and policies of all applicable jurisdictions.</p>	<p><b>Consistent.</b> Development on the project site would be required to adhere to the provisions of the WCP included in the SPA Plan. Development would also be required to comply with all City regulations related to water conservation, such as the City’s Landscape Water Conservation Ordinance</p>

#### 5.15.1.4 Level of Significance Prior to Mitigation

##### A. New Water Treatment Facilities

No significant impacts related to new water treatment facilities have been identified for implementation of the SPA Plan and TM.

##### B. Long-term Water Supply and Entitlements

Long-term water supply availability cannot be guaranteed; therefore, the increase in water demand that would result from implementation of the project would be potentially significant. Additionally, the transfer of density between planning areas could have a significant impact to on-site infrastructure.

##### C. Compliance with City Water Supply Thresholds

Until future developers provide service availability letters and get approved SAMPs from OWD, the project would not be in compliance with the City threshold standards.

##### D. Consistency with Water Supply Policies

No significant impacts related to consistency with water supply policies have been identified for implementation of the SPA Plan and TM.



### 5.15.1.5 Mitigation Measures

#### A. New Water Treatment Facilities

No mitigation measures are required.

#### B. Long-term Water Supply and Entitlements

The WSAV verifies that the OWD has adequate water supply for the project. Additionally, the project would comply with the Chula Vista Landscape Water Conservation Ordinance, implement a WCP, and utilize recycled water to reduce water demand. However, no mitigation measures are available to guarantee a long-term water supply would be available to serve the project. The following mitigation measure reduces impacts related to density transfers.

5.15.1-1 **Density Transfer Technical Report.** Prior to design review approval in accordance with the Intensity Transfer provision in the Village 9 SPA Plan, the applicant shall provide an update to the Overview of Water Service for Otay Ranch Village 9 (Dexter Wilson Engineering, Inc. 2010) with each proposed project requesting an intensity transfer. The technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site water infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site water supply infrastructure to accommodate flows.

#### C. Compliance with City Water Supply Thresholds

5.15.1-2 **Service Availability Letters.** Prior to approval of each final map for Village 9, the applicant shall request and obtain a service availability letter from the Otay Water District and submit the letter to the City of Chula Vista.

5.15.1-3 **Subarea Master Plan Preparation.** Prior to approval of the first final map, the applicant shall provide a Subarea Master Plan to the Otay Water District. Water facilities improvements shall be financed or installed on site and off site in accordance with the fees and phasing in the approved Public Facilities Finance Plan and Subarea Master Plan. The Subarea Master Plan shall include, but shall not be limited to:

- i. Existing pipeline locations, size, and capacity;
- ii. The proposed points of connection and system;
- iii. The estimated water demands and/or sewer flow calculations;
- iv. Governing fire department's flow requirements (flow rate, duration, hydrant spacing, etc);
- v. Agency Master Plan;
- vi. Agency's planning criteria (see Sections 4.1 through 4.3 of the Water Agencies Standards);
- vii. Water quality maintenance; and
- viii. Size of the system and number of lots to be served.

5.15.1-4 **Subarea Master Plan Approval.** Prior to approval of the first final map, the applicant shall obtain Otay Water District's approval of the Subarea Master Plan for potable water. Any on-site and off-site facilities identified in the Subarea Master Plan required to serve a final

mapped area, including but not limited to water facilities within the SR-125 overcrossings at Main Streets and Otay Valley Road, shall be secured or constructed by the applicant prior to the approval of the final map and in accordance with the phasing in the Public Facilities Finance Plan.

#### **D. Consistency with Water Supply Policies**

No mitigation measures are required.

#### **5.15.1.6 Level of Significance After Mitigation**

##### **A. New Water Treatment Facilities**

Impacts would be less than significant without mitigation.

##### **B. Long-term Water Supply and Entitlements**

Mitigation measure 5.15.1-1 would reduce impacts related to density transfers to a less than significant level. No mitigation measures are available to guarantee a long-term water supply would be available to serve the project. As such, any increase in water demand would be considered significant. Therefore, impacts would be significant and unavoidable.

##### **C. Compliance with City Water Supply Thresholds**

With implementation of mitigation measures 5.15.1-2 through 5.15.1-4 identified above, impacts related to compliance with City thresholds would be mitigated to less than significant.

##### **D. Consistency with Water Supply Policies**

Impacts would be less than significant without mitigation.

### **5.15.2 Wastewater**

#### **5.15.2.1 Existing Conditions**

##### **A. Regulatory Framework**

###### **1. Local**

###### **a. City of Chula Vista General Plan**

The Chula Vista General Plan recognizes that to ensure adequate and reliable sewer service and facilities, services need to be maintained and expanded as the city population grows. The Chula Vista General Plan includes objectives and policies in the Public Facilities and Services Element that increase efficiencies in wastewater generation and its reuse through use of alternative technologies (Objective PFS 2). Additionally, Growth Management Objective GM 1, and Policy GM 1.11 encourage withholding discretionary approvals and subsequent building permits from projects demonstrated to be out of compliance with applicable threshold standards for wastewater service.

###### **b. Wastewater Master Plan**

The Chula Vista Wastewater Master Plan was adopted in May 2005 for the purpose of evaluating the capacity of the sewerage system, assessing the condition of existing pump station facilities, developing a

CIP for rehabilitation and expansion of the collection system, and recommendation of a revised capacity charge. The 20-year CIP includes the recommended system improvements to address existing and projected demand at build out. Future city flow estimates, based on 2005 growth projections, indicate that the city would exceed the existing (or increased to 20.870 mgd) share in the City of San Diego Metropolitan Wastewater Department Sewerage System (Metro system) by 2010. As such, the wastewater generation analysis presented in the Wastewater Master Plan is intended to be used by the City to establish a basis for future sewage capacity acquisitions to allow for the implementation of the Chula Vista General Plan, as adopted in 2005. The city's sewage capacity was not exceeded in 2010, and the 2012 GMOC Annual Report concluded the city would not exceed its sewage capacity in the next five years.

The Wastewater Master Plan also presents the methodology and findings of the sewer capacity evaluation, including summaries of hydraulic computer model analyses used to present findings of existing pump station assessments and recommended facility improvements. Sewer system design standards under the Wastewater Master Plan are based on the Chula Vista Subdivision Manual Section 3-300. Recommended wastewater unit generation rates for use in design of sewer improvements, are shown in Table 5.15-10.

**Table 5.15-10 Recommended Sewer Design Unit Generation Rates**

Land Use	Unit Generation Rate (gpd)
Residential (R-1 and R-2)	265 per dwelling unit
Residential (R-3 and MHP)	199 per dwelling unit
Commercial/Industrial/Institutional	2,500 per acre
Parks	500 per acre
Elementary School	15 per capita
Source: City of Chula Vista 2005c	

### c. Chula Vista Municipal Code Growth Ordinance

CVMC Section 19.80.030 (Controlled Residential Development) is intended to ensure that new development would not degrade existing public services and facilities below acceptable standards for sewer and other public services. The preparation of the PFFP is required in conjunction with the SPA Plan to ensure that the development of the project is consistent with the overall goals and policies of the General Plan and would not degrade public services. Similarly, CVMC Section 19.09 (Growth Management) provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040G specifically requires that "that sewage flows and volumes shall not exceed City engineering standards as set forth in the subdivision manual." In addition, the City must annually provide the San Diego Metropolitan Sewer Authority with a 12- to 18-month development forecast and request confirmation that the projection is within the city's purchased capacity rights and an evaluation of their ability to accommodate the forecast and continuing growth, or the City Engineering Department staff shall gather the necessary data. The information provided to the GMO must include the following:

- Amount of current capacity now used or committed;
- Ability of affected facilities to absorb forecast growth;
- Evaluation of funding and site availability for projected new facilities;
- Other relevant information.

The development (growth) forecast and authority response letters are to be provided to the GMOC for inclusion in its review. Section 19.09 also requires a PFFP and the demonstration that utilities, such as sewer services, meet the GMOC quality of life threshold standards. The analysis of sewer services provided in this section, along with the PFFP are intended to ensure funding for any needed expansion of sewers and to confirm that wastewater services will be provided commensurate with development and demand.

**d. City of Chula Vista Municipal Code Ordinance 2974**

To reimburse the City for the cost to construct the Salt Creek Interceptor, all developments that propose connections to this line are required to pay a development impact fee. Ordinance 2974 provides that the fees are to be collected by the City for properties to be served by the Salt Creek Interceptor.

**B. Existing Sewer Service**

The City of Chula Vista operates and maintains its own sanitary collection system that connects to the Metro sewerage system for treatment and disposal. The Metro sewerage system treats wastewater from the city of San Diego and 15 other cities and districts, including Chula Vista. The San Diego Metropolitan Sewer Authority regulates the three wastewater treatment plants: 1) the Point Loma Wastewater Treatment Plant, 2) the Southbay Water Reclamation Plant, and 3) the North City Water Reclamation Plant. Currently, the three combined treatment plants have a maximum permitted treatment capacity of 285 mgd of wastewater for the City of San Diego and 15 other participating agencies. All wastewater within the Otay Ranch area will eventually be conveyed to the Salt Creek Sewer Interceptor that discharges into the Metro system. The wastewater would ultimately be treated by the City of San Diego at the Point Loma Wastewater Treatment Plant. The Point Loma Wastewater Treatment Plant currently treats approximately 180 million gallons of wastewater each day for the City of San Diego and 15 other cities and districts in the region, and has a maximum daily treatment capacity of 240 million gallons.

Chula Vista has wastewater treatment capacity rights to 20.864 mgd in the Metro system. According to the GMOC 2012 Annual Report, Chula Vista generated an average flow of 16.219 mgd in fiscal year 2010; therefore, it has remaining capacity of approximately 4.645 mgd. According to the Chula Vista Wastewater Master Plan, Chula Vista would require 5.358 mgd of additional capacity to accommodate City growth as projected in 2005. However, growth projections have been revised since the master plan was prepared. The 2005 General Plan was adopted after preparation of the master plan, and amendments have been adopted since 2005 to accommodate increased development capacities in some areas, including Otay Ranch. The General Plan was recently amended to accommodate an additional 386 homes in Village 9 compared to 2005 General Plan projections.

The Salt Creek Interceptor Technical Sewer Study for the South Otay Ranch, prepared by Atkins (formerly PBS&J) in November 2010, specifically looked at the impact of the updates to the General Plan projection since approval of the 2005 General Plan, including Village 9. The Salt Creek Interceptor Technical Sewer Study determined the City would need to acquire an additional 11.684 mgd of capacity above current capacity rights. The City may acquire rights for this additional capacity in the Metro system through negotiations with the City of San Diego, but the City of Chula Vista is also evaluating the construction of a new wastewater treatment plant to meet its future treatment capacity and disposal requirements. The project will be timed to proceed with the City's acquisition of additional treatment capacity. Building permits will be issued only if the City Engineer had determined that adequate sewer capacity exists.

Village 9 is located within the Salt Creek sewer basin. The Salt Creek Interceptor was planned, designed, and constructed to convey projected development flows in the eastern portions of Chula Vista and unincorporated areas in San Diego County. The Salt Creek Interceptor is located approximately 600 feet south of Village 9. At the location where the Salt Creek Interceptor passes south of Village 9 the line ranges from 30-inches to 36-inches in size. There are no existing sewer facilities within the Village 9 project site but facilities exist within Village 11 to the northeast of the project site.

### 5.15.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would result in a significant impact to wastewater services if it would:

- **Threshold 1:** Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the providers existing commitments.
- **Threshold 2:** Require the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of would cause significant environmental effects.
- **Threshold 3:** Generate sewage flows and volumes that exceed City Engineering Standards as set forth in the Subdivision Manual.
- **Threshold 4:** Be inconsistent with the General Plan, GDP or other relevant objectives and policies regarding wastewater thereby resulting in a significant physical impact.

### 5.15.2.3 Impact Analysis

#### **A. Threshold 1: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the providers existing commitments.**

Sewer service for the project will be provided by the City of Chula Vista. Village 9 is within the Salt Creek sewer basin. The Salt Creek Interceptor was constructed to serve regional development in the Otay Ranch area, and is located approximately 600 feet south of the project site.

The design criteria used to determine wastewater flow is based on the 2002 Chula Vista Subdivision Manual sewer generation factors. The details of these factors are provided in Appendix L. The project's sewer generation according to proposed land uses is shown in Table 5.15-11. As shown in Table 5.15-11, the overview of water service estimated average flow for the project to total 907,105 gpd. Since the completion of the sewer study, some SPA Plan adjustments to the acreages for parks and schools were necessary. The net result is a slightly higher total sewer flow of 908,306 gpd. Therefore, this analysis assumes a sewer demand of 0.91 mgd. The estimated peak sewage flow is 1.68 mgd, which is equal to 3,423 equivalent dwelling units. Converting the proposed land uses to equivalent dwelling units create a standard growth projection for utility demand that can easily be compared to growth projections for Village 9 in other documents.



**Table 5.15-11 Village 9 Projected Sewage Flows**

Land Use	Quantity	Unit Flow	Total Flow (gpd)
Single-family	266 units	265 gpd/unit	70,490
Multi-family	3,734 units	199 gpd/unit	743,065
School – Elementary	1,600 students	15 gpd/each	24,000
Commercial	17.8 acre	2,500 gpd/acre	44,500
CPF	5.0 acre	2,500 gpd/acre	12,500
Parks	25.1 acre	500 gpd/acre	12,500
<b>Total</b>			<b>907,105</b>
gpd = gallons per day			
Source: Dexter Wilson Engineering, Inc. 2010			

The Village 9 SPA allows intensity transfer between planning areas provided that the overall target intensity of 4,000 residential units and 1.5 million square feet of non-residential floor area is not exceeded. A request for an intensity transfer must be accompanied by a variety of findings, one of which is that adequate infrastructure exists to support the transfer. This finding must be substantiated by updated technical studies, in this case a sewer study, that ensures adequate infrastructure existing to accommodate the transfer and that the target intensity is not exceeded. This provision in the SPA Plan ensures that while sewage generation by planning area may shift, the total sewerage generation for Village 9 would not exceed 907,105 gpd. A mitigation measure has been added to enforce this provision.

Chula Vista has wastewater treatment capacity rights of 20.864 mgd in the Metro system. According to the GMOC 2012 Annual Report, Chula Vista generated an average flow of approximately 16.219 mgd, and has a remaining capacity of approximately 4.645 mgd in the Metro system. Therefore, Chula Vista currently has adequate capacity to serve the project's direct impact on wastewater demand. However, like other properties in the area, the proposed intensity of development in the SPA Plan has increased from what was accounted for in the Wastewater Master Plan projections and would contribute to a regional increase in wastewater generation. According to the November 2010 Salt Creek Interceptor Technical Sewer Study, the City would need to acquire an additional 11.684 mgd of capacity above current capacity rights to serve the estimated buildout of the city by 2030 under the current General Plan, including implementation of the project.

Development of Village 9 would require 0.91 mgd of treatment capacity. The increase of 0.91 mgd is the portion of the city's estimated 11.684 mgd capacity requirement that is attributable to Village 9. With a limited amount of treatment capacity remaining, the City is working on a variety of alternatives that would provide additional treatment capacity in order to serve all of the anticipated development within city limits. Building permits will be issued only if the City Engineer had determined that adequate sewer capacity exists.

The Salt Creek Interceptor Technical Sewer Study also concluded that certain sections of the Salt Creek Interceptor may require upgrades at ultimate buildout. However, these sections are upstream of the project site and the study determined that the projected development of Village 9 would not exceed the capacity of the Salt Creek Interceptor or trigger the need for any upgrades. The actual total equivalent dwelling units proposed for the project in the SPA Plan and TM (3,423 equivalent dwelling units) is less than what was estimated in the Salt Creek Interceptor Technical Study (3,536.5 equivalent dwelling

units). Therefore, the development proposed in the project would not exceed the capacity of the Salt Creek Interceptor.

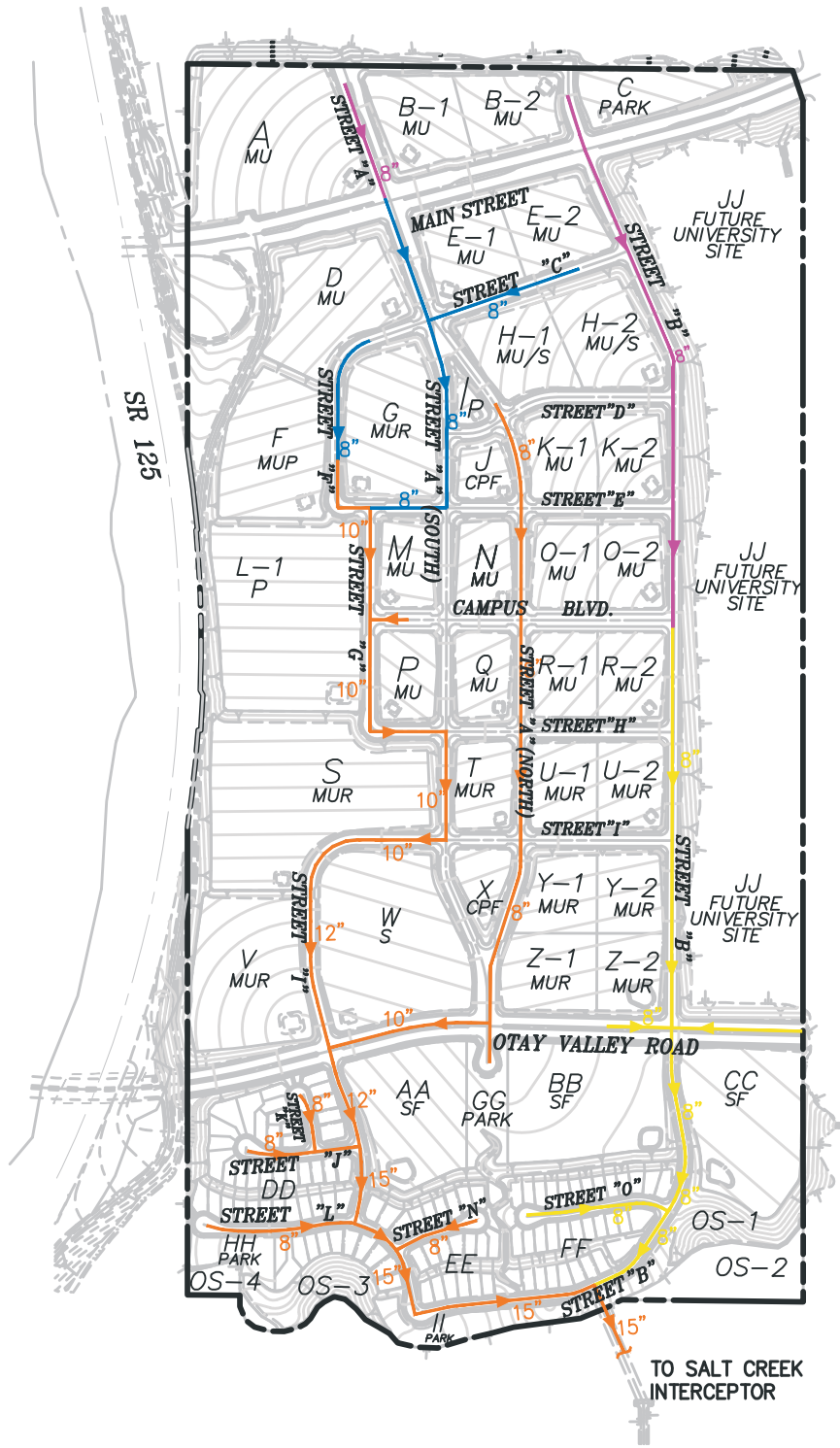
The approximately 907,105 gpd generated by the project is within the city's remaining capacity of 4.645 mgd. However, the project would be phased over a period of up to 20 years. The city's sewer system would potentially reach capacity during this time. If adequate sewer facilities are not provided concurrently with demand, a significant impact would occur.

**B. Threshold 2: Require the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of would cause significant environmental effects.**

Installation of new on-site and off-site wastewater conveyance lines that would contribute to or expand existing facilities would be required as part of development of Village 9. The on-site sewer system would consist of 8- to 15-inch diameter pipes, depending on the projected flows, available grade, and anticipated land use. Several currently planned on-site sewer lines may also need to be extended during final engineering to accommodate development of the individual blocks at multiple or alternative connection points. The proposed system is described in greater detail under Threshold 3 below. Figure 3-11, Sewer System, illustrates the location of the proposed on-site sewer system. The proposed phasing of the sewer system is provided in Figure 5.15-2.

The sewer pipeline would be installed using conventional construction practices, either open trench excavation or a boring and jacking method. Installation of on- and off-site site sewer lines has the potential to generate vehicle and equipment emissions and dust, increase noise levels, impact undiscovered cultural resources, affect biologically sensitive habitats, contaminate groundwater, and cause erosion. These issues have been addressed as part of the construction analysis presented in Sections 5.4 Air Quality, 5.6 Biological Resources, 5.7 Cultural Resources, 5.11 Hydrology and Water Quality, and 5.5 Noise. Mitigation measures are proposed in these sections to reduce construction impacts to a less than significant level, with exception of air quality emissions from grading. Air pollutant emissions from installation of infrastructure are included in the trenching phase of construction in Table 5.4-6, Maximum Daily Emissions per Construction Activity. As shown in this table, all air pollutant emissions associated with installation of the underground utilities would be less than significant.

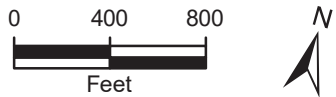
The proposed project could require sewage treatment capacity beyond the City's existing wastewater treatment capacity rights and allocated additional treatment capacity. Implementation of respective General Plan policies would ensure that treatment capacity would be provided by the City; however, the means by which additional treatment capacity would be acquired is unknown. The City's options include the acquisition of treatment capacity from a San Diego Metropolitan Sewer Authority member agency, including the City of San Diego, or construction of a Chula Vista treatment facility. Final determination on the means by which additional treatment capacity would be acquired has not yet been made. As the location and scope of construction for any newly developed treatment facilities are unknown, and the development of treatment capacity beyond the City's existing and allocated capacity may result in impacts on the environment, it is conservatively concluded that a potentially significant environmental impact associated with construction of new or expanded treatment facilities may occur.



Notes: All pipes are recommended as 8 inch unless otherwise noted.  
 Village 9 is generally planned to develop from north to south; however, the sequencing of development phases would be determined by market conditions and the PFFP.

- Project Boundary
- Phase 1
- Phase 2
- Phase 3
- Phase 4

Source: Dexter Wilson Engineering 2010



## SEWER INFRASTRUCTURE PHASES FIGURE 5.15-2

### **C. Threshold 3: Generate sewage flows and volumes that exceed City Engineering Standards as set forth in the Subdivision Manual, as may be amended from time to time.**

The proposed sewer facility improvements that would be required to serve Village 9 were developed by Dexter Wilson Engineering, Inc. and are provided in Appendix L. Sewer facility improvements required to serve Village 9 include on-site gravity sewer lines, including a temporary deep sewer line, and an off-site connection to the Salt Creek Interceptor. Figure 3-11, Sewer System, shows the conceptual sewer facilities. These facilities are summarized below.

All of Village 9 would be served by constructing gravity sewer lines to convey flows south to a single point of connection with the Salt Creek Interceptor. This would require approximately 750 feet of off-site 15-inch gravity sewer pipelines that would be installed in a sewer and storm drain easement. No flows from the EUC or other Villages would be conveyed through Village 9. Therefore, all sewer lines within the project site have been sized to serve only Village 9. A sewer stub would be provided in Otay Valley Road to the eastern property boundary to accept future flows from the University site. Development of the University site is not part of the currently proposed Village 9 project. Once the flows from the future university site to this point have been determined, the impact of these flows on the downstream sewer system will be evaluated.

The SPA Plan has identified four phases of development. The order in which these phases will occur is not yet known. The sewer service report for Village 9 describes the sewer facilities that would be required to serve each phase. Figure 3-18, Development Phases, graphically shows the proposed phasing of the project. The site utilization proposed in the Village 9 SPA Plan has been revised since preparation of the Overview of Sewer Service (December 2010). Although the land uses for some individual planning areas differ from the utilization shown in Appendix L, the total development and overall sewer demand is the same. No revision to the Overview of Sewer Service was required as a result of the updated utilization plan. The required improvements are summarized below. Prior to the approval of the final map for each phase, the sewer improvements described below would be required to be installed.

The Orange phase is located in the central and southwest portion of the site. This area of the project would be served by constructing 8-inch through 15-inch sewer lines south to the Salt Creek Interceptor.

The Blue phase is located in the western portion of the project. This area would be served by constructing 8-inch through 15-inch sewer lines southerly to the Salt Creek Interceptor.

The Yellow phase is located in the southeast portion of the project. To provide sewer service to this area of the project, 8-inch to 15-inch sewer lines would be constructed south to the off-site connection with the Salt Creek Interceptor.

The Purple phase is in the northern portion of the project. Development in this area would require 8-inch sewer lines through 15-inch sewer lines to convey flow south to the Salt Creek Interceptor.

Detailed calculations for the on-site sewer system are provided in the Overview of Sewer Service, contained in Appendix L of this EIR. Since Village 9 has the potential to develop in a variety of ways, flow projections are based on the maximum buildout. Several on-site lines may need to be relocated (with respect to the existing preliminary plan) during final engineering to accommodate development of the individual blocks at multiple or alternative connection points.

The design of the proposed on-site system would be required to comply with the existing Subdivision Manual, Section 3 (General Design Criteria) and would be subject to review by the City's Engineering Department. Compliance with regulatory design criteria would ensure that on-site lines would not exceed 75 percent of pipe capacity for pipes greater than 12 inches in diameter or 50 percent for pipes 12 inches or less in diameter, including projected flows for the off-site developments that would be served by Village 9 infrastructure. Therefore, the project would be less than significant with respect to this threshold.

**D. Threshold 4: Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding wastewater, thereby resulting in a significant physical impact.**

Tables 5.15-12 and 5.15-13 evaluate the project's consistency with the General Plan and GDP policies related to wastewater. The analysis demonstrates that the project would be consistent with applicable policies.

**Table 5.15-12 Project Consistency with Applicable General Plan Sewer Service Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective PFS 2:</b> Increase efficiencies in water use, wastewater generation and its re-use, and handling of storm water runoff throughout the City through use of alternative technologies.</p> <p><b>Policy PFS 2.3:</b> In designing water, wastewater, and drainage facilities, limit the disruption of natural landforms and water bodies. Encourage the use of natural channels that simulate natural drainage ways while protecting property.</p>	<p><b>Consistent.</b> The proposed sewer infrastructure would be placed underground. No new storage facilities or other above ground facilities would be required. Refer to the analysis of the sewer system's impact under Threshold 2. Installation of the facilities would not significantly disrupt any natural landforms or water bodies.</p>
<p><b>Objective PFS 4:</b> Provide long-term wastewater treatment capacity to meet the needs of existing and new development in Chula Vista.</p>	<p><b>Consistent.</b> Project development would be consistent with the growth anticipated for Village 9 and would not result in a determination by the City of Chula Vista or San Diego Metropolitan Sewer Authority that it has inadequate capacity to serve the project's demand in addition to the providers' existing commitments. The PFFP for Village 9 identifies the appropriate funding mechanisms to support the City's provision of public services, including a future expansion of waste water treatment capacity.</p>
<p><b>Objective GM 1:</b> Concurrent public facilities and services.</p>	<p><b>Consistent.</b> Development in Village 9 area would be subject to this policy. This objective provides the authority to impose limits on the rate of development if adequate sewer treatment facilities would not be available.</p>
<p><b>Objective GM 3:</b> Create and preserve vital neighborhoods.</p> <p><b>Policy GM 3.3:</b> Assure that all new and infill development within existing urban areas pays its proportional share of the cost for urban infrastructure and public facilities required to maintain the threshold standards, as adopted for its area of impact.</p>	<p><b>Consistent.</b> See analysis for Objective GM 1.</p>



**Table 5.15-13 Project Consistency with Applicable GDP Sewer Service Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section C –Public Facility Plans</b>	
<p><b>Goal:</b> Provide a healthful and sanitary sewerage collection and disposal system for the residents of Otay Ranch and the region, including a system designed and constructed to accommodate the use of reclaimed water.</p> <p><b>Objective:</b> The on-going planning, management and development of sewerage conveyance, treatment and disposal facilities to adequately meet future demands.</p> <p><b>Policy:</b> Land use planning will be coordinated with sewerage system planning, which is the responsibility of facility providers.</p> <p><b>Policy:</b> Ensure that the Otay Ranch project will not use all available regional facility capacity, such as sewer, water and roads, and thus compromise the ability of other South County and East County parcels to develop as planned.</p> <p><b>Objective:</b> Assure that wastewater treatment plans are consistent with sewerage master plans.</p>	<p><b>Consistent.</b> A sewer plan was developed for project, provided as Appendix L, which includes the infrastructure required to serve the entire project site, as well as by individual phase. The infrastructure plan was developed based on the City's Wastewater Master Plan, which was updated by the November 2010 Salt Creek Interceptor Technical Sewer Study for the South Otay Ranch. The updated Wastewater Master Plan factored Village 9 into the city wastewater demand. See also the analysis of impact on the city sewer system under Thresholds 1, 2 and 3. The City currently has the capacity to serve development of Village 9 and has the authority through the General Plan to withhold permits in the future if adequate sewer capacity is not available.</p>

#### 5.15.2.4 Level of Significance Prior to Mitigation

##### A. Adequate Wastewater Facilities

A significant impact would occur if adequate wastewater facilities are not provided concurrently with new demand. Additionally, the transfer of density between planning areas could have a significant impact on on-site infrastructure.

##### B. New Wastewater Treatment Facilities

No significant impacts related to wastewater treatment facilities have been identified for implementation of the SPA Plan and TM. However, the project would require sewage treatment beyond the City's existing wastewater treatment capacity rights and allocated additional treatment capacity. Therefore, additional capacity would need to be acquired from San Diego Metropolitan Sewer Authority or other sources. The means by which additional treatment capacity would be acquired is unknown and the development of additional capacity may require construction of new treatment facilities. As the location and scope of construction for any newly developed treatment facilities is unknown, the development of treatment capacity beyond the City's existing and allocated capacity may result in a potentially significant environmental impact, even understanding that such projects would likely be subject to environmental review.

##### C. Consistency with City Engineering Standards

No significant impacts City engineering standards have been identified for implementation of the SPA Plan and TM.

##### D. Consistency with Wastewater Policies

No significant impacts related to consistency with wastewater policies have been identified for implementation of the SPA Plan and TM.

## 5.15.2.5 Mitigation Measures

### A. Adequate Wastewater Facilities

5.15.2-1 **Sewer System Improvements.** The applicant shall finance or install all on-site and off-site sewer facilities required to serve development in Village 9 in accordance with the fees and phasing in the approved Public Facilities Finance Plan to the satisfaction of the City Engineer.

5.15.2-2 **Salt Creek Development Impact Fee.** Prior to issuance of each building permit, the applicant shall pay the Salt Creek Development Impact Fee at the rate in effect at the time of building permit issuance and corresponding to the sewer basin that the building will permanently sewer to, unless stated otherwise in a development agreement that has been approved by the City Council. Existing fees are provided in Table 5.15-14.

**Table 5.15-14 Salt Creek Interceptor Development Impact Fee**

Land Use	EDU Factor	Fee
Single-family Residential	1.0 EDU/unit	\$1,330/unit
Multi-family Residential	0.75 EDU/unit	\$997.5/unit
Elementary School	0.06 EDU/student	\$79.80/student
Junior High School	0.08 EDU/student	\$106.4/student
Commercial/Industrial	9.43 EDU/acre	\$12,541.9/acre
Community Purpose Facility	9.43 EDU/acre	\$12,541.9/acre
Parks	1.89 EDU/acre	\$2,513.7/acre
EDU = Impact in terms of single family dwelling unit equivalence, or equivalent dwelling units Source: Dexter Wilson Engineering Inc. 2010b		

5.15.1-3 **Density Transfer Technical Report.** Prior to design review approval in accordance with the Intensity Transfer provision in the Village 9 SPA Plan, the applicant shall provide an update to the Overview of Sewer Service for Otay Ranch Village 9 (Dexter Wilson Engineering, Inc. 2010) with each proposed project requesting an intensity transfer. The technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site wastewater infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site sewerage facilities to accommodate flows.

### B. New Wastewater Treatment Facilities

No mitigation measures are required for wastewater conveyance facilities in compliance with standards or policies. The means by which additional capacity is obtained from the San Diego Metropolitan Sewer Authority or other sources to support treatment city-wide is unknown at this time.

### C. Consistency with City Engineering Standards

No mitigation measures are required.

### D. Consistency with Wastewater Policies

No mitigation measures are required.

### 5.15.2.6 Level of Significance After Mitigation

#### A. Adequate Wastewater Facilities

With implementation of mitigation measures 5.15.2-1 through 5.15.2-3, no significant impacts with respect to wastewater conveyance facilities would occur and adequate treatment capacity to serve new development within Village 9 would be ensured through review of available capacity by the City Engineer prior to approval of building permits.

However, the project in combination with foreseeable growth may require sewage treatment that exceeds the City's existing wastewater treatment capacity. Therefore, additional capacity may need to be acquired from the San Diego Metropolitan Sewer Authority or other sources to support treatment needs through the Year 2030. The means by which additional treatment capacity would be acquired is unknown and could include the acquisition of available sewerage treatment capacity from another participating agency, including the City of San Diego, or the construction of new treatment facilities. As the location and scope of construction for any future expanded or newly developed treatment facilities is unknown, the development of treatment capacity beyond the city's existing and allocated capacity may result in potentially significant and unavoidable impacts associated with construction of new or expanded facilities. This cumulative impact is addressed in Chapter 6.

#### B. New Wastewater Treatment Facilities

As the location and scope of construction of future expanded or newly developed treatment facilities is unknown, the development treatment capacity beyond the city's existing and allocated capacity may result in significant and unavoidable impacts.

#### C. Consistency with City Engineering Standards

Impacts would be less than significant without mitigation.

#### D. Consistency with Wastewater Policies

Impacts would be less than significant without mitigation.

## 5.15.3 Solid Waste

### 5.15.3.1 Existing Conditions

#### A. Regulatory Framework

##### 1. State

##### a. California Integrated Waste Management Act of 1989

The Integrated Waste Management Act of 1989 (PRC Section 4000, et.seq.) requires each city and county in California to recycle or divert 50 percent (or as much as feasible) of its current waste stream from landfills by 2000. In 2008, California diverted 60 percent of its solid waste stream in accordance with the Integrated Waste Management Act (CIWMB 2009). The term, "integrated waste management," refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with a minimum impact on human health and the environment. The Integrated Waste Management Act establishes the following waste management

priorities: source reduction, recycling, composting, energy recovery, deposits in landfills, and household hazardous waste management.

## **2. Local**

### **a. City of Chula Vista General Plan**

Objective PFS 25 of the Public Facilities and Services Element of the Chula Vista General Plan encourages the City to “efficiently handle solid waste disposal throughout the city.” The General Plan policies related to solid waste address city-wide methods to manage waste generation, permit transfer stations, promote recycled materials and participate in interjurisdictional efforts to maintain available landfill capacity. As such, the policies are regional in nature and do not specifically address individual developments.

## **B. Existing Solid Waste Service**

The Chula Vista Public Works Department, Environmental Services Division provides guidance in the disposal of solid waste for residences and businesses, recycling, and household hazardous materials disposal. Currently, Allied Waste Management Services is the exclusive solid waste and recycling services provider for Chula Vista’s residential, commercial, and industrial waste. The City of Chula Vista Public Works Department, Environmental Services Division also enforces a Special Event Recycling and Solid Waste Management Plan in which a permit for special events requires a plan for litter control before, during, and after a special event (City of Chula Vista 2009b).

The Environmental Services Division also provides a household hazardous waste program at the Public Works Center, in which household hazardous materials can be dropped off or picked up for a nominal donation. Household waste collected at the city facility is sent to various locations throughout the United States for treatment and/or recycling. The City has a mandatory construction and demolition recycling program mandating that 90 percent of all inert materials (rock, dirt, concrete, brick, etc.) and 50 percent of all other debris be diverted from disposal (Municipal Code 15.12). Allied Waste provides a construction and demolition debris processing facility to ensure that these materials are separated from trash and recycled material (City of Chula Vista 2009b). Several processing facilities are currently available in Chula Vista: untreated wood and mixed load recycling at Otay Landfill; dirt and rocks, concrete, and asphalt recycling at the Reclaimed Aggregates facility at 855 Energy Way; and concrete and asphalt recycling at the Rimrock CA, LLC facility at 2041 Heritage Road (City of San Diego 2010).

Per the City’s franchise agreement with Allied Waste, both the Otay Landfill and the Sycamore Canyon Landfill are City-authorized landfills, in accordance with all applicable laws.

The Otay Landfill, located in Chula Vista, is a private landfill operated by San Diego Landfill Systems that receives the majority of solid waste from the city. Based on permitted daily maximum disposal rates, the Otay Landfill is expected to be in operation until 2028. Once the Otay Landfill is closed, it is anticipated that a portion of the site could be used for a trash transfer facility and/or a material recovery facility where recyclables are prepared for secondary markets. The City has also acquired rights to approximately 30 acres of space at the Otay Landfill for a composting facility when the landfill closes. Continued efforts to expand recycling and to accommodate compostable materials will reduce future waste transfer costs (City of Chula Vista 2007). When the Otay Landfill closes, it is expected that Allied Waste will build a transfer station at the Otay Landfill site to enable trash hauling to Sycamore Canyon or a more distant landfill.

### 5.15.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would result in a significant impact to solid waste services if it would:

- **Threshold 1:** Would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- **Threshold 2:** Does not comply with federal, state, and local statutes and regulations relating to solid waste.
- **Threshold 3:** Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding solid waste thereby resulting in a significant physical impact.

### 5.15.3.3 Impact Analysis

#### A. Threshold 1: Would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

The Otay Landfill has a total permitted capacity of 62.4 million cubic yards and has a permitted remaining capacity of 33.1 million cubic yards (53 percent capacity). According to the 2013 GPA/GDPA SEIR, buildout of the city under the General Plan would generate a solid waste disposal quantity of 274,063 tons, after which there would be 26.2 million tons of remaining landfill capacity. Based on the city's generation rate of 4.0 pounds per person per day, implementation of the 2013 GPA/GDPA, including Village 9, would result in an additional disposal quantity of 22,433 tons above the 2005 General Plan projection. The Otay Landfill has sufficient capacity to accommodate the increased waste disposal. The Otay Landfill is scheduled to close in 2028. However, an existing agreement will permit waste from the city to be transferred to the Sycamore Canyon Landfill upon the closing of the Otay Landfill. There would be no interruption of service (City of Chula Vista 2013).

Since there is sufficient existing and future landfill capacity to accommodate projected development of the GPA/GDPA, impacts associated with insufficient permitted capacity to accommodate solid waste disposal from Village 9 would be less than significant, consistent with the conclusion of the 2013 GPA/GDPA SEIR.

#### B. Threshold 2: Does not comply with federal, state, and local statutes and regulations relating to solid waste.

The City of Chula Vista's Office of City Manager complies with state and federal requirements through the development and the implementation of goals and policies in the Public Facilities and Services and the Environmental Elements of the General Plan. General Plan policies support and provide for city-wide recycling programs, including educational programs; source reduction programs; the control of litter and solid waste associated with special events; and collection of household hazardous materials.

Landfills used for the disposal of Chula Vista's solid waste are legally permitted and consistent with the California Integrated Waste Management Board requirements and other state and federal requirements. Waste collection for Village 9 commercial and residential land uses would be provided by the City of Chula Vista under its contract agreement with Allied Waste. The Village 9 waste collection procedures and programs would be required to comply with the municipal requirements for recycling and collection of solid waste, including provision for litter control for public events. Therefore, the project would be consistent with all applicable statutes and regulations, and would have a less than significant impact with respect to solid waste collection and management.



**C. Threshold 3: Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding solid waste thereby resulting in a significant physical impact.**

Table 5.15-15 evaluates the consistency of the project with the applicable General Plan policies and Table 5.15-16 evaluates the project's consistency with that applicable GDP goal and objective. As shown in Tables 5.15-15 and 5.15-16, the project would be consistent with the General Plan and GDP policies that pertain to solid waste.

**Table 5.15-15 Project Consistency with Applicable General Plan Solid Waste Policy**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 8:</b> Minimize the amount of solid waste generated within the General Plan area that requires landfill disposal.</p> <p><b>Policy E 8.1:</b> Promote efforts to reduce waste, minimize the need for additional landfills, and provide economically and environmentally sound resource recovery, management, and disposal facilities.</p> <p><b>Policy E 8.3:</b> Implement source reduction strategies, including curbside recycling, use of small collection facilities for recycling, and composting.</p>	<p><b>Consistent.</b> Waste collection service to Village 9 would be provided by Allied Waste. Allied Waste also provides a comprehensive recycling program for residential, commercial and industrial generators, including curbside pickup and drop-off facilities within the city.</p>

**Table 5.15-16 Project Consistency with Applicable GDP Solid Waste Policy**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section C –Public Facility Plans</b>	
<p><b>Goal:</b> Provide solid waste facilities and services which emphasize recycling of reusable materials and disposal of remaining solid waste so that the potential adverse impacts to public health are minimized.</p> <p><b>Objective:</b> Reduce the volume of waste to be landfilled by 30 percent by 1995 and by 50 percent by 2000.</p>	<p><b>Consistent.</b> During construction, solid waste disposal and recycling of materials will adhere to BMPs and City standards. Curb-side recycling for residents and businesses will be provided to the project site by Allied Waste. Recycling containers will also be provided throughout the Town Center as part of the street furniture program.</p>

#### **5.15.3.4 Level of Significance Prior to Mitigation**

No significant impacts related to solid waste have been identified for implementation of the project.

#### **5.15.3.5 Mitigation Measures**

No mitigation measures are required.

#### **5.15.3.6 Level of Significance After Mitigation**

No significant impacts related to solid waste were identified for implementation of the project.

