



Otay Ranch Village 8 West

Sectional Planning Area Plan and Tentative Map

Final Environmental Impact Report

CV EIR #10-03

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ACRONYMSxi

Final Environmental Impact Report

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Mitigation Monitoring and Reporting Program

**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE
OTAY RANCH VILLAGE 8 WEST SECTIONAL PLANNING AREA PLAN
AND TENTATIVE MAP FINAL ENVIRONMENTAL IMPACT REPORTMMRP-1**

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- Appendix C: Air Quality Technical 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 ₂	Carbon Dioxide
CO ₂ 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
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 Act
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
HVAC	Heating, Ventilation, and Air Conditioning
I-	Interstate
ICAO	International Civil Aviation Organization
ICLEI	International Council of Environmental Initiatives
ILV	Intersection Lane Volume Analysis
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 CO ₂ e	Million Metric Tons Carbon Dioxide Equivalent
MOU	Memorandum of Understanding
mpg	Miles Per Gallon
mph	Mile Per Hour
MRZ-2	Regionally Significant Aggregate Resource Area
MSCP	Multiple Species Conservation Program
MT CO ₂ e	Metric Tons Carbon Dioxide Equivalent
MUTCD	Manual on Uniform Traffic Control Devices
MWD	Metropolitan Water District
N ₂ 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
NO ₂	Nitrogen Dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
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
PM ₁₀	Course particulate matter with an aerodynamic diameter of 10 microns
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 ₂	Sulfur Dioxide
SPA	Sectional Planning Area
SR	State Route
SRP	Subregional Plan
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 Water Management Plan
VOC	Volatile Organic Compounds
WCP	Water Conservation Plan
WSAV	Water Supply Assessment and Verification Report

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Otay Ranch Village 8 West Sectional Planning Area Plan and Tentative Map

Final Environmental Impact Report

Errata
Comments Received on the Draft EIR and Responses

November 2013

CV EIR #10-03

SCH No. 2010062093

Lead Agency:

City of Chula Vista
Development Services Department
276 Fourth Avenue
Chula Vista, California 91910

Final EIR for the Village 8 West 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 8 West 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. 2010062093) 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 Result of Impact Analysis and Impact Level After Mitigation columns under the Noise heading of Table 1-2 have been revised to correct references to short-term significant impacts related to traffic noise. This impact was identified under the first noise issue in Table 1-2. References to this impact have been relocated to the third noise issue, consistent with Section 5.5, Noise. The Mitigation column under the third noise issue was also revised to reflect that mitigation measure 5.3-20 would ensure long-term noise impacts would be less than significant. Mitigation measure 5.6-1 was revised consistent with revisions in the Biological Resources section, described in response to the United States Fish and Wildlife Service and California Department of Fish and Wildlife comment B-3. A typo in mitigation measure 5.6-3 was also revised to correct the beginning of least Bell’s vireo breeding season from March 25 to March 15. A typo in mitigation measure 5.3-17 was corrected to include Olympic Parkway: Heritage Road to La Media Road to the list of cumulative impacts, consistent with this measure in Section 5.3, Transportation/Traffic.

Land Use and Planning – The evaluation of consistency with Objective PFS 19 in Table 5.1-2, Project Consistency with Applicable General Plan Land Use Policies, has been revised to clarify the manner in which the Community Purpose Facility (CPF) requirement for Village 8 West would be provided. The evaluation consistency for Objective PFS 19 in Table 5.1-2 on page 5.1-25 has been revised as follows:

Implementation of the SPA Plan would provide 5.8 acres of CPF zone in one planning area. The balance of the CPF requirements for Village 8 West (2.2 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 by the City obtaining ownership of land through a separate contractual obligation which is consistent with the CPF Ordinance.

Policy LUT 84.4 was also incorrectly identified as Policy LUT 84.2. This typo in Table 5.1-2 on page 5.1-24 has been corrected. In addition, a typo in the anticipated conveyance obligation for Village 8 West has been corrected from 220.6 acres to 232.7 acres on page 5.1-38.

Transportation/Traffic – A typo on page 5.3-21 has been revised to correct the Growth Management Ordinance threshold for Olympic Parkway from 2,463 equivalent dwelling units to 2,463 dwelling units. Minor revisions have been made to Table 5.3-22, Project Consistency with Applicable General Plan Transportation Policies. Policy LUT 73.7 was duplicated as Policy LUT 73.8. Policies LUT 33.1 and LUT 33.2 incorrectly included the text from Policies LUT 31.1 and 31.2. These typos have been corrected. As a result, the project’s consistency with Objective 33 in Table 5.3-22 on page 5.3-46 has been revised as follows:

Consistent. 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. 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. For example, each road within Village 8 West would consist of no more than two travel lanes and would include sidewalks, parallel parking, and a striped bike lane. Reduced street width, shade trees, minimized setbacks, and urban uses required along the couplet create a visual street frame and

~~a pedestrian friendly atmosphere. Additionally, on street parking and only the minimum required off street parking would be provided to reduce the impact of parking lots and structures on the streetscape and promote the use of bicycles, transit, and alternative modes of travel.~~

Biological Resources – A typo in mitigation measure 5.6-3 on page 5.6-30 was revised to correct the beginning of least Bell’s vireo breeding season from March 25 to March 15.

Public Services – A typo in the first paragraph of this section was revised to correct the reference to the schools subsection from subsection 5.9 to subsection 5.9.3.

Comments Received on the Draft EIR and Responses

The Draft EIR was circulated for public review on June 7, 2013 through July 22, 2013, in accordance with the 45-day comment period required under Section 15105(a) of the CEQA Guidelines. A total of eight 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-8
Letter C	California Department of Transportation (Caltrans)	RTC-11
Letter D	City of San Diego Parks and Recreation	RTC-14
Letter E	Chula Vista Elementary School District	RTC-15
Letter F	San Diego County Archaeological Society, Inc.	RTC-16
Letter G	Christian Driscoll.....	RTC-17
Letter H	Theresa Acerro	RTC-18

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.

Location in the Final EIR	Description
Page 5.3-10	Correction made to Table 5.3-5
Page 5.3-15	Clarification added regarding internal capture and transit reduction
Page 5.3-17	Correction made to Table 5.3-8
Page 5.6-29	Correction made to Mitigation Measure 5.6-1

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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
(July 22 and July 23)

July 22, 2013

Marni Borg
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 91910

Subject: Otay Ranch Village 8 West Sectional Planning Area (SPA) Plan and Tentative Map (TM)
SCH#: 2010062093

Dear Marni Borg:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on July 19, 2013, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

A-1.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

A-1

The comment letters from the Governor's Office of Planning and Research (OPR) confirm that the Draft Environmental Impact Report (EIR) was submitted to select State agencies for review. The July 22, 2013 letter confirms that the Draft EIR public review period closed on July 19, 2013 and no state agencies had submitted comments to OPR by that date. However, the California Department of Fish and Wildlife (CDFW) and the California Department of Transportation (Caltrans) submitted comments directly to and were accepted by the City of Chula Vista by the close of public review. A second letter from ORP dated July 23, 2013 confirms receipt of the letter from Caltrans. No further response is required. The comments from CDFW are included as Letter B, and the comments from Caltrans are included as Letter C.

COMMENTS

RESPONSES

**Document Details Report
State Clearinghouse Data Base**

SCH# 2010062093
Project Title Otay Ranch Village 8 West Sectional Planning Area (SPA) Plan and Tentative Map (TM)
Lead Agency Chula Vista, City of

Type EIR Draft EIR
Description The project includes the implementation of the Village 8 West SPA Plan. In addition, a TM is proposed to establish subdivision of the site. The proposed SPA Plan would result in the development of a maximum of 1,429 multi-family and 621 single-family residential units; a maximum of 50,000 sf of office use; a maximum of 250,000 sf of commercial use; 27.9 acres of urban parks; 31.6 acres for elementary and middle school sites; 5.8 acres for community purpose facility uses; 39.1 acres of open space; and 32.5 acres of street right-of-way and a water quality basin.

Lead Agency Contact

Name Marni Borg
Agency City of Chula Vista
Phone 619 409 5913 **Fax**
email
Address 276 Fourth Avenue
City Chula Vista **State** CA **Zip** 91910

Project Location

County San Diego
City Chula Vista
Region
Lat / Long 32° 36' 14" N / 116° 58' 44" W
Cross Streets southerly terminus of La Media Rd; westerly terminus of Main Street
Parcel No. 644-070-12, 14; Lots 27 & 28 of Map No. 862
Township **Range** **Section** **Base**

Proximity to:

Highways SR 125
Airports Brown Field
Railways
Waterways
Schools Olympian HS
Land Use Vacant land
 Z: Planned Community

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 5; Cal Fire; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Management Agency, California; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 11; Department of Housing and Community Development; CA Department of Public Health; 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 06/05/2013 **Start of Review** 06/05/2013 **End of Review** 07/19/2013

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

July 23, 2013

Marni Borg
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 91910

Subject: Otay Ranch Village 8 West Sectional Planning Area (SPA) Plan and Tentative Map (TM)
SCH#: 2010062093

Dear Marni Borg:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on July 19, 2013. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

**A-1.
cont.**

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2010062093) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures

cc: Resources Agency

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

Letter B – United States Fish and Wildlife Services and California Department of Fish and Wildlife

In Reply Refer To:
FWS-SD-10B0634-13B0354

JUL 17 2013

Ms. Marni Borg
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 91910

Subject: Comments on the Draft Environmental Impact Report for the Otay Ranch Village 8 West Sectional Planning Area Plan and Tentative Map Project, City of Chula Vista, California

Dear Ms. Borg:

This letter provides U. S. Fish and Wildlife Service (Service) and California Department of Fish and Wildlife (Department) comments on the June 5, 2013, draft Environmental Impact Report (EIR) for the Otay Ranch Village 8 West Sectional Planning Area (SPA) Plan and Tentative Map Project.

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. The City of Chula Vista (City) participates in the NCCP program by implementing its approved Multiple Species Conservation Program (MSCP) Subarea Plan (SAP).

The proposed project involves implementation of a SPA plan for both residential and commercial development on approximately 300 acres of land within Otay Ranch, located at the southeastern edge of the City of Chula Vista. Village 8 West is identified as a "covered" project in the City's MSCP SAP.

- B-1** This comment introduces the commenter 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** This comment recommends early coordination with the wildlife agencies regarding the active burrowing owl burrows within the project site. The City will coordinate with the wildlife agencies as necessary following the results of the pre-construction surveys 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 during pre-construction surveys, 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. Therefore, coordination with the wildlife agencies has already been incorporated into mitigation for the proposed project and will be included in the Mitigation Monitoring and Reporting Program (MMRP) for Village 8 West. No revision to the Draft EIR is necessary as a result of this comment.
- B-3** This comment requests additional background information in the EIR regarding mitigation for maritime succulent scrub and coastal sage scrub. As stated on page 4-20 of the Biological Resources Report (Appendix E of the Draft EIR), impacts to maritime succulent scrub would be mitigated at a 1:1 ratio, pursuant to the Otay Ranch Resource Management Plan. Mitigation measure 5.6-1 in Section 5.6 of the Draft EIR, Biological Resources, has been revised consistent with page 4-20 of the Biological Technical Report (see Final EIR page 5.6-29):
- 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 1.05 acres of maritime succulent scrub impacted maritime succulent scrub at 1:1 ratio, pursuant to the Otay Ranch Resource Management Plan. A total of 1.05 acres of maritime

COMMENTS

RESPONSES

Ms. Marni Borg (FWS-SD-10B0634-13TA0354)

2


- B-1. cont. The Wildlife Agencies appreciate the efforts that have been made to comply with the SAP and offer the following comments and recommendations to assist the City in avoiding, minimizing, and adequately mitigating project-related impacts to biological resources and to ensure that the project is consistent with, and does not adversely affect, ongoing regional habitat conservation planning efforts.
- B-2. 1. The draft EIR identifies at least 2 active burrowing owl (*Athene cunicularia*) burrows within the project site. The Wildlife Agencies recommend early coordination on this issue so we (in conjunction with the City and applicant) can develop an appropriate relocation strategy in an effort to maximize the effectiveness of the relocation effort and avoid significant project delays.
- B-3. 2. Mitigation Measure 5.6-1 requires restoration of 1.05 acres of maritime succulent scrub, but the draft EIR is not clear on the source of this requirement. We assume that the restoration is being completed in order to comply with the Otay Ranch Resource Management Plan (Phase 2), but we recommend that background information be included in the final EIR. We also recommend that a discussion be included as to why the coastal sage scrub restoration requirement (Otay Ranch Resource Management Plan Phase 2, page 75) is no longer required.
- B-4. 3. To ensure consistency with the conservation goals of the MSCP SAP, please provide 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 for the Service and Department to review.
- B-5. 4. 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). Please identify the mitigation measure in the EIR that addresses this impact, or otherwise explain how this issue has been addressed through other means (e.g. through the MSCP SAP). This information should also be provided in the final EIR.
- B-6. Thank you for the opportunity to comment on the 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.

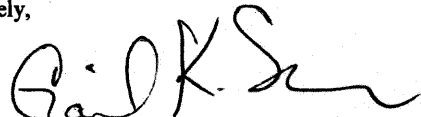
succulent scrub will require restoration. The restoration plan shall include, at a minimum, an implementation strategy; species salvage and relocation, appropriate seed mixtures and planting method; irrigation; quantitative and qualitative success criteria; maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The maritime succulent scrub restoration 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).

This minor clarification does not constitute significant new information pursuant to Section 15088.5 of the California Environmental Quality Act (CEQA) Guidelines that would require recirculation of the Draft EIR. As stated in Section 15088.5 of the CEQA Guidelines, significant new information includes: a new significant environmental impact that would result from the proposed project or a new mitigation measure proposed to be implemented; a substantial increase in the severity of an environmental impact would result unless mitigation measure are adopted that reduce the impact to a level of insignificance; a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it; or the draft environmental impact report was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. The Draft EIR revision does not meet any of these criteria; therefore, it does not trigger recirculation.

The coastal sage scrub restoration requirement was removed from the Otay Ranch Resource Management Plan as part of the Village Two, Three, and a Portion of Four Sectional Planning Area Plan. Refer to page 3-35 of the Final Second Tier EIR for the Village Two, Three, and a Portion of Four Sectional Planning Area Plan (SCH #2003091012). The Otay Ranch Resource Management Plan as amended does not include a coastal sage scrub requirement; therefore, a discussion of previous requirements is not applicable to the proposed project. No revision to the Draft EIR is necessary.

Sincerely,


for 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-4

This comment states that, to ensure consistency with the MSCP SAP, the wildlife agencies should be provided 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. With the exception of the Preserve Edge Plan, these plans are required as mitigation for the proposed project in Section

COMMENTS

RESPONSES

5.6 of the Draft EIR, Biological Resources. These plans are required in mitigation measures 5.6-1 (Maritime Succulent Scrub Restoration Plan), 5.6-2 (Resource Salvage Plan), 5.6-2 (Revegetation Plan), and 5.6-19 (Area Specific Management Directives). The City will coordinate with the wildlife agencies to provide the above plans associated with the proposed project at the time of preparation. The Preserve Edge Plan is included as Appendix D to the Village 8 West SPA Plan and has been made available for review. No revision to the Draft EIR is necessary as a result of this comment.

- B-5** This comment requests clarification regarding mitigation for impacts to foraging raptors. Impacts to foraging raptors as a result of loss of habitat on-site are mitigated through revegetation (mitigation measure 5.6-5) and preservation of habitat in the Otay Ranch Preserve in accordance with the MSCP SAP (mitigation measures 5.6-17 through 5.6-19). In addition, the MSCP Subregional Plan, as implemented through the 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 5.6.3(E) of the Draft EIR. 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—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 11
4050 Taylor St., MS 240
SAN DIEGO, CA 92110
PHONE (619) 688-6954
FAX (619) 688-4299
TTY 1-800-735-2929



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July 22, 2013

11-SD-125/805
Otay Ranch Village 8 West
DEIR SCH 2010062093
PM 4.182 and PM 4.4

Ms. Marni Borg
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 91910

RE: Otay Ranch Village 8 West

Dear Ms. Borg:

The California Department of Transportation (Caltrans) appreciates the opportunity to have reviewed the proposed Otay Ranch Village 8 West Draft Environmental Impact Report (DEIR). We have the following comments:

C-1. Traffic Impact Study (TIS) dated April 17, 2012:

- Please provide an analysis of the Interstate 805 (I-805) and State Route 125 (SR-125) main lanes.