## 5.15.4 Recycled Water

### 5.15.4.1 Existing Conditions

#### A. Regulatory Framework

##### 1. *Chula Vista Landscape Water Conservation Ordinance*

Section 20.12.200 of the Landscape Water Conservation Ordinance (Chapter 20.12 of the City Municipal Code), requires that all newly constructed and rehabilitated landscapes for public agencies and private development projects with a landscape area equal to or greater than 2,500 square feet including, but are not limited to, industrial, commercial, cemetery, public, quasi-public, institutional and multi-family residential development shall use recycled water for irrigation purposes where it is available.

#### B. Existing Recycled Water Service

Historically, the only source of recycled water for the OWD has been the Ralph W. Chapman Water Recycling Facility. This facility currently has a rated capacity of 1.3 mgd with a maximum production of approximately 1.1 mgd and could be expanded to an ultimate capacity of 2.50 mgd. Typically, summer demands exceed the 1.1 mgd plant capacity. OWD has the capability to supplement the recycled water supply with the potable 980 Zone water system which has facilities in the area. The South Bay Water Treatment Plant has an ultimate rated capacity of 15 mgd and the OWD obtained capacity rights to 6.0 mgd of recycled water. This additional source of recycled water will allow OWD to meet existing and future recycled water demands. OWD has planned and begun constructing a series of pump stations, reservoirs, and transmission lines to integrate this source of water into the existing recycled water system. A 12-inch 680 Zone pipeline has been constructed in Hunte Parkway along the southern boundary of Village 11 and an 8-inch 927 Zone pipeline has been constructed in Eastlake Parkway to the northeast corner of Village 9.

### 5.15.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would result in a significant impact to recycled water services if it would:

- **Threshold 1:** Require or result in the construction of new recycled water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- **Threshold 2:** Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding recycled water thereby resulting in a significant physical impact.

### 5.15.4.3 Impact Analysis

#### A. **Threshold 1: Require or result in the construction of new recycled water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

The OWD will also be the purveyor of recycled water to the project. The project would use recycled water for landscape irrigation, including medians, parks, open space, and common landscaped areas. The primary benefit of using recycled water is that it would offset potable water demand. Table 5.15-17 summarizes the recycled water demand for Village 9. As shown in this table, the estimated recycled

water demand for the project is 116,380 gpd. Since the completion of the water study it was necessary to adjust the acreages for parks and schools proposed in the SPA Plan. These adjustments resulted in a higher recycled water demand for 120,680 gpd. This analysis assumes a recycled water demand of approximately 0.2 mgd

**Table 5.15-17 Village 9 Recycled Water Demand**

Land Use	Area, Acres	Percentage to be Irrigated	Irrigated Acreage	Recycled Water Irrigation Factor (gpd/acre)	Average Recycled Water Demand (gpd)
Open Space Slopes	3.0	100	3.0	2,155	6,465
Parks	5.1	100	5.1	2,155	10,990
CPF	2.3	10	0.2	2,155	430
School	10.3	20	2.1	2,155	4,530
Mixed Use	58.2	10	5.8	2,155	12,500
<b>Subtotal 944 Zone</b>					<b>34,915</b>
Open Space Slopes	7.0	100	7.0	2,155	15085
Parks	20.0	100	20.0	2,155	43100
Schools	11.7	20	2.3	2,155	4960
CPF	2.7	10	0.3	2,155	650
Mixed Use	82.2	10	8.2	2,155	17670
<b>Subtotal 680 Zone</b>					<b>84,465</b>
<b>Total</b>					<b>116,380</b>
gpd = gallons per day					
Source: Dexter Wilson Engineering Inc. 2010b					

Recycled water would be provided to the project by extending the 927 Zone recycled water system from the 8-inch line in Eastlake Parkway. The northern portions of the project would be served from the 927 Zone and the southern portion of the project would be served from the 680 Zone. The primary source of supply for the 680 Zone would be an on-site 927/680 Zone pressure reducing station, but the 680 Zone would ultimately be looped through other future developments to the west. Figure 3-11, Recycled Water System, provides the proposed on-site recycled water system.

Installation of on- and off-site recycled water pipelines have the potential to generate vehicle and equipment emissions and dust, increase noise levels, impact undiscovered cultural resources, disturb biological resources, contaminate groundwater, and increase erosion. These issues have been addressed as part of the construction analyses presented in Sections 5.4 Air Quality, 5.6 Biological Resources, 5.7 Cultural Resources, 5.11 Hydrology and Water Quality, and 5.5 Noise of this EIR. Mitigation measures are proposed in these sections to reduce construction impacts to a less than significant level, with exception of air quality impacts related to grading. Air pollutant emissions from installation of infrastructure are included in the trenching phase of construction in Table 5.4-6, Maximum Daily Emissions per Construction Activity. As shown in this table, all air pollutant emissions associated with installation of the underground utilities would be less than significant. Therefore, construction of the recycled water infrastructure required by buildout of the project would not result in significant environmental effects. However, if the proposed recycled water facilities are not constructed, the project would result in an additional impact related to water supply because a greater amount of potable water would be needed. If recycled water facilities are not provided concurrently with demand, a potentially significant impact would occur.

**B. Threshold 2: Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding recycled water thereby resulting in a significant physical impact.**

The evaluation in Table 5.15-18 demonstrates that the project would be consistent with General Plan Policy E 3.3. The evaluation in Table 5.15-19 demonstrates that the project would be consistent with applicable GDP goals and objectives. Therefore, this impact would be less than significant.

**Table 5.15-18 Project Consistency with Applicable General Plan Recycled Water Policy**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 3:</b> Minimize the impacts of growth and development on water supply resources through the efficient use and conservation of water by residents, businesses, and city government.</p> <p><b>Policy E 3.3:</b> Where safe and feasible, promote and facilitate the continued use of recycled water in new developments, and explore opportunities for the use of recycled water in redevelopment projects.</p>	<p><b>Consistent.</b> Village 9 would use recycled water for landscape irrigation, including medians, parks, open space, and common landscaped areas.</p>

**Table 5.15-19 Project Consistency with Applicable GDP Recycled Water Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 5 – Capital Facilities, Section C –Public Facility Plans</b>	
<p><b>Goal:</b> Provide a healthful and sanitary sewerage collection and disposal system for the residents of Otay Ranch and the region, including a system designed and constructed to accommodate the use of reclaimed water.</p> <p><b>Objective:</b> Sewage disposal systems should maximize the provision and utilization of reclaimed water.</p> <p><b>Goal:</b> Design a sewerage system which will produce reclaimed water. Ensure a water distribution system will be designed and constructed to use reclaimed water. Construction of a dual system of water supply will be required for all development where reclaimed water is used.</p> <p><b>Objective:</b> Encourage development of public and private recreational uses that could utilize reclaimed water.</p> <p><b>Goal:</b> Conserve water during and after construction of Otay Ranch.</p> <p><b>Objective:</b> Develop an extensive water restoration and recycling system throughout the developed areas of Otay Ranch.</p> <p><b>Objective:</b> Investigate traditional and non-traditional uses for reclaimed water and identify potential restraints for reclaimed water use.</p>	<p><b>Consistent.</b> Village 9 would use recycled water for landscape irrigation, including medians, parks, open space, and common landscaped areas. The project would connect to the OWD sewer system, which diverts wastewater for treatment at the Ralph W. Chapman Water Recycling Facility.</p>

#### 5.15.4.4 Level of Significance Prior to Mitigation

##### A. New Recycled Water Facilities

If recycled water facilities are not provided concurrently with demand, a potentially significant impact would occur.

## B. Consistency with Recycled Water Policies

No significant impacts related to recycled water polices have been identified for the project.

### 5.15.4.5 Mitigation Measures

5.15.4-1 **Subarea Master Plan Preparation.** Prior to approval of the first final map, the applicant shall provide a Subarea Master Plan to the Otay Water District. Recycled water facilities improvements shall be financed or installed on site and off site in accordance with the fees and phasing in the approved Public Facilities Finance Plan and Subarea Master Plan. The Subarea Master Plan shall include, but shall not be limited to the following information related to recycled water:

- i. Existing recycled water pipeline locations, size, and capacity;
- ii. The proposed points of connection and system;
- iii. The estimated recycled water demand calculations; and
- iv. Size of the system and number of lots to be served.

5.15.4-2 **Subarea Master Plan Approval.** Prior to approval of the first final map, the applicant shall obtain Otay Water District approval of the Sub Area Master Plan for recycled water. Any on-site and off-site facilities identified in the Subarea Master Plan required to serve a final mapped area shall be secured or constructed by the applicant prior to the approval of the final map and in accordance with the phasing in the Public Facilities Finance Plan.

## A. Consistency with Recycled Water Policies

No mitigation measures are required.

### 5.15.4.6 Level of Significance After Mitigation

#### A. New Recycled Water Facilities

With implementation of mitigation measures 5.15.4-1 and 5.15.4-2, impacts related to recycled water facilities would be less than significant.

#### B. Consistency with Recycled Water Policies

Impacts would be less than significant without mitigation.

## 5.15.5 Energy

### 5.15.5.1 Existing Conditions

#### A. Regulatory Framework

##### 1. State

##### a. Leadership in Energy and Environmental Design

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is a certification program and the nationally accepted benchmark for the design, consumption, and operation of high performance green buildings. LEED provides building owners and operators with the



tools they need for an immediate and measurable impact on their building's performance. The LEED green building certification program encourages and accelerates global adoption of sustainable green building and development practices through a suite of rating systems that recognize projects that implement strategies for better environmental and health performance.

#### **b. California Code of Regulations Title 20 and Title 24**

New buildings and major renovations constructed in California are required to comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, Building Energy Efficiency Standards. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficiency technologies and methods. The Energy Commission adopted the 2008 changes to the Building Energy Efficiency Standards for a number of compelling reasons (CEC 2012):

- To provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- To respond to AB 32, the Global Warming Solutions Act of 2006, that mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- To pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.
- To act on the findings of California's Integrated Energy Policy Report that Standards are the most cost effective means to achieve energy efficiency, expects the Building Energy Efficiency Standards to continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.
- To meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of state building codes.
- To meet the Executive Order in the Green Building Initiative to improve the energy efficiency of non-residential buildings through aggressive standards.

Title 20 contains standards ranging from power plant procedures and siting to energy-efficiency standards for appliances to ensure that reliable energy sources are provided and diversified through energy efficiency and renewable energy resources.

Title 24 contains energy efficiency standards for residential and non-residential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs. The 2008 version of Title 24 includes standards that achieve a minimum 15 percent improvement in energy efficiency over the previous 2005 Title 24 standards.

#### **c. State of California Flex Your Power Campaign**

California's intent to reduce energy consumption is also reflected in the established Flex Your Power Campaign. Flex Your Power aims to partner Californians across the state to maximize energy conservation and efficiency. The goal is to get local governments and elected officials to implement innovative energy conservation and efficiency measures in facilities throughout communities. Flex Your Power collaborates with local businesses and community groups to get local business leaders and building owners to sign an Energy Conservation Declaration Action, thereby committing to follow

measures that will help “achieve collectively an overall 20 percent reduction in energy use as compared to the same period last summer.”

Some of the activities outlined in the declaration include setting building temperatures no cooler than 78 degrees during the months of May through October, reducing lighting levels by 25 percent, closing blinds and shades where windows contribute to indoor temperature increases, and turning off and unplugging all appliances in commercial and residential buildings. Businesses can also benchmark buildings using the Energy Star rating system, which calculates energy use in a building or a group of buildings, providing a tool with which to measure the impact of energy efficiency improvements. This can provide a way to compare energy use in buildings of similar size, shape, location, and operating characteristics. The results (a number on a scale of 1 to 100) determine which buildings will benefit most from energy efficiency upgrades. By increasing energy efficiency in buildings, local governments can save energy immediately.

## **2. Regional**

### **a. SDG&E 20-Year Resource Plan**

In April 2003, San Diego Gas & Electric (SDG&E) filed its 20-year resource plan with the California Public Utilities Commission to outline its resource portfolio to meet future demand. The plan describes SDG&E’s recommended resource portfolio and includes a number of policy recommendations that SDG&E believes should be adopted by the California Public Utilities Commission as guidance for future resource planning and procurement. The plan included four different portfolio proposals: one portfolio emphasized on-system fossil generation; one emphasized resources delivered over added transmission; another emphasized resources delivered over added transmission, but builds in additional fuel diversity by including an off-system coal based resource in the mix; and the fourth represented SDG&E’s recommended balanced portfolio, which included the best elements of each of the prior three.

Resource gaps that would not be filled by energy conservation and demand response alternatives were planned to be filled by additional transmissions lines from generating systems outside of SDG&E territory, including renewable energy facilities. Using the Balanced Portfolio, SDG&E’s 2012 energy mix would be comprised of roughly 14 percent Renewable, 53 percent Natural Gas, 14 percent Nuclear, and 19 percent Off-System Resources.

## **3. Local**

### **a. Climate Change Working Group Measures – Implementation Plans**

The Chula Vista Climate Change Working Group recommended seven measures to reduce city-wide GHG emissions that were adopted by the City Council on April 1, 2008. Two of these measures would reduce GHG emissions by reducing electricity and natural gas use. These measures include adopting a green building standard, and providing cost-effective and streamlined mechanism for property owners to implement solar and energy efficiency upgrades.

### **b. Chula Vista Green Building Standards**

The Green Building Standards ordinance includes standards for energy efficiency. Building permit applications are required to indicate on project construction plans and specifications the GBS measures that comply with the ordinance. Prior to final building approval or issuance of a certificate of occupancy the Building Official reviews the information submitted by the applicant and determines whether the

applicant has constructed the project in accordance with the permitted plans and documents, and whether the plans are in compliance with the GBS.

**c. City of Chula Vista Municipal Code Section 15.26, Energy Code**

Since the adoption of the 2005 GPU EIR, the City adopted its Energy Code, Municipal Code sections 15.26, et seq. The Energy Code incorporates the requirements of the state's 2008 energy code (i.e., Title 24), discussed above, with an additional requirement for increased energy efficiency standards to be applied to most new development within the City (Section 15.26.030). The Energy Code went into effect on February 26, 2010. There are several different volumes of information that make up the Energy Code including:

- **Building Energy Efficiency Standards for Residential and Non-Residential Buildings.** This volume is the actual Energy Code text.
- **Residential Compliance Manual.** This volume is intended to help owners, designers, builders, inspectors, plans examiners, and energy consultants comply with and enforce building energy efficiency standards for low-rise (3 stories or less) residential buildings.
- **Non-Residential Compliance Manual.** This volume is intended to help owners, designers, builders, inspectors, plans examiners, and energy consultants comply with and enforce building energy efficiency standards for non-residential, high-rise residential and hotel/motel buildings.
- **Reference Appendices.** This volume contains the testing standards and methods as well as the background and support information used throughout the Energy Code package.
- Residential Compliance Forms
- Non-Residential Compliance Forms

Energy efficiency reduces energy costs, increases reliability and availability of electricity, improves building occupant comfort, and reduces impacts to the environment. All building permits applied for and submitted after February 2010 are subject to these increased energy efficiency standards. The increase in energy efficiency is a percentage above the 2008 Title 24 energy code and is dependent on Climate Zone and type of development proposed. The project area is located within Climate Zone 7. Generally, new residential and non-residential projects within the project area must be at least 15 percent more energy efficient than the 2008 Title 24 energy code.

**d. Chula Vista Climate Adaptation Strategies – Implementation Plans**

The Climate Adaptation Strategies – Implementation Plans document developed by the Climate Change Working Group includes eleven strategies to adapt Chula Vista to the potential impacts of global climate change, including energy supply. The strategies to reduce energy demand include cool paving, shade trees, and cool roofs. For each strategy, the plans outline specific implementation components, critical steps, costs, and timelines. In order to limit the necessary staffing and funding required to implement the strategies, the plans were also designed to build upon existing municipal efforts rather than create new, stand-alone policies or programs. Initial implementation of all eleven strategies is intended to be phased in over a three year period from plan adoption.

**e. San Diego Regional Energy Efficiency Plan/City of Chula Vista Energy Strategy and Action Plan**

The San Diego Regional Energy Plan provided policy and program recommendations to achieve energy sustainability and security (SANDAG 1994). The San Diego Regional Energy Office worked with SANDAG to update the plan with Energy 2030, the San Diego Regional Energy Strategy. The Regional Energy Strategy is intended to create a vision of how energy will be produced and consumed in the San Diego

region in 2030. It also provides an integrated approach to meeting energy needs and ensures that an adequate supply and distribution of electricity, natural gas and transportation fuels is available.

The City has adopted an energy plan to address long-term energy issues and to protect its residents from unreliable energy supply and volatile prices. The plan, called the Chula Vista Energy Strategy and Action Plan, addresses demand side management, energy efficient and renewable energy outreach programs for businesses and residents, energy acquisition, power generation, and distributed energy resources and legislative actions (City of Chula Vista 2001a).

#### **f. City of Chula Vista Solar Ready Ordinances**

CVMC Section 15.28.015, Solar water heater pre-plumbing, and Section 15.24.065, Photovoltaic pre-wiring requirements, are referred to as the Solar Ready ordinances. Section 15.28.015 requires all new residential units to include plumbing specifically designed to allow the later installation of a system which utilizes solar energy as the primary means of heating domestic potable water. Section 15.24.065 requires all new residential units to include electrical conduit specifically designed to allow the later installation of a photovoltaic system which utilizes solar energy as a means to provide electricity.

#### **g. City of Chula Vista General Plan**

The Chula Vista General Plan recognizes that to ensure adequate and reliable energy service, efficient energy efforts throughout the city and transitioning to non-fossil fuel alternatives will help to extend limited supplies; reduce the need for expensive new regional power generators and transmission lines, and contribute to Chula Vista's economic sustainability and regional competitiveness. The General Plan includes objectives in the Public Facilities and Services Element to ensure adequate energy supplies throughout Chula Vista (Objective PFS 22) and integrate sensible and efficient electrical and natural gas facilities into the natural and developed environment (Objective PFS 23).

#### **h. Otay Ranch General Development Plan**

Part II, Chapter 10 establishes goals, objectives, and policies to ensure the conservation of significant portions of Otay Ranch's natural environment. Overall, these goals, objectives and policies prevent the wasteful exploitation, destruction, or neglect of resources and encourage the preservation enhancement and management of sensitive resources. Specifically, Section E addresses the overall goal of establishing Otay Ranch as a "showcase" for the efficient utilization of energy resources and the use of renewable energy resources.

- **Objective:** Reduce the use of non-renewable energy resources within Otay Ranch below per capita non-renewable energy consumption in San Diego County.
- **Policy:** Prepare a non-renewable energy-conservation plan for each SPA.
- **Objective:** Provide land use patterns and project features which result in the conservation of non-renewable energy resources.
- **Policy:** Reduce the reliance for project residents to utilize the automobile, thereby minimizing automobile trips and miles traveled. Encourage the provision of regional mass transit facilities within the Otay Ranch.

## B. Existing Energy Demand

As discussed in the 2013 GPA/GDPA SEIR, existing energy use in Chula Vista consists of fixed uses, such as homes and businesses, and mobile uses, primarily cars and trucks. The discussion of energy demand from each of these uses is provided below.

### 1. Fixed Uses

#### a. Electricity

Electricity is provided by SDG&E, who is the owner and operator of electricity transmission, distribution, and natural gas distribution infrastructure in the county. Power generation and power use are not linked geographically. In other words, power generated within the city is not dedicated to users in the city. Electricity generated is fed into the statewide grid and is generally available to any users statewide.

Electricity consumption in the San Diego region varies greatly by type of use. In 2010, the city consumed approximately 872 million kilowatt-hours (kWh) (City of Chula Vista 2012e). As mirrored in the county, the largest electricity consumption was from commercial uses, followed by residential, industrial, and agriculture. Average energy consumption rates are based on CARB's 2011 California Emissions Estimator Model (CalEEMod) obtained from the CEC end-use surveys for residential and non-residential uses. For ease of comparison, all rates have been calculated into annual rates. Table 5.15-20 shows average existing annual consumption rates.

**Table 5.15-20 Average Existing Energy Consumption Rates**

Land Use Type	Electricity	Natural Gas
Residential	7,090.56.0 kWh/single-family unit 4,324.68 kWh/multi-family unit	62,384.40 cubic feet/single-family unit 37,547.64 cubic feet/multi-family unit
Schools	6.35 kWh/square feet	15.50 cubic feet/square feet
Commercial	14.10 kWh/square feet	34.8 cubic feet/square feet
Industrial (Regional Technology Park)	17.6 kWh/square feet	2,899,332 cubic feet/consumer/year
Community Purpose Facility	9.38 kWh/square feet	33.20 cubic feet/square feet
Parks	9.38 kWh/square feet	3.0 cubic feet/square feet
Source: City of Chula Vista 2013		

#### b. Natural Gas

Natural gas imported into southern California originates from any of a series of major supply basins located from Canada to Texas. Although the San Diego region has access to all of these basins by interstate pipeline, the final delivery into the SDG&E system is dependent on just one gas pipeline. Several liquefied natural gas plants are proposed in Mexico, which would provide an additional source of natural gas to Southern California.

In general, power plants account for the highest percentage of natural gas consumption in the San Diego region. Residential consumption of natural gas is the second highest percentage, followed by co-generation, commercial consumption, industrial consumption, and natural gas vehicles. In 2010, the city consumed approximately 48 million therms of natural gas (City of Chula Vista 2012e).

Natural gas consumption for this analysis is likewise calculated using rates obtained from CARB's 2011 CalEEMod. Table 5.15-20 shows average existing annual consumption rates for natural gas.



## 2. Mobile Uses

Roughly half of the energy Californians consume is for transportation. In 2007, Californians consumed an estimated 20 billion gallons of gasoline and diesel fuel on the state's roadways, an increase of nearly 50 percent over the last 20 years. Nearly 26 million registered vehicles operating in California produce about 40 percent of the state's GHG emissions (CEC 2010).

### 5.15.5.2 Thresholds of Significance

According to the City of Chula Vista, the project would result in a significant impact to energy resources if it would:

- **Threshold 1:** Increase the demand of energy resources to exceed the available supply or cause a need for new and expanded facilities.
- **Threshold 2:** Result in the wasteful, inefficient, or unnecessary use of energy.
- **Threshold 3:** Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding energy thereby resulting in a significant physical impact.

### 5.15.5.3 Impact Analysis

#### A. Threshold 1: Increase the demand of energy resources to exceed the available supply or cause a need for new and expanded facilities.

A significant impact to energy resources would occur if implementation of Village 9 would result in a demand for energy that would exceed the city's available supply or cause a need for new and expanded facilities. Table 5.15-21 provides for the projected energy demand for Village 9. Adjustments to the existing rates of average energy consumption were made in these calculations to reflect improvements in energy-efficient building design due to the 2008 Title 24 updates (which became effective January 2010) and the new Increased Energy Efficiency Standards of the City Energy Code (which became effective February 2010). Combined, these increased energy-efficiency requirements would achieve 30 percent less energy consumption for the project compared to existing average rates of energy consumption. This 30 percent reduction is based on the 15 percent increase in energy efficiency in building design required in the 2008 Energy Code plus an additional 15 percent energy improvement required by the Chula Vista Increased Energy Efficiency Ordinance (City of Chula Vista 2013). As shown in Table 5.15-21, Village 9 would increase electricity demand by 17.3 million kWh and natural gas demand by 66.9 million cubic feet.

The Climate Change Working Group's recommendations to reduce energy use are actions for the City to implement and do not include any measures to be implemented by individual projects. However, the project would be required to comply with any ordinances that are adopted as a result of the recommendations. At a minimum, future development in Village 9 would be required to meet the mandatory energy standards of the Chula Vista Green Building Standards (Ordinance No. 3140), the Chula Vista Energy Code (Municipal Code sections 15.26, et seq.) and current CCR Titles 24, Part 6 California Energy Code, Part 11 California Green Building Standards, and the Chula Vista Energy Code includes Increased Energy Efficiency Standards (Municipal Code section 15.26.030). These standards require projects to use 15 to 20 percent less energy than the California Energy Code requires, depending on climate zone. Village 9 lies within the climate zone that requires 15 percent increased energy efficiency. Additionally, some of the recommendations of the Climate Change Working Group's Adaptation Strategies have been incorporated into the SPA Plan. The SPA Plan encourages shared parking and parking structures that would minimize expansive paved areas for parking lots, requires

streetscaping that would include shade trees and other vegetation, and encourages the use of cool roofs, photovoltaics, and other energy saving materials and features.

**Table 5.15-21 Estimated Annual Increase in Energy Demand above 2005 General Plan Projections**

Land Use Type	Maximum Allowable Units/sf	Electricity Consumption Rate	Electricity Demand	Natural Gas Consumption Rate	Natural Gas Demand
Single-family Residential	266 du	2,127.17 kWh/unit	0.6 million kWh	18,715.32 cf/ single-family unit/year	5.0 million cf
Multi-family Residential	3,734 du	1,297.40 kWh/unit	4.8 million kWh	11,264.29 cf/multi-family unit/year	42.1 million cf
Commercial	1,500,000 sf	4.23 kWh/sf	6.3 million kWh	10.44 cf/sf	15.7 million cf
Schools	862,488 sf	1.91 kWh/sf	1.6 million kWh	4.65 cf/sf/year	4.0 million cf
Community Purpose Facility	217,800 sf	2.81 kWh/sf	0.6 million kWh	0.09 cf/sf/year	19,602 cf
Parks	1,197,900 sf	2.81 kWh/sf	3.4 million kWh	0.09 cf/sf/year	0.1 million cf
Total Increase			17.3 million kWh		66.9 million cf

du = dwelling units; cf = cubic feet; sf = square feet; kWh = kilowatt-hours  
Source for Consumption Rates: City of Chula Vista 2013

To further address energy efficiency, the City also participates in the LEED Rating System, and private developments are strongly encouraged to utilize green building practices. The City's adoption of the Green Building Standards Ordinance in 2009 represented early adoption of the now-effective (as of January 1, 2011) California Green Building Standards. Respective to energy efficiency, these standards mandate 20 percent less water use than currently required by the state plumbing code.

The City's Landscape Water Conservation Ordinance calls for greater efforts at water conservation and more efficient use of water in landscaping. Because energy consumption is embodied in the acquisition, treatment and distribution of water resources, less water consumption yields less energy consumption. Development would also be required to comply with the Chula Vista Solar Ready ordinances, which would encourage the use of solar energy.

As required by the Otay Ranch GDP, the SPA Plan includes a non-renewable energy conservation plan addressing preservation of energy resources. This includes the development of land use patterns and project features which reduce the reliance for project residents to utilize the automobile, encourage the use of regional mass transit facilities, and reduce fossil fuel consumption through better siting and design. Application of the City Energy Code, requiring a 15 percent less energy use than the state 2008 Energy Code, would add to the overall decrease in energy use throughout the project area. Therefore, average energy consumed by future occupants of Village 9 would not be excessive, and would in fact be less than the regional average and less than statewide business-as-usual projections made by the CARB as part of its GHG emissions forecasting.

Although these programs and policies would result in more efficient use of energy, they do not ensure that increased resources will be available when needed. SDG&E has indicated that without an increased import capacity, including a new substation within the Otay Ranch area, future energy needs could not be assured. The new substation would be located in the EUC, south of the east end of Hunte Parkway. Construction of the substation is expected to begin in late 2014 and is expected to be placed in service in late 2015 (SDG&E 2012). The substation would provide infrastructure necessary to provide power to buildout of Otay Ranch, but would not generate electricity or guarantee that adequate supply would be

available. Therefore, consistent with the conclusion of the 2013 GPA/GDPA SEIR, because there is still no assurance of a long-term supply of energy in the future, the increase in energy consumption associated with the project would be significant.

**B. Threshold 2: Result in the wasteful, inefficient, or unnecessary use of energy.**

As discussed above, future development in Village 9 would be required to meet the mandatory energy standards of the Chula Vista Energy Code, current CCR Titles 24, Part 6 California Energy Code, Part 11 California Green Building Standards, and the Chula Vista Energy Code. Additionally, the SPA Plan includes a non-renewable energy conservation plan addressing preservation of energy resources. Compliance with these policies and the energy conservation plan would ensure that average energy consumed by future occupants of Village 9 would not be wasteful, inefficient, or unnecessary, and would in fact be less than the regional average and less than statewide business-as-usual projections. Therefore, this impact would be less than significant.

**C. Threshold 3: Be inconsistent with General Plan, GDP, or other relevant objectives and policies regarding energy thereby resulting in a significant physical impact.**

Table 5.15-22 evaluates the consistency of the project with the applicable General Plan policies and Table 5.15-23 evaluates the project's consistency with applicable GDP goals and objectives. As shown in Tables 5.15-22 and 5.15-23, the project would be consistent with the General Plan and GDP policies that pertain to energy.

**Table 5.15-22 Project Consistency with Applicable General Plan Energy Policies**

Applicable Policies	Evaluation of Consistency
<p><b>Objective E 7:</b> Promote energy conservation through the efficient use of energy and through the development of local, non-fossil fuel-based renewable sources of energy.</p> <p><b>Policy E 7.1:</b> Promote development of regulations and building design standards that maximize energy efficiency through appropriate site and building design and through the use of energy-efficient materials, equipment, and appliances.</p>	<p><b>Consistent.</b> As discussed in Section 5.10, Global Climate Change, Village 9 would be subject to the California Green Building Standards and the Chula Vista Green Building and Increased Energy Efficiency ordinances of the City municipal code. Additionally, the SPA Plan includes a Non-Renewable Energy Conservation Plan that identifies feasible methods to reduce the consumption of non-renewable energy resources, including methods for land use and community design, building siting and construction techniques, and the transit facilities and alternative transportation modes.</p>
<p><b>Objective H 2:</b> Promote efficient use of water and energy through adopted standards and incentive-based policies to conserve limited resources and reduce long-term operational costs of housing.</p> <p><b>Policy H 2.1:</b> Encourage the efficient use and conservation of water by residents.</p> <p><b>Policy H 2.2:</b> Promote the efficient use of energy.</p>	<p><b>Consistent.</b> See the analysis for Objective E 7.</p>

**Table 5.15-23 Project Consistency with Applicable GDP Energy Policies**

Applicable Policies	Evaluation of Consistency
<b>Part II, Chapter 6 – Air Quality</b>	
<b>Objective:</b> Minimize fossil fuel emission by conserving energy.	<b>Consistent.</b> As discussed in Section 3.3.1(C), Mobility, Village 9 is designed to provide alternate modes of travel and reduce vehicle trips to reduce fossil fuel emissions.
<b>Part II, Chapter 10 – Resource Protection, Conservation and Management</b>	
<p><b>Goal:</b> Establish Otay Ranch as a “showcase” for the efficient utilization of energy resources and the use of renewable energy resources.</p> <p><b>Objective:</b> Reduce the use of non-renewable energy resources within Otay Ranch below per capita non-renewable energy consumption in San Diego County.</p> <p><b>Policy:</b> Prepare a non-renewable energy-conservation plan for each SPA.</p>	<b>Consistent.</b> The design of Village 9 encourages walking, bicycling, and public transit use to lower fuel consumption. A non-renewable energy conservation plan is included in the SPA Plan and will contribute to efficient use of resources.

#### 5.15.5.4 Level of Significance Prior to Mitigation

##### A. Energy Resources

While energy consumed by future occupants of Village 9 would not be excessive, implementation of the SPA Plan and TM has the potential to result in impacts due to increased consumption of electricity and natural gas above that analyzed in the 2005 GPU EIR, which identified a significant and unavoidable impact related to energy demand. Although development pursuant to the project would be required comply with state and City building and energy codes and regulations related to reduction in energy use, there is no long-term assurance that energy supplies will be available as needed to support subsequent development projects. Therefore, impacts associated with energy consumption would be significant.

##### B. Wasteful Use of Energy

No significant impacts related to wasteful use of energy have been identified for the project.

##### C. Consistency with Energy Policies

No significant impacts related to consistency with energy policies have been identified for the project.

#### 5.15.5.5 Mitigation Measures

##### A. Energy Resources

The 2013 GPA/GDPA SEIR included mitigation measure 5.3.5-1, as identified in the 2005 GPU EIR, to be incorporated into future SPA plans to reduce impacts related to energy use. This plan required continued focus on the Energy Strategy and Action Plan and continued implementation of the Adaptation Strategies to lessen the impacts from energy. The project is consistent with this mitigation measure because it includes a non-renewable energy conservation plan to reduce energy use. Implementation of this plan would reduce average energy consumption, but would not guarantee that future energy supplies will be available as needed to support future development project. No mitigation measures are available that would guarantee future energy supplies.

**B. Wasteful Use of Energy**

No mitigation measures are required.

**C. Consistency with Energy Policies**

No mitigation measures are required.

**5.15.5.6 Level of Significance After Mitigation**

**A. Energy Resources**

Consistency with the 2013 GPA/GDPA SEIR, mitigation measure 5.3.5-1, along with the programs and policies identified above, would reduce impacts to energy resources; however, because there is no assurance that energy resources will be available to adequately serve the projected increase in population resulting from the project, impacts would remain significant and unmitigated.

**B. Wasteful Use of Energy**

Impacts would be less than significant without mitigation.

**C. Consistency with Energy Policies**

Impacts would be less than significant without mitigation.



# Chapter 6 Cumulative Impacts

The CEQA Guidelines (Section 15355) define a cumulative impact as “an impact which is created as a result of the combination of the project evaluated in the environmental impact report together with other projects causing related impacts.”

Section 15130(a) of the CEQA Guidelines requires a discussion of cumulative impacts of a project “when the project’s incremental effect is cumulatively considerable.” Cumulatively considerable, as defined in CEQA Section 15065(c), “means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

The evaluation of cumulative impacts as required by CEQA Section 15130(b)(1), is to be based on either (a) “a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those impacts outside the control of the agency,” or (b) “a summary of projections contained in an adopted plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.” Section 6.1 describes the cumulative projects that are considered in the cumulative analysis. Section 6.2 includes the cumulative analysis for each of the environmental topics covered in Chapter 5, Environmental Impact Analysis.

## 6.1 Probable Future Projects

### 6.1.1 Land Development

This section provides a cumulative analysis based on the probable future (foreseeable) land use development as well as plans that were identified in the cumulative analysis of the 2013 GPA/GDPA SEIR (SEIR 09-01). Table 6-1 shows the land uses used for this cumulative analysis. These projects include Village 8 East and Village 10/University, including the planned circulation network. The analysis of these cumulative projects is based on land offer agreements between JPB Development and the City of Chula Vista, and OLC and the City of Chula Vista. Other projects within the Otay Ranch area that are approved but not yet built out, such as the EUC and portions of Villages 2, 3 and 4, are included as part of existing adopted plans for the Otay Ranch area, and as such are included in the General Plan and GDP, rather than identified as foreseeable future projects.

The four cumulative projects identified in Table 6-1, including Village 9, comprise what is referred to as the “cumulative area.” Where applicable, a quantitative analysis of the potential cumulative impacts is

provided, based on the methodology used in the 2013 SEIR. The SEIR used a cumulative increase factor based on the ratio of ADTs attributed to the foreseeable projects compared to ADTs from Village 9 (without accounting for any project-specific trip reductions). The SEIR reported the ADT for Village 9 to be 56,123 trips. This was divided into total ADT for the cumulative study area (174,700 trips) resulting in a coefficient of 3.1. This factor is applied for the issues of schools, water, wastewater, recycled water, and energy to represent total cumulative impact.

## 6.1.2 Adopted Plans

From a regional approach, the cumulative analysis relies on the RCP, GDP, and the Chula Vista General Plan, along with other regional planning documents, including the MSCP Subarea Plan, and RAQS in accordance with CEQA Section 15130(b)(1)(B).

**Table 6-1 Land Uses within Cumulative Project Area**

Land Use Type	Village 9	Village 8 West, Regional Technology Park, Portion of University Site in Village 9	Village 8 East, Village 10, Remaining University Site	Village 3	Total Cumulative Project Area
Single-family Residential	266 du	621 du	0	0	887 du
Multi-family Residential	3,734 du	1,429 du	5,756 du	0	10,919 du
Commercial	1,500,000 sf	300,000 sf	0	0	1,800,000 sf
Industrial/Regional Technology Park	0	85.0 acres	0	176.6 acres	261.6 acres
Community Purpose Facility	5.0 acres	5.8 acres	8.0 acres	10.2 acres	29 acres
School	19.8 acres	31.6 acres	20.0 acres	0	71.4 acres
Park	27.5 acres	27.9 acres	45.1 acres	0	100.5 acres
Future University	0	50.0 acres	210.0 acres	0	260.0 acres

du = dwelling units; sf = square feet  
Source: City of Chula Vista 2013

## 6.2 Cumulative Impact Analysis

The geographic scope of the cumulative impact analysis varies depending upon the specific environmental topic being analyzed. In accordance with CEQA Guidelines Section 15130(b)(3), Table 6-2 summarizes the geographic area within which past, present, and probable future projects may contribute to a specific cumulative impact, when considered in conjunction with the impacts associated with implementation of the Village 9 SPA Plan and TM.

Each topic analyzed in the Sections 4.1 through 4.15 of the EIR includes an evaluation of the project's consistency with applicable GP and GDP policies. Policy consistency is project specific and is not cumulative in nature. Similar to the project, other cumulative projects would be required to demonstrate compliance with the General Plan and GDP as part of their project-specific approval process. Therefore, cumulative impacts associated with consistency of GP and GDP policies is not further analyzed in this section.

**Table 6-2 Geographic Scope of Cumulative Impact Analyses**

<b>Environmental Topic</b>	<b>Geographic Scope of Cumulative Impact Analyses</b>
Land Use/ Planning	Incompatibilities with adjacent land uses are generally site specific; therefore, the geographic context for the analysis of cumulative impacts relative to adjacent land use incompatibilities includes the area surrounding the project site. The geographic context for the analysis of cumulative impacts relative to physical division of an established community is generally site specific and limited to the area directly adjacent to Village 9.
Aesthetics	The cumulative study area associated with aesthetics impacts is the viewshed of Village 9, which is geographic area from which a proposed project is likely to be seen, based on topography and land use patterns. The cumulative study area for light and glare is the city of Chula Vista. The cumulative study area for steep slopes is Otay Ranch.
Transportation/ Traffic	The cumulative study area associated with traffic and level of service standards, traffic hazards, alternative transportation, and emergency access is the study area for the project-specific traffic impact analysis (Appendix B). Impacts related to aircraft traffic are generally specific and limited to the area within two miles of a specific airport.
Air Quality	The geographic scope of cumulative impact analysis for criteria air pollutants, sensitive receptors, and air quality plans is the San Diego Air Basin. Impacts relative to objectionable odors are limited to the area immediately surrounding the odor source and are not cumulative in nature because the air emissions that cause odors disperse beyond the sources of the odor.
Noise	The area of cumulative impact that would be considered for the noise and vibration cumulative analysis would be only those cumulative projects within the immediate vicinity of Village 9. Exposure to aircraft noise is also a localized impact and the area of cumulative impact that would be considered for aircraft impacts would be only those projects located within two miles of Brown Field.
Biological Resources	The geographic scope of cumulative impact analysis for biological resources includes the Chula Vista MSCP Subarea Plan area.
Cultural and Paleontological Resources	The geographic context for the analysis of cumulative impacts to archaeological resources, historic resources, paleontological resources, and human remains includes the San Diego region, which has a similar archaeological, ethnohistoric, historic, and prehistoric setting as the project site.
Geology and Soils	The geographic context for the analysis of cumulative impacts relative to soil erosion encompasses the Otay River watersheds directly downstream from the project site. Impacts relative to seismic hazards and other geologic/soil conditions (i.e., fault rupture, groundshaking, ground failure, liquefaction/collapse, landslides, lateral spreading, subsidence, and expansive soils) and septic systems are generally site specific.
Public Services	The city of Chula Vista is the geographic scope of cumulative impacts for public services.
Global Climate Change	Due to the nature of assessment of greenhouse gas emissions and the effects of climate change, impacts can currently only be analyzed from a cumulative context; therefore, the geographic scope for the cumulative analysis of greenhouse gas emissions and their effect on climate change is the global atmosphere.
Hydrology/ Water Quality	The geographic context for the analysis of cumulative impacts relative to water quality standards and alteration of drainage patterns encompasses the portions of the Otay River watershed directly downstream from the project site. Impacts relative to mudflows, dam inundation, tsunamis, seiches, and flood hazard areas are generally specific to a project site.
Agricultural Resources	The city of Chula Vista is the geographic scope of cumulative impacts to agricultural resources.
Hazards and Hazardous Materials	The geographic context for the analysis of cumulative impacts relative to the transport, use and disposal of hazardous materials, and associated accidental releases, encompasses the roadways and freeways used by vehicles transporting hazardous materials to and from the project sites. The geographic context for the analysis of cumulative impacts relative to wildland fires and emergency response and evacuation plans is the city of Chula Vista. Impacts relative to listed hazardous materials sites and airport hazards are generally specific to the project site.
Housing and Population	The city of Chula Vista is the geographic scope of cumulative impacts to housing and population.
Public Utilities	The city of Chula Vista is the geographic scope of cumulative impacts to public utilities.

## 6.2.1 Land Use

### A. Physical Division of an Established Community and Conflicts with Land Use Plans, Policies, and Regulations

Village 9's contribution to the cumulative impacts on land use was included in the 2013 GPA/GDPA SEIR. The SEIR concluded that the GPA/GDPA, including Village 9, would result in increased density and intensity of land uses within the GPA/GDPA area compared to the development analyzed in the 2005 GPU EIR. The SEIR concluded that this intensification is consistent with the goals and objectives of the RCP, General Plan and Otay Ranch General Development Plan. Through conformance with the General Plan, the cumulative projects analyzed in the SEIR, including Village 9, would promote mobility, increase jobs/housing balance, and encourage transit-oriented development. The cumulative projects would realize SANDAG's vision for the cumulative project area. The SEIR further concluded that because adherence to the smart growth principles and objectives of the Chula Vista General Plan, cumulative land use impacts would be less than significant.

As discussed in Section 5.1, Land Use and Planning, the project would be consistent with the General Plan as approved in 2013. Village 9 would be a continuation of planned development in the Otay Ranch. It would provide intensities and densities of residential development as well as mixed-use development that would promote alternative transportation. The project would also provide parks, schools and CPF acreage in conformance with City policies and ordinances. As such, the project, as part of and combined with the cumulative projects, would not result in a significant cumulative land use impact.

### B. Conflicts with HCPs or NCCPs

The Chula Vista MSCP Subarea Plan and the Otay Ranch RMP are the applicable natural resource plans for the project and cumulative projects. The cumulative projects, including Village 9, would be required to demonstrate compliance with the MSCP Subarea Plan and the RMP as part of project approval. Therefore, cumulative land use impacts associated with potential conflicts with HCPs or NCCPs would be less than significant.

## 6.2.2 Aesthetics/Landform Alteration

### A. Scenic Vistas and Scenic Resources

Scenic vistas and scenic resources are project-specific issues because they are limited to individual view points and therefore cumulative impacts relative to scenic vistas and scenic resources were not addressed at the programmatic level in the SEIR for the GPA/GDPA. As discussed in Section 5.2, Aesthetic/Landform Alteration, implementation of Village 9 would not result in any significant direct impacts on scenic vistas and scenic resources because scenic views would continue to be available throughout the site, no scenic resources would be damaged, and the project design guidelines would ensure development does not adversely affect views. However, the project, in combination with the cumulative projects, would contribute to a cumulative loss of views of natural open space. Therefore, the project would result in a cumulatively considerable contribution to a significant and unavoidable cumulative impact.

## **B. Visual Character or Quality**

Village 9's contribution to the cumulative impacts on landform alteration/visual resources was included in the 2013 GPA/GDPA SEIR. As concluded in the SEIR, the GDP/GDPA would result in cumulatively considerable and unavoidable impact related to permanent alteration to the open, rolling hills within the planning area. Grading and development of the project site's vacant land with 4,000 residential units, 1.5 million square feet of commercial land use, parks, and schools would incrementally contribute to the cumulative loss of open, rolling topography. Therefore, the project would result in a cumulatively considerable contribution to a significant and unavoidable cumulative impact.

## **C. Lighting and Glare**

Lighting and glare impacts are project-specific issues and therefore cumulative impacts were not addressed at the programmatic level in the SEIR for the GPA/GDPA. Although Village 9 is currently undeveloped, substantial nighttime lighting is currently generated by the existing development in Otay Ranch and the remainder of the city. Development of Village 9 and cumulative growth in Otay Ranch would contribute new lighting sources from streetlights, security lighting, and decorative lighting throughout the planning area. The SPA Plan includes lighting performance standards to minimize the project's contribution to nighttime lighting. In addition, compliance with City and state energy conservation measures and City lighting standards would limit the amount of unnecessary illumination during evening and nighttime hours. Similar to the proposed project, the cumulative projects would be required to submit photometric analyses and landscape master plans for approval. Therefore, the project's contribution to this potentially significant cumulative impact would be less than significant. Impacts related to glare, solar access, and wind are limited to the area immediately surrounding the source and are not cumulative in nature. The SPA Plan also includes requirements for buildings that would limit glare. Therefore, the project would not result in a cumulatively considerable contribution to lighting and glare.

## **D. Landform Alteration**

Impacts to steep slopes were not specifically addressed in the SEIR for the GPA/GDPA because the SEIR only included an analysis of environmental topics that resulted in new or additional impacts compared to the land use assumptions made for the project area in the 2005 GPU EIR. Steep slopes are the sensitive landform applicable to the cumulative analysis for development in Otay Ranch. As discussed in Section 5.2 under Threshold 6, the Otay Ranch RMP includes a ranch-wide steep slope standard requires preservation of at least 83 percent of the natural steep slopes (natural slopes with gradients of 25 percent or greater) throughout Otay Ranch. Compliance with the RMP would ensure that a cumulative impact related to steep slopes would not occur. Impacts to natural steep slopes in the cumulative project area would be speculative at this time as some areas do not have proposed development plans. However, as demonstrated in Table 5.2-1 and in the analysis in Section 5.2, the proposed project combined with the other projects in Otay Ranch would not exceed the ranch-wide preservation requirement (1,670 acres). Furthermore, other cumulative projects would also be required to demonstrate compliance with the RMP steep slope standard. Therefore, cumulative impacts related to landform alteration would be less than significant.



## 6.2.3 Transportation/Traffic

### A. Traffic and Level of Service Standards and Congestion Management

Village 9's contribution to the potential cumulative impacts on traffic and level of service standards was included in the 2013 GPA/GDPA SEIR. The SEIR concluded that cumulative traffic impacts would occur to a segment of Otay Valley Road in Chula Vista, several segments of Heritage Road in the city of San Diego, I-805, and SR-125 and SR-905. Payment of appropriate development impact fees and adding an additional lane to Otay Valley Road between SR-125 and Street A would reduce impacts to all freeways and Otay Valley Road to a less than significant level. However, the SEIR concluded that impacts to the segments of Heritage Road in the city of San Diego would remain significant and unmitigable.

The Otay Ranch Village 9 Traffic Impact Analysis Report (RBF 2013) updates the analysis in the 2013 GPA/GDPA SEIR with a project-specific analysis. The traffic impact report included an analysis of the project's contribution to cumulative regional traffic. The analysis included a Mitigated Year 2030 scenario that analyzed the potential traffic impacts that would occur as a result of buildout of Village 9 and the cumulative growth in the region through the year 2030. At full buildout, the project would result in a cumulatively considerable contribution to a significant impact at the following intersections:

- Birch Road/SR-125 northbound ramps (LOS F – AM Peak Hour)
- Birch Road/Eastlake Parkway (LOS F – AM Peak Hour, LOS E – PM Peak Hour)
- Birch Road/La Media Road (LOS F – AM and PM Peak Hour)
- Main Street/I-805 northbound ramps (LOS E – PM Peak Hour)
- Main Street/I-805 southbound ramps (LOS E – PM Peak Hour)
- Main Street/La Media Couplet (LOS F – AM and PM Peak Hour)
- Main Street/Magdalena Avenue (LOS F – AM and PM Peak Hour)
- Main Street/Eastlake Parkway (LOS F – AM Peak Hour)

Additionally, the project would result in a cumulatively considerable contribution to a significant impact to the following roadway segments in year 2030:

- Birch Road: La Media Road to SR-125 (LOS F)
- Birch Road: SR-125 to Eastlake Parkway (LOS F)
- Main Street: I-805 to Brandywine Ave (LOS D)
- Main Street: Brandywine to Heritage Road (LOS D)
- Eastlake Parkway: Birch Road to Main Street (LOS D)
- Heritage Road: Main Street to Entertainment Circle (LOS E)
- Heritage Road: Entertainment Circle to Avenida de Las Vistas (LOS D)

~~However, w~~With implementation of mitigation measures 5.3-1 through 5.3-21, all intersections and roadways that would be impacted under buildout conditions would operate at LOS D or better. These mitigation measures would reduce the project's Year 2030 traffic impacts to a less than cumulatively considerable level by providing the necessary road improvements to accommodate project traffic. However, as discussed in Section 5.3, Transportation/Traffic, the proposed project would result in a cumulatively considerable and unavoidable impact to the Olympic Parkway/I-805 northbound ramps intersection in interim Year 2020.

## **B. Air Traffic Patterns, Road Safety, Emergency Access**

Impacts related to air traffic patterns, road safety and emergency access are project-specific issues and therefore cumulative impacts were not addressed at the programmatic level in the SEIR for the GPA/GDPA. Impacts related to air traffic patterns, road safety, and emergency access are site specific and are not cumulative in nature. Construction of a project that would interfere with air traffic, result in a traffic hazard, or have inadequate emergency access would not affect these issues at another site. Similar to the project, cumulative development would be required to provide proper notification in compliance with Brown Field Airport Land Use Compatibility Plan when applicable and comply with all City requirements for parking, roadway design, and emergency access. Therefore, cumulative impacts would be less than significant.

### **6.2.4 Air Quality**

#### **A. Air Quality Violations**

Village 9's contribution to cumulative impacts to air quality violations was included in the 2013 GPA/GDPA SEIR, which concluded that implementation of the GPA/GDPA would result in cumulatively considerable and unavoidable impacts related to air quality violations. The Air Quality Technical Report prepared for Village 9 (Atkins 2013a) updates the analysis in the 2013 GPA/GDPA SEIR with a project-specific analysis, as described below.

The project would contribute to a cumulative impact during construction if air pollutant emissions from simultaneous construction activities would combine to exceed the significance thresholds for criteria air pollutants. The closest cumulative projects to Village 9 are the EUC to the north, and the University/RTP site to the east of the project site. Village 8 East is located approximately 400 feet west of the Village 9 site and would potentially be under construction the same time as Village 9. Village 8 East is within the cumulative impact screening distances for  $\text{NO}_x$ ,  $\text{PM}_{10}$ ,  $\text{PM}_{2.5}$ , and VOC emissions. Construction of Village 8 West is anticipated to begin prior to construction of Village 9; however, construction will be phased over multiple years. Some construction in Village 8 West would occur simultaneously with construction in Village 9. Village 8 West is located approximately 2,000 feet from Village 9 and is within the cumulative impact screening distance for  $\text{NO}_x$  and VOC emissions, but not for  $\text{PM}_{10}$  or  $\text{PM}_{2.5}$ . The Village 9 project alone would result in significant  $\text{NO}_x$ ,  $\text{PM}_{10}$ , and  $\text{PM}_{2.5}$  emissions during construction. If any cumulative project is constructed during the same time period, emissions of criteria pollutants would combine to further exacerbate the violations. Mitigation measures 5.4-1, 5.4-2, and 5.4-3 would reduce impacts but not to below the significance thresholds. Impacts would be cumulatively considerable and unavoidable.

Cumulative daily operational air quality emissions are regulated on a regional level by the RAQS. If a project is not consistent with the growth assumptions included in the RAQS, then the project would result in a significant cumulatively considerable contribution to an air quality. As discussed in Section 5.4, Air Quality, under Threshold 4, Village 9 would exceed the growth projections of the RAQS. Additionally, the project would result in unavoidably significant emissions of VOCs,  $\text{NO}_x$ , and  $\text{PM}_{10}$  during operation. Therefore, the project would result in a cumulatively considerable contribution to a significant air quality impact.

## B. Sensitive Receptors

Impacts related to sensitive receptors are project-specific issues and therefore cumulative impacts were not addressed at the programmatic level in the SEIR for the GPA/GDPA.

**Carbon Monoxide.** Carbon monoxide concentrations were analyzed for three scenarios that included interim cumulative traffic growth: 2020, 2025, and full project buildout (2030). As shown in Table 5.4-8, Estimated Carbon Monoxide Concentrations, the concentrations at all of the studied intersections were below state and federal standards. Therefore, a cumulative impact would not occur.

**Toxic Air Contaminants.** Impacts related to siting new sensitive receptors near sources of TACs would generally be site specific. Similar to the proposed project, new emitters of TACs would need to comply with San Diego Air Pollution Control District criteria, such as Rule 1200. Potential diesel particulate matter emissions from commercial deliveries and bus service proposed in the adjacent villages would be subject to CARB regulations that would reduce emissions to the extent feasible. Therefore, cumulative impacts related to TACs are less than significant.

The HRA prepared by Atkins for Village 9 (Atkins 2013c) analyzed the potential exposure of diesel particulates from cumulative traffic growth in 2020, 2025, and 2030 on SR-125 to sensitive receptors in Village 9. The results showed that some receptors would be exposed to diesel particulate levels in exceedance of the cancer risk criteria. The potential for cumulative projects to be exposed to diesel particulates from mobile sources on SR-125 is site specific and is dependent on factors such as intervening topography, structures, and vegetation. Future projects would need to be analyzed on a site-specific basis. Therefore, a cumulative impact would not occur related to SR-125.

## C. Objectionable Odors

Impacts related to objectionable odors are project specific and therefore cumulative impacts were not addressed at the programmatic level in the SEIR for the GPA/GDPA.

Impacts relative to objectionable odors are generally limited to the area in close vicinity to the source and are not cumulative in nature. As the emissions that cause odors disperse, the odor becomes less and less detectable. Nuisance odor issues are regulated by the San Diego Air Pollution Control District through Rule 51. Similar to the proposed project, none of the adjacent villages propose land uses that are a typical source of odor complaints. Therefore, a cumulatively significant impact associated with objectionable odors would not occur.

## D. Air Quality Plans

The SEIR concluded that implementation of the GPA/GDPA would result in a cumulatively considerable and unavoidable impact related to consistency with air plans.

A project that conflicts with the RAQS growth projections would be inconsistent with the RAQS and SIP and result in cumulative impact. As discussed in Section 5.4 under Threshold 4, the SPA Plan would exceed regional growth projections and therefore the project would result in a cumulatively considerable and unavoidable impact to consistency with adopted air quality plans.

## 6.2.5 Noise

### A. Excessive Noise Levels

Cumulative impacts related to excessive noise levels were not specifically addressed in the SEIR for the GPA/GDPA because the SEIR only included an analysis of environmental topics that resulted in new or additional impacts compared to the land use assumptions made for the project area in the 2005 GPU EIR.

The noise study conducted for Village 9 (Atkins 2013b) included an analysis of impacts from cumulative traffic growth in 2030 to contribute to excessive noise levels on noise sensitive land uses (NSLU) within Village 9. Noise levels would potentially exceed the Chula Vista noise compatibility standards along Main Street, Otay Valley Road, Street A, Street B, and SR-125. Therefore, a cumulative impact would occur. However, mitigation measures 5.5-1 through 5.5-8 would require future new development on site to comply with Chula Vista noise standards so that new residents and visitors would not be exposed to excessive traffic noise. Therefore, the project's contribution to exposure to cumulative traffic noise would be reduced to less than cumulatively considerable.

Village 9 would be surrounded by Village 8 East to the west, the EUC to the north, and the University/RTP to the east. According to the GDP, these villages would be developed with similar land uses compared to Village 9, including commercial, residential, and parkland development, as well as university and university-supporting land uses. Commercial equipment, including HVAC systems, would contribute to noise levels that exceed City standards, which may affect neighboring projects. Therefore, a potentially significant cumulative impact could occur. Mitigation measures 5.5-2 through 5.5-8 would ensure that operational noise levels comply with City standards. Cumulative projects would also be required to demonstrate compliance with City noise standards. Therefore, a cumulative operational noise impact would not be significant.

### B. Excessive Groundborne Vibration

Cumulative impacts related to groundborne vibration were not specifically addressed in the SEIR for the GPA/GDPA because the SIER only included an analysis of environmental topics that resulted in new or additional impacts compared to the land use assumptions made for the project area in the 2005 GPU EIR.

In order to result in a cumulative vibration impact, major construction activities would have to be located within 200 feet of another project, or within 600 feet for pile driving (Caltrans 2002). Vibration impacts are localized and not all construction activities would occur at the same time or at the same location. It is possible that the University site may include laboratory classrooms that contain vibration sensitive equipment. It is unlikely that laboratory uses would be located within 200 feet of Village 9 construction because uses adjacent to Village 9 are anticipated to include supporting development that transitions from the university-supporting residential and commercial uses in the Village 9 Town Center. Construction within 200 feet of the University site would be limited in duration. No land use plan has been proposed for the University site; therefore, a site-specific analysis of potential vibration impacts on the campus is not possible. Further, uses on the University site would need to have been constructed and operating in order to be affected by construction from Village 9. No construction schedule has been proposed for the University. Therefore, it would be speculative to assume laboratories would be developed within 200 feet of Village 9 prior to construction of the eastern area of Village 9. Therefore, a cumulative groundborne vibration impact would not occur.

### **C. Permanent Increase in Ambient Noise Levels**

Village 9's contribution to cumulative permanent increases in noise levels was included in the programmatic SEIR for the GPA/GDPA, which concluded the increases in noise levels as a result of traffic noise would be cumulatively significant and unavoidable.

The Noise Technical Report prepared for Village 9 (Atkins 2013b) updates the analysis in the 2013 GPA/GDPA SEIR with a project-specific analysis. The potential regional noise impacts that would result from traffic increases as a result of cumulative projects and regional growth are included in the Mitigated Year 2030 scenario. Table 14 in Appendix D, Cumulative Traffic Noise Impacts, compares Mitigated Year 2030 traffic noise levels to existing conditions. As shown in this table, 17 of the 22 existing roadway segments currently generate noise levels that exceed 65 dBA CNEL, without cumulative development. Cumulative growth, including the proposed project, would result in five new roadway segments that would exceed 65 dBA CNEL. Cumulative growth would cause four existing roadway segments to exceed 65 dBA, and would result in an increase in traffic noise of 3 dBA CNEL or more on 11 existing roadway segments. A cumulatively considerable impact would occur on a total of 20 roadway segments.

The project's contribution to the cumulative noise impact is based on the increase in traffic noise attributable to the proposed project under the Mitigated Year 2030 scenario. Implementation of the project would result in a 1 dBA increase on eight impacted roadways. Noise increases that are 1 dBA are generally not discernable, although project traffic would incrementally contribute to an already noisy environment that may exceed compatibility standards for NSLU in the vicinity. The significance threshold for traffic-related noise increases is 3 dBA CNEL. Implementation of the project would not result in a cumulatively considerable contribution to roadway noise.

### **D. Temporary Increase in Ambient Noise Levels**

Cumulative impacts related to temporary noise increases were not specifically addressed in the SEIR for the GPA/GDPA because the SIER only included an analysis of environmental topics that resulted in new or additional impacts compared to the land use assumptions made for the project area in the 2005 GPU EIR.

Construction noise impacts are localized in nature because they are limited to the area of the site where construction equipment is operating. Sound levels from project construction would be up to 87 dBA Leq at 50 feet from the source (Atkins 2013b). However, the cumulative projects and the project would be subject to the Chula Vista construction noise ordinance, which limits the hours of construction to 7:00 a.m. and 10:00 p.m., Monday through Friday, and between the hours of 8:00 a.m. and 10:00 p.m., Saturday and Sunday. Compliance with the Chula Vista ordinance would reduce impacts to a less than significant level. The project would comply with the Chula Vista construction limits and would not result in a cumulatively considerable contribution to construction noise.

### **E. Excessive Noise Exposure from a Public or Private Airport**

Exposure to airport noise is a project specific issue and therefore cumulative impacts were not addressed at the programmatic level in the SEIR for the GPA/GDPA. No additional aviation uses are planned to be introduced in the vicinity of Village 9. Impacts related to nuisance noise from overflights are site specific and are not cumulative in nature. Therefore, a cumulative impact related to aviation would not occur.



## 6.2.6 Biological Resources

As stated in Section 2.2.3, the SEIR did not address biological resources but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01).

### A. Sensitive Plant and Wildlife Species, Riparian Habitat and Other Sensitive Natural Communities, Federally Protected Wetlands, and Wildlife Movement Corridors and Nursery Sites

Cumulative impacts consider the potential regional effects of a project and how a project may affect an ecosystem or one of its members beyond the project limits and on a regional scale. The PEIR prepared for the entire Otay Ranch development (EIR 90-01) analyzed the existing conditions, potential impacts, and mitigation measures related to biological resources for the entire Otay Ranch area, which consists of approximately 23,000 acres in the county of San Diego, and the cities of Chula Vista and San Diego. The Otay Ranch PEIR identified significant unavoidable impacts to biological resources in Otay Ranch due to loss of raptor foraging habitat. Subsequent to the certification of the PEIR and adoption of the Otay Ranch GDP, the City adopted the Chula Vista MSCP Subarea Plan. The MSCP planning program provided for mitigation of cumulative impacts from regional development on sensitive species and their habitats on a regional basis, including raptor forage habitat. As such, a cumulatively considerable impact would occur if a project would be inconsistent with the Chula Vista MSCP Subarea Plan.

Implementation of Village 9 would contribute to the loss of biological resources within the Otay Ranch and Chula Vista Subarea. However, with implementation of mitigation measures 5.6-1 through 5.6-19, the project would comply with the MSCP Subarea Plan conditions for coverage, and well as the Otay Ranch RMP, the requirements for conveyance of compensatory mitigation lands to the Preserve Owner Manager, and compensatory wetland mitigation required by state and federal wetlands permitting agencies. Implementation of these measures would ensure long-term sustainability of sensitive species and their associated habitats, and mitigates cumulative biological impacts to MSCP covered species and their associated habitats. Therefore, the project would not result in a cumulatively considerable contribution to a significant biological cumulative impact.

### B. Local Policies, Ordinances, HCP and NCCP

The Chula Vista MSCP Subarea Plan and the Otay Ranch RMP are the applicable natural resource plans for the project and cumulative projects. Similar to the SPA Plan and TM, the cumulative projects would be required to demonstrate compliance with the MSCP Subarea Plan and the RMP as part of project approval. Pursuant to the City's MSCP Subarea Plan, no single facility may permanently impact more than two acres of covered habitat. In addition, permanent impacts to covered habitats in the Preserve resulting from future facilities may not exceed a cumulative total of 50 acres. Permanent impacts to covered habitats associated with the development of planned infrastructure facilities (future facilities) within the Preserve are discussed in Section 5.6, Biological Resources. Temporary impacts associated with future facilities are not subject to the limitations for permanent impacts to covered habitat; however, all areas of temporary impacts must be revegetated. The temporary impact area associated with Village 9 would be revegetated pursuant to a restoration plan reviewed and approved by the City (refer to mitigation measure 5.6-5).

Future facilities associated with the project include the off-site sewer and storm water conveyance facility. Development of this facility will permanently impact 0.17 acre of covered habitat, which is less than the two acre single facility limitation. Cumulative impacts to covered habitat associated with

future facilities are estimated at 0.85 acre, as shown in Table 6-3, which is less than the 50-acre cumulative acreage. Therefore, cumulative land use impacts associated with conflicts with HCPs or NCCPs would be less than significant.

**Table 6-3 Future Facilities Cumulative Covered Habitat Impact**

Project	Permanent Impacts to Covered Habitat (acres)
Village 11 (approved)	0.5
Village 2 (approved)	0.09
Village 8 West (reasonably foreseeable)	0.09
Village 9 (proposed)	0.17
<b>Total</b>	<b>0.85</b>

Note: While development in accordance with the land offer agreements for Village 8 East, Village 10, the University/ RTP are included in the cumulative analysis for other environmental issues, no calculation of impacts to future facilities is provided for these areas because no site plans have been filed. Identifying permanent impacts to covered habitats for these projects would be speculative at this time.

## 6.2.7 Cultural and Paleontological Resources

As stated in Section 2.2.3, the Chula Vista General Plan Amendment/Otay Ranch GDP Amendment and SEIR, the SEIR did not address cultural or paleontological resources but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01).

### A. Archaeological, Historic, and Human Remains

The 2005 GPU EIR evaluated impacts to cultural resources in its cumulative analysis. This cumulative assessment of impacts to archaeological and historic resources incorporates by reference the cumulative impact analysis in the 2005 GPU EIR. The continued pressure to develop or redevelop areas would result in incremental impacts to the historical record in the San Diego region. Regardless of the efforts to avoid impacts to cultural resources, the more land that is converted to developed uses, the greater the potential for impacts to cultural resources. While any individual project may avoid or mitigate the direct loss of a specific resource, the effect is considerable when considered cumulatively. The 2005 GPU EIR concluded that the loss of historic or prehistoric resources from the past, present, and probable future projects in the Southern California/Northern Baja California, Mexico areas would contribute to cumulatively significant impacts to cultural resources.

As discussed in Section 5.7, Cultural Resources, the project would not result in a significant impact on historical resources or known archaeological resources. The project would not contribute to a cumulative impact related to historic resources. However, the project could result in significant impacts to unknown archaeological resources or human remains that may be uncovered during project development. While mitigation has been proposed that would reduce project-related impacts to cultural resources to a less than significant level, because the extent of potential cultural resources is unknown at this time, cumulative impacts are concluded to be significant, consistent with the findings in the 2005 GPU EIR.

### B. Paleontological Resources

The 2005 GPU EIR evaluated impacts to paleontological resources in its cumulative analysis. This cumulative assessment of impacts to paleontological resources incorporates by reference the

cumulative impact analysis in the 2005 GPU EIR. As with archaeological and historic resources, the continued pressure to develop undeveloped areas would result in incremental impacts to the paleontological record in the San Diego region. Regardless of the efforts to avoid impacts to these resources, the more land that is converted to developed uses, the greater the potential for adverse impacts. While any individual project may avoid or mitigate the direct loss of a specific resource, the effect was considerable when considered cumulatively.

Cumulative buildout would result in an increased probability of disturbance to paleontological resources causing potentially significant cumulative impacts. However, this could be a positive effect of development due to fact that the discoveries of paleontological resources contribute to important scientific information about the natural history in southwestern San Diego County. As discussed in Section 5.7, Cultural Resources, geological formations underlying the project area and off-site improvement area have been identified as having high sensitivity for paleontological resources. Therefore, the project could result in significant impacts to sensitive paleontological deposits. Mitigation measures 5.7-4 through 5.7-7 have been included that would reduce project-related impacts to paleontological resources to a less than significant level. Because the extent of potential paleontological resources is unknown at this time, cumulative impacts are concluded to be significant, consistent with the findings in the 2005 GPU EIR. However, the proposed mitigation measures would reduce cumulative paleontological impacts to below significance because paleontological resources would be protected from damage and the discoveries of paleontological resources as a result of development contribute to important scientific information about the natural history in southwestern San Diego County.

## **6.2.8 Geology and Soils**

### **A. Exposure to Seismic Related Hazards, Soil Stability, and Expansive Soils**

Geologic hazards are generally site specific and not cumulative in nature. Potential impacts related to geologic hazards in Village 9 are not additive with other projects and are therefore not cumulatively significant. Additionally, as discussed in Section 5.8, Geology and Soils, geological hazards related to seismicity, slope stability, and expansive soils would be reduced to less than significant levels through compliance with the Uniform Building Code and other applicable regulations, and adherence to the recommendations of a site-specific geotechnical investigation (mitigation measure 5.8-1). Although the proposed project and related projects would have potentially significant geological impacts requiring mitigation, these projects are geographically removed to the extent that a hazardous geologic event, such as seismically induced ground failure, at one site would not necessarily occur at the other. Therefore, any potential geological impacts would not be cumulatively significant.

### **B. Soil Erosion or Topsoil Loss**

Potentially cumulative impacts related to soil erosion or top soil loss are addressed in Section 6.2.11, Hydrology and Water Quality. As discussed in that section, future growth and redevelopment in the city, including Otay Ranch, would result in an increase in impermeable surfaces, alteration of the hydrology of local streams and drainage, and grading and clearing of vegetation. All of these actions have the potential to contribute to a cumulative increase in erosion. However, compliance with all applicable regulations, the BMPs identified in the Water Quality Technical Report, and the policies associated with General Plan Objectives PFS 1 and 2 would ensure that development and redevelopment would not result in significant erosion. The project and the other cumulative projects in

Otay Ranch and the city would be required to comply with the federal, state, and local regulations and Chula Vista General Plan policies. Therefore, a cumulative impact related to erosion or topsoil loss would not occur.

### **C. Waste Water Disposal Systems**

Development in the city of Chula Vista and Otay Ranch would be serviced by City wastewater and would not require septic tanks or alternative waste water disposal systems. A cumulative impact would not occur.

## **6.2.9 Public Services**

Village 9's contribution to the cumulative impacts on public services was included in the 2013 GPA/GDPA SEIR. The SEIR determined a significant cumulative impact would not occur to any public services because increased demands will be accommodated through the maintenance of the City GMO threshold standards prior to discretionary project approval. Specifically, Objective GM 1 from the Chula Vista General Plan assures public facilities and services are available to residents and visitors of the city in a timely manner as development occurs. Compliance with this General Plan objective would allow individual development projects to avoid adding a cumulatively considerable drain on city resources. Implementation of the SPA Plan and TM's compliance with the GMO threshold standards and Objective GM 1 is discussed below for each public service.

### **A. Fire and Emergency Medical Services**

Village 9, in combination with cumulative development in the City, would result in an increased demand for fire and emergency medical services. If growth outpaces the CVFD's ability to expand and serve new development, a cumulative impact would occur. However, Section 19.09 (Growth Management) provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040B specifically requires that "properly equipped and staffed fire and medical shall respond to calls throughout the city within seven minutes in 80 percent of the cases." Section 19.09 also requires a PFFP and the demonstration that public services such as fire services meet the GMO quality of life threshold standards. A project that is consistent with the City GMO quality of life threshold standards would not result in a cumulative impact.

As discussed in Section 5.9, the Village 9 SPA Plan and TM has been prepared in coordination with the CVFD. According to the CVFD, all areas of Village 9 are within a five minute response time area (Gipson 2011). With implementation the mitigation measures identified in Section 5.9.1, the project would meet the GMO standards for fire protection, including paying its fair share of funding for public services with each building permit. The PFFP for the SPA Plan and TM identifies Village 9's fair share of costs to provide the public services required to serve the project. As such, the project meets the quality of life threshold standards. The project would not result in a cumulatively considerable contribution to fire protection services.

### **B. Police Services**

Implementation of the SPA Plan and TM in combination with cumulative development in the city would result in an increased demand for police services. If growth outpaces the Chula Vista Police Department's ability to expand and serve new development a cumulative impact would occur. However, Section 19.09 (Growth Management) provides policies and programs that tie the pace of

development to the provision of public facilities and improvements. Section 19.09.040A specifically requires that properly equipped and staffed police units shall respond to 81 percent of priority one emergency calls within seven minutes and maintain an average response time to all priority one emergency calls of 5.5 minutes or less. Section 19.09 also requires a PFFP and the demonstration that public services, such as police services, meet the GMO quality of life threshold standards. A project that is consistent with the City GMO quality of life threshold standards would not result in a cumulative impact.

Maintaining current response times would require additional police officers. With implementation of the mitigation measures identified in Section 5.9.2, the project would meet the GMO standards for police protection, including paying its fair share of funding for public services with each building permit. The PFFP for the SPA Plan and TM identifies the proposed project's fair share of costs to provide the public services required to serve the project. Additionally, Village 9 is designed to incorporate crime prevention through environmental design features, which would reduce demand on police services. Therefore, the project would not result in a cumulatively considerable contribution to police services.

### **C. Schools**

Implementation of the SPA Plan and TM and cumulative development in the city would result in an increased demand for elementary, middle, and high schools. If new growth in school-aged children exceeds the capacity of available schools, a cumulative impact would occur. However, Section 19.09 provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040.C requires that the City annually provide the two local school districts with a 12- to 18-month development forecast and requests an evaluation from the districts of their ability to accommodate the forecast and continuing growth. The growth forecast and school district response letters are delivered to the GMOC for inclusion in its review. Section 19.09 also requires a PFFP and the demonstration that public services, including schools meet the GMO quality of life threshold standards. A project that is consistent with the City GMO quality of life threshold standards would not result in a cumulative impact.

As discussed in Section 5.9, the project would generate approximately 890 elementary school students, 327 middle schools students, and 488 high school students. Based on the cumulative factor of 3.1, the cumulative increase in students would be 2,759 elementary school students, 1,014 middle school students, and 1,513 high school students. The cumulative factor is conservative for student generation because the RTP and University would not be anticipated to generate elementary, middle, or high school students. The SPA Plan proposes a new elementary school and the existing Olympian High School has adequate capacity to accommodate growth from the project. However, the project would have the potential to result in a temporary impact to middle schools until the planned middle school for Otay Ranch in Village 11 or Village 8 West is complete. The PFFP prepared as part of the SPA Plan includes a fiscal impact analysis to determine the revenues and costs expected to be generated by the development. Net revenues are used to finance costs associated with operations and maintenance associated with the public services required to serve the project. Mitigation measures 5.9.3-1 would require the applicant for the project to pay applicable school service fees and protect the designated schools sites from other development. Therefore, with implementation of these mitigation measures, the project would not result in a cumulatively considerable contribution to school impacts.



## D. Libraries

Implementation of the SPA Plan and TM and cumulative development in the city would result in an increased demand for library services. Based on the GMO threshold standard of 500 square feet of library space per 1,000 residents, the total library space needed to serve the existing population of the city would be approximately 123,500 square feet. As approximately 95,400 square feet of library space is currently provided, a shortfall of approximately 28,080 square feet currently exists. Therefore, a cumulative impact currently exists.

As discussed in Section 5.9, the project would require the collection of the PFDIF with each building permit. The City's development impact fee program for library facilities assumes the construction of facilities sufficient to meet the service standard of 600 square feet of library space per 1,000 population, which is more conservative than the GMO standard of 500 square feet per 1,000 population. The funds are expended on a number of projects, but for the most part are being reserved for planned facilities yet to be constructed in eastern Chula Vista. These funds on account will be combined with the impact fees to be collected from future development, including the SPA Plan. Payment of the PFDIF would provide the SPA Plan's fair share contribution to meet the City's threshold standard for library space. The project would not result in a cumulatively considerable contribution to libraries.

## E. Parks, Recreation, Open Space, and Trails

Implementation of the Village 9 SPA Plan and TM and cumulative development in the city would result in an increased demand for park, recreation, open space, and trails. If growth outpaces the City's ability to provide additional facilities, a cumulative impact would occur. However, Section 19.09 provides policies and programs that tie the pace of development to the provision of public facilities and improvements. Section 19.09.040 E specifically requires a population coefficient of "three acres of neighborhood and community park land with appropriate facilities per 1,000 residents east of I-805." Section 19.09 also requires a PFFP and the demonstration that public services, such as parks, meet the GMO quality of life threshold standards. A project that is consistent with the City's GMO quality of life threshold standards would not result in a cumulative impact.

As discussed in Section 5.9, the project would potentially increase use of existing and proposed regional and community parks. However, the project provides parks and recreational facilities to serve the population of Village 9. Village 9 would be obligated to provide approximately 32.9 acres of parkland. The SPA Plan and TM for Village 9 provide 23 eligible acres of parks. However, Village 8 West SPA would provide a total of 27.1 acres of parks, which exceeds its park requirement by 9.4 acres. The excess park acreage from Village 8 West shall be applied to Village 9 to meet the park obligation in Village 9 SPA. The project would also provide approximately 9.6 acres of open space, consistent with the open space requirement of the Otay Ranch RMP. The mitigation measures identified in Section 5.9 would ensure that park facilities are provided concurrently with demand. The project would not result in a cumulatively considerable contribution to parks, recreation and open space.

## 6.2.10 Global Climate Change

### A. Compliance with AB 32

The 2013 GPA/GDPA SEIR included an analysis of cumulative impacts related to global climate change as a result of implementation of the GPA/GDPA land uses. The SEIR concluded that the annual GHG

emissions generated by the cumulative projects including Village 9 would total 333,426 MT CO<sub>2</sub>e per year, and cumulative global climate change impacts would be less than significant.

As discussed in Section 5.10, Village 9 would contribute approximately 90,056 MT CO<sub>2</sub>e annually to the cumulative total. Given that individual projects (within the cumulative area) would be subject to the City's existing Green Building Standards, Increased Energy Efficiency Standards, and General Plan policies, similar to the proposed project, future emissions from these projects would be ensured to be at least 20 percent below business as usual GHG emissions, consistent with the goals of AB 32. The project would reduce its GHG emissions by 32 percent compared to the business as usual emissions. Therefore, cumulative climate change impacts would be less than significant.

## **B. Potential Effects of Global Climate Change**

Similar to compliance with AB 32, impacts related to the potential effects of global climate change can only be addressed at a cumulative level because climate change and its potential effects are caused by the collective of human actions taking place throughout the world. The cumulative impacts of the project associated with the potential effects of climate change are addressed in Section 5.10. The project would have significant impacts related to regional and local air quality resulting from vehicular emissions of ozone precursors. Increased temperatures would have the potential to increase the creation of ground-level ozone (smog) in the basin, which could exacerbate to health impacts associated with ozone, such as asthma. There are no feasible mitigation measures currently available to further reduce the potential criteria pollutant emissions of the project. Therefore, emissions of ozone precursors that would potentially exacerbate air quality problems would be cumulatively considerable and unavoidable.

### **6.2.11 Hydrology and Water Quality**

As stated in Section 2.2.3, the SEIR did not address hydrology or water quality, but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01).

#### **A. Water Quality Standards and Degradation of Water Quality**

The 2005 GPU EIR concluded that compliance with General Plan Objective E 2 and applicable policies, and to all federal, state, and regional water quality regulations would ensure that impacts associated with water quality would not be significant. No cumulative impacts were identified related to water quality because these regulations, including the General Construction Permit and the Chula Vista Development Storm Water Manual, are intended to mitigate cumulative impacts from all new development and redevelopment.

The cumulative projects including Village 9 would have the potential to result in sources of polluted runoff during construction and result in an increase impervious surfaces following construction that would potentially result in the contribution of non-point source pollution. The project would be consistent with Objective E 2 and the policies applicable to new development: Policies E 2.4 and E 2.5. As discussed in Section 5.11, Hydrology and Water Quality, under Threshold 1, prior to construction in Village 9, the applicant would be required to prepare and implement a SWPPP that would outline the BMPs that would reduce water quality impacts during construction to a less than significant level. Prior to the issuance of grading permits, the SWPPP would be required to be prepared to the satisfaction of the City of Chula Vista Engineer and the Director of Public Works. Additionally, all construction activities would comply with the Chula Vista Development Storm Water Manual.

Following construction, the project would comply with the City's Development Storm Water Manual, which would minimize impacts on receiving water quality by incorporating post-construction BMPs into project design, including LID site design, source control, and treatment control. The mitigation measures identified in Section 5.11 require compliance with all applicable regulations, usage of the BMPs identified in the Water Quality Technical Report for Village 9. Further, and development of individual parcels within Village 9 would be required to demonstrate compliance with the City's Development Storm Water Manual.

The proposed project and all new development and redevelopment in the city, including Otay Ranch, would be required to comply with federal, state, and local regulations that protect water quality, including the City's Development Storm Water Manual. Compliance with the applicable regulatory requirements described above would ensure that the potential water quality impacts of the proposed project, and all cumulative projects, would not result in significant cumulative impact. Therefore, a cumulatively considerable impact related to water quality would not occur.

## **B. Erosion or Siltation, Surface Runoff, and Exceed Drainage Capacity**

The 2005 GPU EIR concluded that compliance with policies associated with Objectives PFS 1 and 2 would ensure that development would not result in a significant impact to the area's drainage pattern in a manner which would result in substantial erosion or siltation or flooding. No additional cumulative impacts were identified related to hydrology because the General Plan was intended to reduce cumulative city-wide drainage impacts to a less than cumulatively considerable level.

The cumulative projects including the proposed project, would result in an increase in impermeable surfaces, alteration of the hydrology of local streams and drainage, and clearing of vegetation. As discussed in Table 5.11-4, Project Consistency with Applicable General Plan Drainage and Water Quality Policies, the project would comply with Objectives PFS 1 and 2 and all applicable policies. The Drainage Study for Village 9 outlines the drainage infrastructure required for detention of storm runoff and sediment control associated with buildout of the plan, including incorporation of energy dissipaters to minimize potential erosion.

The project would contribute new flow to Otay River. As discussed under Threshold 3 in Section 5.11, Hydrology and Water Quality, a Hydromodification Management Plan prepared for the County of San Diego exempts the Otay River from hydromodification criteria. The plan already determined that slight increases in flows such as the post-construction conditions of Village 9 would not be considered a cumulatively considerable impact. Additionally, the Water Quality Report outlines the proposed water quality BMPs that would reduce potential erosion and sedimentation impacts to a less than significant level. Implementation of the mitigation measures identified in Section 5.11 would ensure that the Village 9 drainage system is implemented concurrently with demand and in compliance with applicable regulations. The other cumulative projects in Otay Ranch and the city would also be required to comply with the Chula Vista General Plan policies. Therefore, a cumulatively considerable impact related to hydrology would not occur.

## **C. Groundwater Supplies and Recharge**

Cumulative groundwater impacts are limited to projects that are located within the same groundwater basin. Groundwater on Village 9 is seasonal and results from rainwater or runoff that is trapped along joints or rock beds. The groundwater does not support an aquifer or local groundwater table.

Therefore, no cumulative groundwater impact would occur as a result of implementation of the SPA Plan and TM.

## **D. 100-Year Flood Hazards, Flooding, and Inundation**

Impacts related to flood and inundation hazards are site specific and not cumulative in nature. The location of one project in a flood hazard area would not affect the location of another cumulative project. The project would not place any structures in a flood hazard area. Therefore, cumulative impacts related to flood and inundation hazards would be less than significant.

## **6.2.12 Agricultural Resources**

As stated in Section 2.2.3, the SEIR did not address agricultural resources, but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01).

### **A. Direct Conversion of Agricultural Resources**

This evaluation of cumulative impacts on agricultural resources incorporates the cumulative analysis in the 2005 GPU EIR by reference. The 2005 GPU EIR concluded that “there are no prime farmlands or farmlands of statewide importance in the city that would be converted as a result of land use changes.” Therefore, it was determined that impacts on agricultural resources would be less than significant (City of Chula Vista 2005b). However, the GDP EIR (EIR 90-01) identified the incremental and cumulative loss of agricultural lands in the Otay Ranch as a significant impact.

The SPA Plan is within the development scope of the General Plan. Prime farmlands or farmlands of statewide importance do not occur within the General Plan area; however, Village 9 is identified as containing Farmland of Local Importance and Grazing Land. As the project would result in the loss of Farmland of Local Importance and Grazing Land, it would have a significant impact with respect to agricultural resources. The incremental loss of farmland as a result of the project in combination with other projects in Otay Ranch would result in a cumulatively significant impact with respect to agricultural resources, consistent with the GDP PEIR (EIR 90-01). As discussed in Section 5.12, agricultural uses would continue to be allowed in Village 9 in the interim until buildout of Village 9. However, no mitigation measures are available to reduce long-term impacts to below a level of significance without restricting the development proposed in the SPA Plan and TM to allow interim agricultural uses to continue in perpetuity. Therefore, this impact would remain cumulatively considerable and unavoidable.

### **B. Land Use Zoning Conflicts**

Impacts related to consistency with the Chula Vista Zoning Ordinance are project specific and are not cumulative in nature. Similar to the project, other cumulative projects would be required to demonstrate compliance with the zoning. Therefore, cumulative land use impacts associated with consistency with agricultural zoning would be less than significant.

## **6.2.13 Hazards and Hazardous Materials**

As stated in Section 2.2.3, the SEIR did not address hazards or hazardous materials but relies on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01).