C-2. • Further documentation should be provided to justify the existing plus project trip reduction of 38%.

C-3. • The project trip distributions in Exhibit 8 and Exhibit 9 do not add up. Please revise or clarify.

C-4. • Exhibit 5A intersection 13 indicates an exclusive right-turn lane for the southbound SR-125 off-ramp. This intersection geometry is incorrect, please revise accordingly and include revisions for the study conditions.

C-5. • The traffic impact analysis indicates the recommended mitigation measure for the Olympic Parkway / I-805 ramps is payment of TDIF fees, however, this facility is not within the TDIF program. It is stated that the TDIF program Palomar Direct Access Ramps and Heritage Road projects will result in improved LOS to the impacted Olympic Parkway / I-805 ramps, thus mitigating the project's impacts. However, no quantitative analysis is provided in the EIR traffic analysis that demonstrates a direct correlation of these projects mitigating this impact to a level of insignificance. Therefore, the EIR

Letter C – California Department of Transportation (Caltrans)

C-1 This comment introduces the commenter and requests an analysis of Interstate 805 (I-805) and State Route 125 (SR-125). Trip distribution on I-805 and SR-125 are shown in traffic impact analysis Exhibits 8 through 12 for each traffic scenario year (Appendix B to the Draft EIR). Analysis of the I-805 main lanes is provided under Threshold 1 in Section 5.3 of the Draft EIR, Transportation/Traffic, based on the analysis in Table 29 on page 63 of the traffic impact analysis (Appendix B to the Draft EIR). The analysis determined that a future cumulative impact would occur to I-805; however, the proposed project would not result in a significant direct impact. As stated on page 16 of the traffic impact analysis, SR-125 is analyzed as a tolled facility and the 2030 freeway volumes from the SANDAG traffic model, which includes traffic from the project, assume SR-125 remains a toll freeway. As such, the freeways have been included in each traffic analysis scenario. No revision to the Draft EIR is necessary as a result of this comment.

C-2 This comment requests documentation regarding the application of a trip reduction of 38 percent to the Existing Plus Project scenario. As stated in the Otay Ranch Village 8 West Traffic Impact Analysis Report (Appendix B of the Draft EIR, p. 21), 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 in this analysis.” Therefore, the 38 percent trip reduction was not applied to the Existing Plus Project scenario. This detail has been added to the Final EIR on page 5.3-15. As described in comment B-3, this minor revision does not constitute significant new information pursuant to Section 15088.5 of the CEQA Guidelines that would require recirculation of the Draft EIR. No revision to the Draft EIR is necessary as a result of this comment.

C-3 This comment states that the project trip distributions do not add up in Exhibit 8 and 9 of the Traffic Impact Analysis (Appendix B of the Draft EIR). These exhibits present different information and are not intended to match or add up. Exhibits 8 through 12 of the Otay Ranch Village 8 West Traffic Impact Analysis Report (Appendix B of the Draft EIR) are provided to illustrate the project trip generation for each study scenario. Exhibit 8 provides the project's trip distribution under the Existing Plus Project study scenario, which assumes the existing street network and buildout of the proposed project (Appendix B of the Draft EIR, p. 21). Exhibit 9

COMMENTS

RESPONSES

Ms. Marni Borg
July 22, 2013
Page 2

C-5.
cont.

should either disclose that the impact remains significant and unmitigatable, or identify an actual mitigation improvement project for the impacted Olympic Parkway / I-805 ramps, which could be incorporated into the City's TDIF.

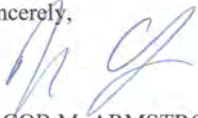
General Comments:

C-6.

Caltrans is currently in the process of developing a Project Study Report (PSR) for the Main Street, Rock Mountain and Otay Valley Road interchanges. It is recommended as part of the EIR that the City coordinate with Caltrans to incorporate information from the PSR where applicable.

If you have any questions, please contact Rogelio Sanchez-Rangel, Development Review Branch, at (619) 688-6494.

Sincerely,



JACOB M. ARMSTRONG, Chief
Development Review Branch

provides the project's trip distribution under the 2015 Project study scenario, which includes project trip generation from 105 single family and 246 multi-family residential dwelling units, and the 2015 roadway network (Appendix B of the Draft EIR, p. 25). Due to differences in the assumed roadway network and phased on-site development (see Table 5.3-7 that shows the phasing for each scenario year), trip distribution differs between the two scenarios. No revision to the Draft EIR is necessary as a result of this comment.

C-4

This comment states that the geometry for the southbound SR-125 ramp at Birch Road is incorrect and needs to be revised. The Otay Ranch Village 8 West Traffic Impact Analysis Report (Appendix B of the Draft EIR) has been revised accordingly to reflect the correct existing lane geometry at Intersection #13. Draft EIR Table 5.3-5, Existing Intersection Level of Service, and Table 5.3-8, Existing Plus Project Intersection Level of Service, have been revised accordingly. This minor geometry revision resulted in changes in the level of service (LOS) at the Birch Road/SR-125 southbound ramps intersection from LOS A to LOS B under the Existing and Existing Plus Project scenarios. This change does not affect any of the significance conclusions or mitigation requirements for the proposed project. As such, as described in comment B-3, this minor revision 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 required.

C-5

This comment states the Olympic Parkway and I-805 ramps cannot be mitigated with Transportation Development Impact Fees (TDIF) and that this impact should be considered significant and unavoidable. The project's impact to the Olympic Parkway / I-805 Northbound Ramps was identified as a cumulative impact for the Year 2015 and Year 2020 scenarios (see Draft EIR page 5.3-54). The City of Chula Vista requires construction of improvements to mitigate direct impacts, and allows payment of TDIF fees to mitigate cumulative impacts. Pages 29 and 30 of the traffic impact analysis (Appendix B to the Draft EIR) acknowledge that the Olympic Parkway / I-805 ramps are not within the City's TDIF program. The analysis also explains that there are a number of planned improvements within the TDIF program as well as planned improvements by Caltrans for the I-805 corridor which would reduce the traffic volume through the Olympic Parkway/I-805 interchange, including the Palomar Street Direct Access Ramps and construction of Heritage Road. The project's payment of TDIF fees, as required in mitigation measure 5.3-17, will contribute to funding these improvements that would reduce traffic volume at the Olympic Parkway / I-805 ramps. Therefore, implementation of mitigation measure 5.3-17, which requires the payment of the TDIF for

COMMENTS

RESPONSES

network improvements that would mitigate impacts to the Olympic Parkway/I-805 ramps, would reduce the cumulative impact to a less than significant level. No revisions to the Draft EIR are required in response to this comment.

- C-6** This comment requests that the City incorporate the Caltrans Project Study Report (PSR) for the Main Street, Rock Mountain and Otay Valley Road interchanges into the Draft EIR. As stated by the commenter, this report is currently being prepared and therefore was not available for incorporation into the Draft EIR traffic analysis. As of publication of the Final EIR, the PSR has not yet been received by the City of Chula Vista. No revision to the Draft EIR is required in response to this comment.

COMMENTS

RESPONSES

From: Hyatt, Joel [mailto:JHyatt@sandiego.gov]
 Sent: Wednesday, July 17, 2013 9:07 AM
 To: Marni Borg
 Subject: Village 8 Draft EIR questions/comments

Hi Marni,

D-1. This is Joel Hyatt in the City of San Diego Park and Recreation Open Space Department. We are not sure if our department will provide any comments on the Village 8 West project mostly because we are not sure of the proximity of the project to the OVRP boundary. In any case, our comment would be that, if possible, we would like to see reasonable connections or trails from Village 8 West to the adjacent OVRP Open Space area.

We are most interested in learning what is "Planning Area 20" located south of the Village 8 West Project.

D-2. Attached is the NOP with a map of the land uses for your quick reference. (Figure #2).

Thank you for your input.

Joel Hyatt
 Senior Planner
 619-685-1359 w

Letter D – City of San Diego Park and Recreation

D-1 This comment introduces the commenter and states that the proposed project should provide reasonable connections or trails to the adjacent Otay Valley Regional Park open space area. The proposed Village 8 West SPA Plan would provide a trail connection to the OVRP. As described in Section 3.3.1 of the Draft EIR, Village 8 West SPA, an off-site utility corridor would extend from the southern end of the project site to the Otay River. A 12-foot paved utility access road would be included within the 30-foot utility corridor. This utility access road would provide access for the off-site utilities and would also serve as a recreational trail connection to the Otay Valley Regional Park trail system. This trail is depicted in Figure 3-7 of the Draft EIR, Pedestrian Circulation System and Transit Stops. Therefore, this comment has already been incorporated into the Draft EIR, and no revisions to the Draft EIR are necessary as a result of this comment.

D-2 This comment request details in regards to Planning Area 20. Planning Area 20 is not part of the proposed project, but is identified in the Otay Ranch General Development Plan as an active recreation area as part of the Otay Valley Regional Park. This comment does not pertain the adequacy or accuracy of information provided in the Draft EIR. No further response is required.

COMMENTS

RESPONSES



CHULA VISTA ELEMENTARY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 91910 • 619 425-9600

EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH

June 20, 2013

Marni Borg
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 91910

Re: EIR 10-03; SCH 2010062093 - Otay Ranch Village 8 West SPA Plan and Tentative Map Draft Environmental Impact Report

To Ms. Borg:

Thank you for the opportunity to respond to the SPA Plan and Tentative Map Draft Environmental Report for the above-mentioned project. Please be advised that this project is within the Chula Vista Elementary School District, which serves children from Kindergarten through Grade 6.

E-1. The California Department of Education (CDE) has specific criteria for school site approval. These criteria are outlined in the Site Selection and Approval Guide available at <http://www.cde.ca.gov/ls/fa/sf/schoolsiteguide.asp>. Please be advised that there is a possibility that CDE will not approve the proposed site.

E-2. State law currently provides for a developer fee of \$1.41/sq. ft. of assessable area to assist in financing facilities needed to serve growth. The District encourages developer participation in alternative financing mechanisms to help assure that facilities will be available to serve children generated by new construction. We are currently utilizing Community Facilities Districts (CFD's) as one method to help fund this shortfall. Participation in a CFD is in lieu of developer fees, with school mitigation paid by the homeowner in the form of a special tax. Use of an alternative financing mechanism, such as participation, or annexation to, a CFD is highly recommended.

The District requests a copy of an approved (stamped/signed) tentative map when/if the project is approved, in order to comply with Office of Public School Construction eligibility audit. Your assistance in this matter would be greatly appreciated.

E-3. Thank you again for the opportunity to review the Otay Ranch Village 8 West SPA Plan and Tentative Map Draft Environmental Report. If additional information is needed, please give our Facilities Planning Department a call at (619) 425-9600, Extension 1374.
Sincerely,


Carolyn L. Scholl
Facilities Planning Manager

Letter E – Chula Vista Elementary School District (CVESD)

- E-1** This comment introduces the commenter and states that there is a possibility that the Chula Vista Elementary School District (CVESD) will not approve the elementary school site proposed in the Village 8 West SPA Plan. The Draft EIR includes this information on page 3-24 of Chapter 3.0, Project Description, which states, "If the district decides not to acquire the elementary school site, it would be re-designated for multi-family residential uses, but is not allowed to increase the overall residential dwelling unit yield and density of the village." No revisions to the Draft EIR are necessary as a result of this comment.
- E-2** This comment recommends utilizing Community Facilities districts in lieu of developer fees for mitigation of impacts to schools. Mitigation measure 5.9.3-1 in Section 5.9.3, Schools, requires that applicants provide the city with evidence or certification by the CVESD 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. In accordance with mitigation measure 5.9.3-1, applicants will consult with the CVESD to determine the appropriate fee charge, dedication, or other requirements appropriate for the proposed development. This comment has already been incorporated into the Draft EIR. No revisions to the Draft EIR are necessary as a result of this comment.
- E-3** This comment concludes the letter and requests a copy of an approved tentative map for Village 8 West. This comment has been noted. No response is required.

COMMENTS

RESPONSES



San Diego County Archaeological Society, Inc.

Environmental Review Committee

16 June 2013

Letter F – San Diego County Archaeological Society (SDCAS)

To: Ms. Marni Borg
Development Services Department
City of Chula Vista
276 Fourth Avenue
Chula Vista, California 91910

Subject: Draft Environmental Impact Report
Otay Ranch Village 8 West Sectional Planning Area

Dear Ms. Borg:

I have reviewed the cultural resources aspects of the subject DEIR on behalf of this committee of the San Diego County Archaeological Society.

F-1. Based on the information contained in the DEIR and its cultural resources appendix, we concur with the impact analysis and mitigation measures as proposed.

Thank you for the opportunity to participate in the City's environmental review process for this project.

F-1 This comment states that the commenter has reviewed the cultural resources analysis contained in the Draft EIR and concurs with the analysis and mitigation. No response is required.

Sincerely,


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

cc: Noah Archaeological Consulting
SDCAS President
File

COMMENTS

RESPONSES

Letter G – Christian Driscoll

OTAY VALLEY QUARRY, LLC

6591 Collins Drive, Suite E-11, Moorpark, CA 93021

Attn: Marni Borg
 City of Chula Vista
 276 Fourth Avenue, Chula Vista, CA 91910

mborg@chulavistaca.gov.

RE: PUBLIC NOTICE OF THE AVAILABILITY OF THE VILLAGE 8 WEST SECTIONAL PLANNING AREA PLAN AND TENTATIVE MAP DRAFT ENVIRONMENTAL IMPACT REPORT (EIR 10-03; SCH 2010062093)

Mrs. Borg,

- G-1. We are writing this letter in response to the above public notice we received. We are the property owners of the land commonly referred to as "Village 4" which is directly contiguous to the west of the proposed "Village 8 West" property listed in the above referenced planning documents.
- G-2. We have reviewed the above documents in relation to our current land use, as well as our future proposed land plans. We are hoping to submit our proposed plans to the City in the near future.
- G-2. We respectfully request that the VILLAGE WEST 8 EIR incorporates into their analysis our current and proposed land use plans and allowed density. Please include a review in all areas, and any associated cumulative impacts, included but not limited to the following areas:
 Land Use and Planning, Aesthetics/Landform Alteration, Transportation/Traffic, Air Quality, Biological Resources, Geology and Soils, Public Services, Hydrology and Water Quality, Housing and Population, Public Utilities, Mineral Resources.
- G-3. Thank you for your consideration. If you have any questions, or need additional information please contact me directly.

Sincerely,

Christian Driscoll

805.299.8223 direct
 805.299.8230 fax

cdriscoll@danskig.com

- G-1. This comment introduces the commenter as the property owner of Village 4 and states that the commenter has reviewed the Draft EIR in relation to current land uses and the commenter's future proposed land plans. No response is required.
- G-2. This comment requests that the EIR incorporate analysis of Village 4 in all applicable sections and in the cumulative impact analysis. As stated by the commenter, to date the commenter has not submitted "proposed land use plans and allowed density" for Village 4 to the City. Therefore, the Draft EIR addressed cumulative impacts based on development of Village 4 consistent with the approved GP and GDP, as was reasonably foreseeable at the time of EIR preparation, in accordance with Section 15130 of the CEQA Guidelines. Cumulative impacts that would result from development of Village 8 West and Village 4 have been adequately addressed in the Draft EIR. No modification of the Draft EIR is required.
- G-3. 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 H – Theresa Acerro

From: THERESA ACERRO [mailto:thacerro@yahoo.com]
Sent: Wed 7/17/2013 8:39 PM
To: Marni Borg
Subject: village 8 west

Marni,

I have not yet had a chance to look at full EIR but from the Exec. summary it appears Main Street will be extended. It is not clear whether this will be before dev. begins and who will pay for it from the Summary.

H-1. My biggest concern is for Wolf Canyon. I believe there needs to be a bridge or at the very least large culverts allowing wildlife safe crossing under the road and hikers, bikers passage back and forth into the Regional Park.
Where exactly would I find this information in the EIR document?

Thanks,
Theresa

H-1 This comment expresses concern over impacts to Wolf Canyon that would occur as a result of the extension of Main Street. The Otay Ranch Village 8 West Traffic Impact Analysis Report (Appendix B of the Draft EIR, p. 50, 65-67) concluded that the westward extension of Main Street is not needed for the proposed project. Therefore, the extension of Main Street over Wolf Canyon is not part of the proposed project. However, it is included in the 2030 traffic analysis assumptions since it is funded by the TDIF program and is a Capital Improvement Project. Therefore, the extension of Main Street is a reasonably foreseeable future roadway network condition, is part of the future circulation network, and was assumed in the traffic impact analysis.

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 8 West 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 8 West.

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 300 acres of land in Otay Ranch known as Village 8 West, 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 13 miles southeast of the downtown area of the city of San Diego, and approximately 7 miles north of the U.S./Mexico international border.

The project site is currently undeveloped. La Media Road currently terminates at the northerly boundary of Village 8 West, and a portion of Magdalena Avenue runs along the northeast boundary of the site. Rock Mountain is located to the west and southwest and the Otay River Valley is south of the site. A reservoir facility owned and operated by the City of San Diego is located in approximately the center of the project site. This facility is not a part of the proposed Village 8 West SPA Plan.

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 8 West 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 defines Village 8 West as an urban village. 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." According to the GDP, Village 8 West is to provide single-family and multi-family residential units, a Town Center containing commercial uses, parks, a community purpose facility site, schools, affordable housing and a transit stop. The most intense development would be concentrated near the Town Center, with building heights and density gradually decreasing with distance from the center.

1.3 Project Description

The project includes the SPA Plan and TM for Village 8 West, including associated off-site improvements, consistent with the Otay Ranch GDP. The development proposed by the Otay Land Company (OLC) pursuant to the Village 8 West SPA Plan is referred to as the "project," and is the focus of this EIR. The Village 8 West 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 8 West 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 an elementary school, a middle school, 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 8 West are provided below in Table 1-1.

Table 1-1 Village 8 West SPA Land Uses

Land Use	Area (Acres)	Residential (Units)	Office (Square feet)	Commercial (Square feet)
Mixed Use (TC)	40.7	899	50,000	250,000
Multi-family (MH)	29.5	530	--	--
Cluster Single-family/Town homes (M)	26.2	290	--	--
Single-family (LMV)	67.0	331	--	--
Schools	31.6	--	--	--
Community Purpose Facility	5.8	--	--	--
Parks	27.9	--	--	--
Open Space	39.1	--	--	--
Arterial Rights-of-Way and Basin	32.5	--	--	--
Total	300.3	2,050	50,000	250,000
TC = Town Center, MH = medium-high density, M = medium density, and LMV = low-medium density Source: Otay Land Company, LLC. 2012				

1.3.2 Off-Site Improvement Area

Village 8 West would include an off-site utility corridor to the south of the project 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 be included within the 30-foot utility corridor. This utility access road would provide access for the off-site utilities and would serve as a trail connection to the Otay Valley Regional Park trail system. The project would also require 4.6 acres of off-site grading on the City of San Diego reservoir site in the middle of Village 8 West.

1.3.3 Mobility

The Village 8 West 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 as well as internal systems to serve the project site. 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 8 West 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 8 as indicated below:

1. Create a recognizable “place” that is unique, attractive, and full of 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 development patterns that promote orderly growth, prevent urban sprawl, and promote effective resource management.
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, recreational uses, and businesses that serve the daily needs of nearby residents.
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. Retain and recruit a skilled and motivated workforce to ensure economic stability into the future by providing attainable housing opportunities. 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.
10. Promote synergistic uses and graceful transitions within the SPA and between the SPA and neighborhoods of adjacent SPAs to balance activities, services, and facilities. Integrate Village 8 West with existing Otay Ranch development, including connectivity to the Greenbelt.
11. 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.
12. 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.
13. 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 8 West SPA Plan and associated documents including but not limited to:
 - Village 8 West 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 8 West
- Approval of a development agreement amendment including conditions of approval for development within the Village 8 West 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 25, 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 scenic resources and visual character (degradation of rolling hills), air quality (consistency with existing plans, increased criteria pollutants), noise (short-term increase in traffic noise), cultural resources (cumulative disturbance of archaeological resources and human remains), potential effects of climate change (exacerbate air quality problems), agricultural resources (conversion of agricultural resources), and public utilities (water, wastewater, energy, and cumulative recycled water demand).

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, scenic resources); 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 (paleontological resources, direct impacts to archaeological resources and human remains), geology and soils (exposure to seismic related hazards, soil erosion or topsoil loss, soil stability, expansive soils), hydrology and water quality (storm water pollution, public services (fire and emergency medical services, police services, schools, libraries, parks and recreation), 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 (direct demand for 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 – 1,167 Dwelling Units, and Reduced Project Alternative #2 – 672 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 8 West 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 – 1,167 Dwelling Units

Reduced Project Alternative #1 would include the development of 1,167 residential units, compared to 2,050 units under the proposed Village 8 West SPA Plan and TM. This alternative is intended to provide a more suburban approach to development in the SPA Plan area, which reduces residential development by almost 50 percent. Under the Reduced Project Alternative #1, no residential units would be developed in Planning Areas B, C, H-1, or L. Multi-family residential units would still be developed in Planning Areas F and J, at reduced densities compared to the project. Commercial development in the Town Center would also be reduced to 170,000 square feet, compared to 300,000 square feet under the proposed project. Additionally, the Neighborhood Park proposed for the project would be eliminated under this alternative. The park area (Planning Area T) would be designated for single-family residential development to further reduce density in the Neighborhood General Zone.

1.6.3 Reduced Project Alternative #2 – 672 Dwelling Units

Reduced Project Alternative #2 would include the development of 672 residential units, compared to 2,050 units under the proposed project. This lower density alternative is intended to provide more open space and eliminate mixed-use development. The greatest reduction in development would occur in the Town Center. Under this alternative, no mixed-use development is proposed and no residential development would occur in the Town Center.

Residential densities would also be reduced in the Neighborhood Edge, Neighborhood General, and Neighborhood Central Zones. Commercial development in the Town Center would also be reduced to 104,000 square feet, compared to 300,000 square feet under the project. Additionally, the Neighborhood Park proposed for the project would be eliminated under this alternative. The park area (Planning Area T) would be designated for single-family residential development to further reduce density in the Neighborhood General Zone. The development footprint would be reduced until this alternative. Portions of Planning Areas N, P, and V of the proposed project would be replaced with an open space designation. This alternative would include 40.4 acres of open space, compared to 23.5 acres under the project. This additional open space area would provide additional transition from developed areas to the Multiple Species Conservation Program Preserve, but would not be incorporated into the Preserve.

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 (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 5.3-7 through 5.3-16 and 5.3-18 through 5.3-20 identified for potential traffic impacts would not be required under this alternative and mitigation measure 5.5-3 would not be required for excessive noise impacts to residences in Planning Areas B, C, F, G, H1, H2, J, and L because no residences are proposed in these areas. However, as with the Reduced Project Alternative #1, this alternative would not avoid any of the project's significant and unavoidable impacts associated with 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 VOC emissions by approximately 57 percent and energy use by approximately 65 percent.

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
5.1 Land Use and Planning			
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 8 West.	<p>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:</p> <ul style="list-style-type: none"> i. Applicant has entered into an agreement with the City of San Diego to relocate the City of San Diego waterlines within Village 8 West 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 8 West. <p>5.1-2 Waterline Relocation. Prior to issuance of the first grading permit within Village 8 West, 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 8 West.	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 8 West, 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.

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
5.2 Aesthetics/Landform Alteration			
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?	The project would alter a portion of the east-facing slope of Rock Mountain.	5.2-1 Landscape Master Plan. Prior to issuance of the first final map for Village 8 West, 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 Rock Mountain and other visible manufactured slopes greater than 25 feet in height, through plant selection, placement, and density, etc.	Less than significant.
Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	The project would permanently alter the character of the project site from open, rolling topography to urban development. This impact would be significant.	Mitigation measure 5.2-1 would also reduce impacts to visual character or quality.	Significant.
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	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.	5.2-2 Lighting Plan and Photometric Analysis - Parks. Concurrent with the preparation of site-specific plan(s) for park sites, including the town center park, Planning Area A and Planning Area T 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 (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 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	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>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>5.2-4 Shadow 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 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 analysis is performed.</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 not significantly impact steep slopes. However, grading on a portion of the east-facing slope of Rock Mountain would be a potentially significant.</p>	<p>Mitigation measure 5.2-1 would also reduce impacts to landform alteration.</p>	<p>Less than significant.</p>
<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>
5.3 Transportation/Traffic			
<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>The project would result in direct and cumulative impacts on roadways and intersections under the Existing Plus Project, Year 2015, 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>Growth Management Oversight Commission Compliance (Section 19.09 of the CVMC)</p> <p>5.3-1 Olympic Parkway: 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"> 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 	<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 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>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</p> <p>iii. Agree to the City Engineer's selection of an alternative method of maintaining Growth Management Ordinance traffic threshold compliance; or</p> <p>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.</p> <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>On-site Circulation Mitigation</p> <p>5.3-2 Main Street/La Media Road Intersection: Prior to the issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct a traffic signal at the intersection of Main Street and La Media Road.</p> <p>5.3-3 Main Street/Magdalen Avenue Intersection: Prior to the issuance of the final map that contains the first equivalent dwelling</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>unit, the applicant shall secure or construct the west leg of this intersection and modify existing striping to provide access to Village 8 West. The applicant shall secure or construct a stop sign on the southbound approach.</p> <p>5.3-4 Main Street: Prior to the issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Main Street from La Media Road to Magdalena Avenue as a two-lane, two-way street to provide access to Village 8 West.</p> <p>5.3-5 La Media Road: Prior to the issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct La Media Road from existing terminus south of Santa Luna Street to Planning Areas N, I and J south of Main Street as a two-lane, two-way street to provide access to Village 8 West.</p> <p>5.3-6 Otay Valley Road: Prior to the issuance of the final map that contains the 302nd equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from south of Main Street to Village 8 West Street A as four-lane major 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 comes first.</p> <p>5.3-7 Main Street (La Media Road to Magdalena Avenue): Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall secure or construct the remaining two lanes of Main Street through the couplet, install traffic signals at new couplet intersections, and restripe Main Street as a one-way segment for each leg of couplet, 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 La Media Road: Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall secure or construct the remaining two lanes of La Media Road through the couplet, install traffic signals at new couplet intersections, and restripe La Media Road as a one-way segment for each leg of couplet, 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>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.3-9 Otay Valley Road: Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road as a four-lane major roadway from Village 8 West Street A to the Village 8 West eastern project boundary and install stop control on side streets until a traffic signal is 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>5.3-10 Main Street/Magdalen Avenue Intersection: Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall re-stripe the Main Street/Magdalen Avenue intersection to include dual eastbound left turn lanes and one eastbound through lane, and secure or construct a traffic signal, 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>5.3-11 Village 8 West Street A: Prior to the issuance of the final map that contains the 2,234th equivalent dwelling unit, the applicant shall secure or construct Street A as a local street from Main Street to Otay Valley Road and provide signalized access at Otay Valley Road and at Main Street, 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>Direct Impact Mitigation</p> <p>5.3-12 Olympic Parkway/Brandywine Avenue Intersection: Prior to the issuance of the final map that contains the 1,388nd equivalent dwelling unit, the applicant shall: 1) secure or construct a northbound right turn overlap phase to reduce delay to the northbound right turning volume and provide a overall capacity improvement to the intersection, and 2) secure or construct the extension of the westbound left turn pocket, if not already completed by 2015.</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.3-13 Olympic Parkway: Heritage Road to La Media Road: Prior to the issuance of the final map that contains the 1,388nd equivalent dwelling unit, the applicant shall secure or construct Santa Victoria Road from Heritage Road to La Media Road and shall construct Heritage Road from Olympic Parkway to Santa Victoria Road.</p> <p>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: Prior to the issuance of the final map that contains the 2,234th equivalent dwelling unit, the applicant shall secure or construct Main Street from the existing terminus east of Village 8 West to Eastlake Parkway, including the construction of an overcrossing at SR-125.</p> <p>5.3-15 Birch Road/La Media Road, Birch Road/SR-125 Northbound Ramps, Birch Road/Eastlake Parkway, Main Street/I-805 Southbound Ramps, and Main Street/I-805 Northbound Ramps Intersections; Birch Road, La Media to SR-125; Birch Road, SR-125 to Eastlake Parkway; Main Street, I-805 to Brandywine Avenue; and Main Street, Brandywine Avenue to Heritage Road: Prior to the issuance of the final map that contains the 2,610th equivalent dwelling unit, the applicant shall construct SR-125 northbound and southbound ramps at Main Street.</p> <p>5.3-16 Main Street/La Media Road Couplet, Main Street/ Magdalena Avenue, and Main Street/ Eastlake Parkway Intersections: Prior to the issuance of the final map that contains the 2,610th equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from the Village 8 West eastern boundary to Village 9 Street A, including the construction of an overcrossing at SR-125.</p> <p>Cumulative Impact Mitigation</p> <p>5.3-17 Prior to the issuance of each building permit, the applicant shall pay their fair share into Chula Vista’s Transportation Development Impact Fee program for cumulative impacts related to:</p> <ul style="list-style-type: none"> i. Olympic Parkway/I-805 northbound ramps intersection ii. Olympic Parkway: I-805 to Brandywine roadway segment 	

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"> iii. Olympic Parkway: Brandywine to Heritage Road roadway segment iv. <u>Olympic Parkway: Heritage Road to La Media Road</u> v. Heritage Road: Main Street to Entertainment Circle roadway segment vi. Heritage Road: Entertainment Circle to Avenida de Las Vistas roadway segment vii. Eastlake Parkway: Birch Road to Main Street roadway segment <p>Circulation System Assumptions</p> <p>5.3-18 The Year 2020 scenario assumes the following roadway improvements:</p> <ul style="list-style-type: none"> i. Construction of Main Street from Village 9 Street A to Eastlake Parkway as a six-lane gateway ii. Construction of Otay Valley Road, from Village 9 Street A to the University site four-lane major street. <p>If the project equivalent dwelling unit limit for study Year 2015 (302 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"> i. Development in Village 8 West 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 a transportation development impact fee credit for those improvements as applicable; or 	

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"> 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>5.3-19 The Year 2025 scenario assumes the following intersection and roadway improvements:</p> <ul style="list-style-type: none"> i. Construction of Olympic Parkway/Santa Victoria intersection ii. Construction of Santa Victoria/Heritage Road intersection iii. 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 iv. Widening of Heritage Road from Main Street to Avenida de la Vistas from a Class II collector to a six-lane prime arterial. <p>If the project equivalent dwelling unit limit for study Year 2020 (1,388 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> <ul style="list-style-type: none"> i. Development in Village 8 West shall stop until those assumed future roadways are constructed by others; or ii. Development in Village 8 West shall stop until those assumed future roadways are constructed by others; or iii. 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 iv. Applicant shall construct the missing roadway links and receive a transportation development impact fee credit for those improvements as applicable; or 	

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"> v. An alternative measure is selected by the city in accordance with the Chula Vista Growth Management Ordinance. vi. All to the satisfaction of the City Engineer. <p>5.3-20 The Year 2030 scenario assumes the following roadway improvement:</p> <ul style="list-style-type: none"> i. Construction of Main Street from Heritage Road to La Media Road as a six-lane prime arterial <p>If the project equivalent dwelling unit limit for study Year 2025 (2,234 equivalent dwelling unit) is exceeded prior to this roadway segment 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"> i. Development in Village 8 West shall stop until the assumed future roadway is constructed by others; or ii. City and the applicant shall meet to determine the need for the incomplete roadway segment. 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 link and receive a transportation development impact fee credit for those improvements as applicable; or iv. An alternative measure is selected by the city in accordance with the Chula Vista Growth Management Ordinance. v. All to the satisfaction of the City Engineer. 	
<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 8 West 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?	Village 8 West 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. The project would not result in significant impacts related to hazards due to a design feature. Hazard impacts due to incompatible uses would be less than significant.	No mitigation required.	Less than significant.
Would the project result in inadequate emergency access?	Individual developments within Village 8 West 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.
5.4 Air Quality			
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 ₁₀ , and PM _{2.5} 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 PM ₁₀ during operation of the development in Village 8 West.	5.4-1 Short-term Air Quality Violations Reduction Measures. The following techniques to reduce construction emissions shall be implemented during all construction activities: <ul style="list-style-type: none"> 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. 	Significant.