## **A. Transport, Use, and Disposal of Hazardous Materials and Accidental Release of Hazardous Materials**

This evaluation of cumulative impacts on hazards and risk of upset incorporates the cumulative impact analysis of the 2005 GPU EIR by reference. The 2005 GPU EIR determined that compliance with Objective E 19 would assure that new development would not be approved if there were a potential for the use or transport of hazardous materials to affect residents. Under this objective, Policy E 19.1 states that proposals for hazardous waste storage, collection, treatment, disposal, and transfer facilities shall be accepted for review, only if located on industrial-zoned land within a designated general area. According to the 2005 GPU EIR, implementation of this objective and policy is assured through compliance with Policy E 20.2, which states that the City shall ensure that significant and potentially significant adverse effects to existing and planned surrounding land uses from facilities that use, store, or handle hazardous materials and waste will be avoided through the environmental review of proposed developments, in accordance with the CEQA. The 2005 GPU EIR concludes that hazards associated with the routine transport, use, disposal, or accidental release of hazardous materials would be less than significant.

The project would support the implementation of Policy E 19.1 and Policy E 20.2. As discussed in Section 5.13 under Thresholds 1 and 2, the project does not propose any incompatible land uses within Village 9 that would result in a significant hazard from the use, transport, or disposal of hazardous materials, or a reasonable foreseeable upset. All non-residential developments such as urgent care centers would be required to comply with local, state, and federal laws such as RCRA. Household hazardous wastes are limited in the amount and frequency of use, therefore, the frequency and severity of exposure to household hazardous was not present a significant risk. As such, the project would not interfere with the implementation of General Plan Objective 19 or Policy E 20.2 and a cumulative impact related to hazardous materials would not occur.

## **B. Emergency Response and Evacuation Plans**

A cumulative impact related to emergency evacuation plans would occur if development in Village 9 and the surrounding developments in Otay Ranch would not provide adequate access to regional evacuation routes. As discussed under Threshold 7 in Section 5.13, Village 9 would not interfere with implementation of any regional response or evacuation plan. Implementation of the SPA Plan and TM would provide connectivity to major arterials with the development of Main Street and Otay Valley Road. Evacuation from and emergency response within Village 9 would be enhanced by the proposed circulation system, which provides multiple accesses to any point within the project area and multiple points of access to the surrounding regional circulation system, as shown in Figure 3-5, Roadway Circulation System. With the completion of Main Street and Otay Valley Road, Village 9 would connect to SR-125 by multiple routes, and ultimately I-805, which would reduce the concentration of gridlock or blockage of either of these major highways during major disasters that may require evacuation. Similar to the proposed project, cumulative development would also enhance the Otay Ranch circulation network and provide additional connections to the regional circulation system. Therefore, cumulative emergency response and evacuation plan impacts would be less than significant.

## **C. Hazards to Schools, Existing Hazardous Materials Sites, Airport Hazards, Wildland Fires, and Historic Use of Pesticides**

Impacts related to schools sites, listing on a hazardous materials site, surrounding airports, wildland fires, and pesticide soil contamination are site specific and not cumulative in nature because impacts to



individual projects would be site specific. Potential risks identified for Village 9 or on other cumulative project sites would not affect potential risks elsewhere in Otay Ranch. Cumulative impacts would be less than significant.

## **6.2.14 Housing and Population**

### **A. Population Growth**

Village 9's contribution to cumulative impacts on population growth was included in the 2013 GPA/GDPA SEIR. The SEIR concluded that cumulative impacts associated with housing and population growth would be less than significant. As discussed in Chapter 7, Growth Inducement, the proposed SPA Plan and TM would be consistent with the GP and GDP, as amended. The amended GDP would not induce substantial population and housing growth because it would implement planned development that would result in an inclusive community, maintain a balance between housing and employment, and allow population to grow adjacent to existing urban areas and in proximity to public transit. The Town Center would provide neighborhood commercial services, increase pedestrian-friendly mobility choices, and medium to high density residential uses in a high-density, mixed use area. Therefore, because the increase in population associated with the cumulative projects, including Village 9, would be accommodated by the proposed homes and town center commercial services, cumulative impacts associated with housing and population growth would be less than significant.

### **B. Displacement of Housing and People**

Displacement of housing and people is a project specific issue and therefore cumulative impacts were not addressed at the programmatic level in the SEIR for the GPA/GDPA. The project is currently undeveloped and would not result in the displacement of housing or people. Cumulative impacts related to displacement of housing and people are less than significant.

## **6.2.15 Public Utilities**

### **A. Water**

Village 9's contribution to the cumulative impacts on water supply was included in the 2013 GPA/GDPA SEIR. The SEIR concluded that impacts would be significant and unmitigated because no water supply verification was required at the program level.

According to the GPA/GDPA SEIR, the cumulative area, including Village 9, would result in an increase in water demand of 1.7 mgd. As discussed in Section 5.15, the project-specific water analysis for Village 9 determined that the project would result in an increase in water demand of 1.3 mgd. A WSAV was prepared based on the most recent water supply information available during assessment preparation (Appendix K1). The report determined that sufficient water supplies are planned for and are intended to be available over a 20-year planning horizon, under normal conditions and in single-dry and multiple-dry water years to meet the projected demand of the project and the existing and other planned development projects to be served by the OWD. The cumulative projects would also be required to obtain WSAVs in compliance with SB 610 and SB 221.

Additionally, the proposed project and the cumulative projects would be required to comply with the Chula Vista Landscape Water Conservation Ordinance, which calls for greater water conservation efforts and more efficient use of water in landscaping. The requirements of this ordinance would be

implemented into the design of the proposed project. The proposed project would promote water conservation through the use of low water use plumbing fixtures and the use of recycled water for the irrigation of parks, open space slopes, schools, parkway landscaping, and the common areas of multi-family residential and commercial sites. OWD also requires the implementation of 14 water conservation BMPs. The proposed project and cumulative projects would implement the BMPs for water conservation, including requiring installation of dual flush toilets, development of a water conservation plan, and use of recycled water.

Long-term water supply cannot be guaranteed; therefore, any increase in water demand would be considered significant. Although the proposed project and the cumulative projects would comply with applicable regulations to reduce water demand, an increase in water demand would occur as a result in development. Cumulative impacts related to water supply would be significant and unavoidable.

## **B. Wastewater**

Village 9's contribution to the cumulative impacts on wastewater was included in the 2013 GPA/GDPA SEIR. The SEIR concluded that cumulative impacts would be less than significant because future projects would include a PFFP that articulates needed facilities and identifies funding mechanisms, and the City has the authority to withhold discretionary approvals and subsequent building permits from projects that are out of compliance with threshold standards.

According to the GPA/GDPA SEIR, the cumulative area, including Village 9, would result in an increase in sewer demand of 2.3 mgd. The project-specific sewer analysis for Village 9 determined that the proposed project would result in an increase in wastewater demand of 907,105 gpd. As discussed in Section 5.15, the City would need to acquire an additional 11.68 mgd of capacity above current capacity rights to serve the buildout of Village 9 and cumulative development in the city.

The project's wastewater generation volume combined with other planned projects would require sewage treatment capacity beyond the City's existing capacity rights and allocated additional treatment capacity. The means by which additional treatment capacity would be acquired is unknown and the development of additional capacity may require the expansion of existing or construction of new treatment facilities. Existing policies require major developments to prepare a PFFP that articulates needed facilities and identifies funding mechanisms as well as provides the authority to withhold discretionary approvals and other measures. Implementation of these policies would therefore avoid significant cumulative impacts associated with a shortfall of treatment capacity. Mitigation measures are also provided to ensure that adequate wastewater facilities are provided concurrently with demand. Building permits for any project in the city will be issued only if the City Engineer at that time has determined that adequate wastewater treatment capacity exists to serve the proposed development. However as stated in Section 5.15, the location and scope of construction for any future expanded or newly developed treatment facilities is unknown and the development of additional treatment capacity may result in potentially significant and unavoidable cumulative impacts associated with construction of new or expanded treatment facilities even understanding that such projects would likely be subject to environmental review.

## **C. Solid Waste**

Village 9's contribution to the cumulative impacts on solid waste management was included in the 2013 GPA/GDPA SEIR. The SEIR concluded that the project, in combination with other cumulative projects, would not result in a significant cumulative solid waste impact. Implementation of the SPA Plan and TM

and cumulative development in the city would result in an increased generation of solid waste. The Otay Landfill has a total permitted capacity of 62.4 million cubic yards and has a permitted remaining capacity of 33.1 million cubic yards (53 percent capacity). Pursuant to the 2005 GPU EIR, build out of the city under the 2005 General Plan projections would generate a solid waste disposal quantity of 274,063 tons, after which there would be 26.2 million tons of remaining landfill capacity.

The SEIR determined that the cumulative projects including Village 9 would generate 35,447 tons per year, of which the proposed project would contribute 21,500 tons. The Otay Landfill has sufficient capacity to accommodate this increased waste disposal in combination with the city-wide cumulative increase in solid waste generation projected in the 2005 GPU EIR. The Otay Landfill is scheduled to close in 2028. However, an existing agreement will permit waste from the city to be transferred to the Sycamore Canyon Landfill upon the closing of the Otay Landfill. There would be no interruption of service (City of Chula Vista 2013). Additionally, the Public Facilities and Services Element and Environmental Element of the General Plan contain objectives intended to encourage the reduction of waste generation and ensure the efficient handling of wastes. Therefore, the project, in combination with the other cumulative projects, would not result in a significant cumulative solid waste impact.

#### **D. Recycled Water**

Village 9's contribution to the cumulative demand for recycled water was not addressed in the 2013 GPA/GDPA SEIR. Implementation of the SPA Plan and TM and cumulative development in the city would result in an increased demand for recycled water. The proposed project would result in a demand for recycled water of approximately 116,380 gpd. Based on the cumulative factor of 3.1, the cumulative project area would result in a demand for approximately 360,778 gpd of recycled water. Historically, the only source of recycled water for the OWD has been the Ralph W. Chapman Water Recycling Facility. This facility currently has a rated capacity of 1.3 mgd with a maximum production of approximately 1.1 mgd. Typically, summer demands exceed the 1.1 mgd plant capacity and, as such, a potentially significant cumulative impact exists. However, as discussed in Section 5.15, the South Bay Water Treatment Plant has an ultimate rated capacity of 15 mgd and the OWD obtained capacity rights to 6 mgd of recycled water. This additional source of recycled water will allow OWD to meet existing and future recycled water demands. OWD has master planned and begun constructing a series of pump stations, reservoirs, and transmission lines to integrate this source of water into the existing recycled water system, including service to the project site. However, a cumulatively considerable and unavoidable impact would occur until recycled water from the South Bay Water Treatment Plant is available to meet the projected future recycled water demand.

#### **E. Energy**

Village 9's contribution to cumulative impacts on energy uses was included in the 2013 GPA/GDPA SEIR. The cumulative assessment of the impacts in the SEIR relies on the 2005 GPU EIR, which concluded that cumulative impacts associated with energy use were significant and unmitigated due to the lack of assurance that resources would be available to adequately serve the projected increase in population.

Implementation of the project in combination with cumulative development in the city would result in an increased energy demand of approximately 17.3 million kWh of electricity and 66.9 million cubic feet of natural gas. Based on the cumulative factor of 3.1, the cumulative area would increase electricity demand by 53.63 million kWh and natural gas demand by 462.52 million cubic feet. A significant cumulative impact to energy resources would occur if the project and the cumulative projects result in a

demand for energy that exceeds the city's available supply and causes a need for new and expanded facilities.

As discussed in Section 5.15, implementation of Village 9 would result in an increased consumption of electricity and natural gas. The proposed project and other cumulative projects are required to meet the mandatory energy standards of the Chula Vista Energy Code, current CCR Title 24, Part 6 California Energy Code, and Part 11 California Green Building Standards. Additionally, the project includes a non-renewable energy conservation plan addressing preservation of energy resources. Compliance with these policies and the energy conservation plan would ensure that average energy consumed by future occupants of Village 9 would not be wasteful, inefficient, or unnecessary. However, while individual cumulative projects may be able to reduce their energy consumption through energy conservation measures, there remains no assurance that an adequate energy supply will be available to serve the cumulative increase in energy demand. Therefore, the project would result in a cumulatively considerable and unavoidable contribution to the significant impact related to energy.

# Chapter 7 Growth Inducement

Under CEQA Guidelines Section 15126.2(d), a project is defined as growth inducing when it directly or indirectly:

- Fosters economic growth, population growth, or the construction of additional housing in the surrounding environment;
- Removes obstacles to population growth;
- Taxes existing public facilities and services; and/or
- Encourages or facilitates other activities that could significantly affect the environments, either individually or cumulatively.

Growth inducement is generally dependent on the presence or lack of existing utilities and municipal or public services. The provision of services and utilities in a non-serviced area can induce growth between newly serviced areas and the community from which the facilities are obtained. In addition, growth inducement can also be defined as growth that makes it more feasible to increase the density of development in surrounding areas.

## **1. Growth Inducement due to Population Growth**

The project would directly contribute to population growth from the development of residential dwelling units, which would accommodate a population of approximately 10,923 people. The Chula Vista Growth Management Plan calls for directing growth in and around the city in an orderly fashion, to avoid “leapfrog” development, to protect and preserve the city’s amenities, and to guide growth in a general west to east direction. The General Plan and Otay Ranch GDP, as amended, includes the 4,000 residential units and 1.5 million square feet of commercial area proposed in the SPA Plan and TM in its growth forecasts for Otay Ranch.

Implementation of the SPA Plan and TM would allow the development of residential units within an existing vacant area. As required by the GDP, the SPA Plan includes a site utilization plan, development regulations, and design guidelines to ensure that development is facilitated in a comprehensive and coordinated manner. The development proposed for Village 9 would result in an inclusive community, maintain a balance between housing and employment, and allow population to grow adjacent to existing urban areas and in proximity to public transit. The Town Center and Urban Center would provide neighborhood commercial services, increase pedestrian-friendly mobility choices, and medium to high-density residential uses in a high-density, mixed-use area.



Implementation of the Village 9 SPA Plan and TM would not represent “leapfrog” development. The site is surrounded by developed land (SR-125 to the west) or land planned for development by the General Plan and Otay Ranch GDP. Village 8 East, to the west of Village 9, the EUC to the north, and the University site, RTP, and Village 10 to the east are currently undeveloped but are planned for development under the General Plan and GDP. The open space to the south of the site is known as the Otay River Valley and is part of the Chula Vista MSCP Subarea, the Otay River Valley Regional Park, and the Otay Ranch Preserve. The project does not facilitate growth in an area of the city that was not planned for residential growth or that was projected to remain vacant. Therefore, consistent with the conclusion of the 2013 GPA/GDPA SEIR, implementation of the SPA Plan and TM would not result in a significant growth inducement impact associated with population.

### ***2. Growth Inducement due to Removal of Obstacles to Population Growth***

Implementation of the project includes public infrastructure improvements that would support development in Village 9, such as water, sewer, and drainage pipelines, and new transportation facilities. These improvements would not open up new areas to development because on-site infrastructure would be sized to serve Village 9 and development planned for in the General Plan and GDP. Infrastructure would not include excess capacity that would allow for additional unplanned development. The mitigation measures identified in Section 5.15 would ensure that public utilities would be provided concurrently with development. Therefore, consistent with the conclusion of the 2013 GPA/GDPA SEIR, implementation of the SPA Plan and TM would not result in significant growth inducement associated with removal of obstacles to population growth as necessary.

### ***3. Growth Inducement due to Economic Growth***

The project would generate direct and indirect population growth and employment opportunities through the construction of housing and non-residential land uses. As people choose to live within the project area rather than elsewhere in the San Diego region, a potential for economic growth would evolve. The project would accommodate economic growth within the development by providing services and employment opportunities to support its residents. The increased population of the area would further foster economic growth by increasing demand for local retail and stimulating employment opportunities. The economic growth of the project area would not be considered growth inducing because the project includes mixed-use development that would provide a balance between jobs and housing. Village 9 includes several different housing options, as well as a variety of retail, commercial, and office space opportunities to provide employment options. Additionally, Village 9 is located adjacent to the future EUC, the RTP, and University site, which would support a balance of jobs and housing in the area. Therefore, consistent with the conclusion of the 2013 GPA/GDPA SEIR, implementation of the SPA Plan and TM would not result in significant growth inducement associated with economic growth.

### ***4. Growth Inducement due to Construction of Additional Housing***

Village 9 would accommodate 4,000 residential dwelling units. Residences developed in Village 9 would be new homes on currently vacant land that are envisioned by and consistent with the General Plan and GDP, as amended. Implementation of the project would accommodate an already projected increase in population. By adding new residents, the amount of potential consumers would increase, resulting in the need for additional commercial services. The project is a mixed-use plan, the intention of which is to provide opportunities for both homes and employment. Residential growth in Village 9 would not induce additional growth beyond what is proposed for the Otay Ranch area because it provides mixed-

use development that complements land uses proposed for the surrounding villages. Therefore, consistent with the conclusion of the 2013 GPA/GDPA SEIR, the project would not be growth inducing with respect to the construction of additional housing due to the fact that the SPA Plan and TM include planned commercial growth in the area to support residential development and provide employment opportunities.

**5. *Taxation of Existing Public Facilities and Services***

As discussed in Section 5.9, Public Services, and Section 5.15, Public Utilities, the mitigation measures identified in these sections would ensure that the proposed project would meet the requirements of the Growth Management Plan. The PFFP implements the Chula Vista Growth Management Program and Ordinance. The intent of the PFFP is to ensure that the phased development of the project is consistent with the overall goals and policies of the Chula Vista General Plan, Growth Management Program, and the Otay Ranch GDP. The PFFP ensures that development of Village 9 will not adversely impact the city's quality of life standards by requiring public facilities and services concurrent with demand.

**6. *Other Activities that Significantly Affect the Environment***

The project does not include any components that would encourage or facilitate any other activities that would significantly affect the environment. The land uses proposed in the SPA Plan are consistent with the General Plan and GDP and would not encourage or facilitate any off-site unplanned uses. The regional circulation connections proposed in the Village 9 circulation system, such as Main Street and Otay Valley Road, are also consistent with regional planning and the City's Transportation Element. Therefore, the project would not result in other activities that would significantly affect the environment.

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# **Chapter 8 Significant Unavoidable Environmental Effects / Irreversible Changes**

CEQA Guidelines Section 15126.2 (b) and (c) require that the significant, unavoidable impacts of the project, as well as any significant irreversible environmental changes that would result from project implementation, be addressed in the EIR.

## **8.1 Significant Environmental Effects Which Cannot Be Avoided if the Project Is Implemented**

In accordance with CEQA Guidelines Section 15126.2 (b), any significant unavoidable impacts of a project, including those impacts that can be mitigated but not reduced to below a level of significance despite the applicant's willingness to implement all feasible mitigation measures, must be identified. Implementation of the project would result in impacts associated with traffic (cumulative impacts to the Olympic Parkway/I-805 northbound ramps intersection), air quality (violation of air quality standards, conflict with air quality plans), global climate change (direct and cumulative contribution to air quality problems), agricultural resources (direct and cumulative conversion of agricultural resources), aesthetics (direct and cumulative alteration of visual character, cumulative loss of views of open space), cultural resources (cumulative impacts to unknown archaeological resources and human remains), noise (short-term increase in traffic noise), and public utilities (direct and cumulative guarantee of long-term water supply, direct and cumulative demand for wastewater treatment capacity, direct and cumulative guarantee of long-term energy supply, and cumulative demand for recycled water) which are significant and unavoidable. All other significant impacts identified in Chapters 5 and 6 of this EIR are determined to be less than significant or can be reduced to below a level of significance with the mitigation measures identified.

## **8.2 Irreversible Environmental Changes Which Would Result if the Project Is Implemented**

CEQA Guidelines Section 15126.2(c) indicates that:

“[u]ses of non-renewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal

or non-use thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Implementation of the project would necessarily consume limited, slowly renewable and non-renewable resources. This consumption would occur during the construction phase of the project and would continue throughout its operational lifetime. The project would require a commitment of resources that would include: 1) building materials, 2) fuel and operational materials/resources, and 3) the transportation of goods and people to and from Village 9.

Construction of the project would require the consumption of resources that are not renewable or which may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: certain types of lumber and other forest products; aggregate materials used in concrete and asphalt such as sand, gravel and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; water; and fossil fuels such as gasoline and oil.

The resources that would be committed during operation of the project would include water for drinking and bathing, and fossil fuels for electricity, natural gas, and transportation. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the project, and the existing, finite supplies of these natural resources would be incrementally reduced. However, the SPA Plan includes a Non-Renewable Energy Conservation Plan that identifies feasible methods to reduce the consumption of non-renewable energy resources. The three main categories identified in the plan where reductions in energy use may occur are land use and community design, building siting and construction techniques, and transit facilities and alternative transportation modes. Additionally, the SPA Plan includes a WCP that includes mandatory water reduction measures for residential and non-residential land uses that would reduce water use. The Non-Renewable Energy Conservation Plan and WCP are described in detail in Section 5.10, Global Climate Change, and Section 5.15, Public Utilities. As indicated in Section 5.10, Global Climate Change, the project’s design and features, would reduce vehicle miles traveled by approximately 20 percent compared to the regional average trip length, and total GHG emissions for the GPA/GDPA area would be reduced by 29 percent compared to the business-as-usual conditions.

The project would involve an unquantifiable, but limited, use of potentially hazardous materials typical of residential, office and commercial uses, including cleaning solvents, fertilizers and/or pesticides for landscaping. These materials would be contained, stored, and used on site in accordance with manufacturers’ instructions, applicable standards and regulations. Compliance with regulations would serve to protect against a significant and irreversible environmental change that could result from the accidental release of hazardous materials.

The Village 9 site has historically been used for agricultural uses, specifically cattle grazing and dry farming including barley, wheat, and oat hay (Gallegos & Associates 2009). Development on the site would contribute to the incremental and cumulative loss of agricultural lands (Farmland of Local Importance). This would be an irreversible consequence of converting the site to urban uses. However, this site has been envisioned as part of the adopted Otay Ranch GDP to serve as an Urban Village to provide single-family and multi-family residential units, a town center containing commercial uses,



parks, community purpose facility uses, schools, affordable housing and a transit stop. No additional loss of agricultural land would occur beyond what was planned for in the GDP.

In summary, construction and operation of the project would result in the irretrievable commitment of limited, slowly renewable, and non-renewable resources, which would limit the availability of these particular resources for future generations or for other uses during the life of the project. However, the SPA Plan includes requirements for future development so that continued use of such resources would be of a relatively small scale compared to similar development. Additionally, the project would accommodate growth forecasted for the Otay Ranch area. The loss of such resources would not be highly accelerated when compared to existing conditions and growth projections for the City of Chula Vista. Therefore, although irretrievable commitment of resources would result from the project, such changes would be considered less than significant.

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## **Chapter 9      Effects Found Not To Be Significant**

Based on Appendix G of the CEQA Guidelines, which provides a checklist questionnaire by which potential environmental effects can be identified, the NOP determined that the proposed project would not result in significant environmental impacts to mineral resources. Because impacts to mineral resources have been determined to not be significant, they are not addressed in the environmental analysis of the EIR (Chapter 5). A short summary of mineral resources is provided below.

### **Mineral Resources**

Mineral resources of economic value on the Otay Ranch have included sand, gravel, crushed rock (collectively known as construction aggregate), and bentonitic clay. These mineral resources are important to the construction industry. The project site is not designated as a locally important mineral resource site in the city of Chula Vista, and these mineral resources do not occur within the SPA Plan area in sufficient quantities to be considered a valuable source. Areas containing significant mineral resources have been classified as regionally significant aggregate resource areas (MRZ-2), as depicted in Figure 16-1 of the 2005 GPU EIR, Regionally Significant MRZ-2 Aggregate Resource Areas. The area designated MRZ-2 is located south of the project site in the Otay River valley and extends to the west and east. It includes the southern portion of Village 8 West and the existing Otay Valley Rock Quarry. Development in Village 9 would not preclude extraction of mineral resources in areas potentially containing valuable mineral resources south of the site. As such, project implementation would not result in significant impacts to mineral resources.

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# Chapter 10 Alternatives

Section 15126.6 of the CEQA Guidelines requires the discussion of “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project” and the evaluation of the comparative merits of the alternatives. The alternatives discussion in this chapter is intended to “focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project,” even if these alternatives impede to some degree on the attainment of the project objectives.

Implementation of the SPA Plan and TM has been evaluated for significant direct and/or cumulative environmental impacts in Chapter 5, Environmental Impact Analysis, and Chapter 6, Cumulative Impacts. Significant direct and/or cumulative impacts have been identified for the following issues: land use compatibility, aesthetics/landform alteration, noise, biological resources, cultural resources, water supply, wastewater facilities, energy supply, transportation, air quality, hazards and hazardous materials, hydrology and water quality, fire and emergency medical services, police services, schools, libraries, parks, potential effects of climate change, recycled water, agriculture resources, and geology and soils.

Mitigation measures have been identified that would reduce all direct and cumulative impacts to below a level of significance, with the exception of traffic (cumulative impacts to Olympic Parkway/I-805 northbound ramps intersection), agricultural resources (direct and cumulative conversion of agricultural resources), noise (short-term increase in traffic noise), water (direct and cumulative guarantee of long term water supply), energy (direct and cumulative guarantee of long term energy supply), air quality (direct and cumulative conflict with air quality plans and violation of air quality standards), aesthetics (direct and cumulative alternation of visual character, and cumulative loss of views of open space), cultural resources (cumulative impacts to unknown archaeological resources and human remains), global climate change (direct and cumulative contribution to air quality problems), wastewater (direct and cumulative demand for treatment capacity), and recycled water (cumulative demand for recycled water).

In developing the alternatives to be addressed in this chapter, consideration was given to the ability to meet the basic objectives of the project and eliminate or substantially reduce the identified significant environmental impacts. The SPA Plan identifies the project objectives that would implement the Otay Ranch GDP vision for Village 9 as indicated below:

1. Create a recognizable “place” that is well designed to provide 500,000 to 1.5 million square feet of office and retail space in three unique and attractive urban districts accommodating cultural and social diversity.



2. Develop distinctive design standards and invest in design excellence to create inspiring and memorable places; emphasize the appearance and qualities of the public realm; create streetscapes, pathways, and public spaces of beauty, interest, and functional benefit to pedestrians.
3. Encourage a development pattern that promotes orderly growth, prevents urban sprawl, and promotes effective resource management, while implementing the GDP goals of a strong relationship between Village 9, the Eastern Urban Center, and the planned university.
4. Protect and enhance the natural environment and increase the quality of life. Design neighborhoods with compact and multi-dimensional land use patterns that ensure a mix of uses and joint optimization of transportation modes to minimize the impact of cars, promote walking and bicycling, and provide access to employment, education, recreation, entertainment, shopping, and services.
5. Create an appropriately scaled and economically healthy Town Center. Include a wide range of commercial, residential, cultural, civic, and recreational uses. The Town Center should contain businesses that serve the daily needs of nearby residents and employees including students, faculty, and Regional Technology Park employees.
6. Establish a pedestrian and transit-oriented village with an intense, vibrant Town Center to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and regional transit.
7. Encourage community development in mixed use and compact pedestrian oriented forms to accommodate all income levels and lifestyles.
8. Foster a compact form facilitated by “form-based planning,” resulting in efficient infrastructure investments and advanced opportunities to provide socially diverse housing.
9. Promote jobs that match the skills of existing and future residents through provision of housing opportunities and choices and by providing an opportunity for the City to attract a university or related uses by dedication of land for such purposes. Retain and recruit a skilled and motivated workforce to ensure economic stability into the future and support university development by providing attainable housing opportunities at increased densities.
10. Encourage diverse, informal centers of creativity, learning, and interaction that support the University. Focus community design on a manner of life and civic culture that embraces and fosters life-long learning. This shall take place in traditional educational institutions as well as diverse venues such as restaurants, arts, and cultural locations. This includes public and private places of exceptional design and open spaces that inspire and connect with the natural environment through features that spark creativity. Identify and promote business clusters that complement the University and the Regional Technology Park.
11. Promote synergistic uses and graceful transitions within the SPA Plan area and between the SPA Plan area and neighborhoods of adjacent SPA areas to balance activities, services, and facilities. Integrate Village 9 with existing Otay Ranch development, the University, the Regional Technology Park, and connectivity to the Greenbelt trail system.
12. Implement the goals, objectives and policies of the Chula Vista General Plan, the Otay Ranch General Development Plan, the Chula Vista Greenbelt Master Plan, and the Otay Valley Regional Park Concept Plan.

13. Encourage the interactivity of a wide range of people, promote community diversity, and enrich the human experience by providing a broad variety of public spaces and housing types and styles that appeal to all ages, incomes, and lifestyles.
14. Establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions.

Three alternatives have been selected for the SPA Plan and TM. They include the following:

- No Project (No Build) Alternative
- Reduced Project Alternative #1 – 2,799 Dwelling Units
- Reduced Project Alternative #2 – 1,803 Dwelling Units

A summary of the buildout potential of each reduced project alternative compared to the proposed SPA Plan and TM is shown in Table 10-1. Another alternative considered but eliminated from further analysis included the development of the project at another location. This was determined to be infeasible because the project applicant owns the property in question, and the goal is to complete the vision of the Otay Ranch GDP, which can only be accomplished at the current project location.

**Table 10-1 Alternative Land Use Comparison**

Land Use	Proposed Project	Reduced Project Alternative #1: 2,799 Dwelling Units	Reduced Project Alternative #2: 1,803 Dwelling Units
Neighborhood Edge - Residential Low-Medium Density (units)	105	141	129
Neighborhood General - Residential Medium Density (units)	161	137	0
Neighborhood Central - Residential Medium-High Density (units)	792	931	321
Urban Neighborhood (units)	136	118	192
Town Center (units)	894	878	497
Urban Center (Units)	1,912	594	664
Commercial (square feet)	1,500,000	1,030,000	532,000
Neighborhood Park (acres)	14.8	12.5	7.4
Pedestrian Parks (acres)	7.6	6.3	2.9
Open Space (acres)	9.6	10.9	14.3
Total Residences	4,000	2,799	1,803

An analysis of the alternatives to the project is presented in Sections 10.1 through 10.3, below. Each subject area included in Chapter 5, Environmental Impact Analysis, has been evaluated under each alternative. A concluding Section 10.4 provides a summary of the comparative assessment and a discussion of the alternatives' ability to meet the project objectives. A discussion of the environmentally superior alternative is provided in Section 10.5.

As required under Section 15126.6(e)(2) of the CEQA Guidelines, an EIR must identify the environmentally superior alternative. Pursuant to the CEQA Guidelines, if the No Project Alternative is determined to be the most environmentally superior project, then another alternative among the alternatives evaluated must be identified as the environmentally superior project. Section 10.5 identifies the Environmentally Superior Alternative.

## 10.1 No Project (No Build) Alternative

CEQA Guidelines Section 15126.6 (e)(3)(B) states that the No Project (No Build) alternative is “a circumstance under which a project does not proceed” and may be considered the environmental effects of the property remaining in its existing state. The No Project (No Build) Alternative assumes that no SPA Plan would be developed for Village 9 and that the project area would remain unchanged. Accordingly, the site characteristics of this alternative would be equivalent to the existing conditions for each category analyzed in this EIR. The potential impacts of this alternative are compared to the proposed project below.

### Land Use

Similar to the project, the No Project (No Build) Alternative would result in a less than significant impact related to physical division of an established community because no community exists on site and the undeveloped area would be compatible with surrounding land uses. If the site were to remain undeveloped, open rolling hills would be retained, maintaining the existing character of the project site. Similar to the project, the No Project (No Build) Alternative would not conflict with the Chula Vista MSCP Subarea Plan and the Otay Ranch RMP because the site would remain open space and would not include any land uses that would conflict with these resource plans. However, the No Project (No Build) Alternative would conflict with the General Plan and GDP because it would not implement the development envisioned for Village 9 in these documents. For example, this alternative would conflict with Objective LUT 86 of the Chula Vista General Plan Land Use and Transportation Element. Objective LUT 86 is the development of integrated, high-intensity urban uses; office and business parks; retail centers; residential uses; and a major higher educational institution along the State Route 125 corridor to serve the East Planning Area and the broader south county region. The No Project (No Build) Alternative would not develop any of these uses.

### Aesthetics/Landform Alteration

The No Project (No Build) Alternative would avoid impacts related to scenic vistas, scenic roadways, visual character or quality, lighting and glare, sensitive landforms, and steep slopes compared to the project. Under this alternative, views of the project and the character of the site would remain unchanged. Additionally, no new sources of light, glare, or shading and wind would be introduced. The project’s cumulatively considerable contribution to a significant aesthetic impact would be avoided. Similar to the project, this alternative would result in less than significant impact related to consistency with General Plan policies related to aesthetics and landform alteration.

### Transportation and Traffic

The No Project (No Build) Alternative would result in reduced direct impacts to traffic and level of service standards and congestion management compared to the project because no new vehicular trips would be generated by this alternative. However, the proposed extensions of Main Street and Otay Valley Road across the project area would not be implemented under the No Project (No Build) Alternative. These extensions are part of the envisioned circulation network for Otay Ranch and would provide important connections between villages and access to SR-125 and the region. These roadways would be incomplete without development on the Village 9 site; therefore, long-term cumulative traffic impacts would likely still occur under the No Project (No Build) Alternative and mitigation may not be possible without development within the project area. Without the regional connections that would be provided by the Village 9 SPA Plan circulation network, traffic generated by future growth would be

concentrated on fewer roadways. Therefore, this alternative would potentially result in a greater cumulative traffic impact compared to the project.

Additionally, impacts related to emergency access and alternative transportation policies would be greater under this alternative because evacuation, emergency response, and alternative transportation facilities to adjacent development areas would not be enhanced under this alternative. No new points of access, trails, pathways, bicycle paths, or transit routes proposed for Village 9 would be developed. The No Project (No Build) Alternative would be inconsistent with General Plan policies to increase use of alternative modes of transportation. For example, Objective LUT 17 in the Land Use and Transportation Element is to plan and coordinate development to be compatible and supportive of planned transit. The No Project (No Build) Alternative would conflict with planned transit routes for the Otay Ranch area.

The No Project (No Build) Alternative would result in reduced impacts to air traffic patterns compared to the project because no development would occur and no notification in compliance with the Brown Field ALUCP would be required. No roadways would be constructed under this alternative; therefore, impacts related to safety hazards would be less than significant, similar to the project.

## **Air Quality**

The No Project (No Build) Alternative would avoid impacts related to air quality violations compared to the project because no construction or operational emissions would result from this alternative. The significant and unavoidable impacts that would result from the project would be avoided. Impacts related to sensitive receptors would also be avoided because no new potential toxic air contaminant sources or sensitive receptors would be developed in Village 9. Similar to the proposed project, no new receptors would be proposed in the vicinity of the Otay Landfill and odor impacts would be less than significant. The No Project (No Build) Alternative would result in no impact related to consistency with the RAQS and SIP because no new criteria air pollutant emissions or growth would occur under this alternative. The significant and unavoidable direct and cumulative air quality impacts that would result from the project would be avoided. Similar to the project, the No Project (No Build) Alternative would result in less than significant impacts related to consistency with General Plan air quality policies.

## **Noise**

The No Project (No Build) Alternative would avoid impacts related to excessive noise levels compared to the project because no new noise sources or sensitive receptors would be developed in Village 9, and no traffic would be generated on site. The project's less than significant impacts related to groundborne vibration and temporary increase in ambient noise would not occur under the No Project (No Build) Alternative because no construction would occur. The No Project (No Build) Alternative would not contribute to any perceived increase in ambient noise levels. Similar to the project, the No Project (No Build) Alternative would result in less than significant impacts related to aircraft noise and consistency with General Plan noise policies.

## **Biological Resources**

The No Project (No Build) Alternative would not result in any impacts related to special status plant and wildlife species, riparian habitat, and other sensitive natural communities, federally protected wetlands, and consistency with the MSCP and RMP because no development would occur. No direct or indirect impacts to biological resources would occur. Less than significant impacts related to wildlife movement corridors and nursery sites would also be avoided.

## **Cultural and Paleontological Resources**

Similar to the project, there would be no impacts related to historical resources on site because no historical resources are located in Village 9. Potentially significant direct and cumulative impacts related to archaeological resources, human remains, and paleontological resources would be avoided under this alternative because no earth-disturbing construction activities would occur. However, the potential benefit of discovery of scientific information about the natural history in southwestern San Diego County would not occur under this alternative. Similar to the project, the No Project (No Build) Alternative would be consistent with General Plan policies related to cultural resources, and impacts would be less than significant.

## **Geology and Soils**

The No Project (No Build) Alternative would avoid potentially significant impacts related to exposure to seismic related hazards, soil stability, and expansive soils that would occur under the project because no new development would occur. Potentially significant impacts related to soil erosion and topsoil loss would also be avoided compared to the project because no site preparation activities or alteration of drainage patterns would occur. Similar to the proposed project, the No Project (No Build) Alternative would be consistent with General Plan geotechnical policies and would not require any septic tanks or alternative wastewater disposal systems.

## **Public Services**

The No Project (No Build) Alternative would not result in any impacts to fire and emergency medical services, schools, libraries, or parks and recreation because no increase in demand for these services would occur under this alternative; therefore, the ability to meet the City's services standards would not be affected. Impacts related to schools siting would be reduced compared to the project because no new schools would be needed or developed; therefore, no soil testing or geotechnical investigations would be required to identify potential siting conflicts. The No Project (No Build) Alternative would be consistent with all General Plan policies related to fire and emergency medical, police, school, library services, and parks and recreation and there would be no impact on the GMO standards.

## **Global Climate Change**

The No Project (No Build) Alternative would not result in any impact related to GHG and compliance with AB 32 because no construction or operation emissions of GHGs would occur under this alternative. Additionally, the significant and unavoidable direct and cumulative impact related to exacerbation of air quality problems as a result of climate change would be avoided under this alternative because no construction or operation would occur. The No Project (No Build) Alternative would not result in any emissions of ozone precursors that would contribute to exacerbation of air quality problems as a result of climate change.

## **Hydrology and Water Quality**

The No Project (No Build) Alternative would not result in any impacts related to water quality standards, erosion and siltation, surface runoff, drainage capacity, and water quality degradation compared to the project because no changes to the existing drainage pattern would occur, and no construction or development activities would take place that would generative pollutants. Similar to the project, this alternative would not interfere with groundwater supplies and recharge, place housing or structures within a 100-year flood hazard boundary, conflict with General Plan policies related to hydrology and



water quality, expose people or structures to significant risk of loss from flooding, or result in an increased risk of exposure to inundation by seiche, tsunami, or mudflow.

### **Agricultural Resources**

The direct and cumulative significant and unavoidable impact related to conversion of agricultural resources would not occur under this alternative because no development would be implemented on the site, and no potential agricultural land would be converted to non-agricultural use. Potentially significant impacts related to land use conflicts would be avoided because no development would occur on site. Similar to the project, the No Project (No Build) Alternative would not result in any conflict with agricultural policies.

### **Hazards and Hazardous Materials**

No development would occur under this alternative; therefore, no hazardous materials would be transported, used, or disposed of for construction or operation. Impacts related to the accidental release of hazardous materials, hazards to schools, and historic use of pesticides would be avoided because no ground disturbing activities with the potential to disturb contaminated soil would occur, and no new schools would be developed. Less than significant impacts related to wildland fire would be avoided because no new development would occur. A Fire Protection Plan would not be required. The potential for a wildland fire on the project would still exist, but the No Project Alternative would not expose any new structures or people to the risk.

Similar to the project, impacts related to listed hazardous sites would not occur. The No Project (No Build) Alternative would not result in any impacts related to airport hazards compared to the project because no development would occur. Impacts related to emergency response and evacuation plans would be greater under this alternative because the circulation system would not be constructed through the site thereby hindering emergency response to the area. There would be no need for evacuation from the site in case of any emergency, as no residents would be located in Village 9. Similar to the project, the No Project (No Build) Alternative would not conflict with any General Plan policies related to hazards and hazardous materials.

### **Housing and Population**

No impacts related to population growth would occur under this alternative because no residential or economic growth would occur and no infrastructure would be installed. Also similar to the project, the No Project (No Build) Alternative would not displace any housing or people. However, the No Project Alternative would conflict with any General Plan housing and population policies that encourage a variety of housing types in the city because it would not implement the range of residential development envisioned for Village 9 in the General Plan, including affordable housing.

### **Public Utilities**

The No Project (No Build) Alternative would not result in any impacts related to water, wastewater treatment, solid waste, recycled water, and energy compared to the project because no development, and therefore no demand for services, would occur. The potentially significant direct and cumulative impacts related to long-term guarantee of water supply and energy, capacity of wastewater treatment facilities, and recycled water supply would be avoided under this alternative.