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"> 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. <p>5.4-2 Dust Control Measures. Mitigation of PM₁₀ 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"> 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. 	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>vii. To the maximum extent feasible:</p> <ul style="list-style-type: none"> a. Heavy-duty construction equipment with modified combustion/fuel injection systems for emissions control shall be utilized during grading and construction activities. <p>viii. Catalytic reduction for gasoline-powered equipment shall be used.</p> <p>ix. 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>x. Electrical construction equipment shall be used to the extent feasible.</p> <p>xi. The simultaneous operations of multiple construction equipment units shall be minimized (i.e., phase construction to minimize impacts).</p> <p>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 (PM₁₀ and PM_{2.5}). 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"> i. All construction equipment shall be outfitted with best available control technology devices certified by the 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. 	

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"> 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. x. During blasting, utilize control measures to minimize fugitive dust. Control measures may include, but are not limited to, blast enclosures, vacuum blasters, drapes, water curtains, or wet blasting. 	
<p>Would the project expose sensitive receptors to substantial pollutant concentrations?</p>	<p>The carbon monoxide concentrations at all of the remaining intersections under each scenario are also below the state and federal standards. Provided that new sources of toxic air contaminants emissions proposed within Village 8 West comply with San Diego Air Pollution Control District standards, the impact associated with risk of toxic exposure to sensitive receptors is considered less than significant.</p>	<p>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 contaminant 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 the California Air Resources Board siting recommendations.</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 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.
5.5 Noise			
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. Short term increased in noise levels would remain significant until the proposed roadway system is complete.	5.5-1 Noise Attenuation in the Neighborhood Edge Zone (Planning Area N) and Neighborhood General Zone (Planning Areas Q and U). Prior to the approval of grading permits for residential development along Otay Valley Road within Planning Areas N, Q, and U in the Neighborhood Edge and Neighborhood General Zones (as shown in Figure 3-3, Utilization Plan), the applicant shall be responsible for the preparation of a subsequent acoustical study based on the final map design and implementation of any measures recommended as a result of the analysis to the satisfaction of the Development Services Director (or their designee). The study shall include, but not be limited to the following: 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; ii. A detailed analysis which demonstrates that barriers and/or setbacks have been incorporated into the project design, such	Less than significant. Significant (Short term)/Less than significant (Long term).

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>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>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 N, Q, and U), the applicant shall prepare an acoustical analysis ensuring that interior noise levels due to exterior noise sources will be at or below 45 dBA CNEL. 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.</p> <p>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 second 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 B, C, E, F, H1, H2, I, J, L, M, and O), the applicant shall prepare an acoustical analysis demonstrating compliance with California’s Title 24 Interior Noise Standards (i.e., 45 dBA CNEL) and the City’s Exterior Land Use/Noise Compatibility Guidelines for outdoor use areas (i.e., 65 dBA CNEL). Design-level architectural plans will be available during design review and will permit the accurate calculation of transmissions 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</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>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.</p> <p>5.5-4 Site-Specific Acoustic Analysis – Non-Residential Noise Sensitive Land Use. Concurrent with design review and prior to the approval of building permits for any non-residential noise sensitive land use (schools, neighborhood parks, outdoor use areas, some Community Purpose Facility uses, etc.) area where exterior noise levels exceed 65 dBA CNEL (Planning Areas B, C, D, F, G, H1, H2, I, J, M, L, R, S, and T), the applicant shall be responsible for the preparation of an acoustical analysis ensuring that exterior noise levels at the boundary of the proposed noise sensitive land use will be below 65 dBA CNEL and implementation of any measures recommended as a result of the analysis. 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. The analysis shall also demonstrate that barriers or setbacks have been incorporated into the project design, such that, when considered with proposed construction specifications, ground level and upper story interior noise levels shall not exceed 45 dBA CNEL. 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.</p> <p>5.5-5 Site-Specific Acoustic Analysis – Office Uses. Concurrent with design review and prior to the approval of building permits for any office area where exterior noise levels exceed 70 dBA CNEL (Planning Areas H2, J, and L), the applicant shall prepare an acoustical analysis, and construct any attenuation measures identified therein, to ensure that exterior noise levels at the property line of the proposed office building will be below 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.</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.5-6 HVAC Mechanical Equipment Shielding. Concurrent with design review and prior to the approval of building permits for non-residential development requiring HVAC equipment, the applicant shall prepare a report demonstrating that HVAC equipment is designed to ensure that noise levels from the equipment will not exceed the Chula Vista noise ordinance standards. Noise from HVAC equipment shall be reduced by either the installation of acoustical shielding around all new rooftop HVAC equipment, or by placing the HVAC equipment below grade in basement space.</p> <p>5.5-7 Shielded Private Outdoor Usable Space for Town Center Residences. Private usable outdoor space for new residential or commercial development such as patios, balconies, or outdoor dining areas in the Town Center shall be located or protected from noise to ensure noise levels are below 65 dB CNEL. The proposed plan for private residential open space shall be designed to the satisfaction of the City Engineer prior to design review.</p> <p>5.5-8 Site Specific Acoustic Analysis - Community Park and Neighborhood Park. Concurrent with the preparation of site-specific plan(s) and prior to the approval of a precise grading plan for the Community Park or Neighborhood Park, the applicant shall prepare, or in the case the City being the lead on the preparation of the site specific plan, the applicant shall fund the preparation of an acoustical analysis shall be conducted to ensure that noise levels generated from any active uses at the Community Park or Neighborhood Park, such as sports fields and a skate park, do not exceed the exterior noise limits of the receiving land use category as identified in the Chula Vista Noise Ordinance. The applicant shall be responsible for 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 to provide setbacks between active areas and adjacent noise sensitive uses or construction of a wall to provide noise attenuation. Final noise attenuation design shall 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>	

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 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>Existing Plus Project Scenario and Unmitigated Year 2025 Scenario. Five 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; La Media Road, Olympic Parkway to Birch Road; La Media Road, Birch Road to Main Street; and Magdalena Avenue, Birch Road to Main Street. Traffic-related noise is reduced either by constructing noise barriers, lowering traffic speeds, or by reducing traffic. Implementation of the SPA Plan and TM 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 8 West instead of the surrounding roadways. Additionally, these connections would direct traffic generated by Village 8 West 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, 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 8 West. <u>Short-term increases in noise levels would</u></p>	<p><u>Mitigation measure 5.3-20 would ensure that the regional circulation system would be implemented concurrently with Village 8 West.</u> No mitigation required.</p>	<p><u>Significant (Short-term, Existing + Project Only)/Less than significant (Long-term).</u> 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><u>remain significant until the proposed roadway system is complete.</u></p> <p>Unmitigated Year 2025 Scenario. One roadway segment would result in a significant impact under the Year 2025 Scenario: La Media Road, Birch Road to Main Street. As described above under the Existing Plus Project Scenario, the buildout circulation network for Village 8 West would reduce long-term traffic noise. Mitigation measure 5.3-20 would ensure that the circulation network is implemented concurrently with development.</p> <p>Unmitigated and Mitigated Year 2030 Scenarios. In the Unmitigated and Mitigated Year 2030 (Buildout) scenarios, Village 8 West would not result in a significant traffic noise increase on any roadway.</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?	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 in Section 5.6, Biological Resources, would also reduce impacts related to construction noise.	Less than significant.
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 proposed project would not have a significant impact on airport operations, nor would the project be exposed to excessive aircraft overflight noise levels	No mitigation required.	Less than significant.
Would the project Be inconsistent with General Plan, GDP or other objectives and policies regarding noise, thereby resulting in a significant physical impact?	No significant impacts related to consistency with general plan policies have been identified for implementation of the Village 8 West SPA Plan and TM.	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
5.6 Biological Resources			
<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 Wildlife 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 coast barrel cactus, Otay tarplant, San Diego marsh elder, California gnatcatcher, least Bell's vireo, cactus wren, rufous-crown sparrow, orange-throated whiptail, 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>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 1.05 acres of maritime succulent scrub will require restoration 1.05 acres of maritime succulent scrub. 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 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>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, Otay tarplant, a Chula Vista narrow endemic species, <i>Plantago erecta</i> (Quino checkerspot butterfly larval host plant), coast barrel cactus, 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/</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>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>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 Coastal California Gnatcatcher, Coastal Cactus Wren, and Least Bell's Vireo Pre-Construction Survey. For any work proposed between February 15 and September 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</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>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 Burrowing Owl 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 pre-construction surveys for burrowing owls. The surveys shall be performed no earlier than 30 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> <p>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 0.7 acre of temporary impacts 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 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</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>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 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.</p> <p>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.</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.6-9 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 be removed or disturbed until all young have fledged.</p> <p>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.</p> <p>5.6-11 Indirect Impact Avoidance. In accordance with the Chula Vista Adjacency Management Guidelines and the Otay Ranch Village 8 West 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 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.</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>5.6-13 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 8 West 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 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 8 West 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 Wildlife or U.S. Fish and Wildlife Service?</p>	<p>The project would result in significant direct impact to coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, non-native grasslands, mule fat scrub, and freshwater marsh habitat.</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; and mitigation measures 5.11-1 through 5.11-5 would reduce impacts to riparian habitat and other sensitive natural communities.</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 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 and 5.11-5 would reduce impacts to federally protected wetlands.</p> <p>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 the 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>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.</p>	<p>Less than significant.</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>

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 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 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.</p> <p>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.</p> <p>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 Multiple Species Conservation Program Subarea Plan and information and recommendations from any relevant special studies.</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
		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.	
5.7 Cultural and Paleontological Resources			
Would the project cause a substantial adverse change in the significance of a historical resource?	No significant impacts related to historical resources have been identified for implementation of SPA Plan and TM.	No mitigation required.	Less than significant.
Would the project cause a substantial adverse change in the significance of an archaeological resource?	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. It is not anticipated that construction would extend beyond the defined area of potential effect. However, a mitigation measure is include below, consistent with the recommendations of the cultural resources report (Appendix F1), to avoid a potentially significant impact that could occur if construction activities inadvertently extended in the proximity of site CA-SDI-12809.	<p>5.7-1 Protective Fencing. Prior to the issuance of any land development permits for the SPA Plan and associated off-site facilities, including clearing, grubbing, and grading, the applicant shall install protective fencing (i.e., orange snow fence or similar) along the area of potential effect in the area of CA-SDI-12809 as directed by a qualified archaeologist. A qualified archaeologist shall monitor the site throughout the construction of the off-site facilities (including clearing, grubbing, grading, and installation) to ensure that unanticipated finds are handled in an appropriate and professional manner and that required fencing remains intact and project related construction activities do not extend beyond the approved limits of work.</p> <p>5.7-2 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 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 than an archeological monitor(s) 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>	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>5.7-3 Resource Discovery Procedure. During the initial grading of previously undisturbed soils within Village 8 West 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) 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). For those prehistoric/historic resources that are determined to be significant, the following measures shall be implemented:</p> <ul style="list-style-type: none"> 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 	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>Monitoring and Reporting Program adopted as part of the 1993 Otay Ranch General Development Plan Program EIR (EIR 90-01).</p> <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 shall, 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 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>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
Would the project disturb any human remains, including those interred outside of formal cemeteries?	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.	5.7-4 Human Remains Disturbance Protocol. If human remains are discovered during grading or site preparation activities within Village 8 West or off-site improvement area, 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.	Less than significant.
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Geological formations underlying Village 8 West 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.	5.7-5 Paleontological Resource Mitigation Program. 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. 5.7-6 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	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>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"> 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). 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>5.7-7 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.</p> <p>5.7-8 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.</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 General Plan cultural and paleontological policies thereby resulting in a significant physical impact?	No significant impacts related to cultural resource policies have been identified for implementation of SPA Plan and TM.	No mitigation required.	Less than significant.
5.8 Geology and Soils			
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?	The exposure of people and structures to moderate-to-severe ground shaking generated from potential earthquakes along active faults in the region is considered a less than significant impact. However, grading activities could result in slope instabilities or landslides within the project area.	<p>5.8-1 Geotechnical Recommendations. Prior to the issuance of each grading permit for Village 8 West, the applicant shall verify that the applicable recommendations in the Geotechnical Investigation prepared by Advanced Geotechnical Solutions, Inc., dated October 22, 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>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.</p>	Less than significant.
Would the project result in substantial soil erosion or the loss of topsoil?	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.	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.	Less than significant.
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?	The presence of loose compressible materials within Village 8 West could become unstable as a result of the project. As a result, there is the potential for landsliding, lateral spreading, liquefaction and/or collapse.	Mitigation measures 5.8-1 and 5.8-2 would also reduce impacts related to slope stability.	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 located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Soils within Village 8 West have high to very high expansion potential. Development of structures on these soils could create substantial risks to life or property.	Mitigation measures 5.8-1 and 5.8-2 would also reduce impacts related to expansive soil.	Less than significant.
Would the project be inconsistent with General Plan geotechnical policies thereby resulting in a significant physical impact?	No significant impacts related to consistency with geotechnical policies have been identified for implementation of the SPA Plan and TM.	No mitigation required.	Less than significant.
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?	Septic tanks and alternative wastewater disposal systems would not be required to the proposed project and no impact would occur.	No mitigation required.	Less than significant.
5.9 Public Services			
5.9.1 Fire and Emergency Medical Services			
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?	No significant impacts related to fire and emergency medical facilities have been identified for the project.	No mitigation required.	Less than significant.
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?	The anticipated increase in residential population of 5,737 people and the employment base from 300,000 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.	5.9.1-1 Public Facilities Development Impact Fees. 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.	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>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.</p> <p>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.</p>	
5.9.2 Police Services			
<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 police protection services?</p>	<p>No significant impacts related to police service facilities have been identified for implementation of the project.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<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>	<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>	<p>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 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 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.</p> <p>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</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
		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.	
5.9.3 Schools			
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 elementary and middle schools unless construction of an elementary school, a middle school, and high school coincides with student generation and associated service demands.	<p>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 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.</p> <p>5.9.3-2 School Site Protection. Prior to approval of a final map for private development on Planning Areas D or S, designated for future schools, the applicant shall provide evidence from the Chula Vista Elementary School District or Sweetwater Unified High School District that the site has not been determined by the district to be needed for use as a school site.</p>	Less than significant.
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 measures 5.8-1 and 5.8-2 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.

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
5.9.4 Libraries			
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.	<p>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 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.</p> <p>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.</p>	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.
5.9.5 Parks, Recreation, Open Space, and Trails			
<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>	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>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 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 Director of Library and Recreation.</p> <p>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 8 West that does not require a final map, prior to building permit approval, the applicant shall pay applicable Park</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
		<p>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 Library and 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>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.</p> <p>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 Library and Recreation. Park facilities such as the Neighborhood Park and Town Square identified as being required to meet the overall park obligation shall be identified on the first final map.</p> <p>5.9.5-5 Town Square Park. Prior to issuance of the final map containing the 383rd residential building permit, the Town Square Park shall be completed to the satisfaction of the Director of Library and Recreation.</p> <p>5.9.5-6 Park Development Agreement. Prior to the approval of the first final map for Village 8 West 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 Library and Recreation. 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.</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 require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No significant impacts related to new recreational facilities have been identified for the project.	No mitigation required.	Less than significant.
Would the project be inconsistent with General Plan, GDP or other relevant objectives and policies regarding parks thereby resulting in a significant physical impact?	No significant impacts related to consistency with park policies have been identified for the project.	No mitigation required.	Less than significant.
5.10 Global Climate Change			
Would the project conflict with or obstruct goals or strategies of the California Global Solutions Act of 2006 (AB 32) or related executive orders?	Greenhouse gas emissions from buildout of the SPA Plan and TM would be reduced by 32 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 8 West would comply with AB 32 and related executive orders.	No mitigation required.	Less than significant.
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)?	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.	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 feasible mitigation measures are available for this impact.	Significant.
5.11 Hydrology and Water Quality			
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? Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream	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.	5.11-1 Storm Water Pollution Prevention Plan. Prior to issuance of each grading permit for the Village 8 West 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	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>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?</p> <p>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>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.</p> <p>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 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 practices requirements.</p> <p>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 8 West Edge Plan. The grading plans shall note the condition requiring a Storm Water Pollution Prevention Plan and monitoring plans.</p> <p>5.11-2 Supplemental Water Quality Report. Prior to issuance of each grading permit, the applicant shall submit a supplemental report to the Preliminary Water Quality Technical Report for Village 8 West prepared by Hale Engineering dated December 8, 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 parcel 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 Preliminary Water Quality Technical Report for Village 8 West for information relevant to regional design concepts (e.g., downstream conditions of concern) to the satisfaction of the City Engineer.</p>	

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		<p>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 Chula Vista Standard Urban Storm Water Management Plan, the Chula Vista Development Storm Water Manual, and the Preliminary Water Quality Technical Report for Village 8 West 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, the applicant shall 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>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.</p> <p>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.</p>	
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 8 West.	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 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?</p> <p>Would the project place structures within a 100-year flood hazard area which would impede or redirect flood flows?</p>	No significant impacts related to 100-year flood have been identified with implementation of Village 8 West.	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 8 West.	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 8 West.	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 8 West.	No mitigation required.	Less than significant.
5.12 Agricultural Resources			
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 8 West 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 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.	<p>5.12-1 Agricultural Plan. The Agricultural Plan included in the SPA Plan shall be implemented as development proceeds in Village 8 West. The following measures shall be implemented to the satisfaction of the Chula Vista Development Services Director (or their designee):</p> <ul style="list-style-type: none"> 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.
5.13 Hazards and Hazardous Materials			
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.
<p>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?</p> <p>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?</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.	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 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	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>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>	
<p>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?</p>	<p>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.</p>	<p>No mitigation required.</p>	<p>Less than significant.</p>
<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>	<p>Village 8 West 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>	<p>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 8 West would present a hazard to air navigation.</p> <p>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).</p> <p>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 Chula Vista Development Service 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
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 polities 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.	Mitigation measure 5.13-1 would also reduce impacts related to consistency with hazard Policies.	Less than significant.
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?	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.	Mitigation measure 5.13-1 would reduce impacts related to historic use of pesticides.	Less than significant.
5.14 Housing and Population			
Would the project displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere?	The project would not displace any existing households or people, or necessitate the construction of replacement housing elsewhere and impacts would not be significant.	No mitigation required.	Less than significant.
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?	The project would be consistent with all applicable General Plan and GDP policies and impacts would not be significant.	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
5.15 Public Utilities			
5.15.1 Water Impacts			
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?	No significant impacts related to new water treatment facilities have been identified for implementation of the SPA Plan and TM.	No mitigation required.	Less than significant.
Would the project have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded 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 on on-site infrastructure.	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 8 West SPA, the applicant shall provide an update to the Overview of Water Service for Otay Ranch Village 8 West (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.	Significant.
Would the project exceed city threshold standards which seek to ensure that adequate supplies of quality water, appropriate for intended uses, are available?	The increase in water demand would be significant if future developers did not provide service availability letters.	5.15.1-2 Service Availability Letters. Prior to approval of each final map, 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 the site and off the 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: <ul style="list-style-type: none">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;	Less than significant.

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
		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 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.	
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?	No significant impacts related to consistency with water supply policies have been identified for implementation of the SPA Plan and TM.	No mitigation required.	Less than significant.
5.15.2 Wastewater			
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?	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.	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 8 West 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. 5.15.1-3 Density Transfer Technical Report. Prior to design review approval in accordance with the Intensity Transfer provision in 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
		Village 8 West SPA Plan, the applicant shall provide an update to the Overview of Sewer Service for Otay Ranch Village 8 West (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.	
Would the project require the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of would cause significant environmental effects?	With respect to conveyance lines, no significant impacts have been identified for implementation of the SPA Plan and TM. However, the proposed project would require sewerage treatment beyond the City's existing wastewater treatment capacity rights and allocated additional treatment capacity. Therefore, additional capacity would need to be acquired from the 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.	No mitigation is available at this time.	Significant.
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?	No significant impacts related to City engineering standards have been identified for implementation of the SPA Plan and TM.	No mitigation required.	Less than significant.
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.

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

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
5.15.3 Solid Waste			
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 8 West.	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.
5.15.4 Recycled Water			
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>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 the site and off the 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"> 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. <p>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 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.
5.15.5 Energy			
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 8 West 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 8 West 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 1-2 Summary of Significant Environmental Analysis Results (continued)

Environmental Issue	Result of Impact Analysis	Mitigation	Impact Level After Mitigation
5.16 Mineral Resources			
Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Mineral resources in the Otay River Valley would continue to be available with implementation of the SPA Plan and TM and impacts would not be significant.	No mitigation required.	Less than significant.
Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	Mineral resources in the Otay River Valley would continue to be available with implementation of the SPA Plan and TM and impacts would not be significant.	No mitigation required.	Less than significant.
Would the project be inconsistent with General Plan, GDP, and other objectives and policies regarding mineral resources thereby resulting in a significant physical impact?	The project would be consistent with applicable mineral resource policies and impacts would not be significant.	No mitigation required.	Less than significant.

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Table 1-3 Summary of Cumulative Impacts

Environmental Issue	Result of Impact Analysis	Significant Cumulative Impact?	Project Contribution
5.1 Land Use and Planning			
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 8 West, 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.
5.2 Aesthetics/Landform Alteration			
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	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 8 West 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.	Yes	Not cumulatively considerable.
5.3 Transportation/Traffic			
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 seven intersections and seven roadway segments.	Yes	Not cumulatively considerable with implementation of mitigation measures 5.3-1 through 5.3-20.
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
5.4 Air Quality			
Air Quality Violations	The SDAB is currently in non-attainment for ozone, PM ₁₀ , and PM _{2.5} . 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. 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.
5.5 Noise			
Excessive Noise Levels	The noise study conducted for Village 8 West included an analysis of impacts from cumulative traffic growth in 2030 to contribute to excessive noise levels on noise sensitive land uses within Village 8 West. Noise levels would potentially exceed the Chula Vista noise compatibility standards along Main Street, La Media Road, Otay Valley Road, and Street A. Therefore, a cumulative impact would occur.	Yes	Not cumulatively considerable.
Excessive Groundborne Vibration	The future cumulative projects that would potentially be located within 600 feet of Village 8 West are not considered vibration sensitive. Additionally, the existing Declaration of Covenants of Operation for the quarry includes provisions to minimize nuisance impacts from groundborne vibration. Therefore, cumulative groundborne vibration impacts would be less than significant.	No	No cumulative impact.
Permanent Increase in Ambient Noise Levels	Cumulative growth, including the proposed project, would result in six new roadway segments that would exceed 65 dBA CNEL. Cumulative growth would cause three existing roadway segments to exceed 65 dBA, and would result in an increase in traffic noise of 3 dBA CNEL or more on 12 existing roadway segments. A cumulatively considerable impact would occur on a total of 21 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 or Private Airport	Impacts related to nuisance noise from over flights are site specific and are not cumulative in nature. Therefore, a cumulative impact related to aviation would not occur.	No	No cumulative impact.
5.6 Biological Resources			
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.
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.
5.7 Cultural and Paleontological Resources			
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 5.7-8 through 5.7-11.
5.8 Geology and Soils			
Exposure to Seismic Related Hazards, Soil Stability, and Expansive Soils	Potential impacts related to geologic hazards in Village 8 West 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 wastewater disposal systems. A cumulative impact would not occur.	No	No cumulative impact.
5.9 Public Services			
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.
5.10 Global Climate Change			
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 significant cumulative impact.	Yes	Cumulatively considerable and unavoidable.
5.11 Hydrology and Water Quality			
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 8 West 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.
5.12 Agricultural Resources			
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.
5.13 Hazards and Hazardous Materials			
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 8 West 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.
5.14 Housing and Population			
Population Growth	Because the increase in population associated with the cumulative projects, including Village 8 West, 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
5.15 Public Utilities			
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 8 West 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.
5.16 Mineral Resources			
Mineral Resource Availability and Mineral Resource Recovery Sites	Because the majority of resources in the City's MRZ-2 area would be available for extraction and extraction of resources outside of the quarry property would not be precluded, a significant cumulative impact would not occur.	No	No cumulative impact.

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 – 1,167 Dwelling Units	Reduced Project Alternative #2 – 672 Dwelling Units
5.1 Land Use and Planning					
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	PS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
5.2 Aesthetics/Landform Alteration					
Scenic Vistas	LS	LS	○	—	—
<i>Cumulative</i>	CC	SU	○	—	—
Scenic Resources	PS	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>	CC	LCC	○	—	—
Consistency with Visual Character Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
5.3 Transportation and Traffic					
Traffic and Level of Service Standards	S	LS	▲	▼	▼
<i>Cumulative</i>	CC	LCC	▲	▼	▼
Congestion Management	S	LS	▲	▼	▼
<i>Cumulative</i>	CC	LCC	▲	▼	▼
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	—	—	—
5.4 Air Quality					
Air Quality Violations	S	SU	○	▼	▼
<i>Cumulative</i>	CC	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 – 1,167 Dwelling Units	Reduced Project Alternative #2 – 672 Dwelling Units
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	—	—	—
5.5 Noise					
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	PS	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	—	—	—
5.6 Biological Resources					
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	○	—	—
5.7 Cultural Resources					
Historical Resources	LS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Archaeological Resources	PS	LS	○	—	▼
<i>Cumulative</i>	CC	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 – 1,167 Dwelling Units	Reduced Project Alternative #2 – 672 Dwelling Units
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	—	—	—
5.8 Geology and Soils					
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	○	—	—
5.9 Public Services					
Fire and Emergency Medical Services					
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	○	—	—
Police Services					
Police Service Facilities	LS	LS	○	—	—
Police Service Standard	PS	LS	○	▼	▼
Consistency with Police Service Policies	PS	LS	○	▼	▼
<i>Cumulative</i>	CC	LCC	○	—	—
Schools					
School Facilities	PS	LS	○	—	—
Schools Siting	PS	LS	○	—	—
Consistency with School Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	LCC	○	—	—

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 – 1,167 Dwelling Units	Reduced Project Alternative #2 – 672 Dwelling Units
Libraries					
Library Facilities	LS	LS	○	—	—
Library Service Standard	PS	LS	○	▼	▼
Consistency with Library Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Parks, Recreation, Open Space, and Trails					
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	▲	▲	▲
5.10 Global Climate Change					
Compliance with AB 32	LS	LS	○	—	—
<i>Cumulative</i>	CC	LCC	○	—	—
Potential Effects of Global Climate Change	PS	SU	○	▼	▼
<i>Cumulative</i>	CC	SU	○	▼	▼
5.11 Hydrology and Water Quality					
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	○	—	—

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 – 1,167 Dwelling Units	Reduced Project Alternative #2 – 672 Dwelling Units
5.12 Agricultural Resources					
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	—	—	—
5.13 Hazards and Hazardous Materials					
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	○	—	—
5.14 Housing/Population					
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	—	—	—
5.15 Public Utilities					
Water					
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	○	—	—

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 – 1,167 Dwelling Units	Reduced Project Alternative #2 – 672 Dwelling Units
Wastewater					
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	○	—	—
Solid Waste					
Sufficient Landfill Capacity	LS	LS	○	—	—
Solid Waste Regulations	LS	LS	○	—	—
Consistency with Solid Waste Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Recycled Water					
New Recycled Water Facilities	PS	LS	○	▼	▼
Consistency with Recycled Water Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	▼	▼
Energy					
Energy Resources	S	SU	○	▼	▼
Wasteful Use of Energy	LS	LS	○	—	—
Consistency with Energy Policies	LS	LS	—	—	—
<i>Cumulative</i>	CC	SU	○	▼	▼
5.16 Mineral Resources					
Mineral Resource Availability	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Mineral Resource Recovery Sites	LS	LS	○	—	—
<i>Cumulative</i>	NCC	NCC	○	—	—
Consistency with Mineral Resources Policies	LS	LS	—	—	—
<i>Cumulative</i>	NCC	NCC	—	—	—
<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. ○ No impact would occur as a result of the Alternative. 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>					

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 8 West 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) ⁽¹⁾	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 2013)	2013 Chula Vista General Plan Amendment/Otay Ranch General Development Plan Amendment SEIR (SEIR 09-01) (SCH #2004081066)
Otay Ranch Village 8 West SPA Plan	Otay Ranch Village 8 West EIR (EIR 10-03) (SCH #2010062093)
⁽¹⁾ The GDP was amended in 2001 for land use changes within the Village 11 SPA; however, the changes associated with this amendment did not affect Village 8 West.	

2.1.1 1993 Otay Ranch General Development Plan and EIR

The Otay Ranch GDP/Subregional Plan (SRP) 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 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 8 West, 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 8 West.

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 8 West 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 8 West accounted for an additional 494 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 GPU EIR for these issue areas.

2.2 Otay Ranch Village 8 West 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 8 West 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 8 West as an “Urban Village” with a mixed-use “Town Center” and low-medium density residential uses to the south of the town 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 identified planned transit stops in the Town Center. The proposed SPA Plan for Village 8 West includes the following components:

1. Village 8 West 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 N, P, and V, the alignment of public pathways, and the alignment of common lanes, which are public alleyways that provide access to rear-loaded garages and parking. 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 8 West 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 8 West 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 8 West 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

Environmental Topic	Documents Utilized in Tiered Analysis
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)
Mineral Resources	2005 GPU EIR (EIR 05-01) 1993 GDP Program EIR (EIR 90-01)

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 8 West 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 8 West 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.

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 Scope and Content of this EIR

This EIR addresses the potential physical environmental impacts that could result from implementation of the Village 8 West 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 |
| ■ Aesthetics/Landform Alteration | ■ Global Climate Change |
| ■ Transportation/Traffic | ■ Hydrology and Water Quality |
| ■ Air Quality | ■ Agricultural Resources |
| ■ Noise | ■ Hazards and Hazardous Materials |
| ■ Biological Resources | ■ Housing and Population |
| ■ Cultural and Paleontological Resources | ■ Public Utilities |
| ■ Geology and Soils | ■ Mineral Resources |

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 existing physical conditions for the project site 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 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 C: Air Quality Technical Report
- Appendix D: Noise Technical Report
- 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 I3: Hydromodification 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

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Chapter 3 Project Description

3.1 Project Location

The project consists of approximately 300 acres of land in Otay Ranch known as Village 8 West, 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 13 miles southeast of the downtown area of the city of San Diego, and approximately 7 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 600 feet above mean sea level (AMSL) in the east to 400 feet AMSL in the west. Village 8 West is located less than 0.5 mile west of State Route (SR) 125 and is surrounded on three sides by undeveloped land. Rock Mountain is located to the west of the site, and bluffs abutting the Otay River Valley are located to the south. Village 8 East (currently undeveloped) is located to the east of the site; Otay Valley Regional Park and the Otay River Valley form the southerly boundary; the Otay Valley Quarry and Village 4 (currently undeveloped) are west of the site; and the partially developed Village 7, including Olympian High school, is located immediately adjacent to the northeast corner of the project area. An existing City of San Diego Reservoir facility, which would remain on site, is located in approximately the center of the site. La Media Road, which currently terminates at the northerly boundary of Village 8 West, and Magdalena Avenue, which terminates at the northeast corner of the site, would provide north/south access to the site. Main Street, which currently terminates at the intersection of Heritage Road, would provide the main east/west access.