## 10.2 Reduced Project Alternative #1

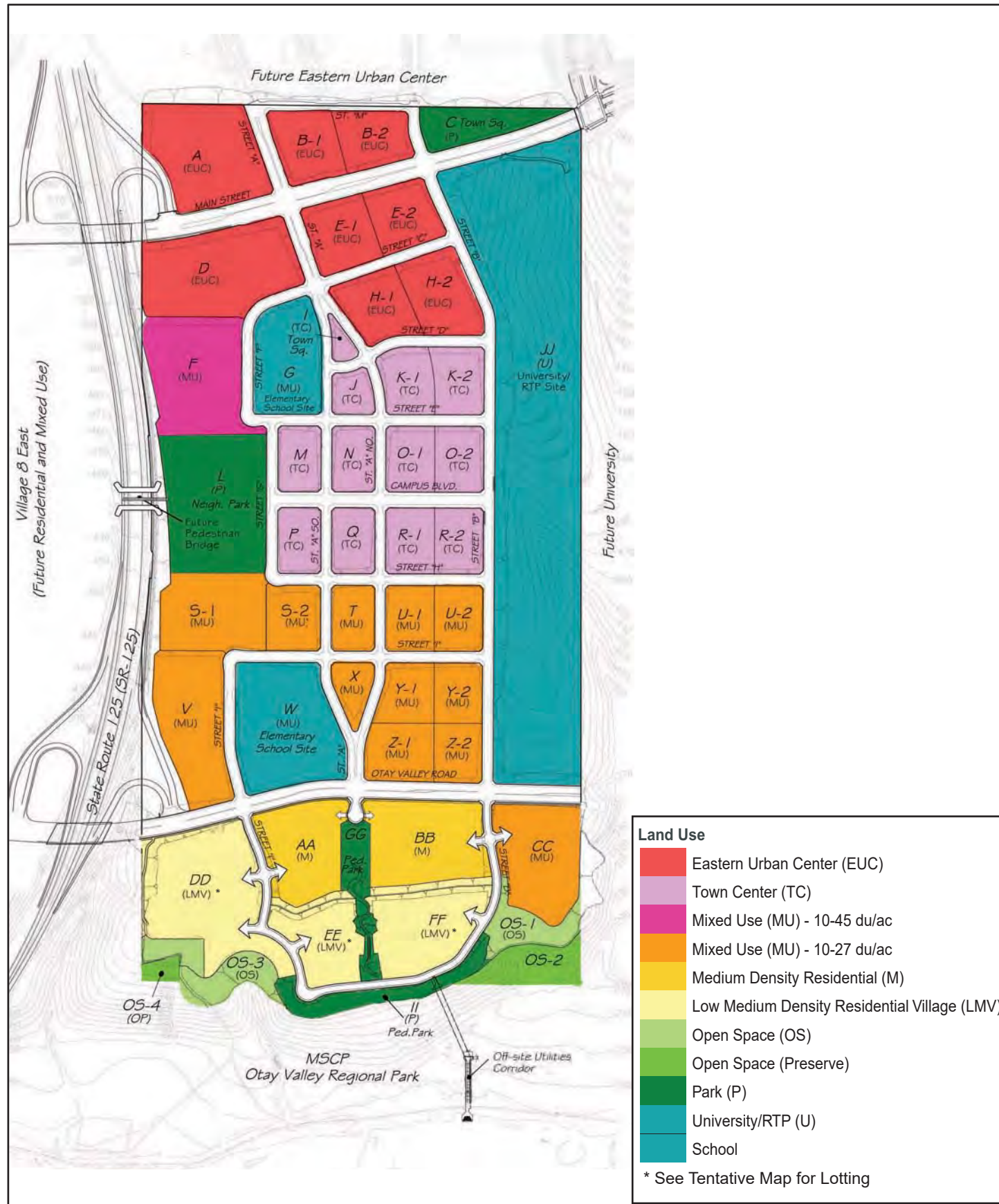
As shown in Table 10-1, Reduced Project Alternative #1 (the 2,799 dwelling unit plan) would include the development of 2,799 residential units, compared to 4,000 units under the proposed Village 9 SPA Plan and TM. This alternative was derived from the intention to provide a more suburban approach to development in the SPA Plan area. This alternative reduces residential development by approximately 30 percent, and promotes a more horizontal mixed-use pattern in place of the more vertical mixed-use plan for the Town Center and Urban Center. It significantly reduces residential density in the Urban Center. A maximum of 1,030,000 square feet of commercial development would occur under this alternative, compared to 1,500,000 square feet under the proposed project. The reduction in commercial uses would occur primarily in the Urban Center to promote a more horizontal building pattern rather than high-rise structures. The Neighborhood Park (Planning Area L) would also be reduced by 2.3 acres to accommodate this building pattern.

Additionally, one of the pedestrian parks proposed for the project would be eliminated under this alternative (Planning Area HH, as shown in Figure 3-4, Transect Zones). This additional open space area would provide additional transition from developed areas to the MSCP Preserve, but would not be incorporated into the Preserve. Figure 10-1 summarizes the Reduced Project Alternative #1 site utilization plan. Impacts of this alternative are compared to the proposed project below.

### Land Use

Similar to the proposed project, the Reduced Project Alternative #1 would result in a less than significant impact related to physical division of an established community because no community exists on site, and the proposed land uses would be compatible with surrounding planned land uses. Similar to the project, the Reduced Project Alternative #1 would not conflict with applicable land use plans, the Chula Vista MSCP Subarea Plan, or the Otay Ranch RMP. This is because this alternative would propose similar commercial and residential development areas as the proposed project, a greater amount of open space, would include a Preserve Edge Plan, and would not include any land uses that conflict with these resource plans. The land use incompatibility associated with the impedance of access to the City of San Diego water line would still occur under this alternative.

However, the Reduced Project Alternative #1 would result in a significant impact related to consistency with the GDP and Chula Vista General Plan because this alternative would not implement the objectives and policies envisioned for the development in Village 9 described in the General Plan and GDP. For example, this alternative would conflict with Objective LUT 86 of the Chula Vista General Plan Land Use and Transportation Element, which is the development of integrated, high-intensity urban uses; office and business parks; retail centers; residential uses; and a major higher educational institution along the State Route 125 corridor to serve the East Planning Area and the broader south county region. The Reduced Project Alternative #1 proposes residential and mixed-use development to support the University site, but not the extent planned for in the General Plan and GDP. Therefore, this alternative would result in an additional land use impact compared to the project.



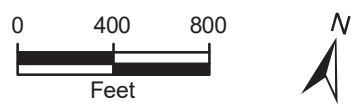
Commercial and Residential				
Eastern Urban Center (EUC) – 28-60 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
A	9.5	T-5: UC	0	136
B-1	4.6	T-5: UC	97	67
B-2	3.9	T-5: UC	79	60
D	11.2	T-5: UC	0	165
E-1	4.6	T-5: UC	97	70
E-2	4.2	T-5: UC	92	60
H-1	4.7	T-5: UC	101	66
H-2	5.6	T-5: UC	128	76
<b>Subtotal</b>	<b>48.3</b>		<b>594</b>	<b>700</b>
Town Center (TC) – 18-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
K-1	3.7	T-4: TC	118	0
K-2	3.8	T-4: TC	122	0
M	3.6	T-4: TC	86	18
N	3.5	T-4: TC	61	35
O-1	3.6	T-4: TC	86	18
O-2	3.6	T-4: TC	86	18
P	3.6	T-4: TC	86	18
Q	3.5	T-4: TC	61	35
R-1	3.6	T-4: TC	86	18
R-2	3.6	T-4: TC	86	18
<b>Subtotal</b>	<b>36.1</b>		<b>878</b>	<b>178</b>
Mixed Use (MU) – 10-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
F	9.6	T-4: UN	118	120
G <sup>(2)</sup>	--	T-4: UN	0	0
<b>Subtotal</b>	<b>9.6</b>		<b>118</b>	<b>120</b>
Mixed Use (MU) – 10-27 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
S-1	7.2	T-3: NC	140	0
S-2	3.5	T-3: NC	67	0
T	3.4	T-3: NC	40	32
U-1	3.5	T-3: NC	67	0
U-2	3.5	T-3: NC	67	0
V	8.6	T-3: NC	163	0
W <sup>(2)</sup>	--	T-3: NC	0	0
Y-1	3.3	T-3: NC	63	0
Y-2	3.0	T-3: NC	57	0
Z-1	3.7	T-3: NC	70	0
Z-2	2.7	T-3: NC	51	0
CC	7.7	T-3: NC	146	0
<b>Subtotal</b>	<b>50.1</b>		<b>931</b>	<b>32</b>
Mixed Density Residential (M) – 6-11 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	
AA	6.8	T-2: NG	61	
BB	8.4	T-2: NG	76	
<b>Subtotal</b>	<b>15.2</b>		<b>137</b>	
Low Medium Density Residential Village (LMV) – 3-6 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	
DD	12.2	T-2: NE	61	
EE	7.1	T-2: NE	36	
FF	8.8	T-2: NE	44	
<b>Subtotal</b>	<b>28.1</b>		<b>141</b>	
<b>TOTAL</b>	<b>187.4 acres</b>		<b>2,799</b>	<b>1030K<sup>(3)</sup></b>

Public, Quasi Public, and Other				
Community Purpose Facility (CPF) <sup>(4)</sup>				
Planning Area	Land Use	Gross Acres	Transect	Description
J	TC	2.3	SD: CPF	CPF
X	MU	2.7	SD: CPF	CPF
<b>Subtotal</b>		<b>5.0</b>		
Potential School (S) Sites <sup>(5)</sup>				
Planning Area	Land Use	Gross Acres	Transect	Description
G	MU	7.9	T-4: UN	Elementary
W	MU	11.9	T-3: NC	Elementary
<b>Subtotal</b>		<b>19.8</b>		
Parks (P)				
Planning Area	Land Use	Gross Acres	Transect	Description
C	P	3.6	SD: P	Town Square
I	TC	1.5	SD: P	Town Square
L	P	12.5	SD: P	Neighborhood
GG	P	2.9	SD: P	Pedestrian
II	P	3.4	SD: P	Pedestrian
<b>Subtotal</b>		<b>23.9</b>		
Open Space (OS)				
Planning Area	Land Use	Gross Acres	Transect	Description
OS-1	OS	2.8	T-1: OS	Open Space
OS-2	CVOSP <sup>(6)</sup>	3.3	T-1: OP	Preserve
OS-3	OS	4.1	T-1: OS	Open Space
OS-4	CVOSP <sup>(6)</sup>	0.7		Preserve
<b>Subtotal</b>		<b>10.9</b>		
Other				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
JJ	U	50.0	SD: U	University/RTP
Arterials		17.9		Right-of-Way
SR-125		8.2		Right-of-Way
<b>Subtotal</b>		<b>76.1</b>		
<b>TOTAL</b>		<b>135.7 acres</b>		

**SPA Total Area: 323.1 Gross Acres**

Footnotes:  
<sup>(1)</sup> Transects are defined in Chapter 3  
<sup>(2)</sup> See Chapter 9 regarding intensity transfers and minimum retail/commercial square footage requirements  
<sup>(3)</sup> 800,000 square feet of office and 200,000 square feet retail; excludes live/work  
<sup>(4)</sup> As defined by CVMC Chapter 19.48  
<sup>(5)</sup> School sites will revert to mixed use if not accepted by the school district  
<sup>(6)</sup> Chula Vista Open Space Preserve

Source: William Hezmalhalch Architects, Inc. 2013



**REDUCED PROJECT ALTERNATIVE #1 SITE UTILIZATION PLAN  
FIGURE 10-1**

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## **Aesthetics/Landform Alteration**

Similar to the project, the Reduced Project Alternative #1 would result in less than significant direct impacts related to scenic vistas, scenic roadways, and steep slopes. This alternative would result in similar grading. Although densities would be reduced, similar land uses would be developed across Village 9. Similar to the project, implementation of the design guidelines in the SPA Plan would reduce direct impacts to a less than significant level. However, significant direct and cumulatively considerable impacts related to visual character and loss of rolling hills would be significant and unavoidable under this alternative, similar to the project because loss of open rolling hills would still occur. Significant impacts related to lighting and glare, including shading, would also occur under this alternative, but would be reduced because this alternative encourages horizontal rather than vertical mixed-use development and would result in fewer high-rise buildings. Similar to the project, this alternative would result in a less than significant impact related to consistency with General Plan and GDP policies related to aesthetics and landform alteration, including steep slopes.

## **Transportation and Traffic**

The Reduced Project Alternative #1 would result in reduced direct and cumulative impacts to traffic and level of service standards and congestion management compared to the project. Less vehicular trips would be generated by this alternative: 30,649 ADT compared to 34,067 ADT under the project as proposed, based on the trip generation rates utilized in the traffic impact analysis (RBF 2013). This alternative assumes a similar internal capture rate of the proposed project because it would include high-intensity mixed-use development and an urban center and town center that provides retail and commercial opportunities for residents.

This alternative would include the full circulation network proposed for Village 9. Mitigation measures 5.3-12 through 5.3-16, 5.3-20, and 5.3-21 would not be required under this alternative because it would not reach the equivalent dwelling units and associated trips that would mandate these measures. However, mitigation measures 5.3-1 through 5.3-11, and 5.3-17 through 5.3-19 would still be required. The significant and unavoidable impact to the Olympic Parkway/I-805 northbound ramps intersection would still occur under this alternative.

This alternative would result in a similar maximum number of daily construction trips compared to the proposed project because similar construction activities would be required; however, the length of construction, and the associated temporary increase in trips, would be reduced because less construction would occur. Similar to the proposed project, the mitigation measures that would be implemented for this alternative's operational impacts would also reduce temporary construction impacts to a less than significant level.

Impacts related to emergency access, road safety, and transportation policies would be less than significant under this alternative, similar to the project, because the circulation system proposed for Village 9 would also be implemented under Reduced Project Alternative #1. The extensions of Main Street and Otay Valley Road would project additional points of access to the surrounding regional circulation system, and ultimately major evacuation routes such as SR-125.

The proposed trails, pathways, bicycle trails, and transit routes proposed for Village 9, especially along Campus Boulevard, Street A, Street B, Main Street, and Otay Valley Road would provide important pedestrian, bicycle, and transit connections between villages in Otay Ranch.



The Reduced Project Alternative #1 would also result in similar impacts to air traffic patterns compared to the project because the same maximum building heights would be allowed under this alternative. FAA notification would be required to reduce impacts to a less than significant level.

## **Air Quality**

The Reduced Project Alternative #1 would result in reduced impacts related to air quality violations compared to the project because fewer construction and operational emissions would result from this alternative. This alternative would result in similar construction activities and associated emissions from grading, paving, and underground utility installation; however, because fewer structures would be constructed, building construction and coating emissions would be reduced. Similar to the project, direct and cumulative construction emissions would remain significant and unavoidable under this alternative due to the amount of grading required.

Operational emissions would also be reduced because of fewer vehicle trips and area sources compared to the project. Significant carbon monoxide impacts associated with the proposed project would be reduced by approximately 14 percent. Significant VOC emissions would be reduced by approximately 26 percent. Significant NO<sub>x</sub> emission would be reduced by approximately 20 percent. Significant PM<sub>10</sub> impacts would be reduced by approximately 10 percent compared to the proposed project, and PM<sub>2.5</sub> impacts would be reduced by approximately 23 percent. This alternative would avoid the project's significant impact related to carbon monoxide emissions. However, as shown in Table 10-2, VOC, NO<sub>x</sub>, and PM<sub>10</sub> emissions would still be significant because the significance thresholds would still be exceeded. Direct and cumulative Impacts would be significant and unavoidable, similar to the project.

Impacts related to sensitive receptors would be comparable to the project because similar land uses would be allowed under this alternative, including gas stations and development along the western boundary of the site adjacent to SR-125. Impacts would be less than significant with mitigation.

Impacts related to odors would be the same under this alternative. No new receptors would be located in the vicinity of Otay Landfill. The Reduced Project Alternative #1 would not exceed the RAQS growth assumption for Village 9 (3,614 residential units). However, this alternative would still result in new significant and unavoidable criteria pollutant emissions. Direct and cumulative Impacts would remain significant and unavoidable, similar to the project. Less than significant impacts related to consistency with General Plan air quality policies would be similar to the project under the Reduced Project Alternative #1.

## **Noise**

The Reduced Project Alternative #1 would result in fewer impacts related to excessive noise levels compared to the project because reduced traffic volumes would result in lower noise levels. However, due to cumulative increases in traffic, including the Reduced Project Alternative #1 trips, this alternative's direct and cumulative impacts related to placement of new NSLU near noise levels that exceed the City guidelines would still be significant. The reduced density in the Urban Center and Town Center would also reduce exposure of NSLU to noise from HVAC units and community parks. However, NSLU would still be proposed in areas adjacent to commercial and neighborhood park uses, such as mixed-use planning areas and the middle school site (Planning Area G). Impacts to residences in Planning Areas A, D, F, and G would be eliminated because no residences are proposed in these areas under the Reduced Project Alternative #1. However, outdoor usable areas in these planning areas would still have the potential to be exposed to excessive noise. The mitigation measures required for the proposed project would also be required for the Reduced Project Alternative #1 for direct and cumulative impacts.

**Table 10-2 Operation Maximum Daily Emissions – Reduced Project Alternative #1**

Emissions Source	Pollutant Emissions (pounds/ day)					
	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Vehicular Sources <sup>(1)</sup>	461	50	38	1	256	50
Area Sources						
Natural Gas <sup>(2)</sup>	24	3	40	0	0	0
Hearth (fireplaces) <sup>(3)</sup>	1	0	2	0	0	0
Landscape	23	3	0	0	0	0
Consumer Products	0	144	0	0	0	0
Architectural Coatings <sup>(4)</sup>	0	15	0	0	0	0
Reduced Project Alternative #1 Total Emissions	509	215	80	1	256	43
Proposed Village 9 Total Emissions	592	291	100	2	285	56
Significance Thresholds	550	55	55	150	150	55
Significant Impact?	No	Yes	Yes	No	Yes	No
CO = carbon monoxide; VOC = volatile organic compounds; NO <sub>x</sub> = nitrogen oxides; SO <sub>x</sub> = sulfur oxides; PM <sub>10</sub> = respirable particulate matter; PM <sub>2.5</sub> = fine particulate matter <sup>(1)</sup> Modeling assumptions: Calculations assume the full development of project at buildout (2030). Output is for summer emissions, with the exception of hearth emissions, where winter emissions were added to the daily emissions for a worst-case condition. <sup>(2)</sup> Other assumptions include: Based on an ADT of 30,649 trips and an estimated vehicle trip length of 5.08 miles, which accounts for internal capture from mixed-use development, the reduction in vehicle trips compared to similar developments that do not provide access to transit, and the TDM program in the SPA Plan. A 4 percent vehicular emission reduction for VOC, NO <sub>x</sub> , CO, and PM <sub>10</sub> emissions was applied for traffic light synchronization based on the SCAQMD CEQA Air Quality Handbook (1993). Assumes buildings comply with 15 percent above 2008 Title 24 standards. <sup>(3)</sup> Assumes 15 percent of homes would have fireplaces, consistent with assumptions of the GPA/GDPA SEIR. No wood burning fireplaces would be allowed. <sup>(4)</sup> Assumes model defaults for low VOC coatings (250 grams of VOC per liter or less). Source: CARB 2007.						

Less than significant impacts related to groundborne vibration and temporary increase in ambient noise would be similar to the project under the Reduced Project Alternative #1 because similar construction activities would occur and short-term traffic related noise would increase. The Reduced Project Alternative #1 would reduce impacts related to the substantial permanent increase in ambient noise levels compared to the project because fewer trips would be generated from Village 9. However, the Reduced Project Alternative #1 trips in combination with trips from cumulative growth would still result in significant increases in traffic noise levels. Less than significant impacts related to aircraft noise and consistency with General Plan noise policies would be similar to the project under the Reduced Project Alternative #1.

## Biological Resources

The Reduced Project Alternative #1 would result in the same potentially significant but mitigable impacts related to special status plant and wildlife species, riparian habitat, and other sensitive natural communities, federally protected wetlands, and consistency with the MSCP and RMP compared to the project because this alternative would have the same development footprint as the project. The mitigation measures identified for the proposed project would also be required under this alternative.

## Cultural and Paleontological Resources

Impacts related to historical resources would be less than significant under the Reduced Project Alternative #1, similar to the project, because no historical resources are located in Village 9. Potentially significant impacts related to archaeological resources, human remains, and paleontological resources would be the same as the proposed project because this alternative would have the same development footprint as the project and would require ground disturbing activities. The mitigation measures required for the project would also be required for Reduced Project Alternative #1. Similar to the proposed project, even with implementation of these mitigation measures, impacts to unknown resources and human remains would be cumulatively considerable and unavoidable due to the potential for discovery of these resources in Village 9. Similar to the project, the Reduced Project Alternative #1 would be consistent with General Plan policies related to cultural resources, and impacts would be less than significant.

## Geology and Soils

The Reduced Project Alternative #1 would result in the same potentially significant impacts related to exposure to seismic related hazards, soil stability, soil erosion and topsoil loss, and expansive soils that would occur under the project because similar development would occur across the majority of the project area. The mitigation measures identified for the proposed project would also be required for this alternative to implement the geotechnical recommendations and comply with applicable regulations. Similar to the project, the Reduced Project Alternative #1 would be consistent with General Plan geotechnical policies and would not require any septic tanks or alternative wastewater disposal systems.

## Public Services

**Fire and Emergency Medical Services, Police Services, Schools, and Libraries.** The Reduced Project Alternative #1 would result in reduced demand for fire and emergency medical services, schools, and libraries because fewer residential units would be constructed, and the Reduced Project Alternative #1 would generate less population growth. However, new development under this alternative would still have the potential to affect the ability for services to meet the City's services standards if the services are not provided commensurate with need.

Impacts related to schools siting would be similar compared to the project because a new elementary school proposed for Village 9 would also be developed under this alternative. Therefore, the mitigation measures required for the project would also be required for this alternative. Similar to the project, the Reduced Project Alternative #1 would be consistent with all General Plan policies related to fire and emergency medical, police, school, and library services with implementation of the mitigation measures identified for the project.

**Parks, Recreation, Open Space, and Trails.** Based on the CVMC method for calculating parkland requirements, which is more conservative than the GDP and Quimby Act method, the Reduced Project Alternative #1 would require 21.8 acres of parkland to serve the development. This alternative would provide 22.9 acres of community park and town square parkland, which would meet the parkland requirement. Although not considered a significant environmental impact, the removal of the pedestrian park in Planning Area HH would eliminate direct access from the residences in Planning Area DD to a park facility. Similar to the project, Reduced Project Alternative #1 would have potentially significant impacts related to the City's parks and recreations standard if parkland would not be

provided concurrently with demand. The mitigation measures identified for the proposed project would be required to ensure adequate park facilities would be provided.

Impacts related to construction of new facilities would decrease compared to the project because less construction would occur. The pedestrian parks proposed for Village 9 in Planning Areas HH would not be developed. This alternative would not conflict with the parkland designations and policies of the General Plan, Otay Ranch GDP, or Greenbelt Master Plan, or Chula Vista Parks and Recreation Master Plan, similar to the project.

## **Global Climate Change**

The Reduced Project Alternative #1 would result in a less than significant impact related to GHG emissions and compliance with AB 32 because construction and operational emissions of GHGs would be reduced under this alternative. Commercial and residential land uses would be reduced by approximately 30 percent compared to the proposed project; therefore, it is assumed that GHG emissions from implementation of the proposed project would also be reduced approximately 30 percent.

Additionally, the significant and unavoidable impact related to exacerbation of air quality problems as a result of climate change would be reduced under this alternative because operational emissions of ozone precursors would be reduced. However, the Reduced Project Alternative #1 would still have the potential to exacerbate air quality problems. Direct and cumulative impacts related to the potential effects of climate change would be significant and unavoidable, similar to the project.

## **Hydrology and Water Quality**

The Reduced Project Alternative #1 would result in similar impacts related to water quality standards, erosion and siltation, surface runoff, drainage capacity, and water quality degradation compared to the project. The Reduced Project Alternative #1 has the same development footprint as the project and would result in similar impacts to the existing drainage pattern, and similar construction and development activities would take place. Generation of pollutants during operation would be slightly reduced because less development would occur. Similar to the project, mitigation would be required to reduce hydrology and water quality impacts to a less than significant level. Similar to the project, this alternative would not interfere with groundwater supplies and recharge, place housing or structures within a 100-year flood hazard boundary, conflict with General Plan policies related to hydrology and water quality, expose people or structures to significant risk of loss from flooding, or result in an increased risk of exposure to inundation by seiche, tsunami, or mudflow.

## **Agricultural Resources**

A significant and unavoidable direct and cumulative impact related to conversion of agricultural resources would occur under this alternative, similar to the project, because this alternative would have the same development footprint as the project would result in the conversion of land to non-agricultural use. Similar to the project, the Reduced Project Alternative #1 would potentially result in land use conflicts unless an agricultural plan would be implemented to prevent land use conflicts. This alternative would not result in any conflict with agricultural policies and impacts would be less than significant.

## Hazards and Hazardous Materials

Impacts related to transport, use, and disposal of hazardous materials would be similar to the project under this alternative because similar land uses are proposed. Impacts would be slightly reduced because less development would occur. Impacts related to accidental release of hazardous materials, hazards to schools, and historic use of pesticides would also be similar because this alternative would result in ground disturbing activities with the potential to disturb contaminated soil, and both new schools proposed for Village 9 would be developed. Similar to the project, impacts related to listed hazardous sites would be less than significant because no sites are listed for Village 9.

The Reduced Project Alternative #1 would result in similar impacts related to airport hazards compared to the project because the same maximum building heights would be allowed, although this alternative emphasizes horizontal rather than vertical development. Impacts related to emergency response and evacuation plans would be similar under this alternative because the circulation network proposed for Village 9 would be fully implemented. Less than significant impacts related to wildland fire would be similar to the project because similar development would occur along the edge of the project area, and a Fire Protection Plan would be implemented. Similar to the project, the Reduced Project Alternative #1 would not conflict with any General Plan policies related to hazards and hazardous materials.

## Housing/Population

Less than significant impacts related to population growth would be reduced under this alternative because less residential growth would occur. Similar to the project, the Reduced Project Alternative #1 would not displace any housing or people, or conflict with any General Plan housing and population policies.

## Public Utilities

The Reduced Project Alternative #1 would result in reduced demand for water, wastewater treatment, solid waste, recycled water, and energy compared to the project because less development would occur. However, the mitigation measures identified for the project to ensure provision of public utilities concurrent with development would also be required under this alternative. Similar to the project, future water supply, wastewater treatment capacity, and energy availability cannot be guaranteed; therefore, impacts would remain significant and unavoidable under this alternative although demand would be reduced. Additionally, similar to the proposed project, recycled water impacts would remain significant and unavoidable until recycled water from the South Bay Water Treatment Plant is available to meet the projected future recycled water demand.

## 10.3 Reduced Project Alternative #2

As shown in Table 10-1, Reduced Project Alternative #2 (the 1,803 dwelling unit plan) would include the development of 1,803 residential units, less than half of the 4,000 units proposed under the proposed project. This alternative is a low-density alternative based on the minimum densities accommodated by the proposed land uses, shown in Figure 3-3.

The greatest reduction in development would occur in the Urban Center. Under this alternative, residential development would be reduced by approximately 65 percent. Residential densities would also be reduced in the Town Center, Urban Neighborhood, Neighborhood Edge, Neighborhood General, and Neighborhood Center Zones. Commercial development in the Town Center would also be reduced to 532,000 square feet, compared to 1,500,000 square feet under the project. Additionally, the



Neighborhood Park (Planning Area L) proposed for the project would be reduced in size, and two pedestrian parks (Planning Areas HH and II) would be eliminated under this alternative. The pedestrian park areas (Planning Areas HH, and II) would provide additional open space, 14.3 acres of open space compared to 9.6 acres under the proposed project. This additional open space area would provide additional transition from developed areas to the MSCP Preserve, but would not be incorporated into the Preserve. One potential elementary school site (Planning Area G) would be eliminated. Under this alternative, Planning Area G would be developed with mixed-use residential and commercial development as part of the Urban Neighborhood Zone. Figure 10-2 summarizes the Reduced Project Alternative #2 site utilization plan. The potential impacts of this alternative are compared to the proposed project below.

## **Land Use**

Similar to the project, the Reduced Project Alternative #2 would result in a less than significant impact related to physical division of an established community because no community exists on site and the proposed land uses would be compatible with surrounding planned land uses. Similar to the project, the Reduced Project Alternative #2 would not conflict with applicable land use plans or the Chula Vista MSCP Subarea Plan and the Otay Ranch RMP. The Reduced Project Alternative #2 would propose mixed-use development along the SR-125 corridor, propose more open space compared to the proposed project, would include a Preserve Edge Plan, and would not include any land uses that would conflict with these resource plans. The land use incompatibility associated with the impedance of access to the City of San Diego water line would also occur under this alternative.

However, the Reduced Project Alternative #2 would result in a significant impact related to consistency with the GDP and Chula Vista General Plan because this alternative would not implement the related objectives and policies envisioned for development in Village 9 described in the General Plan and GDP. For example, this alternative would conflict with Objective LUT 86 of the Chula Vista General Plan Land Use and Transportation Element, which is the development of integrated, high-intensity urban uses; office and business parks; retail centers; residential uses; and a major higher educational institution along the State Route 125 corridor to serve the East Planning Area and the broader south county region. The Reduced Project Alternative #2 proposes residential and mixed-use development to support the University site, but not the extent planned for in the General Plan and GDP. Therefore, this alternative would result in an additional land use impact compared to the project.

## **Aesthetics/Landform Alteration**

The Reduced Project Alternative #2 would result in similar less than significant direct impacts related to scenic vistas and scenic roadways compared to the project. However, this alternative would accommodate structures with heights up to 215 feet tall, similar to the proposed project. Therefore, potentially significant impacts related to shading and wind would also occur under this alternative. This alternative would require the same grading as the project and, although densities would be reduced, similar land uses would be developed. Similar to the project, implementation of the design guidelines in the SPA Plan would reduce visual character impacts; however, this alternative would still result in a significant and unavoidable direct and cumulative impact to visual character and quality because the loss of rolling hills would occur. Similar to the project, this alternative would result in less than significant impact related to consistency with General Plan policies related to aesthetics and landform alteration, including steep slopes.

## Transportation and Traffic

The Reduced Project Alternative #2 would result in reduced direct and cumulative impacts to traffic and level of service standards and congestion management compared to the project because approximately 48 percent less vehicular trips would be generated by this alternative: 16,224 ADT compared to 34,067 ADT under Village 9 as proposed, based on the trip generation rates utilized in the traffic impact analysis (RBF 2013). This alternative assumes an internal capture rate similar to the internal capture rate of the project because the Reduced Project Alternative #2 would continue to provide mixed-use commercial and retail opportunities for residents in the Urban Center and Town Center.

This alternative would include the full circulation network proposed for Village 9. Mitigation measures 5.3-12 through 5.3-16, 5.3-19, 5.3-20, and 5.3-21 would not be required under this alternative because this alternative would not reach the equivalent dwelling units and associated trips that would mandate these measures. However, the traffic generated by the Reduced Project Alternative #2 would still have potential to generate significant traffic and mitigation measures 5.3-1 through 5.3-11, 5.3-17, and 5.3-18 would still be required. The significant and unavoidable impact to the Olympic Parkway/I-805 northbound ramps intersection would still occur under this alternative.

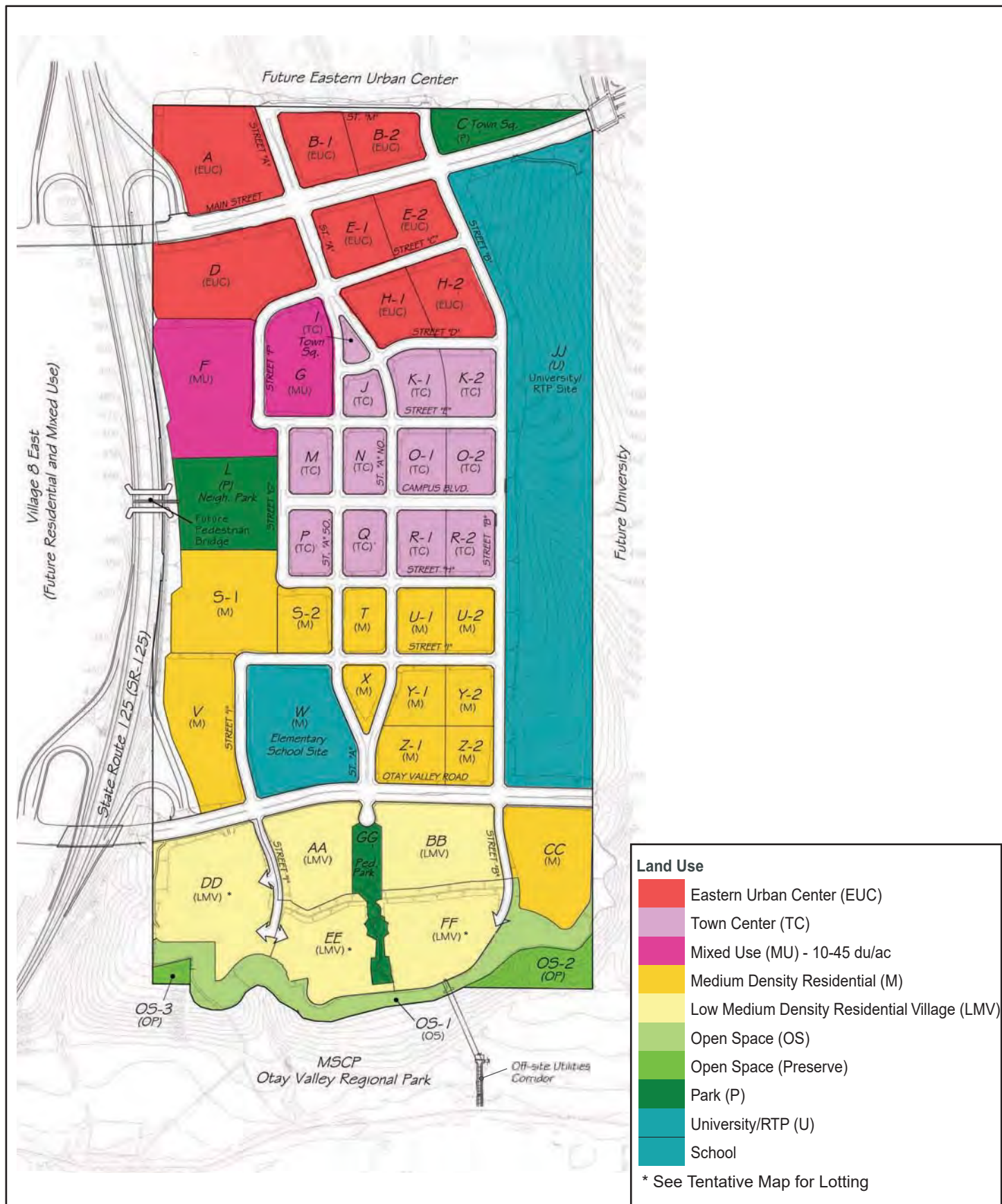
This alternative would result in a similar maximum number of daily construction trips compared to the proposed project because similar construction activities would be required; however, the length of construction and the associated temporary increase in trips would be reduced because less construction would occur. Similar to the proposed project, the mitigation measures that would be implemented for this alternative's operational impacts would also reduce temporary construction impacts to a less than significant level.

Impacts related to emergency access, road safety, and transportation policies would be less than significant under this alternative, similar to the project, because the circulation system proposed for Village 9 would also be implemented under Reduced Project Alternative #2. The extensions of Main Street and Otay Valley Road would provide additional points of access to the surrounding regional circulation system, and ultimately major evacuation routes such as SR-125.

The proposed trails, pathways, bicycle trails, and transit routes proposed for Village 9 especially along Campus Boulevard, Street A, Street B, Main Street and Otay Valley Road would provide important pedestrian, bicycle, and transit connections between villages in Otay Ranch. The Reduced Project Alternative #2 would also result in similar impacts to air traffic patterns compared to the project because the same maximum building heights would be allowed under this alternative. FAA notification would be required to reduce impacts to a less than significant level.

## Air Quality

The Reduced Project Alternative #2 would result in reduced impacts related to air quality violations compared to the project because a smaller volume of construction and operational emissions would result from this alternative. Construction emissions would be reduced; however, similar to the project, construction emissions would remain significant and unavoidable under this alternative due to the amount of grading required, and the potential for simultaneous construction activities.



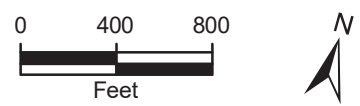
Commercial and Residential				
Eastern Urban Center (EUC) – 28-60 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
A	9.5	T-5: UC	132	65
B-1	4.6	T-5: UC	62	30
B-2	3.9	T-5: UC	50	28
D	11.2	T-5: UC	154	80
E-1	4.6	T-5: UC	62	40
E-2	4.2	T-5: UC	59	32
H-1	4.7	T-5: UC	64	30
H-2	5.6	T-5: UC	81	35
<b>Subtotal</b>	<b>48.3</b>		<b>664</b>	<b>340</b>
Town Center (TC) – 18-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
K-1	3.7	T-4: TC	67	0
K-2	3.8	T-4: TC	68	0
M	3.6	T-4: TC	49	10
N	3.5	T-4: TC	34	20
O-1	3.6	T-4: TC	49	10
O-2	3.6	T-4: TC	49	10
P	3.6	T-4: TC	49	10
Q	3.5	T-4: TC	34	20
R-1	3.6	T-4: TC	49	10
R-2	3.6	T-4: TC	49	10
<b>Subtotal</b>	<b>36.1</b>		<b>497</b>	<b>100</b>
Mixed Use (MU) – 10-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
F	11.3	T-4: UN	113	36
G	7.9	T-4: UN	79	24
<b>Subtotal</b>	<b>19.2</b>		<b>192</b>	<b>60</b>
Medium Density Residential (M) – 6-11 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
S-1	10.6	T-3: NC	64	0
S-2	3.5	T-3: NC	21	0
T	3.4	T-3: NC	20	32
U-1	3.5	T-3: NC	21	0
U-2	3.5	T-3: NC	21	0
V	8.6	T-3: NC	52	0
W <sup>(2)</sup>	--	T-3: NC	0	0
Y-1	3.3	T-3: NC	20	0
Y-2	3.0	T-3: NC	18	0
Z-1	3.7	T-3: NC	22	0
Z-2	2.7	T-3: NC	16	0
CC	7.7	T-3: NC	46	0
<b>Subtotal</b>	<b>53.5</b>		<b>321</b>	<b>32</b>
Low Medium Density Residential Village (LMV) – 3-6 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
AA	6.8	T-2: NG	20	
BB	8.4	T-2: NG	25	
DD	12.2	T-2: NE	37	
EE	7.1	T-2: NE	21	
FF	8.8	T-2: NE	26	
<b>Subtotal</b>	<b>43.3</b>		<b>129</b>	
<b>TOTAL</b>	<b>200.4 acres</b>		<b>1,803</b>	<b>532K<sup>(3)</sup></b>

Public, Quasi Public, and Other				
Community Purpose Facility (CPF) <sup>(4)</sup>				
Planning Area	Land Use	Gross Acres	Transect	Description
J	TC	2.3	SD: CPF	CPF
X	MU	2.7	SD: CPF	CPF
<b>Subtotal</b>		<b>5.0</b>		
Potential School (S) Sites <sup>(5)</sup>				
Planning Area	Land Use	Gross Acres	Transect	Description
W	MU	11.9	T-3: NC	Elementary
<b>Subtotal</b>		<b>11.9</b>		
Parks (P)				
Planning Area	Land Use	Gross Acres	Transect	Description
C	P	3.6	SD: P	Town Square
I	TC	1.5	SD: P	Town Square
L	P	7.4	SD: P	Neighborhood
GG	P	2.9	SD: P	Pedestrian
<b>Subtotal</b>		<b>15.4</b>		
Open Space (OS)				
Planning Area	Land Use	Gross Acres	Transect	Description
OS-1	OS	10.3	T-1: OS	Open Space
OS-2	CVOSP <sup>(6)</sup>	3.3	T-1: OP	Preserve
OS-3	CVOSP <sup>(6)</sup>	0.7	T-1: OP	Preserve
<b>Subtotal</b>		<b>14.3</b>		
Other				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
JJ	U	50.0	SD: U	University/RTP
Arterials		17.9		Right-of-Way
SR-125		8.2		Right-of-Way
<b>Subtotal</b>		<b>76.1</b>		
<b>TOTAL</b>		<b>122.7 acres</b>		

**SPA Total Area: 323.1 Gross Acres**

Footnotes:  
<sup>(1)</sup> Transects are defined in Chapter 3  
<sup>(2)</sup> See Chapter 9 regarding intensity transfers. A minimum retail/commercial square footage instead of a range is shown in the Town Center to meet the minimum square footage requirements described in Chapter 9.  
<sup>(3)</sup> 432,000 square feet office and 100,000 square feet retail; excludes live/work  
<sup>(4)</sup> As defined by CVMC Chapter 19.48  
<sup>(5)</sup> School sites will revert to Medium Density Residential (M) if not accepted by the school district.  
<sup>(6)</sup> Chula Vista Open Space Preserve

Source: William Hezmalhach Architects, Inc. 2013



**REDUCED PROJECT ALTERNATIVE #2 SITE UTILIZATION PLAN  
FIGURE 10-2**

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Operational emissions would also be lower because vehicle trips and area sources would be reduced compared to the project. As shown in Table 10-3, carbon monoxide, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions would be reduced to a less than significant level under this alternative. VOC emissions would be reduced approximately 55 percent; however, direct and cumulative impacts for VOC emissions would remain significant and unavoidable, similar to the project.

**Table 10-3 Operation Maximum Daily Emissions – Reduced Project Alternative #2**

Emissions Source	Pollutant Emissions (pounds/ day)					
	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Vehicular Sources <sup>(1)</sup>	242	27	20	1	136	27
Area Sources						
Natural Gas <sup>(2)</sup>	14	2	24	0	0	0
Hearth (fireplaces) <sup>(3)</sup>	1	0	2	0	0	0
Landscape	17	2	0	0	0	0
Consumer Products	0	92	0	0	0	0
Architectural Coatings <sup>(4)</sup>	0	9	0	0	0	0
Reduced Project Alternative #2 Total Emissions	274	132	46	1	136	27
Proposed Village 9 Total Emissions	592	291	100	2	285	56
Significance Thresholds	550	55	55	150	150	55
Significant Impact?	No	Yes	No	No	No	No

CO = carbon monoxide; VOC = volatile organic compounds; NO<sub>x</sub> = nitrogen oxides; SO<sub>x</sub> = sulfur oxides; PM<sub>10</sub> = respirable particulate matter; PM<sub>2.5</sub> = fine particulate matter

(1) Modeling assumptions: Calculations assume the full development of project at buildout (2030). Output is for summer emissions, with the exception of hearth emissions, where winter emissions were added to the daily emissions for a worst-case condition.

(2) Other assumptions include: Based on an ADT of 16,224 trips and an estimated vehicle trip length of 5.08 miles, which accounts for internal capture from mixed-use development, the reduction in vehicle trips compared to similar developments that do not provide access to transit, and the TDM program in the SPA Plan. A four percent vehicular emission reduction for VOC, NO<sub>x</sub>, CO, and PM<sub>10</sub> emissions was applied for traffic light synchronization based on the SCAQMD CEQA Air Quality Handbook (1993). Assumes buildings comply with 15 percent above 2008 Title 24 standards.

(3) Assumes 15 percent of homes would have fireplaces, consistent with assumptions of the GPA/GDPA SEIR. No wood burning fireplaces would be allowed.

(4) Assumes model defaults for low VOC coatings (250 grams of VOC per liter or less).

Source: CARB 2007.

Impacts related to sensitive receptors would still potentially occur as a result of gas stations in the Town Center and Urban Center because they would be exposed to similar uses in these areas as the proposed project. Impacts would be less than significant with the mitigation required for the project. Fewer residences would be developed along the western boundary of Village 9 adjacent to SR-125. However, site specific studies for TAC levels at sensitive land use areas would still be required.