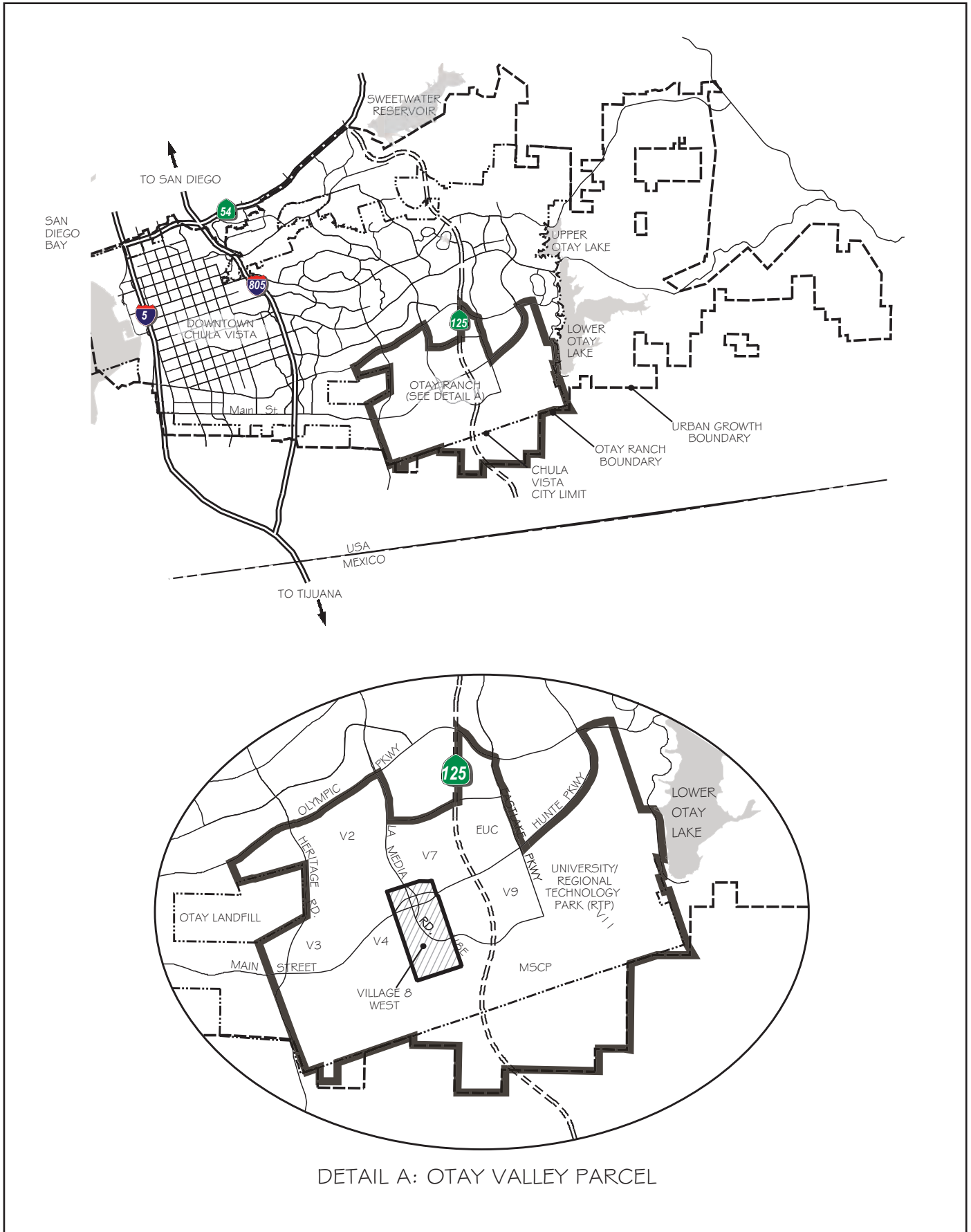
3.2 Statement of Project Objectives

The Otay Ranch GDP describes Village 8 as an urban village. 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." According to the GDP, Village 8 West is to provide single-family and multi-family residential units, a Town Center containing commercial uses, parks, a community purpose facility site, schools, affordable housing and a transit stop.

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 the following project objectives that would implement the aforementioned GDP vision for Village 8 West:

1. Create a recognizable "place" that is unique, attractive, and full of 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 development patterns that promote orderly growth, prevent urban sprawl, and promote effective resource management.
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.
5. Create an appropriately scaled and economically healthy Town Center. Include a wide range of commercial, residential, cultural, civic, recreational uses, and businesses that serve the daily needs of nearby residents.
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. Retain and recruit a skilled and motivated workforce to ensure economic stability into the future by providing attainable housing opportunities. 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.
10. Promote synergistic uses and graceful transitions within the SPA and between the SPA and neighborhoods of adjacent SPAs to balance activities, services, and facilities. Integrate Village 8 West with existing Otay Ranch development, including connectivity to the Greenbelt.
11. 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.
12. 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.
13. Establish a plan that is fiscally responsible and viable with consideration of existing and anticipated economic conditions.

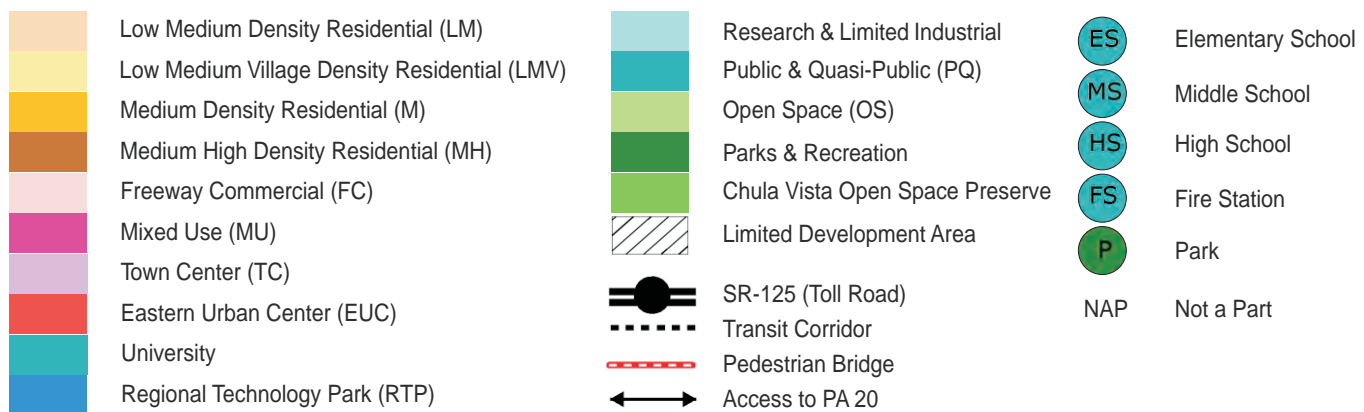
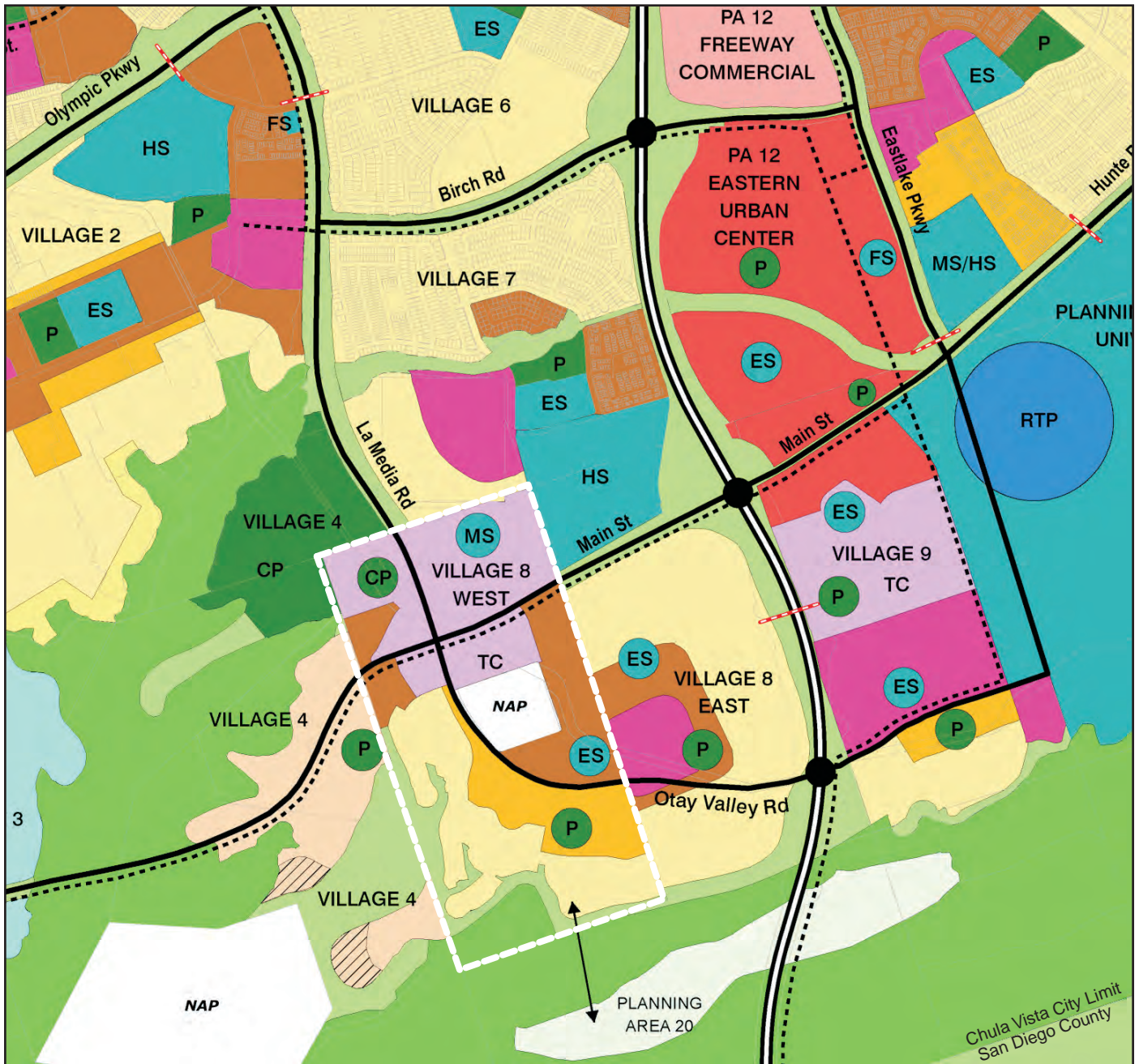


Source: William Hezmalhalch Architects, Inc. 2012

Not to Scale



**PROJECT VICINITY
FIGURE 3-1**



Source: William Hezmalchal 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 8 West, including associated off-site improvements, consistent with the Otay Ranch GDP. The development proposed by the Otay Land Company (OLC) pursuant to the Village 8 West SPA Plan is referred to as the “project,” and is the focus of this EIR. The components of the SPA Plan are described below. The 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 8 West SPA Plan

A. Development Concept

Village 8 West is one of the designated fourteen villages within the Otay Ranch GDP area. As prescribed in the Otay Ranch GDP, Village 8 West is an Urban Village with a mixed-use town center, higher density uses around the Town Center and low-medium density residential uses 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 land use plan for the project site. Village 8 West 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 provided in Figure 3-3 assigns the uses for each transect within the planning area. Uses include an elementary school, a middle school, 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 8 West are provided below in Table 3-1. Maximum development for each planning area is identified in Figure 3-3. 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 8 West would remain the same.

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 8 West SPA Plan Land Uses

Land Use	Area (Acres)	Residential (Units)	Office (Square feet)	Commercial (Square feet)
Mixed Use (TC)	40.7	899	50,000	250,000
Multi-family (MH)	29.5	530	--	--
Cluster Single-family/Town homes (M)	26.2	290	--	--
Single-family (LMV)	67.0	331	--	--
Schools	31.6	--	--	--
Community Purpose Facility	5.8	--	--	--
Parks	27.9	--	--	--
Open Space	39.1	--	--	--
Arterial Rights-of-Way and Basin	32.5	--	--	--
Total	300.3	2,050	50,000	250,000
Source: OLC 2012				

Zone standards in Chapter 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

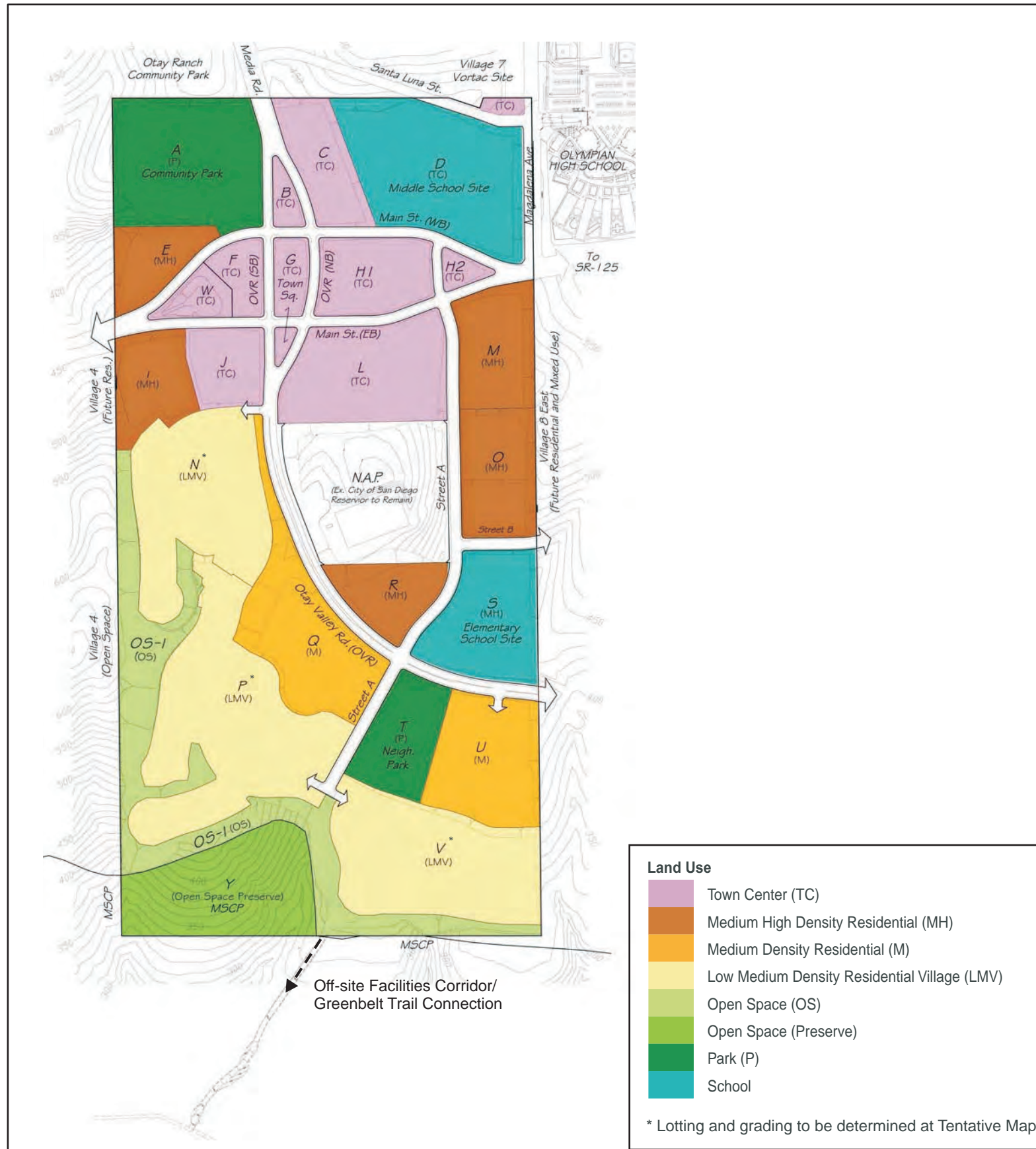
Transect 1 would consist of areas reserved for limited recreation, passive open spaces, and habitat preserves, providing a transition from natural areas to the built environment. Transect 1 would be characterized by rolling hills adjacent to the Otay River Valley. This transect would be intended for low-intensity recreation, hiking trails, and staging areas. Transect 1 would be 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 8 West, these lands consist of a 15.6-acre planning area in the southwest corner 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 protect manufactured slopes along the perimeter of development within Village 8 West. These slopes consist of manufactured, landscaped slopes that are not suitable for development due to their topography. This zone allows for landscaping and passive recreation such as hiking and nature trails.

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.

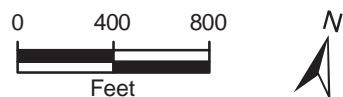


Commercial and Residential				
Town Center – 18-45 du/ac				
Planning Area	Gross Acres	Transect ⁽¹⁾	Target Res. Units ⁽²⁾	Target C'ml Sq.Ft. (K) ⁽²⁾
B	1.4	T-4: TC	35	0
C	6.9	T-4: TC	156	36
F	3.0	T-4: TC	54	25
H-1	7.8	T-4: TC	33	144
H-2	1.3	T-4: TC	0	12
J	5.4	T-4: TC	161	18
L	14.2	T-4: TC	460	65
X	0.7	T-4: TC	0	0
Subtotal	40.7		899	300
Medium High Density Residential – 11-18 du/ac				
Planning Area	Gross Acres	Transect ⁽¹⁾	Target Res. Units ⁽²⁾	
E	5.3	T-3: NC	95	
I	6.8	T-3: NC	122	
M	8.5	T-3: NC	153	
O	8.9	T-3: NC	160	
Subtotal	29.5		530	
Medium Density Residential Attached/Detached – 6-11 du/ac				
Planning Area	Gross Acres	Transect ⁽¹⁾	Target Res. Units ⁽²⁾	
Q	14.7	T-2: NG	160	
U	11.5	T-2: NG	130	
Subtotal	26.2		290	
Low Medium Density Residential Village – 3-6 du/ac				
Planning Area	Gross Acres	Transect ⁽¹⁾	Target Res. Units ⁽²⁾	
N	19.6	T-2: NE	117	
P	26.9	T-2: NE	124	
V	20.5	T-2: NE	90	
Subtotal	67.0		331	
TOTAL	163.4		2,050	300K⁽³⁾

Public, Quasi Public, and Other				
Community Purpose Facility (CPF) ⁽⁴⁾				
Planning Area	GDP Land Use	Gross Acres	Transect ⁽¹⁾	Description
R	MH	5.8	SD: CPF	CPF ⁽⁴⁾
Subtotal		5.8		
Potential School (S) Sites ⁽⁵⁾				
Planning Area	GDP Land Use	Gross Acres	Transect ⁽¹⁾	Description
D	TC	20.2	T-4: TC	Middle
S	MH	11.4	T-3: NC	Elementary
Subtotal		31.6		
Parks (P)				
Planning Area	GDP Land Use	Gross Acres	Transect ⁽¹⁾	Classification
A	P	17.4	SD: P	Community
G	TC	3.0	SD: P	Town Square
T	P	7.5	SD: P	Neighborhood
Subtotal		27.9		
Open Space (OS)				
Planning Area	GDP Land Use	Gross Acres	Transect ⁽¹⁾	Classification
Y	CVOSP ⁽⁶⁾	15.6	T-1: OP	Preserve (MSCP)
OS-1	OS	23.5	T-1: OS	Open Space
Subtotal		39.1		
Other				
Planning Area	GDP Land Use	Gross Acres	Transect ⁽¹⁾	Description
W	TC	2.4	SD: R	Basin
Right-of-Way	NA	30.1	NA	Arterials
Subtotal		32.5		
TOTAL		136.9		
SPA Total Area: 300.3 Gross Acres⁽⁷⁾				

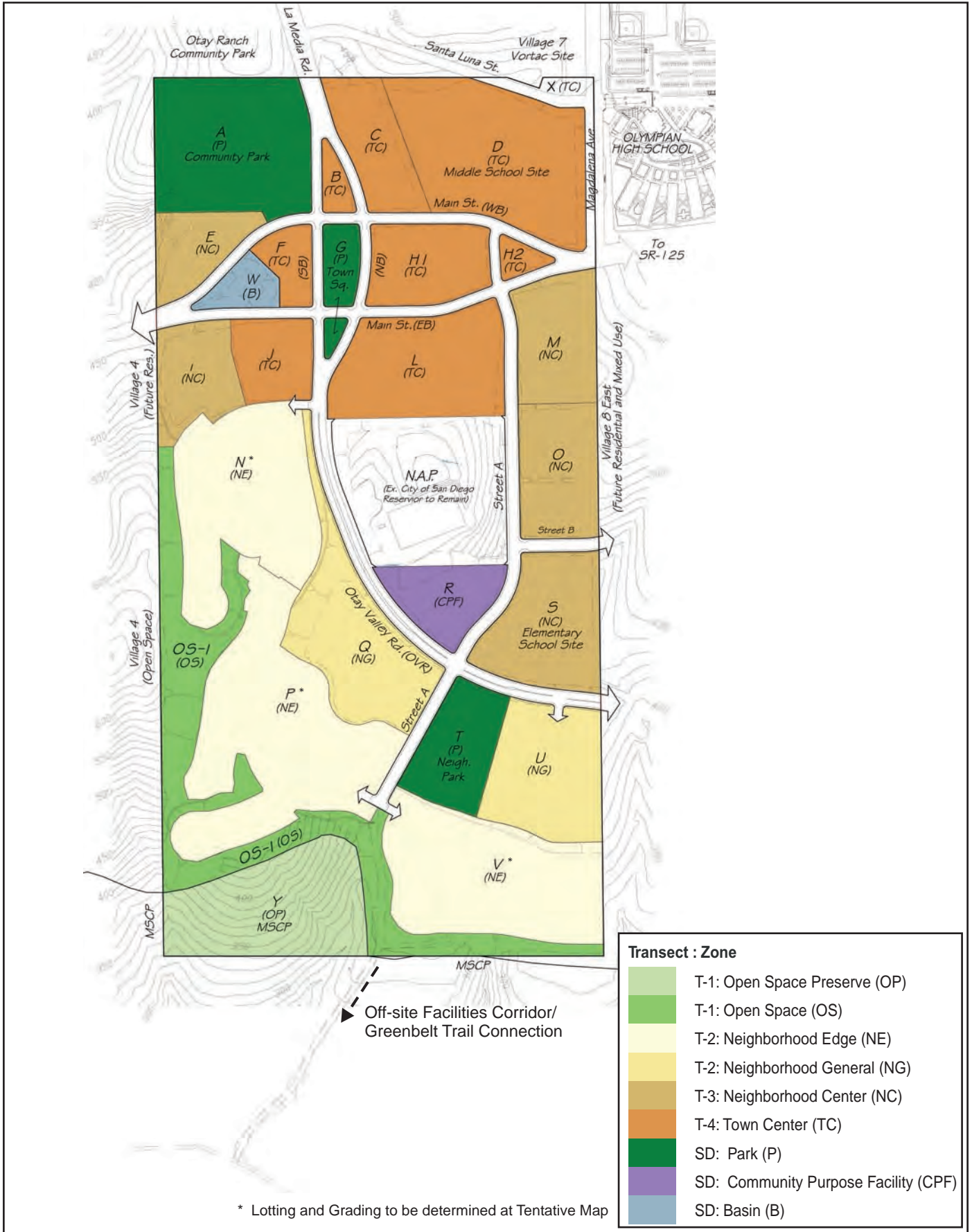
⁽¹⁾ Transects are defined in Chapter 3 of the SPA Plan.
⁽²⁾ See Chapter 9 of the SPA Plan regarding Intensity Transfer
⁽³⁾ 50,000 square feet of office retail; 250,000 square feet of retail commercial (excludes Live/Work)
⁽⁴⁾ As defined by CVMC 19.48
⁽⁵⁾ School sites will revert to the underlying use if sites are not accepted by the school district. Parcel D shall revert to Town Center and Parcel S shall revert to Medium High Density Residential.
⁽⁶⁾ Chula Vista Open Space Preserve
⁽⁷⁾ Acreage does not include 19.6-acre San Diego Reservoir

Source: William Hezmalhalch Architects, Inc. 2012



**SITE UTILIZATION PLAN
FIGURE 3-3**

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Source: William Hezmalhalch Architects, Inc. 2012



TRANSECT ZONES FIGURE 3-4

The Neighborhood Edge Zone is characterized by one- 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 in Transect 3. Non-residential uses that foster a functional and walkable neighborhood would be permitted.

3. *Transect 3 – General Urban*

Transect 3 consists of medium-high density (11-18 du/ac) attached residential development and a potential elementary school. Transect 3 is characterized by a mix of residential and public/quasi-public uses in a pedestrian-oriented environment. There is a focus on common open space and strong pedestrian linkages along public sidewalks and internal development pathways. This transect would be defined by the Neighborhood Center (NC) Zone.

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

4. *Transect 4 – Town Center*

Transect 4 consists of mixed-use development including retail, office, attached residential, and a potential middle school in an urban setting. This transect would be defined by the Town Center (TC) Zone. The Town Center area includes the most intense level of development (18-45 du/ac). The SPA Plan and TM propose 40.7 acres of mixed use in the Town Center. Commercial uses would occur on ground floors with minimal setbacks to create an urban, pedestrian-oriented street environment.

5. *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 17.4 acres of a future 70-acre community park in the northwest corner of Village 8 West and contiguous with the larger community park, a 7.5-acre neighborhood park, to serve residents south of La Media/Otay Valley Road; and an additional 3.0 acres of town square parkland that would serve as a focal point for the Town Center. These parklands are discussed in more detail in conjunction with the Parks, Recreation, and Open Space Master Plan. The CPF Zone designates a 5.8 acre site for a community purpose facility. Permitted land uses for the community purpose facility site are discussed in more detail in subsection L.

B. Off-site Improvements

The project would include an off-site utility corridor to the south of the project 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 be

included within the 30-foot utility corridor. This utility access road would provide access for the off-site utilities and would also serve as a multi-purpose recreational trail connection to the Otay Valley Regional Park trail system. The off-site utilities alignment is depicted on the sewer plan, which is discussed below in Section 3.3.1.E. Under the proposed project, the utility access road would only be open to maintenance and emergency vehicles, as well as pedestrians for access to the Otay Valley Regional Park trail system. Implementation of the utility access road is addressed in this EIR.

C. Mobility

The Village 8 West 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 8 West is currently provided from SR-125 via Olympic Parkway to La Media Road. La Media Road currently terminates at the northerly boundary of the site. La Media Road will become Otay Valley Road as it traverses the project site. Secondary vehicular access is also currently available from I-805 and downtown Chula Vista via Olympic Parkway to La Media Road. Main Street currently terminates at the intersection of Heritage Road. Both Otay Valley Road and Main Street are planned to extend to SR-125, which is located less than one mile east of the project site, providing future, direct access to Village 8 West.

Public transportation is currently provided by Chula Vista Transit, a part of the Metropolitan Transit System. Three routes, Routes 703, 712, and 709, serve the Otay Ranch Area; none of these routes currently extends service to Village 8 West. The nearest existing stop is located approximately 1.5 miles north of the project site at Olympic Parkway and La Media Road. All three 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 8 West circulation system would organize traffic into a hierarchy of roadways, arranged according to anticipated volumes and modes of travel. This organization is consistent with the roadway classifications established by the Otay Ranch GDP. In Village 8 West, roadways form a modified grid pattern that promotes walkability and supports urban development in the Town Center. This modified grid pattern gives way to a suburban street pattern near the southern edge of the project site, providing a transition to the natural open space areas in the south and responding to the topography of this portion of the site. 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 La Media Road, Otay Valley Road, and Main Street.

Main Street would provide the main east-west connection through Village 8 West and is planned to be extended east to provide a connection to Village 8 East and a future Main Street interchange at SR-125. La Media Road would be extended from its existing terminus just north of the site and become Otay Valley Road south of the Town Center. Otay Valley Road would extend south and then curve to the east,

providing a future connection to Village 8 East. Otay Valley Road is planned to extend further to a future Otay Valley Road interchange at SR-125.

Central to the circulation concept for Village 8 West is the use of urban couplets on La Media Road and Main Street, through the heart of the Town Center. An urban couplet is an arterial roadway that splits into two one-way roadways through the urban core. The intent is to bring traffic into, rather than directing traffic away from and around, the Town Center to promote a vibrant and successful commercial mixed-use area. Urban couplets handle similar volumes of traffic as the traditional two-way arterial while allowing for a better mix of pedestrian, bicycle, transit, and vehicle circulation. Each road would consist of no more than two travel lanes and would include sidewalks, parallel parking, and a striped bike lane. 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. This one-way street system reduces left turn delays and creates safer turning movements at each intersection, which benefits automobile drivers, bicyclists, and pedestrians.

Secondary access through the village would be provided via a residential collector, Street A. The residential collector would provide an alternate route through the village, connecting residential neighborhoods to the Town Center. Street B would provide an additional connection to Village 8 East. The remaining roadways in Village 8 West would be parkway residential streets and private streets. Parkway residential streets would provide direct access to single-family homes in the southern and western portions of the project site. Additional private streets and lanes would be provided as part of the precise plan for single-family cluster, multi-family and mixed-use neighborhoods. The final design of the street system, including parkway residential and private streets, would be determined at the precise plan, design review or final subdivision map/parcel map stage, whichever applicable entitlement occurs first within the affected planning area.