Impacts related to odors would be the same under this alternative because no new receptors would be located in the vicinity of Otay Landfill as the project. The Reduced Project Alternative #2 would not exceed the RAQS growth assumption for Village 9 (3,614 residential units); however, this alternative would still result in new significant and unavoidable criteria pollutant emissions. Direct and cumulative impacts would remain significant and unavoidable, similar to the project. Less than significant impacts related to General Plan air quality policies would be similar to the project under the Reduced Project Alternative #2.



## Noise

The Reduced Project Alternative #2 would result in reduced direct and cumulative impacts related to exposure of on-site receptors to excessive noise levels compared to the project because less traffic would result in lower noise levels within Village 9. However, due to cumulative increases in traffic, including the Reduced Project Alternative #2 trips, substantial traffic noise would still be generated by the on-site roadways. NSLU would still be proposed in areas adjacent to commercial and neighborhood park uses, such as the mixed-use Urban and Town Centers and the elementary school sites (Planning Areas G and W). The mitigation measures required for the proposed project would also be required for the Reduced Project Alternative #2.

Less than significant impacts related to groundborne vibration and temporary increases in ambient noise would be similar to the project under the Reduced Project Alternative #2 because similar construction activities would occur.

The Reduced Project Alternative #2 would reduce impacts related to the substantial permanent increase in off-site ambient noise levels on off-site roads compared to the project because fewer trips would be generated from Village 9. However, due to cumulative increases in traffic on off-site roadways, including the Reduced Project Alternative #2 trips, impacts would still be significant. The short-term significant impact that would result from the project would still occur under this alternative.

Less than significant impacts related to aircraft noise and consistency with General Plan noise policies would be similar to the project under the Reduced Project Alternative #2.

## Biological Resources

The Reduced Project Alternative #2 would result in slightly reduced impacts related to special status plant and wildlife species, riparian habitat, and other sensitive natural communities, federally protected wetlands, and consistency with the MSCP and RMP compared to the project because this alternative would propose approximately five additional acres of open space compared to the project. However, potentially significant direct impacts would still occur under this alternative, including impacts to maritime succulent scrub.

Indirect impacts to the Preserve would be reduced under this alternative because an additional open space buffer would be provided between the Preserve and development within the village. However, indirect impacts to sensitive species outside of the Preserve would have the potential to occur along the edge of development and open space, similar to the proposed project. The mitigation measures identified for the proposed project would also be required for direct and indirect impacts under this alternative.

## Cultural and Paleontological Resources

Similar to the project, impacts related to historical resources would be less than significant under the Reduced Project Alternative #2 because no historical resources are located in Village 9. Potentially significant impacts related to unknown archaeological resources, human remains, and paleontological resources would be reduced under this alternative because the alternative development footprint would be reduced compared to the project. However, impacts to unknown resources would still have the potential to occur as a result of ground-disturbing construction activities. The mitigation measures required for the project would also be required for Reduced Project Alternative #2. Similar to the project, even with implementation of these mitigation measures, cumulative impacts related to

unknown archaeological resources and human remains would be significant and unavoidable. Similar to the project, the Reduced Project Alternative #2 would be consistent with General Plan policies related to cultural resources, and impacts would be less than significant.

## Geology and Soils

The Reduced Project Alternative #2 would result in similar potentially significant impacts related to exposure to seismic related hazards, soil stability, soil erosion and topsoil loss, and expansive soils that would occur under the project because similar development is proposed across the project area. The geotechnical recommendations and compliance with applicable regulations as required by the project mitigation measures would still be required for development under this alternative. Similar to the project, the Reduced Project Alternative #2 would be consistent with General Plan geotechnical policies and would not require any septic tanks or alternative wastewater disposal systems.

## Public Services

**Fire and Emergency Medical Services, Police Services, Schools, and Libraries.** The Reduced Project Alternative #2 would result in less demand for fire and emergency medical services, schools, and libraries because fewer residential units would be constructed, and the Reduced Project Alternative #2 would generate less population growth. However, new development under this alternative would still have the potential to affect the ability for services to meet the City's services standards if the services are not provided commensurate with need. The mitigation measures required for the project would also be required for Reduced Project Alternative #2.

Impacts related to schools siting would be similar compared to the project because a new elementary school would also be developed under this alternative. Therefore, the mitigation measures required for the project would also be required for this alternative.

Similar to the project, the Reduced Project Alternative #2 would be consistent with all General Plan policies related to fire and emergency medical, police, school, and library services with implementation of the mitigation measures identified for the project.

**Parks, Recreation, Open Space, and Trails.** Based on the CVMC method for calculating parkland requirements, the Reduced Project Alternative #2 would require 14.5 acres of parkland to serve the proposed development. This alternative would provide 15.4 acres of parkland. This alternative would provide adequate parkland to serve proposed development. However, mitigation would be required to ensure parkland would be provided concurrent with new development. Impacts related to construction of new facilities would decrease compared to the project because the Neighborhood Park proposed in the SPA Plan and TM would be reduced in size and two pedestrian parks would not be constructed. Therefore, associated construction impacts such as air quality emissions would be reduced. Similar to the proposed project, this alternative would not conflict with the parkland designations and policies of the General Plan, GDP, Greenbelt Master Plan, or Chula Vista Parks and Recreation Master Plan.

## Global Climate Change

The Reduced Project Alternative #2 would further minimize the less than significant impact related to GHG and compliance with AB 32 as compared to the proposed project because construction and operational emissions of GHGs would be reduced under this alternative. Additionally, the significant and unavoidable impact related to exacerbation of air quality problems as a result of climate change would be reduced under this alternative because operational emissions of ozone precursors would be

reduced. However, the Reduced Project Alternative #2 would still have the potential to exacerbate air quality problems because it would result in significant and unavoidable VOC and NO<sub>x</sub> emissions. Direct and cumulative impacts related to effects of climate change would be significant and unavoidable, similar to the project.

## Hydrology and Water Quality

The Reduced Project Alternative #2 would result in reduced impacts related to water quality standards, erosion and siltation, surface runoff, drainage capacity, and water quality degradation compared to the project. The Reduced Project Alternative #2 has a smaller development footprint than the project, and would result in fewer changes to the existing drainage pattern, and fewer construction and development activities would take place. Generation of pollutants during operation would be reduced because less development would occur. However, similar to the project, mitigation would be required to reduce hydrology and water quality impacts to a less than significant level. Similar to the project, this alternative would not interfere with groundwater supplies and recharge, place housing or structures within a 100-year flood hazard boundary, conflict with General Plan policies related to hydrology and water quality, expose people or structures to significant risk of loss from flooding, or result in an increased risk of exposure to inundation by seiche, tsunami, or mudflow.

## Agricultural Resources

A significant and unavoidable direct and cumulative impact related to conversion of agricultural resources would occur under this alternative, similar to the project. This alternative would result in the same conversion of land to non-agricultural use compared to the project. Potentially significant impacts related to land use conflicts would also occur under this alternative unless an agriculture plan is implemented. Similar to the project, the Reduced Project Alternative #2 would not result in any conflict with agricultural policies. Impacts related to agricultural zoning and policies would be less than significant.

## Hazards and Hazardous Materials

Impacts related to transport, use, and disposal of hazardous materials would be similar to the project under this alternative because similar land uses are proposed. Impacts would be slightly reduced because less development would occur and less population growth would be generated. Impacts related to accidental release of hazardous materials, hazards to schools, and historic use of pesticides would also be similar to the project because this alternative would result in similar potential to disturb contaminated soil. Similar to the project, impacts related to listed hazardous sites would be less than significant because no sites are listed for Village 9.

The Reduced Project Alternative #2 would result in similar impacts related to airport hazards compared to the project because similar building heights would be allowed. Impacts related to emergency response and evacuation plans would be similar under this alternative because the circulation network proposed for Village 9 would be fully implemented.

Impacts related to wildland fire would be similar to the project because similar development is proposed along the wildland interface at the development edge of the project area, and a Fire Protection Plan would be implemented. Similar to the project, the Reduced Project Alternative #2 would not conflict with any General Plan policies related to hazards and hazardous materials.

## Housing and Population

Impacts related to population growth would be reduced under this alternative compared to the project because less residential and economic growth would occur. Similar to the project, the Reduced Project Alternative #2 would not displace any housing or people, or conflict with any General Plan housing and population policies.

## Public Utilities

The Reduced Project Alternative #2 would result in less demand for water, wastewater treatment capacity, solid waste, recycled water, and energy compared to the project because less development would occur and less population growth would be generated. However, the mitigation measures identified for the project to ensure provision of public utilities concurrent with development would also be required under this alternative. Similar to the project, future water supply, wastewater treatment, and energy availability cannot be guaranteed; therefore, impacts related to water supply, wastewater, and energy would remain significant and unavoidable under this alternative although demand would be reduced.

Additionally, similar to the proposed project, recycled water impacts would remain significant and unavoidable until recycled water from the South Bay Water Treatment Plant is available to meet the projected future recycled water demand. This impact would be reduced under the Reduced Project Alternative #2 because demand for recycled water would be reduced under this alternative.

## 10.4 Fulfillment of Project Objectives

The following sections provide a discussion of whether each alternative would meet the project objectives. A summary comparison of the alternatives considered to the project objectives is shown in Table 10-4.

**Table 10-4 Comparison of Consistency with Project Objectives**

Objective	Project Alternatives		
	No Project (No Build) Alternative	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
1. Create a recognizable “place” that is well designed to provide 500,000 to 1.5 million square feet of office and retail space in three unique and attractive urban districts accommodating cultural and social diversity.	No	Yes	Yes
2. Develop distinctive design standards and invest in design excellence to create inspiring and memorable places; emphasize the appearance and qualities of the public realm; create streetscapes, pathways, and public spaces of beauty, interest, and functional benefit to pedestrians.	No	Yes	Yes
3. Encourage a development pattern that promotes orderly growth, prevent urban sprawl, and promote effective resource management, while implementing the GDP goals of a strong relationship between Village 9, the Eastern Urban Center, and the planned university.	No	Partial	Partial

Table 10-4 Comparison of Consistency with Project Objectives (continued)

Objective	Project Alternatives		
	No Project (No Build) Alternative	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
4. Protect and enhance the natural environment and increase the quality of life. Design neighborhoods with compact and multi-dimensional land use patterns that ensures a mix of uses and joint optimization of transportation modes to minimize the impact of cars, promote walking and bicycling, and provide access to employment, education, recreation, entertainment, shopping, and services.	No	Yes	Yes
5. Create an appropriately scaled and economically healthy Town Center. Include a wide range of commercial, residential, cultural, civic, and recreational uses. The Town Center should contain businesses that serve the daily needs of nearby residents and employees including students, faculty, and Regional Technology Park employees.	No	Partial	Partial
6. Establish a pedestrian and transit-oriented village with an intense, vibrant Town Center to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and regional transit.	No	Yes	Yes
7. Encourage community development in mixed use and compact pedestrian oriented forms to accommodate all income levels and lifestyles.	No	Partial	Partial
8. Foster a compact form facilitated by “form-based planning,” resulting in efficient infrastructure investments and advanced opportunities to provide socially diverse housing.	No	Yes	Yes
9. Promote jobs that match the skills of existing and future residents through provision of housing opportunities and choices and by providing an opportunity for the City to attract a university or related uses by dedication of land for such purposes. Retain and recruit a skilled and motivated workforce to ensure economic stability into the future and support university development by providing attainable housing opportunities at increased densities.	No	Partial	Partial
10. Encourage diverse, informal centers of creativity, learning, and interaction that support the University. Focus community design on a manner of life and civic culture that embraces and fosters life-long learning. This shall take place in traditional educational institutions as well as diverse venues such as restaurants, arts, and cultural locations. This includes public and private places of exceptional design and open spaces that inspire and connect with the natural environment through features that spark creativity. Identify and promote business clusters that complement the University and the Regional Technology Park.	No	Partial	Partial
11. Promote synergistic uses and graceful transitions within the SPA Plan area and between the SPA Plan area and neighborhoods of adjacent SPA areas to balance activities, services, and facilities. Integrate Village 9 with existing Otay Ranch development, the University, the Regional Technology Park, and connectivity to the Greenbelt trail system.	No	Partial	Partial
12. Implement the goals, objectives and policies of the Chula Vista General Plan, the Otay Ranch General Development Plan, the Chula Vista Greenbelt Master Plan, and the Otay Valley Regional Park Concept Plan.	No	Partial	Partial
13. Encourage the interactivity of a wide range of people, promote community diversity, and enrich the human experience by providing a broad variety of public spaces and housing types and styles that appeal to all ages, incomes, and lifestyles.	No	Partial	Partial
14. Establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions.	No	Yes	Yes



## No Project (No Build) Alternative

This alternative would not attain any of the 14 objectives of the project because no SPA would be adopted and no development would occur. Therefore, the No Project (No Build) Alternative would not accomplish any of the following:

- Create a recognizable place, develop design standards;
- Encourage an orderly growth pattern;
- Design neighborhoods with compact and multi-dimensional land use patterns;
- Create a town center;
- Establish a pedestrian-oriented village;
- Encourage community development in mixed use and compact pedestrian oriented forms;
- Retain and recruit a skilled and motivated workforce to ensure economic stability into the future by providing attainable housing opportunities;
- Encourage diverse, informal centers of creativity, learning, and interaction that support the University;
- Foster a compact form facilitated by form-based planning;
- Promote transitions with and between SPAs;
- Provide a broad range of housing types and styles;
- Implement the goals of the General Plan and GDP; or
- Establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions.

Additionally, the No Project (No Build) Alternative would not meet the overall goals and objectives of the City for future growth as outlined in the City's General Plan and the GDP. The regional metropolitan planning organization, SANDAG, has projected a specific growth in population by 2050. If development is eliminated in Village 9, the planned future growth would be accommodated elsewhere, potentially inducing unplanned growth in another area of the city. Additionally, the City has identified the proposed development of the Village 9 site as necessary to support future development of the University and RTP, and support BRT Ridership east of SR-125.

## Reduced Project Alternative #1

This alternative would attain six of the 14 objectives of the project and would partially attain the remaining eight objectives. The Reduced Project Alternative #1 would meet Objective 1 because it would create a recognizable place designed to provide 1,030,000 square feet of commercial development in well designed urban districts. It would meet Objective 2 because it would develop design standards. This alternative would meet Objectives 4 and 6 because it would design neighborhoods with compact and multi-dimensional land use patterns and establish a pedestrian-oriented village. This alternative would implement form-based planning; therefore, it would meet Objective 8. The Reduced Project Alternative #1 would meet Objective 14 because it would establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions.

The Reduced Project Alternative #1 would create a mixed-use urban center and town center, but under this alternative these would include only limited residential uses. The Urban Center and Town Center would not be appropriately scaled in comparison to town centers in neighboring villages, to promote

synergistic uses and graceful transitions between villages, or to serve the daily needs of residents in Village 9 as well as surrounding development, including the University and RTP. The reduced density in the Urban Center would not implement a strong relationship between Village 9 and the EUC or encourage supporting centers of creativity, learning, and interaction to extent of the proposed project. The range of residential densities would be limited compared to the proposed project and would not accommodate all income levels and lifestyles. This alternative would not provide housing opportunities to the extent of the proposed project to attract future University and related uses. This alternative would partially implement the goals of the General Plan and GDP because it would provide similar land uses, but not to the extent planned for in the GDP and General Plan. Additionally, the number of mixed-used residential units that would have the potential to provide affordable housing would be reduced by approximately 30 percent because total housing development would be reduced by approximately 30 percent. Opportunities for public spaces that encourage interactivity would also be reduce compared to the project because one less pedestrian park would be constructed under this alternative. Therefore, the Reduced Project Alternative #1 would only partially meet Objectives 3, 5, 7, 9, 10, 11, 12, and 13.

## **Reduced Project Alternative #2**

This alternative would attain six of the 14 objectives of the project, and would partially attain the remaining eight objectives. The Reduced Project Alternative #2 would create a recognizable place, well designed to accommodate 532,000 square feet of commercial use and would therefore meet Objective 1. This alternative would meet Objective 2 because it would develop design standards. It would meet Objectives 4 and 6 because it would design compact and mixed use neighborhoods and establish a pedestrian-oriented village. This alternative would meet Objective 8 because it would foster a compact form facilitated by form-based planning. This alternative would establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions and would therefore meet Objective 14.

The Reduced Project Alternative #1 would create a mixed-use urban center and town center, but under this alternative these would include less residential and commercial uses. The Urban Center and Town Center would not be appropriately scaled in comparison to town centers in neighboring villages, to promote synergistic uses and graceful transitions between villages, or to serve the daily needs of residents in Village 9 as well as surrounding development, including the University and RTP. This alternative would implement an orderly growth pattern, but would not establish relationships between Village 9, the EUC, and the University, or encourage supporting centers of creativity, learning, and interaction, to the extent of the project. This alternative would partially implement the goals of the General Plan and GDP because it would provide similar land uses, but not to the extent planned for in the GDP and General Plan. The Reduced Project Alternative would provide range of housing types and styles; however, choices would be limited compared to the proposed project. Additionally, the number of mixed-used residential units that would have the potential to provide affordable housing would be reduced by approximately 55 percent because total housing development would be reduced by approximately 55 percent. Employment opportunities would be reduced under this alternative, which would hinder the ability of the City to ensure economic stability, promote jobs for existing residents, and attract a University, RTP, and related uses. Opportunities for public spaces that encourage interactivity would also be reduce compared to the project because one less pedestrian park would be constructed. Therefore, the Reduced Project Alternative #1 would only partially meet Objectives 3, 5, 7, 9, 10, 11, 12, and 13.

## 10.5 Environmentally Superior Alternative

The No Project (No Build) Alternative would be the environmentally superior alternative, as it would entirely avoid the project's significant and unavoidable impacts associated with aesthetics (direct and cumulative), air quality (direct and cumulative), noise (short-term direct), archaeological resources and human remains (cumulative), potential effects of climate change (direct and cumulative), agricultural resources (direct and cumulative), water supply (direct and cumulative), wastewater treatment capacity (direct and cumulative), recycled water (cumulative), and energy (direct and cumulative). However, as the No Project (No Build) Alternative is determined to be environmentally superior, another environmentally superior alternative must be identified among the remaining alternatives.

The Reduced Project Alternative #2 is identified as the environmentally superior alternative as it would reduce traffic (direct and cumulative), air quality (direct and cumulative), noise (direct and cumulative), biological resources (direct), public services (direct), water quality (direct), and public utilities (direct and cumulative) impacts. Mitigation measures 5.3-12 through 5.3-16, 5.3-19, 5.3-20, and 5.3-21 identified for potential traffic impacts would not be required under this alternative. However, as with the Reduced Project Alternative #1, this alternative would not avoid any of the project's significant and unavoidable impacts associated with traffic (cumulative impacts to the Olympic Parkway/I-805 northbound ramps intersection), aesthetics (cumulative), air quality (direct and cumulative), archaeological resources (cumulative), potential effects of climate change (direct and cumulative), agricultural resources (direct and cumulative), wastewater treatment capacity (cumulative), recycled water (cumulative), and energy (direct and cumulative). This alternative would reduce significant carbon monoxide and PM<sub>2.5</sub> emissions by approximately 25 percent to a less than significant level. Table 10-5 provides a generalized summary comparison of the project and the three project alternatives.

**Table 10-5 Summary of Alternative Impacts Compared to Proposed Project**

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>5.1 Land Use and Planning</b>					
Land Use Compatibility	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Conflicts with Land Use Plans, Policies, & Regulations	LS	LS	▲	—	—
<i>Cumulative</i>	NCC	NCC	▲	—	—
Conflicts with HCPs or NCCPs	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<b>5.2 Aesthetics/Landform Alteration</b>					
Scenic Vistas	LS	LS	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Scenic Resources	LS	LS	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Visual Character or Quality	PS	SU	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Lighting and Glare	PS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Landform Alteration	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—

Table 10-5 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
Consistency with Visual Character Policies <i>Cumulative</i>	LS NCC	LS NCC	— —	— —	— —
<b>5.3 Transportation and Traffic</b>					
Traffic and Level of Service Standards <i>Cumulative</i>	S CC	LS SU	▲ ▲	▼ ▼	▼ ▼
Congestion Management <i>Cumulative</i>	S CC	LS SU	▲ ▲	▼ ▼	▼ ▼
Air Traffic Patterns <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Road Safety <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Emergency Access <i>Cumulative</i>	LS NCC	LS NCC	▲ ▲	— —	— —
Consistency with Transportation Policies <i>Cumulative</i>	LS NCC	LS NCC	▲ —	— —	— —
<b>5.4 Air Quality</b>					
Air Quality Violations <i>Cumulative</i>	S CC	SU SU	○ ○	▼ ▼	▼ ▼
Sensitive Receptors <i>Cumulative</i>	PS NCC	LS NCC	○ ○	▼ —	▼ —
Objectionable Odors <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Air Quality Plans <i>Cumulative</i>	S CC	SU SU	○ ○	▼ ▼	▼ ▼
Consistency with Air Quality Policies <i>Cumulative</i>	LS NCC	LS NCC	— —	— —	— —
<b>5.5 Noise</b>					
Excessive Noise Levels <i>Cumulative</i>	S CC	LS LCC	○ ○	▼ ▼	▼ ▼
Excessive Groundborne Vibration <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Permanent Increase in Ambient Noise Levels <i>Cumulative</i>	LS CC	LS LCC	○ ○	— —	— —
Temporary Increase in Ambient Noise Levels <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Aircraft Noise <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
Consistency with Noise Policies <i>Cumulative</i>	LS NCC	LS NCC	— —	— —	— —
<b>5.6 Biological Resources</b>					
Sensitive Plant and Wildlife Species <i>Cumulative</i>	S CC	LS LCC	○ ○	— —	▼ —
Riparian Habitat and Other Sensitive Natural Communities <i>Cumulative</i>	S CC	LS LCC	○ ○	— —	▼ —
Federally Protected Wetlands <i>Cumulative</i>	S CC	LS LCC	○ ○	— —	▼ —
Wildlife Movement Corridors and Nursery Sites <i>Cumulative</i>	LS CC	LS LCC	○ ○	— —	— —

Table 10-5 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
Local Policies, Ordinances, HCP and NCCP <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	▼ —
<b>5.7 Cultural Resources</b>					
Historical Resources <i>Cumulative</i>	LS CC	LS LCC	○ ○	— —	— —
Archaeological Resources <i>Cumulative</i>	PS CC	LS SU	○ ○	— —	▼ ▼
Human Remains <i>Cumulative</i>	PS CC	LS SU	○ ○	— —	▼ ▼
Paleontological Resources <i>Cumulative</i>	PS CC	LS LCC	○ ○	— —	▼ ▼
Consistency with Cultural Resource Policies <i>Cumulative</i>	LS NCC	LS NCC	— —	— —	— —
<b>5.8 Geology and Soils</b>					
Exposure to Seismic Related Hazards <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Soil Erosion or Topsoil Loss <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Soil Stability <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Expansive Soils <i>Cumulative</i>	PS NCC	LS NCC	○ ○	— —	— —
Consistency with Geotechnical Policies <i>Cumulative</i>	LS NCC	LS NCC	— —	— —	— —
Waste Water Disposal Systems <i>Cumulative</i>	LS NCC	LS NCC	○ ○	— —	— —
<b>5.9 Public Services</b>					
<b>Fire and Emergency Medical Services</b>					
Fire and Emergency Medical Facilities	LS	LS	○	—	—
Fire Protection Service Standard	PS	LS	○	▼	▼
Consistency with Fire and Emergency Medical Service Policies <i>Cumulative</i>	PS CC	LS LCC	○ ○	▼ —	▼ —
<b>Police Services</b>					
Police Service Facilities	LS	LS	○	—	—
Police Service Standard	PS	LS	○	▼	▼
Consistency with Police Service Policies <i>Cumulative</i>	PS CC	LS LCC	○ ○	▼ —	▼ —
<b>Schools</b>					
School Facilities	PS	LS	○	—	—
Schools Siting	PS	LS	○	—	—
Consistency with School Policies <i>Cumulative</i>	LS CC	LS LCC	— ○	— —	— —



Table 10-5 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>Libraries</b>					
Library Facilities	LS	LS	○	—	—
Library Service Standard	PS	LS	○	▼	▼
Consistency with Library Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
<b>Parks, Recreation, Open Space, and Trails</b>					
Deterioration of Facilities	PS	LS	○	—	—
New Recreational Facilities	LS	LS	○	—	—
Parks and Recreation Standard	PS	LS	▼	—	—
Consistency with Park Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	LCC	—	—	—
<b>5.10 Global Climate Change</b>					
Compliance with AB 32	LS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Potential Effects of Global Climate Change	PS	SU	▼	▼	▼
<i>Cumulative</i>	CC	SU	○	▼	▼
<b>5.11 Hydrology and Water Quality</b>					
Water Quality Standards	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Groundwater Supplies and Recharge	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Erosion or Siltation	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Surface Runoff	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Exceed Drainage Capacity	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
Degradation of Water Quality	PS	LS	○	▼	▼
<i>Cumulative</i>	NCC	NCC	○	—	—
100-Year Flood Hazards	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Consistency with Water Quality Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
Flooding	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Inundation	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
<b>5.12 Agricultural Resources</b>					
Direct Conversion of Agricultural Resources	PS	SU	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Land Use Zoning Conflicts	PS	LS	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Consistency with Agricultural Resource Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—

Table 10-5 Summary of Alternative Impacts Compared to Proposed Project (continued)

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>5.13 Hazards and Hazardous Materials</b>					
Routine Use and Accidental Release of Hazardous Materials	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Hazards to Schools	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Existing Hazardous Materials Sites	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Airport Hazards	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Emergency Response and Evacuation Plans	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Wildland Fires	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Consistency with Hazard Policies	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Historic Use of Pesticides	PS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
<b>5.14 Housing/Population</b>					
Displacement of Housing and People	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Consistency with Housing and Population Policies	LS	LS	▲	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<b>5.15 Public Utilities</b>					
<b>Water</b>					
New Water Treatment Facilities	LS	LS	○	—	—
Long-Term Water Supply and Entitlements	PS	SU	○	—	—
Compliance with City-wide Supply Thresholds	PS	LS	○	▼	▼
Consistency with Water Supply Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	—	—
<b>Wastewater</b>					
Adequate Wastewater Facilities	PS	LS	○	▼	▼
New Wastewater Treatment Facilities	PS	SU	○	—	—
Consistency with City Engineering Standards	LS	LS	○	—	—
Consistency with Wastewater Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	—	—
<b>Solid Waste</b>					
Sufficient Landfill Capacity	LS	LS	○	—	—
Solid Waste Regulations	LS	LS	○	—	—
Consistency with Solid Waste Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—

**Table 10-5 Summary of Alternative Impacts Compared to Proposed Project (continued)**

Issue Areas	Proposed Project		Alternatives to the Proposed Project		
	Without Mitigation	With Mitigation	No Project (No Build)	Reduced Project Alternative #1 – 2,799 Dwelling Units	Reduced Project Alternative #2 – 1,803 Dwelling Units
<b>Recycled Water</b>					
New Recycled Water Facilities	PS	LS	○	▼	▼
Consistency with Recycled Water Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	▼	▼
<b>Energy</b>					
Energy Resources	S	SU	○	▼	▼
Wasteful Use of Energy	LS	LS	○	—	—
Consistency with Energy Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	▼	▼
<p>▲ Alternative is likely to result in greater impacts to issue when compared to project.                      — Alternative is likely to result in a similar impacts to issue when compared to project.                      ▼ Alternative is likely to result in less impacts to issue when compared to project, however, impacts would still be significant before and/or after mitigation.                      ○ Alternative is likely to result in less impacts to issue when compared to project and impacts would be less than significant and not require mitigation.</p> <p><b>CC</b> = Cumulatively Considerable; <b>LCC</b> = Project would contribute to a cumulative impact, but contribution would less than Cumulatively Considerable; <b>LS</b> = Less Than Significant Impact; <b>NCC</b> = Not Cumulatively Considerable (A cumulatively considerable impact would not occur); <b>PS</b> = Potentially Significant; <b>S</b> = Significant Impact; <b>SU</b> = Significant and Unavoidable Impact</p>					

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## Chapter 12 EIR Preparation

This environmental impact report was prepared by the City of Chula Vista. The City was assisted by Atkins, located at 3570 Carmel Mountain Road, San Diego, California 92130. The following professional staff participated in the preparation of the EIR:

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Chula Vista Fire Department

## **Organizations and Individuals**

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**Otay Ranch Village 9  
Sectional Planning Area Plan  
and Tentative Map  
Final Environmental Impact Report  
Mitigation Monitoring and Reporting Program**

May 2014

CV EIR #10-04  
SCH No. 2010061090

Lead Agency:

City of Chula Vista  
Development Services Department  
276 Fourth Avenue  
Chula Vista, California 91910



# Otay Ranch Village 9 Sectional Planning Area Plan and Tentative Map

## Mitigation Monitoring and Reporting Program

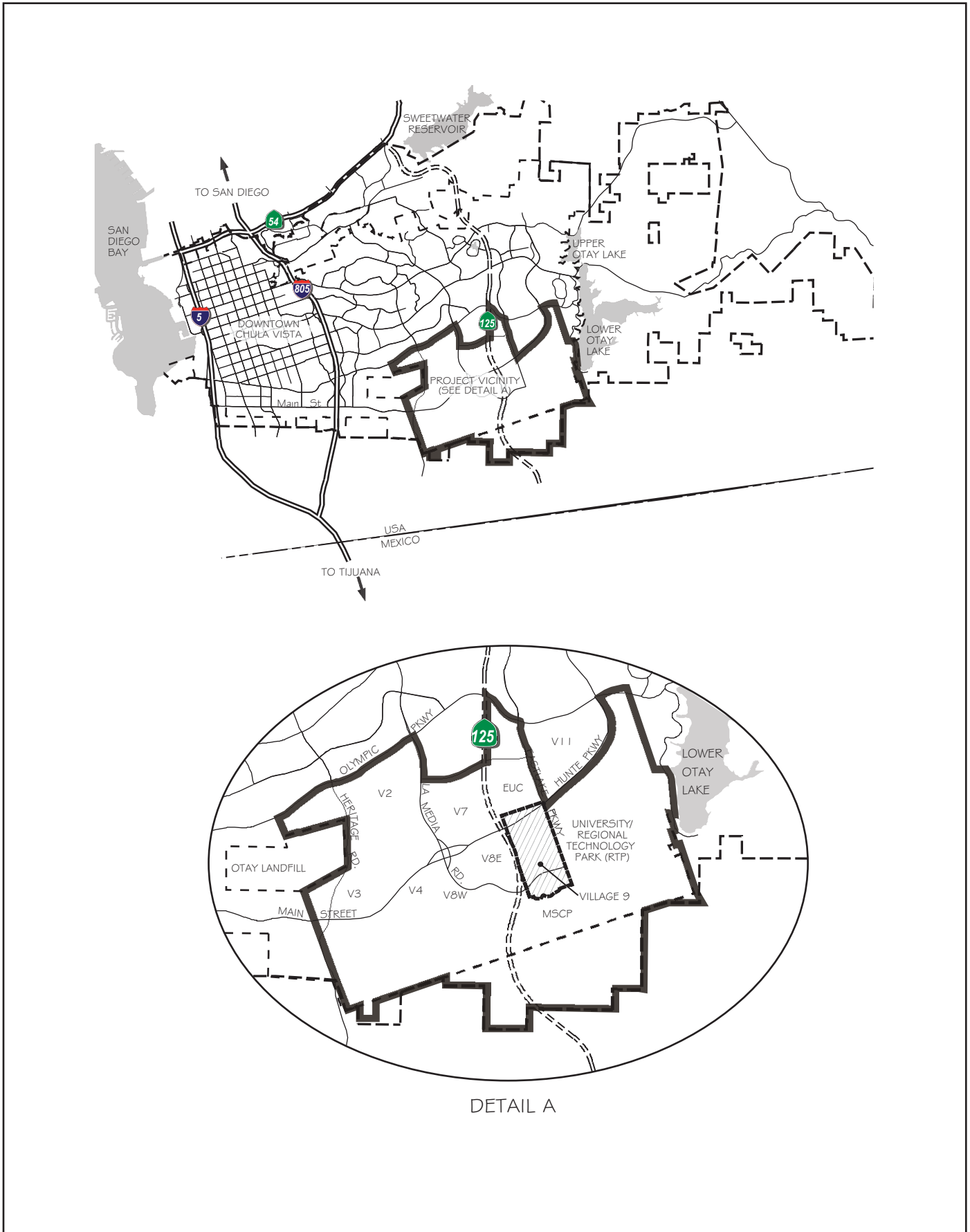
### Introduction

This mitigation monitoring and reporting program (MMRP) was prepared by the City of Chula Vista for the Otay Ranch Village 9 Sectional Planning Area (SPA) Plan and Tentative Map (TM) to comply with Public Resources Code Section 21081.6(a)(1), which requires public agencies to adopt such programs to ensure effective implementation of mitigation measures. This monitoring program is dynamic in that it will undergo changes as additional mitigation measures are identified and additional conditions of approval are placed on the project throughout the project approval process. Pursuant to Public Resources Code Section 21081.6(a)(2), the City of Chula Vista designates the Director of Development Services and the City Clerk as the custodians of the documents or their material which constitute the record of proceedings upon which its decision is based.

This monitoring program will serve a dual purpose of verifying completion of the mitigation identified in the Environmental Impact Report (EIR) and generating information on the effectiveness of the mitigation measures to guide future decisions. The program includes the following:

- Monitor qualifications
- Specific monitoring activities
- Reporting system
- Criteria for evaluating the success of the mitigation measures

The project includes the implementation of the Village 9 SPA Plan. In addition, a TM is proposed to establish subdivision of the site. The project site comprises approximately 323 acres located in the southeastern portion of the Otay Valley Parcel of the Otay Ranch General Development Plan area (Figure 1). The proposed SPA Plan would result in the development of a maximum 3,734 multi-family and 266 single-family residential units; a maximum of 1.5 million square feet (SF) of commercial use; 27.5 acres of urban parks; 19.8 acres for elementary and middle school sites; 5.0 acres for community purpose facility uses; 9.6 acres of open space; and 26.1 arterial roadway rights-of way and SR-125. A 30-foot wide off-site utility corridor is proposed that would extend from the site south. The corridor would include a sewer line that will connect to the existing Salt Creek Sewer Trunk Line, a storm drain to direct drainage to the Otay River, and a paved utility access road, which would provide access to the southern portion of the corridor. The proposed site utilization plan is provided in Figure 2.



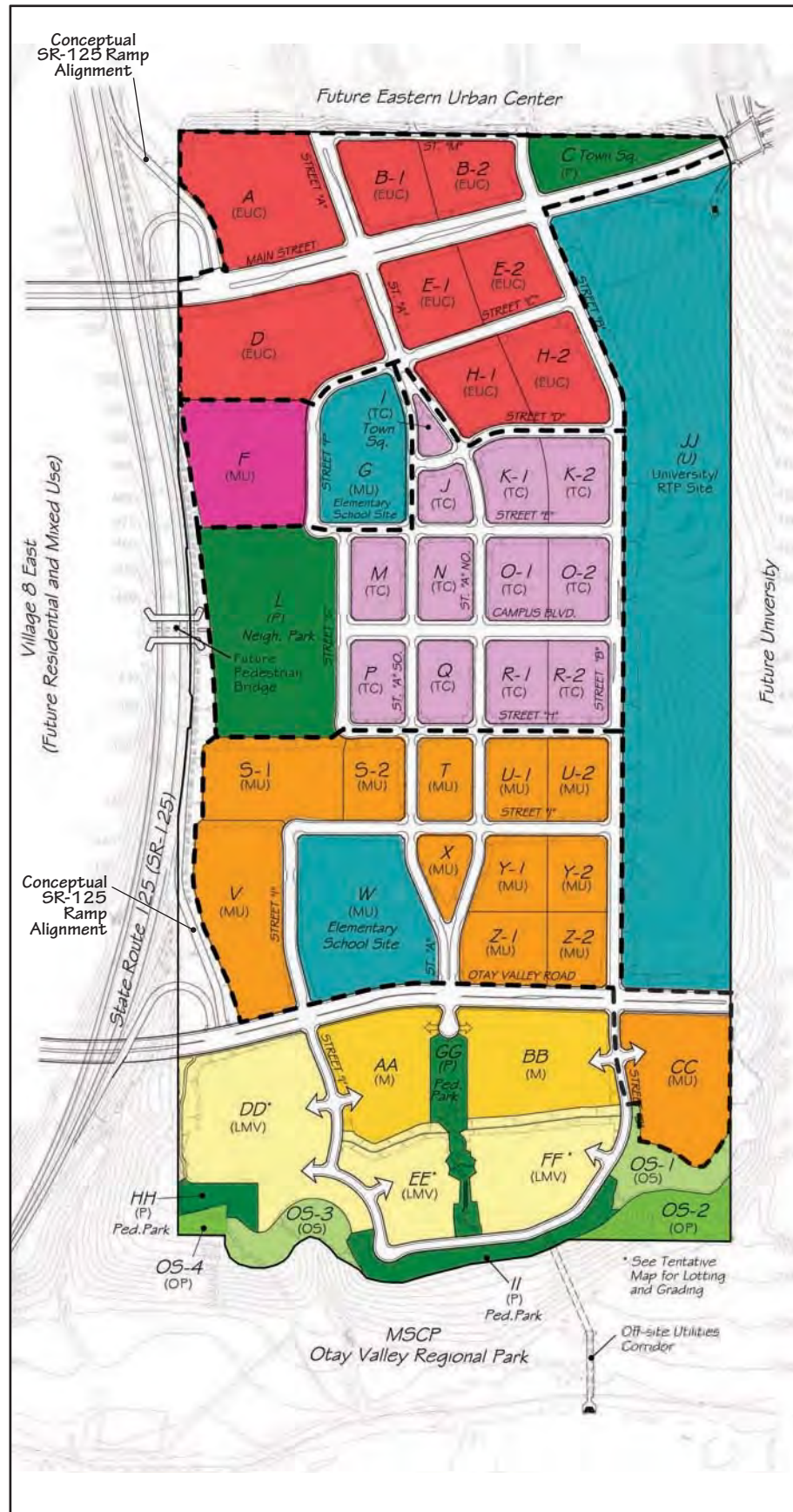
Source: William Hezmalhalch Architects, Inc. 2013

Not to Scale



**PROJECT VICINITY  
FIGURE 1**





**Land Use**

- Eastern Urban Center (EUC) - 28-60 du/ac
- Town Center (TC) - 18-45 du/ac
- Mixed Use (MU) - 10-45 du/ac
- Mixed Use (MU) - 10-27 du/ac
- Medium Density Residential (M)
- Low Medium Density Residential Village (LMV)
- Open Space (OS)
- Open Space (Preserve)
- Park (P)
- University/RTP (U)
- School

--- Boundary of Mixed Use Districts (Master Precise Plan Required, see Section 9.3.7)

\* See Tentative Maps for Lotting

Note: SR-125 ramp locations and designs as shown are conceptual. Final location and design to be determined by Caltrans.

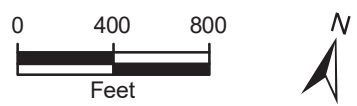
Commercial and Residential				
Eastern Urban Center (EUC) – 28-60 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2,3)</sup>
A	9.5	T-5: UC	380	235
B-1	4.6	T-5: UC	183	115
B-2	3.9	T-5: UC	136	101
D	11.2	T-5: UC	448	278
E-1	4.6	T-5: UC	183	115
E-2	4.2	T-5: UC	168	101
H-1	4.7	T-5: UC	188	115
H-2	5.6	T-5: UC	226	130
<b>Subtotal</b>	<b>48.3</b>		<b>1,912</b>	<b>1,190</b>
Town Center (TC) – 18-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
K-1	3.7	T-4: TC	148	0
K-2	3.8	T-4: TC	152	0
M	3.6	T-4: TC	80	29
N	3.5	T-4: TC	57	52
O-1	3.6	T-4: TC	80	29
O-2	3.6	T-4: TC	80	29
P	3.6	T-4: TC	80	29
Q	3.5	T-4: TC	57	52
R-1	3.6	T-4: TC	80	29
R-2	3.6	T-4: TC	80	29
<b>Subtotal</b>	<b>36.1</b>		<b>894</b>	<b>278</b>
Mixed Use (MU) – 10-45 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
F	8.2	T-4: UN	136	0
G <sup>(2)</sup>	--	T-4: UN	0	0
<b>Subtotal</b>	<b>8.2</b>		<b>136</b>	<b>0</b>
Mixed Use (MU) – 10-27 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	C'ml Sq.Ft. (K) <sup>(2)</sup>
S-1	6.3	T-3: NC	104	0
S-2	3.5	T-3: NC	58	0
T	3.4	T-3: NC	34	0-32
U-1	3.5	T-3: NC	58	0
U-2	3.5	T-3: NC	58	0
V	8.6	T-3: NC	142	0
W <sup>(2)</sup>	--	T-3: NC	0	0
Y-1	3.3	T-3: NC	54	0
Y-2	3.0	T-3: NC	50	0
Z-1	3.7	T-3: NC	61	0
Z-2	2.7	T-3: NC	45	0
CC	7.7	T-3: NC	128	0
<b>Subtotal</b>	<b>49.2</b>		<b>792</b>	<b>32</b>
Mixed Density Residential (M) – 6-11 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	
AA	6.8	T-2: NG	72	
BB	8.4	T-2: NG	89	
<b>Subtotal</b>	<b>15.2</b>		<b>161</b>	
Low Medium Density Residential Village (LMV) – 3-6 du/ac				
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target DU <sup>(2)</sup>	
DD	12.2	T-2: NE	47	
EE	7.1	T-2: NE	26	
FF	8.8	T-2: NE	32	
<b>Subtotal</b>	<b>28.1</b>		<b>105</b>	
<b>TOTAL</b>	<b>185.1 acres</b>		<b>4,000</b>	<b>1,500K<sup>(3)</sup></b>

Public, Quasi Public, and Other				
Community Purpose Facility (CPF) <sup>(4)</sup>				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
J	TC	2.3	SD: CPF	CPF
X	MU	2.7	SD: CPF	CPF
<b>Subtotal</b>		<b>5.0</b>		
Potential School (S) Sites <sup>(5)</sup>				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
G	MU	7.9	T-4: UN	Elementary
W	MU	11.9	T-3: NC	Elementary
<b>Subtotal</b>		<b>19.8</b>		
Parks (P)				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
C	P	3.6	SD: P	Town Square
I	TC	1.5	SD: P	Town Square
L	P	14.8	SD: P	Neighborhood
GG	P	2.9	SD: P	Pedestrian
HH	P	1.3	SD: P	Pedestrian
II	OS	3.4	SD: P	Pedestrian
<b>Subtotal</b>		<b>27.5</b>		
Open Space (OS)				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
OS-1	OS	2.8	T-1: OS	Open Space
OS-2	CVOSP <sup>(6)</sup>	3.3	T-1: OP	Preserve
OS-3	OS	2.8	T-1: OS	Open Space
OS-4	CVOSP <sup>(6)</sup>	0.7	T-1: OP	Preserve
<b>Subtotal</b>		<b>9.6</b>		
Other				
Planning Area	Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
JJ	U	50.0	SD: U	University/RTP
Arterials		17.9		Right-of-Way
SR-125		8.2		Right-of-Way
<b>Subtotal</b>		<b>76.1</b>		
<b>TOTAL</b>		<b>138.0 acres</b>		

**SPA Total Area: 323.1 Gross Acres**

Footnotes:  
<sup>(1)</sup> Transects are defined in Chapter 3 of the SPA  
<sup>(2)</sup> Subject to intensity transfers and minimum retail/commercial square footage requirements  
<sup>(3)</sup> 1,200,000 square feet of office and 300,000 square feet retail; excludes live/work  
<sup>(4)</sup> As defined by CVMC Chapter 19.48  
<sup>(5)</sup> School sites will revert to mixed use if not accepted by the school district  
<sup>(6)</sup> Chula Vista Open Space Preserve

Source: William Hezmalhach Architects, Inc. 2013



**SITE UTILIZATION PLAN  
FIGURE 2**

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The Proposed Project is described in the EIR text in Chapter 3, Project Description. The EIR, incorporated herein as referenced, addressed all environmental issues listed in Appendix G of the CEQA Guidelines.

Public Resources Code section 21081.6 requires monitoring of only those impacts identified as significant or potentially significant. The monitoring program does not address impacts for issues where no mitigation is available and therefore remain unmitigable.

## Mitigation Monitoring Team

The monitoring activities would be accomplished by individuals identified in the attached MMRP table. While specific qualifications should be determined by the City, the monitoring team should possess the following capabilities:

- Interpersonal, decision-making, and management skills with demonstrated experience in working under trying field circumstances;
- Knowledge of and appreciation for the general environmental attributes and special features found in the project area;
- Knowledge of the types of environmental impacts associated with construction of cost-effective mitigation options; and
- Excellent communication skills.

## Program Procedural Guidelines

Prior to any construction activities, meetings should take place between all the parties involved to initiate the monitoring program and establish the responsibility and authority of the participants. Mitigation measures that need to be defined in greater detail will be addressed prior to any project plan approvals in follow-up meetings designed to discuss specific monitoring effects.

An effective reporting system must be established prior to any monitoring efforts. All parties involved must have a clear understanding of the mitigation measures as adopted and these mitigations must be distributed to the participants of the monitoring effort. Those that would have a complete list of all the mitigation measures adopted by the City of Chula Vista would include the City of Chula Vista and its Mitigation Monitor. The Mitigation Monitor would distribute to each Environmental Specialist and Environmental Monitor a specific list of mitigation measures that pertain to his or her monitoring tasks and the appropriate time frame that these mitigations are anticipated to be implemented.

In addition to the list of mitigation measures, the monitors will have mitigation monitoring report (MMR) forms, with each mitigation measure written out on the top of the form. Below the stated mitigation measure, the form will have a series of questions addressing the effectiveness of the mitigation measure. The monitors shall complete the MMR and file it with the Mitigation Monitor following the monitoring activity. The Mitigation Monitor will then include the conclusions of the MMR into an interim and final comprehensive construction report to be submitted to the City. This report will describe the major accomplishments of the monitoring program, summarize problems encountered in achieving the goals of the program, evaluate solutions developed to overcome problems, and provide a list of recommendations for future monitoring programs. In addition, and if appropriate, each Environmental Monitor or Environmental Specialist will be required to fill out and submit a daily log report to the Mitigation Monitor. The daily log report will be used to record and account for the monitoring activities of the monitor. Weekly and/or monthly status reports, as determined appropriate,

will be generated from the daily logs and compliance reports and will include supplemental material (i.e., memoranda, telephone logs, and letters). This type of feedback is essential for the City to confirm the implementation and effectiveness of the mitigation measures imposed on the project.

## **Actions in Case of Noncompliance**

There are generally three separate categories of noncompliance associated with the adopted conditions of approval:

- Noncompliance requiring an immediate halt to a specific task or piece of equipment;
- Infraction that warrants an immediate corrective action, but does not result in work or task delay; and
- Infraction that does not warrant immediate corrective action and results in no work or task delay.

There are a number of options the City may use to enforce this program should noncompliance continue. Some methods that could be used include “stop work” orders, fines and penalties (civil), restitution, permit revocations, citations, and injunctions. It is essential that all parties involved in the program understand the authority and responsibility of the on-site monitors. Decisions regarding actions in case of noncompliance are the responsibility of the City.

## **Summary of Project Impacts and Mitigation Measures**

The following table summarizes the potentially significant project impacts and lists the associated mitigation measures and the monitoring efforts necessary to ensure that the measures are properly implemented. All the mitigation measures identified in the EIR are recommended as conditions of project approval and are stated herein in language appropriate for such conditions. In addition, during various stages of implementation the City will further refine the mitigation measures.

**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
<b>LAND USE AND PLANNING</b>										
A significant land use compatibility impact would occur if the on-site City of San Diego water lines would not be relocated before development of Village 9.	<p><b>5.1-1 Waterline Agreement.</b> Prior to approval of the first final map, the applicant shall provide evidence, satisfactory to the City Engineer, that the:</p> <ul style="list-style-type: none"> <li>i. Applicant has entered into an agreement with the City of San Diego to relocate the City of San Diego waterlines within Village 9 to a location approved by both the City of San Diego and the City of Chula Vista.</li> <li>ii. City of San Diego has abandoned any water main easements not needed as a consequence of the relocation of the City of San Diego waterlines within Village 9.</li> </ul>	ALL	ALL			CCV and City of San Diego				
	<p><b>5.1-2 Waterline Relocation.</b> Prior to issuance of the first grading permit within Village 9, the Applicant shall relocate the City of San Diego waterlines to the satisfaction of the City of San Diego and the City of Chula Vista.</p>		ALL			CCV and City of San Diego				
<b>AESTHETICS/LANDFORM ALTERATION</b>										
New sources of nighttime lighting from parks, mixed-use residential, commercial, multi-family residential, and Community Purpose Facility uses may be incompatible with surrounding development and inconsistent with applicable regulations. Potential impacts associated with light cannot be determined until the location, size, and orientation of future buildings are established. These impacts would be potentially significant.	<p><b>5.2-1 Lighting Plan and Photometric Analysis - Parks.</b> Concurrent with the preparation of site-specific plan(s) for park sites, including the town squares (Planning Areas C and I), Neighborhood Park (Planning Area L), and Pedestrian Parks (Planning Areas GG, HH, and II), and prior to issuance of a building permit for any park, the applicant shall prepare, or in the case of the City being the lead on the preparation of the site specific plan, the applicant shall fund the preparation of a lighting plan and photometric analysis. The plan shall be prepared to the satisfaction of the Development Services Director and evaluate the proposed height, location, and intensity of all exterior lighting for compliance with the City's performance standards for light, and glare (Chula Vista Municipal Code 19.66.100).</p>	ALL	ALL			CCV				

<sup>(1)</sup> SPA - Section Planning Area Plan; TM - Tentative Map; Pre Const - Pre-construction; During Const - During Construction; Post Const - Post-construction; OLC - Otay Land Company

<sup>(2)</sup> CCV - City of Chula Vista



**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	<b>5.2-2 Lighting Plan and Photometric Analysis – New Structures.</b> Concurrent with design review and prior to the issuance of building permits for mixed-use residential, commercial, Community Purpose Facility and multi-family residential, the applicant shall prepare a lighting plan and photometric analysis. The plan shall be prepared to the satisfaction of the Development Services Director (or their designee) and evaluate the proposed height, location, and intensity of all exterior lighting for compliance with the City's performance standards for light, and glare (Chula Vista Municipal Code 19.66.100).		OLC			CCV				
	<b>5.2-3 Shadow and Wind Pattern Analysis.</b> Prior to design review approval for any structure three stories and above, the applicant shall prepare to the satisfaction of the Development Services Director (or their designee), a shadow and wind pattern analysis demonstrating that adjacent shadow-sensitive uses are not permanently shadowed, and/or any other approved City-standard in place at the time the shadow and wind pattern analysis is performed.		OLC			CCV				
The project would have the potential to impact steep slopes until the Landscape Master Plan and subsequent landscape and irrigation construction plans have been approved.	<b>5.2-4 Landscape Master Plan.</b> Prior to issuance of the first final map for Village 9, the applicant shall prepare to the satisfaction of the Development Services Director (or their designee), a Landscape Master Plan. The Landscape Master Plan shall demonstrate compliance with GDP Policies pertaining to softening manufactured slopes, particularly on visible manufactured slopes greater than 25 feet in height, through plant selection, placement, and density, etc.		CCV			CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
<b>TRANSPORTATION/TRAFFIC</b>										
A potentially significant impact would occur related to compliance with the GMO following issuance of the building permit for the 2,463rd dwelling unit for development east of I-805.	<p><b>5.2-1 Olympic Parkway.</b> Heritage Road to Oleander Avenue: Prior to the issuance of the building permit for the 2,463rd dwelling unit for development east of I-805 (commencing from April 4, 2011), the applicant may:</p> <ul style="list-style-type: none"> <li>i. Prepare a traffic study that demonstrates, to the satisfaction of the City Engineer, that the circulation system has additional capacity without exceeding the Growth Management Ordinance traffic threshold standards; or</li> <li>ii. Demonstrate that other improvements are constructed which provide the additional necessary capacity to comply with the Growth Management Ordinance traffic threshold to the satisfaction of the City Engineer; or</li> <li>iii. Agree to the City Engineer's selection of an alternative method of maintaining Growth Management Ordinance traffic threshold compliance; or</li> <li>iv. Enter into agreement, approved by the City, with other Otay Ranch applicants that alleviates congestion and achieves Growth Management Ordinance traffic threshold compliance for Olympic Parkway. The agreement will identify the deficiencies in transportation infrastructure that will need to be constructed, the parties that will construct said needed infrastructure, a timeline for such construction, and provide assurances for construction, in accordance with the City's customary requirements, for said infrastructure.</li> <li>v. If Growth Management Ordinance compliance cannot be achieved through i, ii, iii, or iv above, then the City may, in its sole discretion, stop issuing new building permits within the project area, after building permits</li> </ul>	ALL	ALL			CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	<p>for 2,463 dwelling units have been issued for any development east of I-805 after April 4, 2011, until such time that Growth Management Ordinance traffic threshold standard compliance can be assured to the satisfaction of the City Manager.</p> <p>These measures shall constitute full compliance with growth management objectives and policies in accordance with the requirements of the General Plan, Chapter 10 with regard to traffic thresholds set forth in the Growth Management Ordinance.</p>									
According to Section 12.24 of the City’s municipal code, access related impacts would occur if access and frontage improvements are not provided concurrent with development.	<b>5.3-2 Main Street/Village 9 Street A.</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or install a traffic signal at the intersection of Main Street/Village 9 Street A.	ALL	ALL			CCV				
	<b>5.3-3 Main Street.</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Main Street from Village 9 Street A to Eastlake Parkway as a six-lane gateway.	ALL	ALL			CCV				
	<b>5.3-4 Village 9 Street A.</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Village 9 Street A from Main Street to Village 9 Street C as four-lane roadway, and from Village 9 Street C to Otay Valley Road as a two-lane, two-way roadway.	ALL	ALL			CCV				
	<b>5.3-5 Otay Valley Road.</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from Village 9 Street I to Village 9 Street A as four-lane major roadway.	ALL	ALL			CCV				
	<b>5.3-6 Village 9 Street I.</b> Prior to issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Village 9 Street I south of Otay Valley Road as a two-lane roadway.	ALL	ALL			CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	<b>5.3-7 Otay Valley Road.</b> Prior to issuance of the final map that contains the 1,312 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road as a four-lane major roadway from Village 9 Street A to Village 9 Street B and install a traffic signal at the Otay Valley Road/Village 9 Street A intersection when warranted, or construct the improvements at the 1 <sup>st</sup> final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever comes first.	ALL	ALL			CCV				
	<b>5.3-8 Village 9 Street A.</b> Prior to issuance of the final map that contains the 1,312 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct two lanes to form a couplet and restripe Street A as two one-way segments (two northbound and two southbound lanes). The applicant shall construct the south end of the couplet to Otay Valley Road as a four-lane roadway and install traffic signals or stop control at internal intersections where appropriate, or construct the improvements at the 1 <sup>st</sup> final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.	ALL	ALL			CCV				
	<b>5.3-9 Campus Boulevard.</b> Prior to issuance of the final map that contains the 1,312 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Campus Boulevard from Village 9 Street G to Village 9 Street B as a two-lane roadway, or construct the improvement at the 1 <sup>st</sup> final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.	ALL	ALL			CCV				
	<b>5.3-10 Village 9 Street B.</b> Prior to issuance of the final map that contains the 1,312 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Street B from Campus Boulevard to its terminus south of Otay Valley Road as a two-lane roadway, with dedicated transit lanes from Campus Boulevard to Otay Valley Road, or construct the improvement at the 1 <sup>st</sup> final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.	ALL	ALL			CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	<b>5.3-11 Village 9 Street I.</b> Prior to issuance of the final map that contains the 1,312 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Street I from Village 9 Street A to Otay Valley Road as a two-lane roadway, or construct the improvement at the 1 <sup>st</sup> final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.	ALL	ALL			CCV				
	<b>5.3-12 Village 9 Street A.</b> Prior to issuance of the final map that contains the 3,074 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Village 9 Street A from the northern boundary of Village 9 to Main Street as a four-lane roadway and modify the traffic signal at the Main Street/Village 9 Street A intersection, or construct the improvement at the 1 <sup>st</sup> final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.	ALL	ALL			CCV				
	<b>5.3-13 Village 9 Street B.</b> Prior to issuance of the final map that contains the 3,074 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Village 9 Street B from the northern boundary of Village 9 to Campus Boulevard as a two-lane roadway with dedicated transit lanes and install a traffic signal at the Main Street/Village 9 Street B intersection, or construct the improvement at the 1 <sup>st</sup> final map for the applicable planning areas as listed in Table 4.1.4 of the Public Facilities Finance Plan, whichever occurs first.	ALL	ALL			CCV				
<b>Direct Impacts Existing Plus Project</b> <ul style="list-style-type: none"> <li>■ Olympic Pwy/I-805 NB ramps (AM-LOS F)</li> <li>■ Olympic Pwy/Brandywine Ave (PM-LOS E)</li> <li>■ Olympic Pwy/La Media Rd (AM-LOS E)</li> </ul>	<b>5.3-14 Birch Road/La Media Road, Birch Road/Eastlake Parkway, and Main Street/Eastlake Parkway Intersections; Birch Road from La Media to SR-125; Magdalena Avenue from Birch Road to Main Street; and Eastlake Parkway from Birch Road to Main Street.</b> Prior to issuance of the final map that contains the 3,074 <sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Main Street from La Media Road to Village 9 Street A, including the construction of an overcrossing at SR-125.	ALL	ALL			CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
<ul style="list-style-type: none"> <li>■ Birch Rd/La Media Rd (AM-LOS F, PM-LOS F)</li> <li>■ Birch Rd/Eastlake Pwy (AM-LOS F, PM-LOS F)</li> <li>■ Main St/Eastlake Pwy (AM-LOS F, PM-LOS F)</li> <li>■ Olympic Pwy from I-805 to Brandywine Ave (LOS D)</li> <li>■ Olympic Pwy from Brandywine Ave to Heritage Rd (LOS E)</li> <li>■ Olympic Pwy from Heritage Rd to La Media Rd (LOS F)</li> <li>■ Magdalena Ave from Birch Rd to Main St (LOS F)</li> <li>■ Eastlake Pwy from Birch Rd to Main St (LOS D)</li> </ul>	<p><b>5.3-15 Birch Road/SR-125 Northbound Ramps, Birch Road/Eastlake Parkway, and Main Street/I-805 Northbound Ramps Intersections; Birch Road, SR-125 to Eastlake Parkway; Main Street, I-805 to Brandywine Avenue; Main Street, Brandywine Avenue to Heritage Road:</b> Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct SR-125 northbound and southbound ramps at Main Street.</p>	ALL	ALL			CCV				
<ul style="list-style-type: none"> <li>■ Birch Rd/La Media Rd (AM-LOS F, PM-LOS F)</li> <li>■ Birch Rd/Eastlake Pwy (AM-LOS F, PM-LOS F)</li> <li>■ Main St/Eastlake Pwy (AM-LOS F, PM-LOS F)</li> <li>■ Birch Rd from La Media Rd to SR-125 (LOS F)</li> <li>■ Magdalena Ave from Birch Rd to Main St (LOS F)</li> <li>■ Eastlake Pwy from Birch Rd to Main St (LOS F)</li> </ul>	<p><b>5.3-16 Main Street/La Media Road Couplet and Main Street/Magdalena Avenue Intersections; and Eastlake Parkway, Birch Road to Main Street:</b> Prior to issuance of the final map that contains the 3,407<sup>th</sup> equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from the Main Street to Village 9 Street I, including the construction of an overcrossing at SR-125.</p>	ALL	ALL			CCV				
<p><u>Year 2025</u></p> <ul style="list-style-type: none"> <li>■ Birch Rd/La Media Rd (AM-LOS F, PM-LOS F)</li> <li>■ Birch Rd/Eastlake Pwy (AM-LOS F, PM-LOS F)</li> <li>■ Main St/Eastlake Pwy (AM-LOS F, PM-LOS F)</li> <li>■ Birch Rd from La Media Rd to SR-125 (LOS F)</li> <li>■ Magdalena Ave from Birch Rd to Main St (LOS F)</li> <li>■ Eastlake Pwy from Birch Rd to Main St (LOS F)</li> </ul> <p><u>Year 2030</u></p> <ul style="list-style-type: none"> <li>■ Birch Rd/SR-125 NB ramps (LOS F-AM Peak Hour)</li> <li>■ Birch Rd/Eastlake Pwy (AM-LOS F, PM-LOS E)</li> <li>■ Main St/I-805 NB ramps (PM-LOS E)</li> </ul>	<p><b>5.3-17</b> To mitigate the project’s cumulative impact on the following roadway segments and intersections, prior to issuance of each building permit, the applicant shall pay the Chula Vista Transportation Development Impact Fee:</p> <ul style="list-style-type: none"> <li>i. Olympic Parkway/I-805 northbound ramps intersection</li> <li>ii. Olympic Parkway/Brandywine Avenue intersection</li> <li>iii. Olympic Parkway from I-805 to Brandywine</li> <li>iv. Olympic Parkway from Brandywine Avenue to Heritage Road</li> <li>v. Olympic Parkway from Heritage Road to La Media Road</li> <li>vi. Birch Road from La Media Road to SR-125</li> <li>vii. Birch Road/La Media Road intersection and Main Street/I-805 southbound ramps intersection</li> <li>viii. Heritage Road from Main Street to Avenida de las Vistas</li> <li>ix. Main Street/Eastlake Parkway intersection</li> </ul>	ALL	ALL			CCV				

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<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
<ul style="list-style-type: none"> <li>■ Main St/La Media Couplet (AM-LOS F, PM-LOS F)</li> <li>■ Main St/Magdalena Ave (AM-LOS F, PM-LOS F)</li> <li>■ Birch Rd from SR-125 to Eastlake Pwy (LOS F)</li> <li>■ Main St from I-805 to Brandywine Ave (LOS D)</li> <li>■ Main St from Brandywine to Heritage Rd (LOS D)</li> <li>■ Eastlake Pwy from Birch Rd to Main St (LOS D)</li> </ul> <p><b>Cumulative Impacts</b></p> <p><u>Year 2020</u></p> <ul style="list-style-type: none"> <li>■ Olympic Pwy/I-805 NB ramps (AM-LOS F)</li> <li>■ Olympic Pwy/Brandywine Ave (PM-LOS F)</li> <li>■ Olympic Pwy from I-805 NB ramps to Brandywine Ave (LOS D)</li> <li>■ Olympic Pwy from Brandywine Ave to Heritage Rd (LOS E)</li> <li>■ Olympic Pwy from Heritage Rd to La Media Rd (LOS E)</li> <li>■ Heritage Rd from Main St to Avenida de La Vistas (LOS F)</li> </ul> <p><u>Year 2025</u></p> <ul style="list-style-type: none"> <li>■ Olympic Pwy from Heritage Rd to La Media Rd (LOS F)</li> </ul> <p><u>Year 2030</u></p> <ul style="list-style-type: none"> <li>■ Birch Rd/La Media Rd (AM-LOS F, PM-LOS F)</li> <li>■ Main St/I-805 SB ramps (PM-LOS E)</li> <li>■ Main St/Eastlake Pwy (AM-LOS F)</li> <li>■ Birch Rd from La Media Rd to SR-125 (LOS F)</li> </ul>	<p><b>5.3-18:</b> The Year 2020 scenario assumes the following intersection and roadway improvements:</p> <ul style="list-style-type: none"> <li>i. Construction of Main Street/La Media Road intersection</li> <li>ii. Construction of Main Street /Magdalena Avenue intersection</li> <li>iii. Construction of La Media Road from Birch Road to Main Street roadway segment.</li> <li>iv. Construction of Otay Valley Road from Village 9 Street A to the University site.</li> </ul> <p>If the project equivalent dwelling unit in Village 9 is completed prior to these improvements being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:</p> <ul style="list-style-type: none"> <li>i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or</li> <li>ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or</li> <li>iii. Applicant shall construct the missing roadway links and receive a transportation development impact fee credit for those improvements as applicable; or</li> <li>iv. An alternative measure is selected by the city in accordance with the city of Chula Vista Growth Management Ordinance.</li> <li>v. All to the satisfaction of the City Engineer.</li> </ul>	ALL	ALL			CCV				

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<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
<p>■ Heritage Rd from Main St to Entertainment Cir (LOS E)</p> <p>■ Heritage Rd from Entertainment Cir to Avenida de Las Vistas (LOS D)</p> <p>If the assumed roadway improvements are not in place prior to commencement of each scenario, additional traffic impacts could occur.</p>	<p><b>5.3-19:</b> The Year 2025 scenario assumes the following intersection and roadway improvements:</p> <ul style="list-style-type: none"> <li>i. Construction of Heritage Road from Olympic Parkway to Main Street; re-stripe southbound Heritage Road from Olympic Parkway to Main Street to include dual left turn lanes, three through lanes, and one right turn lane</li> <li>ii. Widening of Heritage Road from Main Street to Avenida de las Vistas from a Class II Collector to a six-lane Prime</li> <li>iii. Construction of Santa Victoria Road from Heritage Road to La Media Road</li> <li>iv. Construction of Main Street from La Media Road to Magdalena Avenue</li> <li>v. Construction of Olympic Parkway/Santa Victoria Road intersection</li> <li>vi. Construction of Santa Victoria/Heritage Road intersection</li> </ul> <p>If the project equivalent dwelling unit limit for study Year 2020 (1,312 equivalent dwelling units) is exceeded prior to these roadway segments being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:</p> <ul style="list-style-type: none"> <li>i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or</li> <li>ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or</li> </ul>	ALL	ALL			CCV				

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<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance. v. All to the satisfaction of the City Engineer.									
	<p><b>5.3-20:</b> The Year 2030 scenario assumes the following roadway improvements:</p> i. Construction of Main Street from Heritage Road to La Media Road ii. Construction of Village Path pedestrian/bicycle bridge over SR-125 to provide non-motorized access between Village 9 and Village 8 East <p>If the project equivalent dwelling unit limit for study Year 2025 (3,074 equivalent dwelling units) is exceeded prior to these intersections or roadway segments being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:</p> i. Development in Village 9 shall stop until those assumed future roadways are constructed by others; or ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. A number of factors, including changes to the tolling structure at SR-125, may affect the traffic patterns in the Otay Ranch. Additional traffic analysis of the roadway network and levels of service assessment may be necessary to determine if such improvements are necessary and the scope and timing of additional circulation improvements; or iii. Applicant shall construct the missing roadway links and receive Transportation Development Impact Fee credit for those improvements as applicable; or	ALL	ALL			CCV				

<sup>(1)</sup> SPA - Section Planning Area Plan; TM - Tentative Map; Pre Const - Pre-construction; During Const - During Construction; Post Const - Post-construction; OLC - Otay Land Company

<sup>(2)</sup> CCV - City of Chula Vista

**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	iv. An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance. v. All to the satisfaction of the City Engineer.									
	<b>5.3-21:</b> Prior to issuance of the final map that contains the 3,407 <sup>th</sup> equivalent dwelling unit, the applicant shall install traffic signals at the Otay Valley Road/Street I and Otay Valley Road/Street B intersections.	ALL	ALL			CCV				

**AIR QUALITY**

Construction of the project would exceed the significance thresholds for nitrogen oxides, PM10, and PM2.5 during grading, and the nitrogen oxide threshold during surface improvements (paving). Simultaneous construction activities would combine to exceed the significance thresholds VOC emissions. The project would exceed the daily regional thresholds for nitrogen oxides, VOCs, and PM10 during operation of the development in Village 9.  Implementation of the project would exceed the growth projections in the Regional Air Quality Strategy and would exceed the significant thresholds for ozone precursors and particulate matter during construction and operation.	<b>5.4-1 Short-term Air Quality Violations Reduction Measures.</b> The following techniques to reduce construction emissions shall be implemented during all construction activities: i. Minimize simultaneous operation of multiple construction equipment units (i.e., phase construction to minimize impacts). ii. Use low pollutant-emitting construction equipment. iii. Use electrical construction equipment as practical. iv. Use catalytic reduction for gasoline-powered equipment. v. Use injection timing retard for diesel-powered equipment. vi. Water the construction area twice daily to minimize fugitive dust. vii. Stabilize (for example hydroseed) graded areas as quickly as possible to minimize fugitive dust. viii. Pave permanent roads as quickly as possible to minimize dust.			OLC		CCV				
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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
Construction of the project would exceed the significance thresholds for nitrogen oxides, PM <sub>10</sub> , and PM <sub>2.5</sub> during grading, and the nitrogen oxide threshold during surface improvements (paving). Simultaneous construction activities would combine to exceed the significance thresholds VOC emissions. The project would exceed the daily regional thresholds for nitrogen oxides, VOCs, and PM <sub>10</sub> during operation of the development in Village 9. Implementation of the project would exceed the growth projections in the Regional Air Quality Strategy and would exceed the significant thresholds for ozone precursors and particulate matter during construction and operation.	<p><b>5.4-2 Dust Control Measures.</b> Mitigation of PM<sub>10</sub> impacts requires active dust control during construction. As a matter of standard practice, the City of Chula Vista shall require the following standard construction measures be included on all grading plans to the satisfaction of the City Engineer, and shall be implemented during construction to the extent applicable:</p> <ul style="list-style-type: none"> <li>i. All unpaved construction areas shall be sprinkled with water or other acceptable San Diego Air Pollution Control District dust control agents twice daily during dust-generating activities to reduce dust emissions. Additional watering or acceptable Air Pollution Control District dust control agents shall be applied during dry weather or on windy days until dust emissions are not visible.</li> <li>ii. Trucks hauling dirt and debris shall be properly covered to reduce windblown dust and spills.</li> <li>iii. A 20-mile-per-hour speed limit on unpaved surfaces shall be enforced.</li> <li>iv. On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce re-suspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.</li> <li>v. On-site stockpiles of excavated material shall be covered or watered.</li> <li>vi. Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the city and/or Air Pollution Control District to reduce dust generation.</li> </ul>		ALL	ALL		CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	<p>vii. To the maximum extent feasible:</p> <ul style="list-style-type: none"> <li>a. Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction activities.</li> <li>b. Catalytic reduction for gasoline-powered equipment shall be used.</li> </ul> <p>viii. Equip construction equipment with pre-chamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of nitrogen oxides, to the extent available and feasible.</p> <p>ix. Electrical construction equipment shall be used to the extent feasible.</p> <p>x. The simultaneous operations of multiple construction equipment units shall be minimized (i.e., phase construction to minimize impacts).</p>									
	<p><b>5.4-3 Construction Best Management Practices.</b> During all construction activities for the project, the project applicant shall ensure implementation of the following best management practices to reduce the emissions of nitrogen oxides and fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>). Prior to issuance of a grading permit, the following best management practices shall be included on all grading plans to the satisfaction of the City Engineer and shall be implemented during construction to the extent applicable:</p> <ul style="list-style-type: none"> <li>i. All construction equipment shall be outfitted with best available control technology devices certified by California Air Resources Board. A copy of each unit's best available control technology documentation shall be provided at the time of mobilization of each applicable unit of equipment.</li> <li>ii. Approach routes to the site shall be cleaned daily of construction-related dirt.</li> </ul>		ALL	OLC		CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
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	iii. Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry. iv. Install wheel washers or rumble plates adjacent to a paved apron prior to any vehicle entry on public roads. v. Remove any visible track-out into traveled public streets within 30 minutes of occurrence. vi. Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred. vii. Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads. viii. General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues should turn their engines off when not in use to reduce vehicle emissions. Construction emissions should be phased and scheduled to avoid emissions peaks and shall be discontinued during second stage smog alerts. ix. During construction, site grading activities within 500 feet of a school in operation shall be discontinued or all exposed surfaces shall be watered to minimize dust transport off site to the maximum degree feasible, when the wind velocity is greater than 15 miles per hour in the direction of the school.									

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**MITIGATION MONITORING AND REPORTING PROGRAM**

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Compliance with San Diego Air Pollution Control District standards is required to reduce impacts associated with risk of toxic exposure to sensitive receptors to less than significant.	<b>5.4-4 San Diego Air Pollution Control District Toxic Air Contaminants Emission Criteria Compliance.</b> Prior to approval of the building permit for any uses that are regulated for toxic air contaminants emissions by the San Diego Air Pollution Control District, the project applicant shall demonstrate to the satisfaction of the Development Services Director (or their designee) that the use complies with established criteria (such as those established by San Diego Air Pollution Control District Rule 1200 and California Air Resources Board). Specifically, gas stations would not be allowed to be constructed within 50 feet of a sensitive receptor, in compliance with California Air Resources Board siting recommendations		ALL			CCV and San Diego Air Pollution Control District				
<b>NOISE</b>										
Implementation of the project would have the potential to result in exposure to excessive noise levels from traffic noise and operational sources including HVAC equipment, commercial equipment, and recreational facilities. Short-term increases in noise levels would remain significant until the proposed roadway system is complete.  Construction of the project would have the potential to generate noise levels that would significantly impact biological resources (see Mitigation Measures 5.6-3, 5.6-6, 5.6-7, 5.6-8, 5.6-9, and 5.6-11).	<b>5.5-1 Noise Attenuation in the Urban Center (Planning Area D), Urban Neighborhood (Planning Area F), and Neighborhood Center Zones (Planning Areas S-1 and V), and Neighborhood Park (Planning Area L).</b> Prior to the approval of grading permits for residential or park development along the western edge of Planning Areas D, F, L, S-1, and V in the Urban Center, Urban Neighborhood Edge, Neighborhood Center, and Neighborhood Park zones (as shown in Figure 3 4, Transect Zones), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. The site plan and acoustical analysis shall include, but not be limited to the following:  i. Location and height of the noise barriers in accordance with Figure 5.5-4. Heights are provided relative to final pad elevation. Required heights may be achieved through construction of walls, berms or a wall/berm combination;	OLC	ALL			CCV				

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	ii. A detailed analysis which demonstrates that barriers and/or setbacks have been incorporated into the project design, such that noise exposure to residential receivers placed in all useable outdoor areas, including multi-family residential patios and balconies, are at or below 65 dBA CNEL; and  iii. Should grading, lot configuration, and/or traffic assumptions change during the processing of any final maps, the barriers shall be refined to reflect those modifications.  The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.									
	<b>5.5-2 Site-Specific Acoustic Analysis – Single-family Residences.</b> Concurrent with design review and prior to the approval of building permits for single-family residential development where the exterior noise level exceeds 65 dBA CNEL (Planning Areas AA and DD), the applicant shall prepare an acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that the proposed building plans ensure that interior noise levels due to exterior noise sources will be at or below 45 dBA CNEL in any habitable room. The analysis must also identify Sound Transmission Loss rates of each window. Design-level architectural plans will be available during design review and will permit the accurate calculation of transmissions loss for habitable rooms. For these lots, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 dBA CNEL. Consequently, the design for these units may need to include ventilation or an air conditioning system to provide a habitable interior environment with the windows closed based on the result on the interior acoustical analysis. The Applicant	OLC	ALL			CCV				

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		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	shall construct and/or install the required noise attenuation features that would reduce sound levels to 45 dBA CNEL in any habitable room.									
	<p><b>5.5-3 Site-Specific Acoustic Analysis – Multi-family Residences.</b> Concurrent with design review and prior to the approval of building permits for multi-family areas where first and/or upper floor exterior noise levels exceed 60 dBA CNEL and/or where required outdoor area (patios or balconies) noise levels exceed 65 dBA CNEL (Planning Areas A, B-1, B-2, D, E-1, E-2, F, H-1, K-1, M, N, O-1, P, R-1, S-1, S-2, T, U-1, V, Z-1, and Z-2), the applicant shall 1) prepare an acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that the proposed building plans ensure that interior noise levels due to exterior noise sources will be at or below California’s Title 24 Interior Noise Standards (i.e., 45 dBA CNEL) in any habitable room, and 2) that all outdoor useable areas are not exposed to noise levels in excess of the City’s Noise Compatibility Guidelines for outdoor use areas (i.e., 65 dBA CNEL). The analysis must also identify Sound Transmission Loss rates of each window. Design-level architectural plans will be available during design review and will permit the accurate calculation of transmission loss for habitable rooms. For these areas, it may be necessary for the windows to be able to remain closed to ensure that interior noise levels meet the interior standard of 45 dBA CNEL. Consequently, the design for buildings in these areas may need to include a ventilation or air conditioning system to provide a habitable interior environment with the windows closed based on the result on the interior acoustical analysis. The Applicant shall construct and/or install the required noise attenuation features that would 1) reduce sound levels to 45 dBA CNEL in any habitable room, and 2) that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.</p>	OLC	ALL			CCV				

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		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	<p><b>5.5-4 Site-Specific Acoustic Analysis – Non-Residential Noise Sensitive Land Use.</b> Concurrent with Design Review and prior to the approval of building permits for any non-residential Noise Sensitive Land Uses (schools, neighborhood parks, outdoor use areas, some Community Purpose Facility use, etc.) area where exterior noise levels exceed 65 dBA CNEL (Planning Areas A, B-1, B-2, C, D, F, E-1, E-2, L, S-1, V, and W), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. Measures to reduce noise levels may include, but would not be limited to, setback of structures from the roadway, installing acoustic barriers, or orienting outdoor activity areas away from roadways so that surrounding structures provide noise attenuation. Roof-ceiling assemblies making up the building envelope shall have a sound transmission class value of at least 50, and exterior windows shall have a minimum sound transmission class of 30 in compliance with the California Green Building Standards Code. The Applicant shall construct and/or install the required noise attenuation features would reduce sound levels to 65 dBA CNEL at outdoor usable areas. If Planning Area W is ultimately developed with multi-family residential uses rather than a school, this planning area would be subject to mitigation measure 5.5-3.</p>	OLC	ALL			CCV				
	<p><b>5.5-5 Site-Specific Acoustic Analysis – Office Uses.</b> Concurrent with Design Review and prior to the approval of building permits for any office use within Planning Areas A, B-1, B-2, D, E-1, and E-2, the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that exterior noise levels at the property line are at or below the City’s Noise Compatibility Guidelines for</p>	OLC	ALL			CCV				

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		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	office uses (i.e., 70 dBA CNEL). Measures to reduce noise levels may include, but would not be limited to, setback of structures from the roadway, installing acoustic barriers, or, in mixed-use buildings, orienting offices away from roadways so that surrounding structures provide noise attenuation. The Applicant shall construct and/or install the required noise attenuation features would reduce sound levels to 70 dBA CNEL at the property line.									
	<b>5.5-6 Shielded Private Outdoor Usable Space for Urban Center Residences.</b> Concurrent with Design Review and prior to the approval of building permits for any private usable outdoor space such as patios, balconies, or outdoor dining areas for new residential or commercial development along Main Street or Street B (Planning Areas A, B-1, B-2, D, E-1, and E-2), the applicant shall submit a site design plan and subsequent acoustical analysis demonstrating to the satisfaction of the Development Services Director (or their designee) that all outdoor useable areas are not exposed to noise levels in excess of 65 dBA CNEL. The Applicant shall construct and/or install the required noise attenuation features that would reduce sound levels to 65 dBA CNEL at outdoor usable areas.	OLC	ALL			CCV				
	<b>5.5-7 HVAC Mechanical Equipment Shielding.</b> Concurrent with Design Review and prior to the approval of building permits for non-residential development, the applicant shall submit a design plan for the project demonstrating to the satisfaction of the Development Services Director (or their designee) that the noise level from operation of mechanical equipment will not cumulatively exceed the noise level limits for a designated receiving land use category as specified in Section 19.68.030 of the City of Chula Vista Noise Ordinance. Noise control measures may include, but are not limited to, the selection of quiet equipment, equipment setbacks, silencers, and/or acoustical louvers. The Applicant shall	OLC	ALL			CCV				

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	construct and/or install the required noise attenuation features that would reduce sound levels to allowable Chula Vista Noise Ordinance Standards.									
	<b>5.5-8 Site Specific Acoustic Analysis - Neighborhood Park.</b> Concurrent with the preparation of site-specific plan(s), and prior to the approval of a precise grading plan for the Neighborhood Park or Planning Area F (whichever occurs first), the project applicant shall prepare, or in the case of the City being the lead on the preparation of the site specific plan, the project applicant shall fund the preparation of an acoustical analysis to ensure that noise levels generated from any active uses at the Neighborhood Park, such as sports fields, shall not exceed the receiving land use category's exterior noise limits as identified in the Chula Vista Noise Ordinance. The project applicant shall be responsible for the preparation of the acoustical analysis and to fund the implementation of any measures recommended as a result of the analysis. Measures to reduce noise levels may include, but would not be limited to, siting of structures or buildings either at the Neighborhood Park or at the receiving land use site in order to provide setbacks between active areas of the Neighborhood Park and adjacent noise sensitive uses, or construction of a wall to provide noise attenuation. Final noise attenuation design would be determined by a site-specific acoustic analysis conducted by a qualified acoustical engineer, to the satisfaction of the Development Services Director (or their designee).	ALL	ALL			CCV				

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<b>BIOLOGICAL RESOURCES</b>										
Implementation of the project would result in significant direct and indirect impacts to several sensitive species, including snake cholla, least Bell’s vireo, southern California rufus-crowned sparrow, burrowing owl, raptors and breeding migratory birds. The project would result in significant direct impact to broom baccharis scrub, coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, disturbed maritime succulent scrub, chaparral, non-native grasslands, riparian scrub, and tamarisk scrub. Army Corps of Engineers regulated jurisdictional waters and California Department of Fish and Wildlife jurisdictional channels would be significantly impacted by development of the project.	<b>5.6-1 Maritime Succulent Scrub Restoration Plan.</b> Prior to the issuance of any land development permits (including clearing and grubbing or grading permits) the applicant shall prepare a restoration plan to restore impacted maritime succulent scrub at 1:1 ratio, pursuant to the Otay Ranch Resource Management Plan. A total of 5.17 acres of maritime succulent scrub will require restoration. The restoration plan shall include, at a minimum, an implementation strategy; species salvage and relocation, appropriate seed mixtures and planting method; irrigation; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The maritime succulent scrub restoration plan shall be prepared by a City-approved biologist pursuant to the Otay Ranch Resource Management Plan restoration requirements. The applicant shall also be required to implement the revegetation plan subject to the oversight and approval of the Development Services Director (or their designee).	ALL	ALL			CCV				
	<b>5.6-2 Resource Salvage Plan.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall prepare a resource salvage plan for areas with salvageable resources, including, but not limited to, snake cholla Chula Vista Narrow Endemic Species, dot-seed plantain (Quino checkerspot butterfly larval host plant), coast barrel cactus, other cacti species, and San Diego sunflower. The resource salvage plan shall, at a minimum, evaluate options for plant salvage and relocation, including native plant mulching, selective soil salvaging, application of plant materials on manufactured slopes, and application/relocation of resources within the Preserve. Relocation efforts may include seed collection and/or transplantation to a suitable receptor site and will be based on the most reliable methods of successful	ALL	ALL			CCV				

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	relocation. The program shall contain a recommendation for method of salvage and relocation/application based on feasibility of implementation and likelihood of success. The program shall include, at a minimum, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. The resource salvage plan shall be prepared by a City-approved biologist. The applicant shall also be required to implement the resource salvage plan subject to the oversight of the Development Services Director (or their designee).									
	<b>5.6-3 Coastal California Gnatcatcher, Coastal Cactus Wren, and Least Bell's Vireo Pre-Construction Survey.</b> For any work proposed between February 15 and August 15 (March 15 and September 15 for least Bell's vireo), a pre-construction survey for the coastal California gnatcatcher, coastal cactus wren, and least Bell's vireo shall be performed in order to reaffirm the presence and extent of occupied habitat. The pre-construction survey area for the species shall encompass all potentially suitable habitat within the project work zone, as well as a 300-foot survey buffer. The pre-construction survey shall be performed to the satisfaction of the Development Services Director (or their designee) by a qualified biologist familiar with the Chula Vista MSCP Subarea Plan.		ALL			CCV				
	The results of the pre-construction survey must be submitted in a report to the Development Services Director (or their designee) for review and approval prior to the issuance of any land development permits and prior to initiating any construction activities. If California gnatcatcher, cactus wren or least Bell's vireo is detected, a minimum 300-foot buffer delineated by orange biological fencing shall be established around the detected species to ensure that no work shall occur within occupied habitat from February 15 through									

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
	August 15 for Coastal California gnatcatcher and cactus wren, and March 15 through September 15 for least Bell’s vireo. On-site noise reduction techniques shall be implemented to ensure that construction noise levels not exceed 60 dBA Leq at the location of any occupied sensitive habitat areas. The Development Services Director (or their designee) shall have the discretion to modify the buffer width depending on site-specific conditions. If the results of the pre-construction survey determine that the survey area is unoccupied, the work may commence at the discretion of the Development Services Director (or their designee) following the review and approval of the pre-construction report.									
	<b>5.6-4 Burrowing Owl Pre-Construction Surveys.</b> Prior to issuance of any land development permits (including clearing and grubbing or grading permits), the applicant shall retain a City-approved biologist to conduct focused pre-construction surveys for burrowing owls. The surveys shall be performed no earlier than 10 days prior to the commencement of any clearing, grubbing, or grading activities. If occupied burrows are detected, the City-approved biologist shall prepare a passive relocation mitigation plan subject to the review and approval by the wildlife agencies and City including any subsequent burrowing owl relocation plans to avoid impacts from construction-related activities.		ALL			CCV				
	<b>5.6-5 Revegetation Plan.</b> Prior to issuance of land development permits, including clearing, grubbing, grading and construction permits, the applicant shall provide a revegetation plan to restore 0.2 acre of temporary impacts to maritime succulent scrub and 0.1 acre of temporary impacts to riparian scrub associated with off-site planned and future facilities. The revegetation plan must be prepared by a qualified City-approved biologist familiar with	ALL	ALL		ALL	CCV				

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	the Chula Vista MSCP Subarea Plan and must include, but not be limited to, an implementation plan; appropriate seed mixtures and planting method; irrigation method; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The applicant shall be required to prepare and implement the revegetation plan subject to the oversight and approval of the Development Services Director (or their designee).									
	<b>5.6-6 Biological Construction Monitoring.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for any areas adjacent to the Preserve and the off-site facilities located within the Preserve, the applicant shall provide written confirmation that a City-approved biological monitor has been retained and shall be on site during clearing, grubbing, and/or grading activities. The biological monitor shall attend all pre-construction meetings and be present during the removal of any vegetation to ensure that the approved limits of disturbance are not exceeded and provide periodic monitoring of the impact area including, but not limited to, trenches, stockpiles, storage areas and protective fencing. The biological monitor shall be authorized to halt all associated project activities that may be in violation of the Chula Vista MSCP Subarea Plan and/or permits issued by any other agencies having jurisdictional authority over the project.		ALL	ALL		CCV				
	<b>5.6-7 Pre-Construction Education.</b> Before construction activities occur in areas adjacent to and/or containing sensitive biological resources, all workers shall be educated by a City-approved biologist to recognize and avoid those areas that have been marked as sensitive biological resources.		ALL	ALL		CCV				

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	<p><b>5.6-8 Migratory Bird Treaty Act Compliance.</b> To avoid any direct impacts to raptors and/or any migratory birds protected under the Migratory Bird Treaty Act, removal of habitat that supports active nests on the proposed area of disturbance should occur outside of the breeding season for these species (January 15 to August 31). If removal of habitat on the proposed area of disturbance must occur during the breeding season, the applicant shall retain a City-approved biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction, the results of which must be submitted to the City for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan as deemed appropriate by the City, shall be prepared and include proposed measures to be implemented to ensure that disturbance of breeding activities are avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City-approved mitigation monitor shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.</p>		ALL	ALL		CCV				
	<p><b>5.6-9 Northern Harrier Pre-Construction Survey.</b> Prior to issuance of any land development permits, including clearing and grubbing or grading permits, the applicant shall retain a City-approved biologist to conduct focused surveys for northern harrier to determine the presence or absence of this species within 900 feet of the construction area. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction. The results of the survey must be submitted to the City for review and approval. If active nests are detected by the City-approved biologist, a biological monitor shall be on site during construction to</p>		ALL	ALL		CCV				

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	minimize construction impacts and ensure that no nests are be removed or disturbed until all young have fledged.									
	<b>5.6-10 Construction Fencing and Signage.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits, the applicant shall install fencing in accordance with Chula Vista Municipal Code Section 17.35.030. Prominently colored, well-installed fencing and signage shall be in place wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the qualified monitoring biologist. Fencing shall remain in place during all construction activities. All temporary fencing shall be shown on grading plans for areas adjacent to the Preserve and for all off-site facilities constructed within the Preserve. Prior to release of grading and/or improvement bonds, a qualified biologist shall provide evidence that work was conducted as authorized under the approved land development permit and associated plans.	ALL	ALL	ALL		CCV				
	<b>5.6-11 Indirect Impact Avoidance.</b> In accordance with the Chula Vista Adjacency Management Guidelines and the Otay Ranch Village 9 Edge Plan, and in addition to mitigation measure 5.11-1, Storm Water Pollution Prevention Plan, the following measures shall be implemented to further reduce indirect impacts (from lighting, noise, invasive, toxic substances, and public access) to sensitive biological resources located in the adjacent Otay Ranch Preserve areas:	ALL	ALL		ALL	CCV				
	i. Prior to issuance of a building permit, a lighting plan and photometric analysis shall be submitted to the satisfaction of the Development Services Director (or their designee) to ensure lighting of all developed areas adjacent to the Preserve has been directed away from the Preserve, wherever feasible and consistent with public safety. The lighting plan shall illustrate the location of the proposed lighting standards and, if applicable, type of shielding measures required to minimize light spillage into the									

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	Preserve. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting.									
	ii. Construction-related noise shall be limited within and adjacent to the Preserve during the typical breeding season of January 15 to September 15. Construction activity within and adjacent to any occupied sensitive habitat areas must not exceed 60 dBA Leq, or ambient noise levels if higher than 60 dBA Leq, during the breeding season. Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for areas within or adjacent to the Preserve, the applicant shall prepare and submit to the satisfaction of the Development Services Director (or their designee), an acoustical analysis to demonstrate that the 60 dBA Leq noise level is not exceeded at the location of any occupied sensitive habitat areas as determined based on the results the required biological pre-construction surveys. The acoustical analysis shall describe the methods by which construction noise shall not exceed 60 dBA Leq. Noise abatement methods may include, but are not limited to, reoperation of specific construction activities, installation of noise abatement at the source, and/or installation of noise abatement at the receiving areas.			ALL		CCV				
	<b>5.6-12 Retain Existing Vegetation.</b> Existing vegetation shall be retained where possible during construction activities and grading activities shall be limited to the immediate area required for construction.			OLC		CCV				

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	<b>5.6-13 Landscape Plan.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for areas within the 100-foot Preserve edge, the applicant shall prepare and submit to the satisfaction of the Development Services Director (or their designee), landscape plans to ensure that the proposed plant palette is consistent with the plant list contained in Attachment A of the Otay Ranch Village 9 Preserve Edge Plan. The landscape plan shall also incorporate a manual weeding program for areas adjacent to the Preserve. The manual weeding program shall describe at a minimum, the entity responsible for controlling invasive species, the maintenance activities and methods required to control invasives, and a maintenance/monitoring schedule.	ALL			ALL	CCV				
	<b>5.6-14 MCSP Preserve Boundary Delineation.</b> Prior to issuance of land development permits, including clearing or grubbing and grading and/or construction permits for the project, the applicant shall submit wall and fence plans depicting appropriate barriers to prevent unauthorized access into the Otay Ranch Preserve. The wall and fence plans shall, at a minimum, illustrate the locations and cross-sections of proposed walls, fences, informational and directional signage, access controls, and/or boundary markers along the Preserve boundary and any off-site pedestrian trails as conceptually described in the Otay Ranch Village 9 Edge Plan. The required wall and fence plan shall be subject to the approval the Development Services Director (or their designee).	ALL			ALL	CCV				

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	<b>5.6-15 Wetlands Mitigation and Monitoring Plan.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits that impact jurisdictional waters, the applicant shall prepare a wetlands mitigation and monitoring plan. This plan shall include, at a minimum, an implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. Areas under the jurisdictional authority of Army Corps of Engineers and California Department of Fish and Wildlife shall be delineated on all grading plans. Creation areas shall occur within the Otay River watershed in accordance with the wetlands mitigation and monitoring plan to the satisfaction of the Development Services Director (or their designee), Army Corps of Engineers, and California Department of Fish and Wildlife . The applicant shall also be required to implement the wetlands mitigation and monitoring plan subject to the oversight of the Development Services Director (or their designee), Army Corps of Engineers, and California Department of Fish and Wildlife.	ALL	ALL	ALL		CCV, Army Corps of Engineers, and California Department of Fish and Wildlife				
	<b>5.6-16 Regulatory Permits.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits for areas that impact jurisdictional waters, the applicant shall provide evidence that all required regulatory permits, such as those required under Sections 404 and 401 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter Cologne Water Quality Act, have been obtained.	OLC	OLC			CCV, Army Corps of Engineers, and California Department of Fish and Wildlife				
	<b>5.6-17 Annexation into Otay Ranch Preserve Community Facilities District No. 97-2.</b> Prior to the approval of the first final map for the SPA Plan, the applicant shall coordinate with the City Engineer and annex the project area within the Otay Ranch Preserve Community Facilities District No. 97-2.	ALL	ALL			CCV				

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The project would have the potential to result in impacts to sensitive species that would conflict with Chula Vista Multiple Species Conservation Program Subarea Plan. Additionally, the project would have significant impacts related to biological resources management unless the Otay Ranch regional open space is preserved proportionally and concurrently with development, in accordance with the provisions of the Chula Vista Multiple Species Conservation Program Subarea Plan and the Otay Ranch Resource Management Plan.	<b>5.6-18 Otay Ranch Preserve Land Conveyance.</b> Prior to recordation of each final map the applicant shall convey land within the Otay Ranch Preserve to the Otay Ranch Preserve Owner Manager or its designee at a ratio of 1.188 acres for each acre of development area, as defined in the Otay Ranch Resource Management Plan. Access for maintenance purposes shall also be conveyed to the satisfaction of the Preserve Owner Manager, and each tentative map shall be subject to a condition that the applicant shall execute a maintenance agreement with the Preserve Owner Manager stating that it is the responsibility of the applicant to maintain the conveyed parcel until the Otay Ranch Preserve Community Facilities District No. 97-2 has generated sufficient revenues to enable the Preserve Owner Manager to assume maintenance responsibilities. The applicant shall maintain and manage the offered conveyance property consistent with the Otay Ranch Resource Management Plan Phase 2 until the Otay Ranch Preserve Community Facilities District No. 97-2 has generated sufficient revenues to enable the Preserve Owner Manager to assume maintenance and management responsibilities.	ALL	ALL			CCV				
	<b>5.6-19 Area-Specific Management Directives.</b> Prior to the Preserve Owner Manager’s acceptance of the conveyed land in fee title, the applicant shall prepare, to the satisfaction of the Preserve Owner Manager, area specific management directives for the associated conveyance areas, which shall incorporate the guidelines and specific requirements of the Otay Ranch Resource Management Plan, management requirements of Table 3-5 of the MSCP Subregional Plan and information and recommendations from any relevant special studies. Guidelines and requirements from these documents shall be evaluated in relationship to the Preserve configuration and specific habitats and species found within	ALL	ALL		ALL	CCV				

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	the associated conveyance areas and incorporated into the area specific management directives to the satisfaction of the Preserve Owner Manager.									
<b>CULTURAL AND PALEONTOLOGICAL RESOURCES</b>										
	<b>5.7-1 Archaeological Monitor.</b> Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall provide written confirmation and incorporate into grading plans, to the satisfaction of the Development Services Director (or their designee), that a principle investigator as listed by the Secretary of the Interior (Code of Federal Regulations Title 36, Section 61) has been retained in an oversight capacity to ensure that an archeological monitor will be present during all cutting of previously undisturbed soil. If these cutting activities would occur in more than one location, multiple monitors shall be provided to monitor these areas, as determined necessary by the principal investigator.		OLC	OLC		CCV				
Construction activities associated with the project could inadvertently result in significant impacts to presently unknown archaeological resources that may be uncovered during clearing and grading.	<b>5.7-2 Resource Discovery Procedure.</b> During the initial grading of previously undisturbed soils within Village 9 and off-site improvement area, prehistoric and historic resources may be encountered. In the event that the monitor identifies a potentially significant site, the archaeological monitor shall secure the discovery site from further impacts by delineating the site with staking and flagging, and by diverting grading equipment away from the archaeological site. Following notification to the Development Services Director (or their designee), the archaeological monitor shall conduct investigations as necessary to determine if the discovery is significant under the criteria listed in CEQA and the environmental guidelines of the City of Chula Vista.			OLC	OLC	CCV				

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	<p>If the discovery is determined to be not significant, grading operations may resume and the archaeological monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities. The letter report shall describe the results of the on-site archeological monitoring, each archaeological site observed, the scope of testing conducted, results of laboratory analysis (if applicable), and conclusions. The letter report will be completed to the satisfaction of the Development Services Director (or their designee) prior to release of grading bonds. Any artifacts recovered during the evaluation shall be curated at a curation facility approved by the Development Services Director (or their designee). For those prehistoric/historic resources that are determined to be significant, the following measures shall be implemented:</p> <p>i. An alternate means of achieving mitigation shall be pursued. In general, these forms of mitigation include: 1) site avoidance by preservation of the site in a natural state in open space or in open space easements, 2) site avoidance by preservation through capping the site and placing landscaping on top of the fill, 3) data recovery through implementation of an excavation and analysis program, or 4) a combination of one or more of the above measures. Procedures for implementing the alternative forms of mitigation described herein are further detailed in the Mitigation Monitoring and Reporting Program adopted as part of the 1993 Otay Ranch General Development Plan Program EIR (EIR 90-01).</p>									

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	<p>ii. For those sites for which avoidance and preservation is not feasible or appropriate, the applicant shall prepare a Data Recovery Plan. The plan will, at a minimum, include the following: 1) a statement of why data recovery is appropriate as a mitigating measure, 2) a research plan that explicitly provides the research questions that can reasonably be expected to be addressed by excavation and analysis of the site, 3) a statement of the types and kinds of data that can reasonably be expected to exist at the site and how these data will be used to answer important research questions, 4) a step-by-step discussion of field and laboratory methods to be employed, and 5) provisions will be stated for curation and storage of the artifacts, notes, and photographs. In cases involving historic resources, archival research and historical documentation shall be used to augment field-testing programs. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). All significant artifacts collected during the implementation of the Data Recovery Plan shall be curated at a facility approved by the Development Services Director (or their designee).</p>									
	<p>iii. Following the completion of mass grading operations, the applicant shall prepare a plan that addresses the temporary on-site presentation and interpretation of the results of the archaeological studies for the project. This could be accomplished through exhibition within a future community center, civic building and/or multi-purpose building. This exhibition will only be for temporary curation of those materials being actively used for interpretation and display, and that permanent curation of artifacts and data will be at a regional repository when one is established. All significant artifacts collected during the implementation of the Data Recovery Plan shall be permanently curated at a facility approved by the Development Services Director (or their designee).</p>									

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	<p><b>5.7-3 Human Remains Disturbance Protocol.</b> If human remains are discovered during grading or site preparation activities within Village 9, the archaeological monitor shall secure the discovery site from any further disturbance. State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission. The Native American Heritage Commission will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American. The Most Likely Descendent will assist the Development Services Director (or their designee) in determining what course of action shall be taken to deal with the remains. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). The Archaeological Monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities.</p>			OLC	OLC	CCV, San Diego County Coroner, Native American Heritage Commission				
<p>Construction activities associated with the project could inadvertently result in significant impacts to presently unknown human remains that may be uncovered during clearing and grading.</p>	<p><b>5.7-4 Paleontological Resource Mitigation Program.</b> Prior to the issuance of grading permits for Village 9 or off-site improvement area, the applicant shall provide written confirmation to the Development Services Director (or their designee) that a qualified paleontologist has been retained to carry out an appropriate mitigation program. A qualified paleontologist is defined as an individual with a M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques. A pre-grade meeting shall be held among the paleontologist and the grading and excavation contractors.</p>		OLC			CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
Geological formations underlying Village 9 and off-site improvement areas have a high sensitivity for paleontological resources. Therefore, construction activities would have the potential to result in significant impacts to paleontological resources.	<p><b>5.7-5 Paleontological Monitor.</b> A paleontological monitor shall be on site at all times during the original cutting of previously undisturbed sediments of the Otay Formation or Quaternary alluvial and terrace deposits to inspect cuts for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of a qualified paleontologist.</p> <p>i. The monitor shall be on the site at least a quarter-time basis during the original cutting of previously undisturbed sediments of low sensitivity geologic formations (Holocene alluvial deposits) to inspect cuts for contained fossils. He or she shall periodically (every several weeks) inspect original cuts in deposits with unknown resource sensitivity (i.e., Quaternary alluvium).</p> <p>ii. In the event that fossils are discovered in unknown, low, or moderately sensitive formations, the per-day field monitoring time shall be increased. Conversely, if fossils are not discovered, the monitoring, at the discretion of the Planning Department, shall be reduced. A paleontological monitor is not needed during grading of rocks with no resource sensitivity (Santiago Peak Volcanics).</p>			OLC		CCV				
	<p><b>5.7-6 Fossil Discovery Procedure.</b> If fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short time frame. However, some fossil specimens (such as a complete whale skeleton) may require an extended salvage time. In these instances, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains such as isolated mammal</p>			OLC		CCV				

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	teeth, it may be necessary in certain instances and at the discretion of the paleontological monitor to set up a screen-washing operation on the site.									
	<b>5.7-7 Fossil Recording.</b> Prepared fossils along with copies of all pertinent field notes, photos, and maps shall be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum. A final summary report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils.			OLC		CCV				
<b>GEOLOGY AND SOILS</b>										
Grading activities could result in slope instabilities or landslides within the project area. Site erosion and topsoil loss during and following construction would be potentially significant. The presence of loose compressible materials within Village 9 could become unstable as a result of the project. As a result, there is the potential for landsliding, lateral spreading, liquefaction and/or collapse. Soils within Village 9 have high to very high expansion potential. Development of structures on these soils could create substantial risks to life or property.	<b>5.8-1 Geotechnical Recommendations.</b> Prior to the issuance of each mass grading permit for Village 9, the applicant shall verify that the applicable recommendations in the Geotechnical Investigation prepared by Advanced Geotechnical Solutions, Inc., dated November 9, 2010, have been incorporated into the final project design and construction documents to the satisfaction of the City Engineer. These recommendations address issues including but not limited to site grading, backdrain systems, undercuts, excavation and fill, monitoring, and soil testing. Geotechnical review of grading plans shall include a review of all proposed storm drain facilities to ensure the storm water runoff would not interfere with the proposed geotechnical recommendations.	OLC	ALL			CCV				
	<b>5.8-2 Slope Factor of Safety.</b> All graded slopes shall have a minimum factor of safety of 1.5. Strategies to increase stability may include, but are not limited to, a stability buttress or shear pins. All slopes stability strategies shall be approved by the City Engineer.			ALL	ALL		CCV			

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		SPA/TM	Pre Const.	During Const.	Post Const.		Monitor	Report			
<b>PUBLIC SERVICES</b>											
<b>Fire and Emergency Medical Services</b>											
The anticipated increase in residential population of 10,923 people and the employment base from 1.5 million square feet of commercial and office development would increase demand on fire and emergency medical services. The increase in demand would be significant if fully operational and appropriately equipped and staffed fire stations are not provided commensurate with the demand.	<b>5.9.1-1 Public Facilities Development Impact Fees.</b> Prior to the approval of each building permit, the applicant shall pay Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan. Subject to approval of the City Council, in lieu of paying the required impact fee, the applicant may satisfy that requirement through a written agreement, by which the applicant agrees to either pay the fee or build the facility in question, pursuant to the terms of the agreement.	ALL	ALL	ALL		CCV					
	<b>5.9.1-2 Growth Management Program's Fire and Emergency Medical Service Threshold Standard.</b> The City of Chula Vista shall continue to monitor the Chula Vista Fire Department responses to emergency fire and medical calls and report the results to the Growth Management Oversight Commission on an annual basis.			ALL	ALL		CCV				
	<b>5.9.1-3 Fire Code Compliance.</b> Prior to the approval of each building permit and to the satisfaction of the City of Chula Vista Fire Marshal, the project shall meet the provisions of the current City-adopted California fire code. In meeting said provisions, the project shall meet the minimum fire flow requirements based upon construction type and square footage.	ALL	ALL	ALL			CCV				
	<b>5.9.1-4 Fuel Modification Easements.</b> Prior to approval of a Final Map requiring off-site fuel modification, as determined the City Fire Marshal, the applicant shall secure any required permits and/or access easements necessary to perform the required brush abatement activities contained in the Village 9 Fire Protection Plan (Village 9 SPA Plan, Appendix F), to the satisfaction of the City's Fire Marshal and Development Services Director.	ALL	ALL	ALL			CCV				

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<b>Police Services</b>										
The project would result in a potentially significant increase demand on police protection if additional police officers are not provided commensurate with demand.	<b>5.9.2-1 Public Facilities Development Impact Fees.</b> Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall pay Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan, unless stated otherwise in a separate development agreement.	ALL	ALL	ALL		CCV				
	<b>5.9.2-2 Growth Management Program’s Police Threshold Standard.</b> The City of Chula Vista shall continue to monitor the Chula Vista Police Department responses to emergency calls and report the results to the Growth Management Oversight Commission on an annual basis.			ALL	ALL	CCV				
	<b>5.9.2-3 Crime Prevention Through Environmental Design Features.</b> Prior to the issuance of each building permit, site plans shall be reviewed by the Chula Vista Police Department (or their designee) to ensure the incorporation of Crime Prevention through Environmental Design features and other recommendations of the Chula Vista Police Department, including, but not limited to, controlled access points to parking lots and buildings; maximizing the visibility along building fronts, sidewalks, and public parks; and providing adequate street, parking lot, and parking structure visibility and lighting.	ALL	ALL			CCV				
<b>Schools</b>										
Project implementation would result in a significant impact to elementary and middle schools unless construction of a middle school and high school coincides with student generation and associated service demands.	<b>5.9.3-1 School Service Fees.</b> Prior to the issuance of each building permit, the applicant(s) shall provide the City with evidence or certification by the Chula Vista Elementary School District and Sweetwater Unified High School District that any fee charge, dedication, or other requirement levied by the school district has been complied with or that the district has determined the fee, charge, dedication or other requirements does not apply to the construction.		ALL	ALL		CCV, Chula Vista Elementary School District (CVESD)				

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The potential exists for pesticides/herbicide to occur at the future schools sites and for potentially unstable soils to occur on the school sites. See mitigation measures 5.8-1, 5.8-2, and 5.13-1.	<b>5.9.3-2 School Site Protection.</b> Prior to approval of a final map for private development on Planning Areas G or W, designated for a future school, the applicant shall provide evidence from the Chula Vista Elementary School District that the site has not been determined by the district to be needed for use as a school site.	ALL	ALL			CCV, CVESD, Sweetwater Unified High School District				
<b>Libraries</b>										
The project would increase demand on library services, which would be significant if library resources are not provided commensurate with demand.	<b>5.9.4-1 Public Facility Development Impact Fees.</b> Prior to the issuance of each building permit for any residential dwelling units, the applicant shall pay required Public Facilities Development Impact Fee in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Public Facilities Finance Plan.	ALL		ALL		CCV				
	<b>5.9.4-2 Growth Management Program’s Libraries Threshold Standard.</b> The City of Chula Vista shall continue to monitor library facilities and services and report the results to the Growth Management Oversight Commission on an annual basis.				ALL	ALL	CCV			
<b>Parks, Recreation, Open Space, and Trails</b>										
The project would increase demand on recreational facilities, which would be significant if the proposed parks and recreational facilities are not provided commensurate with demand.	<b>5.9.5-1 Public Facility Development Impact Fees.</b> Prior to the issuance of each building permit for any residential dwelling units, the applicant shall pay recreation facility development impact fees (part of the Public Facility Development Impact Fee) in accordance with the fees in effect at the time of building permit issuance and phasing approved in the Village 9 Public Facilities Finance Plan, subject to approval of the Director of Recreation.	ALL	ALL			CCV				

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	<b>5.9.5-2 Park Acquisition and Development Fees.</b> Prior to the approval of each final map for the project, or, for any residential development project within Village 9 that does not require a final map, prior to building permit approval, the applicant shall pay applicable Park Acquisition and Development in-lieu fees for the area covered by the final map(s). The payment of in-lieu fees shall be in accordance with the phasing indicated in the Project's approved SPA Plan, and a park agreement, if any, subject to approval of the Director of Recreation. In-lieu fees shall be based on the Park Acquisition and Development fees in effect at the time of issuance of building permits, unless stated otherwise in a parks or development agreement.	ALL	ALL			CCV				
	<b>5.9.5-3 Growth Management Program's Parks and Recreation Threshold Standard.</b> The City of Chula Vista shall continue to monitor parks and recreation services and report the results to the Growth Management Oversight Commission on an annual basis.			ALL	ALL	CCV				
	<b>5.9.5-4 Dedication of Parkland.</b> Prior to approval of the first final map for the project, the applicant shall offer for dedication all public parkland identified in the Project's approved SPA Plan, or as approved by the Director of Recreation. Park facilities such as Town Squares and privately owned/mini pedestrian parks indentified as being required to meet the overall park obligation shall be identified on the first final map and shall be publically accessible.	ALL	ALL			CCV				
	<b>5.9.5-5 Town Square Parks and Pedestrian Parks.</b> Prior to issuing a total of 192 residential building permits from either Planning Area M, N, P, or Q, or in a combination thereof, the Town Square Park in Planning Area I shall be completed to the satisfaction of the Director of Recreation. Prior to issuing a total of 460 residential building permits from Planning Area A, B-1 or B-2, or in a combination thereof, the Town Square	ALL	ALL			CCV				

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	Park in Planning Area C shall be completed to the satisfaction of the Director of Recreation. Prior to the issuance of the 719 <sup>th</sup> residential building permit south of Street H, the Pedestrian Parks in Planning Areas GG, HH, and II, including the pedestrian trail through OS-3 connecting Planning Areas HH and II, shall be completed to the satisfaction of the Director of Recreation.									
	<b>5.9.5-6 Off-site Park Obligation.</b> Prior to the approval of the first final map, the applicant shall have offered for dedication to the City a 9.0 acre park site within Village 8 West or other suitable off-site parkland subject to the satisfaction of the Development Services Director.	ALL	ALL			CCV				
	<b>5.9.5-7 Park Development Agreement.</b> Prior to the approval of the first final map for Village 9 the applicant shall enter into an agreement with the City that provides the following: dedication of public park sites, payment of Park Development Agreement Fees, schedule for completion of improvements, including utilities to streets adjacent to the park sites, all to the satisfaction of the Director of Recreation and Development Services Director. Under the current method for delivery of new parks the City will award a design-build contract for the Project's neighborhood park. The agreement will include provisions that in the event the City chooses not to go forward with a design-build contract, the applicant will be obligated to fully comply with the Parkland Ordinance and park threshold standards by constructing the parks in accordance with all City standards and under a time schedule as specified in the agreement.	ALL	ALL			CCV				

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<b>HYDROLOGY AND WATER QUALITY</b>										
The potential exists for the project to violate water quality standards or waste discharge requirements, alter existing drainage pattern of the site resulting in erosion/siltation or increase the rate or amount of surface runoff), create or contribute runoff water, or otherwise substantially degrade water quality. However, the project includes features and would implement best management practices to reduce hydrology and water quality impacts to a less than significant level. These features are prescribed as mitigation measures to assure implementation and facilitate monitoring through buildout of the project.	<b>5.11-1 Storm Water Pollution Prevention Plan.</b> Prior to issuance of each grading permit for Village 9 or any land development permit, including clearing and grading, the project applicant shall submit a notice of intent and obtain coverage under the National Pollutant Discharge Elimination System permit for construction activity from the State Water Resources Control Board. Adherence to all conditions of the General Permit for Construction Activity is required. The applicant shall be required under the State Water Resources Control Board General Construction Permit to develop a Storm Water Pollution Prevention Plan and monitoring plan that shall be submitted to the City Engineer and the Director of Public Works. The Storm Water Pollution Prevention Plan shall be incorporated into the grading and drainage plans and shall specify both construction and post-construction structural and non-structural best management practices on the site to reduce the amount of sediments and pollutants in construction and post-construction surface runoff before it is discharged into off-site storm water facilities. Section 7 of the City’s Storm Water Manual outlines construction site best management practice requirements. The Storm Water Pollution Prevention Plan shall also address operation and maintenance of post-construction pollution prevention measures, including short-term and long-term funding sources and the party or parties that will be responsible for said measures. The Storm Water Pollution Prevention Plan shall incorporate construction and post-construction best management practices as outlined in the Village 9 Edge Plan. The grading plans shall note the condition requiring a Storm Water Pollution Prevention Plan and monitoring plans.	ALL	ALL	ALL		CCV, State Water Resources Control Board				

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	<b>5.11-2 Supplemental Water Quality Report.</b> Prior to issuance of each grading permit, the applicant shall submit a supplemental report to the Master Water Quality Technical Report for Village 9 prepared by Hunsaker & Associates dated August 10, 2011 that identifies which on-site storm water management measures from the Water Quality Technical Report have been incorporated into the project to the satisfaction of the City Engineer. If a storm water management option is chosen by the planning area owner that is not shown in the water quality technical report, a project-specific water quality technical report shall be prepared for the planning area, referencing the Master Water Quality Technical Report for Village 9 for information relevant to regional design concepts (e.g., downstream conditions of concern) to the satisfaction of the City Engineer.	ALL	ALL		ALL	CCV				
	<b>5.11-3 Post-Construction/Permanent Best Management Practices.</b> Prior to issuance of each grading permit, the City Engineer shall verify that parcel owners have incorporated and will implement post-construction best management practices in accordance with current regulations. In particular, applicants are required to comply with the requirements of Section 2c of the City of Chula Vista’s Standard Urban Storm Water Management Plan, the Chula Vista Development Storm Water Manual, and the Master Water Quality Technical Report for Village 9 or any supplements thereto to the satisfaction of the City Engineer. Specifically, the applicant shall implement low impact development best management practices in the preparation of all site plans and incorporate structural on-site design features into the project design to address site design and treatment control best management practices as well as requirements of the hydromodification management plan. The applicant shall monitor and mitigate any erosion in downstream locations that may occur because of on-site development.		ALL		ALL	CCV				

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	<b>5.11-4 Limitation of Grading.</b> The project applicant shall comply with the Chula Vista Development Storm Water Manual limitation of grading requirements, which limit disturbed soil area to 100 acres, unless expansion of a disturbed area is specifically approved by the Director of Public Works. With any phasing resulting from this limitation, if required, the project applicant shall provide, to the satisfaction of the City Engineer, erosion and sediment control best management practices in areas that may not be completed, before grading of additional area begins.			ALL		CCV				
	<b>5.11-5 Hydromodification Criteria.</b> The project applicant shall comply, to the satisfaction of the City Engineer, with City hydromodification criteria or the hydrograph modification management plan, as applicable, addressed regionally at the SPA Plan level concurrent with grading and improvement plans for the project.	ALL	ALL	ALL	ALL	CCV				
	<b>5.11-6 Outfall Erosion.</b> Developer shall monitor any erosion at the project's outfall at the Otay River and, prior to the last building permit for the project, obtain approval for and complete any reconstructive work necessary to eliminate any existing erosion and prevent future erosion from occurring, all to the satisfaction of the Development Services Director.		ALL	ALL	ALL	CCV				

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<b>AGRICULTURAL RESOURCES</b>										
Implementation of the SPA Plan and TM would result in a significant impact to agricultural resources, due to the on-site loss of approximately 250 acres of farmland of local importance and grazing land. Short-term land use incompatibility issues from ongoing agricultural activities adjacent to urban land uses would be significant without implementation of the Agricultural Plan. Impacts related to land use zoning conflicts and consistency with agricultural resource policies would be potentially significant if the Agriculture Plan is not implemented concurrent with development.	<b>5.12-1 Agricultural Plan.</b> The Agricultural Plan included in the SPA Plan shall be implemented as development proceeds in Village 9. The following measures shall be implemented to the satisfaction of the Chula Vista Development Services Director (or their designee):		ALL	ALL						
	i. Prior to approval of each building permit, the applicant shall ensure that a 200-foot fenced buffer shall be maintained between development and any ongoing agricultural operations on the property.		ALL	ALL		CCV				
	ii. In those areas where pesticides are to be applied, the farmland owner shall utilize vegetation to shield adjacent urban development (within 400 feet) from agricultural activities. Use of pesticides shall comply with federal, state, and local regulations.				ALL	CCV				
	iii. If permitted interim agricultural uses require the use of pesticides, the farmland owner shall notify adjacent developed property owners of potential pesticide application a minimum of 10 days prior to application through advertisements in newspapers of general circulation. Limits shall be established as to the time of day and type of pesticide applications that may be used. The use of pesticides shall comply with federal, state, and local regulations.		ALL	ALL		CCV				

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<b>HAZARDS AND HAZARDOUS MATERIALS</b>										
<p>Potentially significant impacts related to accidental release of hazardous materials and hazards to schools could result from the exposure of construction workers, future residents, and the future on-site schools to pesticide residue occurring in soils on the site.</p> <p>Potentially significant impacts related to consistency with hazard policies could result from the exposure of construction workers, future residents, and the future on-site schools to pesticide residue occurring in soils on the site.</p> <p>Elevated levels of pesticides in the near surface soils at the project area could be disturbed from grading and trenching activities and result in an increased health risk to construction workers on site and future inhabitants of the proposed development, particularly the future residential and school uses, and potentially impact water quality through storm water runoff.</p>	<p><b>5.13-1 Soil Assessment.</b> Soil Assessment. Prior to issuance of a mass grade permit, the applicant shall prepare a soils assessment to the satisfaction of the City Engineer to determine if residual pesticides, herbicides, and/or arsenic are present on site. The assessment shall be prepared by a Registered Environmental Assessor in accordance with the Department of Toxic Substances Control guidance document. The assessment shall include analysis for organochlorine pesticides that include compounds such as toxaphene, dichlorodiphenyldichloroethane, dichlorodiphenyltrichloroethane, and dichlorodiphenyldichloroethylene, which have been historically identified at properties in the site vicinity. The concentrations of the contaminants shall be compared to Department of Toxic Substances Control soil screening levels for residential land use. If levels of contamination exceeding the Department of Toxic Substances Control screening levels are found on site, a Soil Reuse Plan shall be prepared prior to construction on site. The Soil Reuse Plan shall include a determination of the suitability of the soils for on-site or off-site reuse, any special handling provisions that shall be incorporated as part of the site grading activities, and the procedure for the proper remediation and disposal of the contaminated soils, either on site or off site. The results of the limited soil assessment and the Soil Reuse Plan shall be submitted to the County of San Diego Department of Environmental Health, the Development Services Director (or their designee), and/or the Regional Water Quality Control Board for review and approval, prior to implementation.</p>		OLC	OLC		CCV				

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**MITIGATION MONITORING AND REPORTING PROGRAM**

<i>Potential Significant Impact</i>	<i>Mitigation Measures</i>	<i>Time Frame of Mitigation and Responsible Party<sup>(1)</sup></i>				<i>Monitoring Reporting Agency<sup>(2)</sup></i>	<i>Verification Frequency Time Frame to</i>		<i>Date of Completion</i>	<i>Date of Verification</i>
		<i>SPA/TM</i>	<i>Pre Const.</i>	<i>During Const.</i>	<i>Post Const.</i>		<i>Monitor</i>	<i>Report</i>		
Village 9 is located within the Federal Aviation Administration Height Notification Boundary and Airport Overflight Notification Area. Proper notification in compliance with the Brown Field Airport Land Use Compatibility Plan is required to reduce this impact to a less than significant level.	<b>5.13-2 Federal Aviation Administration Notification.</b> Prior to issuance of a building permit for the first structure and/or dwelling unit within the Airport Influence Area of Brown Field, the applicant shall prepare and file a Form 7460-1, Notice of Proposed Construction or Alteration, with the Federal Aviation Administration to ensure that no objects related to development in Village 9 would present a hazard to air navigation.		OLC	OLC		CCV, Federal Aviation Administration (FAA)				
	<b>5.13-3 Federal Aviation Administration Clearance.</b> Prior to the issuance of a building permit for the first structure and/or dwelling unit within the Airport Influence Area of Brown Field, the applicant shall obtain and provide proof of Federal Aviation Administration clearance to the satisfaction of the Development Services Director (or their designee).		OLC	OLC		CCV, FAA				
	<b>5.13-4 Airport Overflight Agreement.</b> Prior to approval of the first Final Map for those areas within the overflight notification area for Brown Field, the applicant shall record the Airport Overflight Agreement with the County Recorder’s office, and provide a signed copy of the recorded Airport Overflight Agreement to the City’s Development Service Director (or their designee).		OLC	OLC		CCV				
<b>PUBLIC UTILITIES</b>										
<b>Water</b>										
Long-term water supply availability cannot be guaranteed; therefore, the increase in water demand that would result from implementation of the project would be potentially significant. Additionally, the transfer of density between planning areas could have a significant impact on on-site infrastructure.	<b>5.15.1-1 Density Transfer Technical Report.</b> Prior to design review approval in accordance with the Intensity Transfer provision in the Village 9 SPA Plan, the applicant shall provide an update to the Overview of Water Service for Otay Ranch Village 9 (Dexter Wilson Engineering, Inc. 2010) with each proposed project requesting an intensity transfer. The technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site water infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site water supply infrastructure to accommodate flows.	ALL	ALL			CCV				

<sup>(1)</sup> SPA - Section Planning Area Plan; TM - Tentative Map; Pre Const - Pre-construction; During Const - During Construction; Post Const - Post-construction; OLC - Otay Land Company

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	<b>5.15.1-2 Service Availability Letters.</b> Prior to approval of each final map for Village 9, the applicant shall request and obtain a service availability letter from the Otay Water District and submit the letter to the City of Chula Vista.	ALL	ALL			CCV, Otay Water District (OWD)				
The increase in water demand would be significant if future developers did not provide service availability letters.	<b>5.15.1-3 Subarea Master Plan Preparation.</b> Prior to approval of the first final map, the applicant shall provide a Subarea Master Plan to the Otay Water District. Water facilities improvements shall be financed or installed on site and off site in accordance with the fees and phasing in the approved Public Facilities Finance Plan and Subarea Master Plan. The Subarea Master Plan shall include, but shall not be limited to: i. Existing pipeline locations, size, and capacity; ii. The proposed points of connection and system; iii. The estimated water demands and/or sewer flow calculations; iv. Governing fire department's flow requirements (flow rate, duration, hydrant spacing, etc); v. Agency Master Plan; vi. Agency's planning criteria (see Sections 4.1 through 4.3 of the Water Agencies Standards); vii. Water quality maintenance; and viii. Size of the system and number of lots to be served.	ALL	ALL			CCV, OWD				
	<b>5.15.1-4 Subarea Master Plan Approval.</b> Prior to approval of the first final map, the applicant shall obtain Otay Water District's approval of the Subarea Master Plan for potable water. Any on-site and off-site facilities identified in the Subarea Master Plan required to serve a final mapped area, including but not limited to water facilities within the SR-125 overcrossings at Main Streets and Otay Valley Road, shall be secured or constructed by the applicant prior to the approval of the final map and in accordance with the phasing in the Public Facilities Finance Plan.	ALL	ALL			CCV, OWD				

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<b>Wastewater</b>										
A significant impact would occur if adequate wastewater facilities and adequate wastewater treatment capacity are not provided concurrently with new demand. Additionally, the transfer of density between planning areas could have a significant impact on on-site infrastructure.	<b>5.15.2-1 Sewer System Improvements.</b> The applicant shall finance or install all on-site and off-site sewer facilities required to serve development in Village 9 in accordance with the fees and phasing in the approved Public Facilities Finance Plan to the satisfaction of the City Engineer.		ALL	ALL		CCV				
	<b>5.15.2-2 Salt Creek Development Impact Fee.</b> Prior to issuance of each building permit, the applicant shall pay the Salt Creek Development Impact Fee at the rate in effect at the time of building permit issuance and corresponding to the sewer basin that the building will permanently sewer to, unless stated otherwise in a development agreement that has been approved by the City Council. Existing fees are provided in Table 5.15-14.	ALL	ALL			CCV				
	<b>5.15.1-3 Density Transfer Technical Report.</b> Prior to design review approval in accordance with the Intensity Transfer provision in the Village 9 SPA Plan, the applicant shall provide an update to the Overview of Sewer Service for Otay Ranch Village 9 (Dexter Wilson Engineering, Inc. 2010) with each proposed project requesting an intensity transfer. The technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site wastewater infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site sewerage facilities to accommodate flows.	ALL	ALL			CCV				
<b>Recycled Water</b>										
If recycled water facilities are not provided concurrently with demand, a potentially significant impact would occur.	<b>5.15.4-1 Subarea Master Plan Preparation.</b> Prior to approval of the first final map, the applicant shall provide a Subarea Master Plan to the Otay Water District. Recycled water facilities improvements shall be financed or installed on site and off site in accordance with the fees and phasing in the approved Public Facilities Finance Plan and Subarea Master Plan. The Subarea Master Plan shall include, but shall not be limited to the following information related to recycled water:	ALL	ALL			CCV, OWD				

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	i. Existing recycled water pipeline locations, size, and capacity; ii. The proposed points of connection and system; iii. The estimated recycled water demand calculations; and iv. Size of the system and number of lots to be served.									
	<b>5.15.4-2 Subarea Master Plan Approval.</b> Prior to approval of the first final map, the applicant shall obtain Otay Water District approval of the Sub Area Master Plan for recycled water. Any on-site and off-site facilities identified in the Subarea Master Plan required to serve a final mapped area shall be secured or constructed by the applicant prior to the approval of the final map and in accordance with the phasing in the Public Facilities Finance Plan.	ALL	ALL			CCV, OWD				

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