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 travel throughway 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

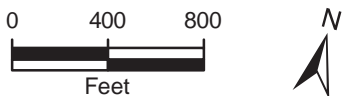
The following section describes the major alternative mode circulation systems for bicycles, pedestrians, public transit, and low speed vehicles.

a. Bicycle Circulation Network

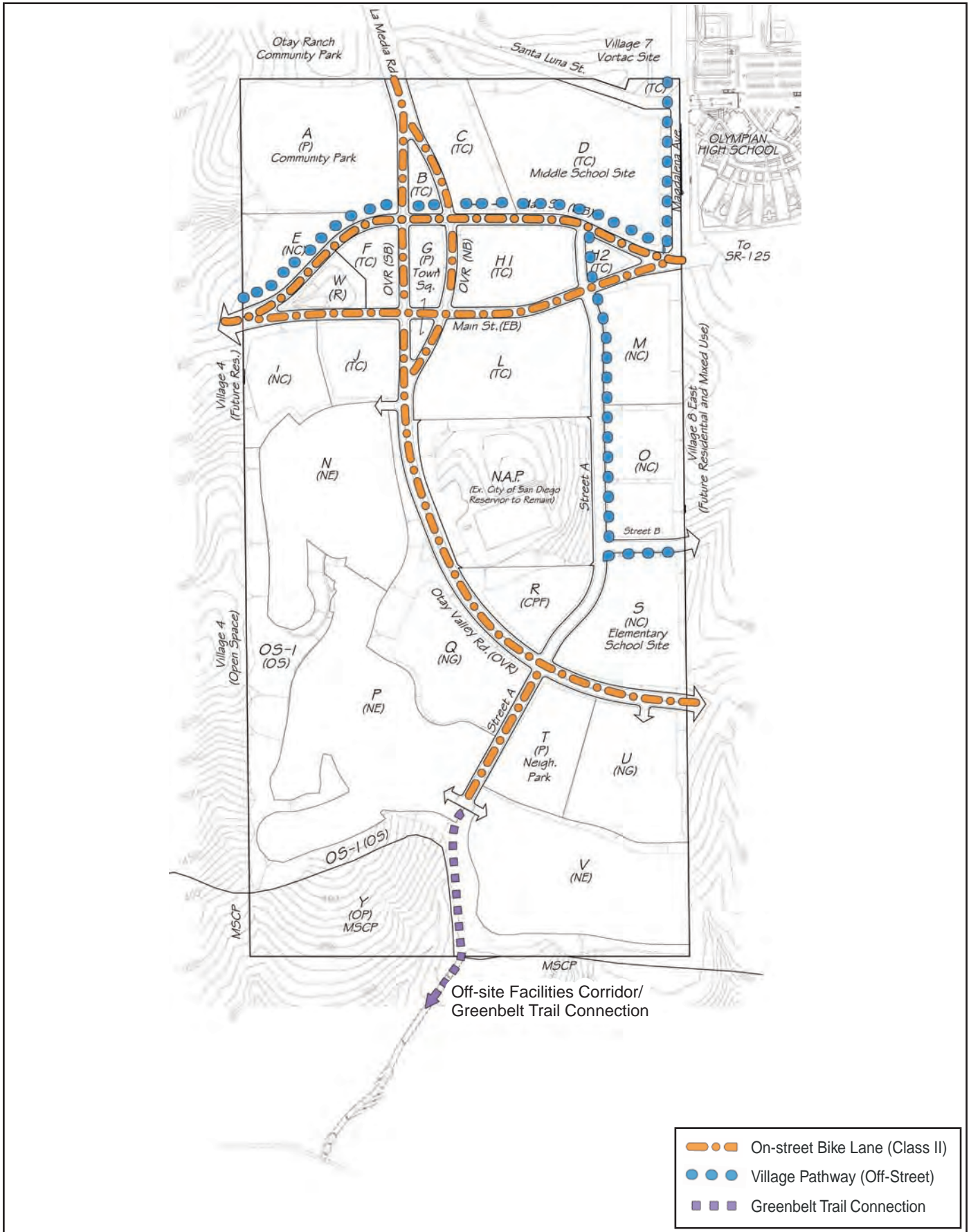
Within the Town Center, Class II, on-street bike lanes would be provided so that bicycles do not conflict with the high levels of pedestrian activity anticipated in this urban center. Village pathways would provide 10-foot wide, off-street paved trails would run parallel to public roadways. Main vehicular thoroughfares would 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. The proposed bicycle circulation plan is provided on Figure 3-6.



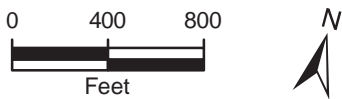
Source: William Hezmalhalch Architects, Inc. 2012



ROADWAY CIRCULATION SYSTEM
FIGURE 3-5



Source: William Hezmalhalch Architects, Inc. 2012



BICYCLE CIRCULATION SYSTEM
FIGURE 3-6

A village pathway that currently terminates at the south end of Magdalena Avenue would be extended through the project site and connections would be provided to Village 8 East via Street B and Village 3 and 4 via Main Street. The Village Pathway in Otay Ranch is intended to provide an off-street, interconnected multi-use trail that allows bicycles and pedestrians to travel between village cores and town centers. A regional trail would traverse the project site along La Media Road and Otay Valley Road and connect Village 8 West to development to the north and east. The regional trail would also extend south from Otay Valley Road along Street A to connect to the Greenbelt Master Plan trail connection. A Greenbelt Master Plan trail connection would begin at the southerly terminus of Street A, follow the alignment of a proposed sewer main, and would ultimately connect to the Otay Valley Regional Park trail system. This trail would double as a utility access road for sewer utilities, and would be open to bicycles. Some other park pathways would also 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.

b. Pedestrian Circulation Network

The pedestrian circulation network includes an interconnected system of sidewalks, the village pathways and greenbelt trails, and rural trails, including a portion of a regional trail that would connect Village 8 West to surrounding development and open space resources. The proposed pedestrian circulation plan is shown in Figure 3-7.

The village pathway and greenbelt trail would also be open to pedestrians. Additionally, a 10-foot wide regional trail, which currently terminates on La Media Road, would be extended through the village along La Media Road. A future connection of the regional trail off site into Village 8 East would be possible at the easterly edge of the project site; however, this portion of the trail is not part of the project. A second regional trail would extend along Street A, south of Otay Valley Road, and would connect to the greenbelt trail that would provide access the regional park trail system. This trail would consist of a 10-foot wide, decomposed granite path outside the Town Center. In the Town Center, this trail would be paved to be more consistent with the urban character of the area. As discussed above under Bicycle Circulation Network, the regional trail and greenbelt trail would implement the portion of the Chula Vista Greenbelt Master Plan identified for Village 8 West.

All streets in the project site would 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 are off-street trails that would provide pedestrian connections between neighborhoods. They would typically occur where direct connections between the Town Center and adjacent villages are needed. The intent is to promote walkability by providing more direct pedestrian connections than would otherwise occur along public roadways.

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 8 West and to adjacent Village 8 East and Village 4. The alignment of park pathways would be determined by the individual park site master plan 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 8 West would accommodate future extension of transit service into the area. Transit service would consist of a bus system that would provide local connections between residential, employment, and major activity centers within Village 8 West and Otay Ranch, as well as regional connections. The

types of bus service that would be available are described in greater detail in Section 5.3, Transportation/Traffic. Figure 3-7 identifies the anticipated transit stops in 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 provide a clean, alternative vehicular mode of transport for shorter trips. The circulation network, as illustrated in Figure 3-8, 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 Village 8 East. Low speed vehicles would not be permitted on sidewalks or trails.

D. Water Supply

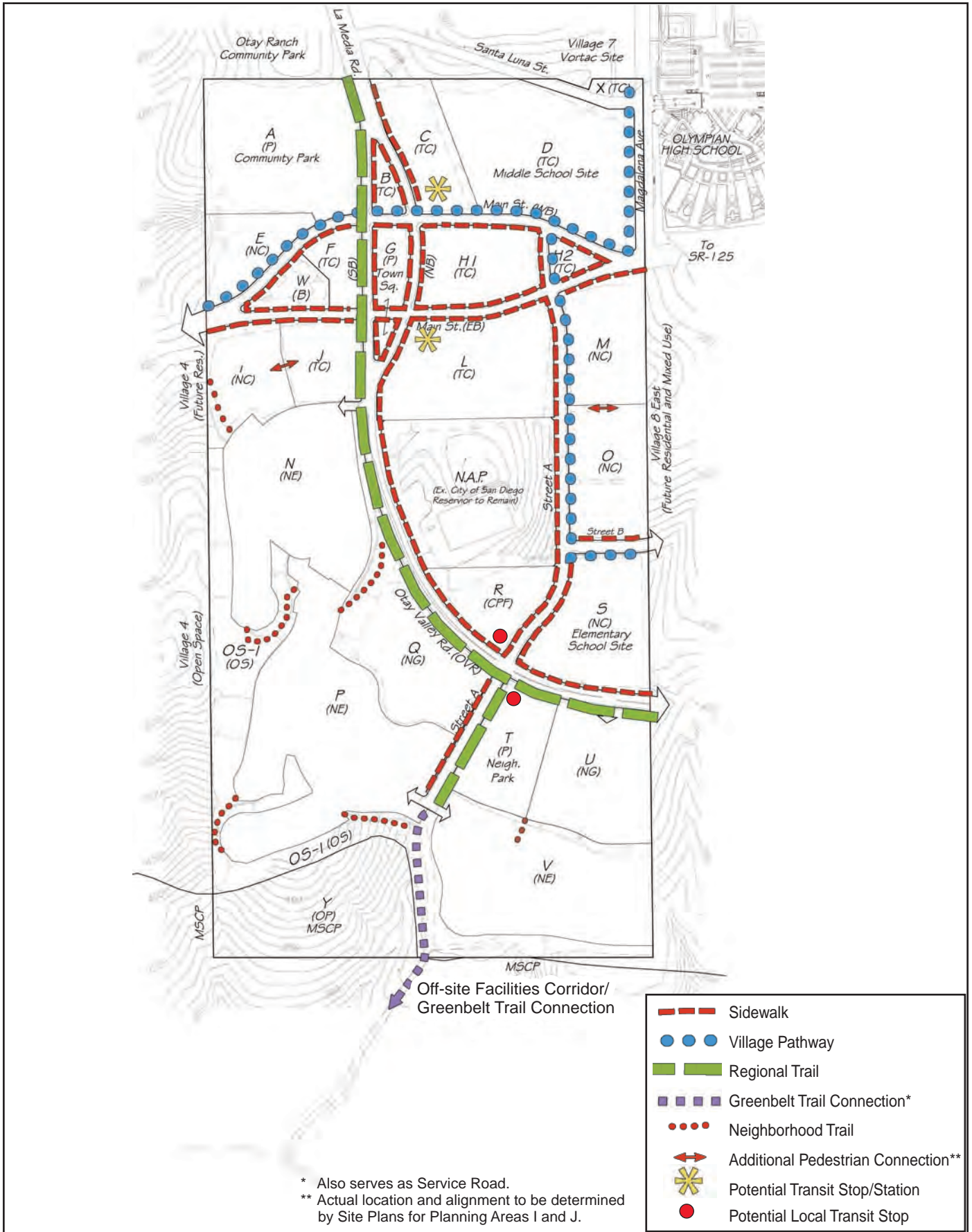
1. Potable Water Demand

Village 8 West 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.

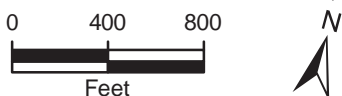
The project is within the central service area of OWD. Water would be provided to the project via a connection to the existing 12-inch line located in La Media Road. Water service would be stubbed to both ends of Main Street and the southerly termination of La Media/Otay Valley Road to allow for future connections to adjacent villages. OWD has three existing reservoirs within the project service area. No additional reservoir storage would be required to supply water to the project.

Domestic water demand for the project is estimated to be 786,575 gallons per day (gpd). OWD would require a water subarea master plan (SAMP) of water 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 project site that are owned, operated, and maintained by the City of San Diego. These pipelines would not provide water to the project, but some would be relocated into the future public rights of way of La Media Road, Otay Valley Road, Street A and the future park access road/service road to facilitate the SPA plan. The relocation of these water transmission pipelines would be required prior to any development in Village 8 West located within existing City of San Diego waterline easements. Figure 3-9 depicts the proposed distribution system required to meet demands within the project area and the relocated City of San Diego water transmission pipelines. The project would not replace the City of San Diego water transmission pipelines that traverse the Preserve. The proposed pipelines within Village 8 West would connect to the existing City of San Diego pipelines outside of the Village 8 West development area.



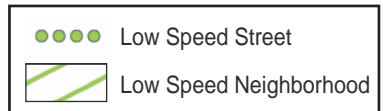
Source: William Hezmalhalch Architects, Inc. 2012



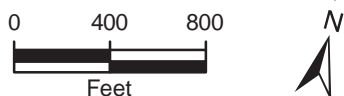
**PEDESTRIAN CIRCULATION SYSTEM
AND TRANSIT STOPS
FIGURE 3-7**



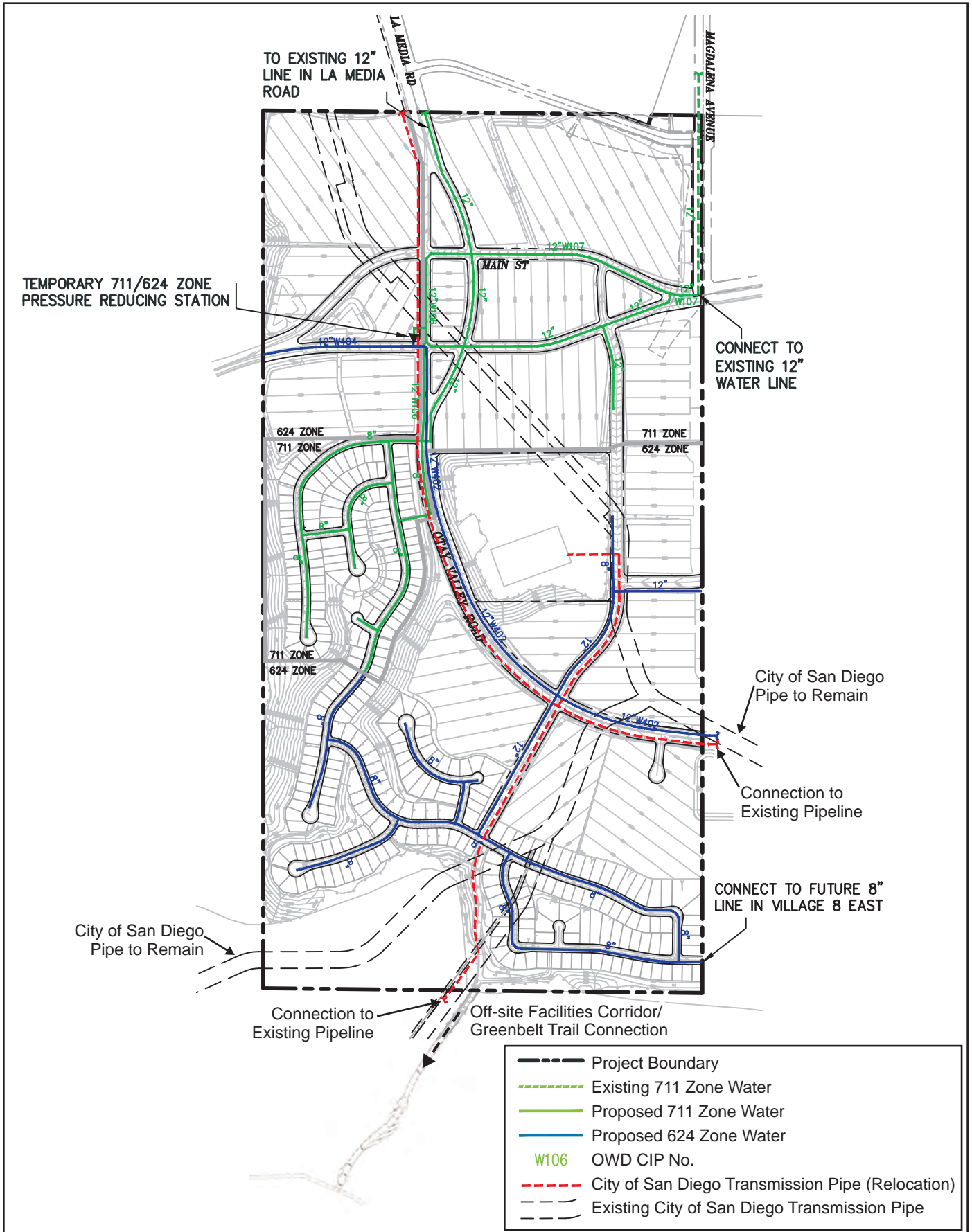
Note: All streets within low speed neighborhoods shall be low speed streets. Alignment of streets to be determined by Tentative Map.



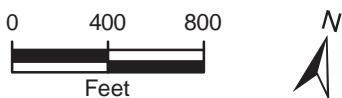
Source: William Hezmalhalch Architects, Inc. 2012



LOW SPEED STREETS FIGURE 3-8



Source: Dexter Wilson Engineering 2013



**POTABLE WATER SYSTEM
FIGURE 3-9**

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, schools, 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 8 West is projected to be 0.14 million gallons per day (mgd).

The primary source of recycled water to Village 8 West 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 12-inch line located in La Media Road. Recycled water would be stubbed at the westerly termination of Main Street and the southerly termination of La Media/Otay Valley Road to allow for a connection to adjacent villages as well as to Village 8 East located to the east. Some areas of the project may require private booster pumps on the landscape connections to get adequate pressure to the irrigation systems. A plan to distribute recycled water within the project is depicted in Figure 3-10. 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.

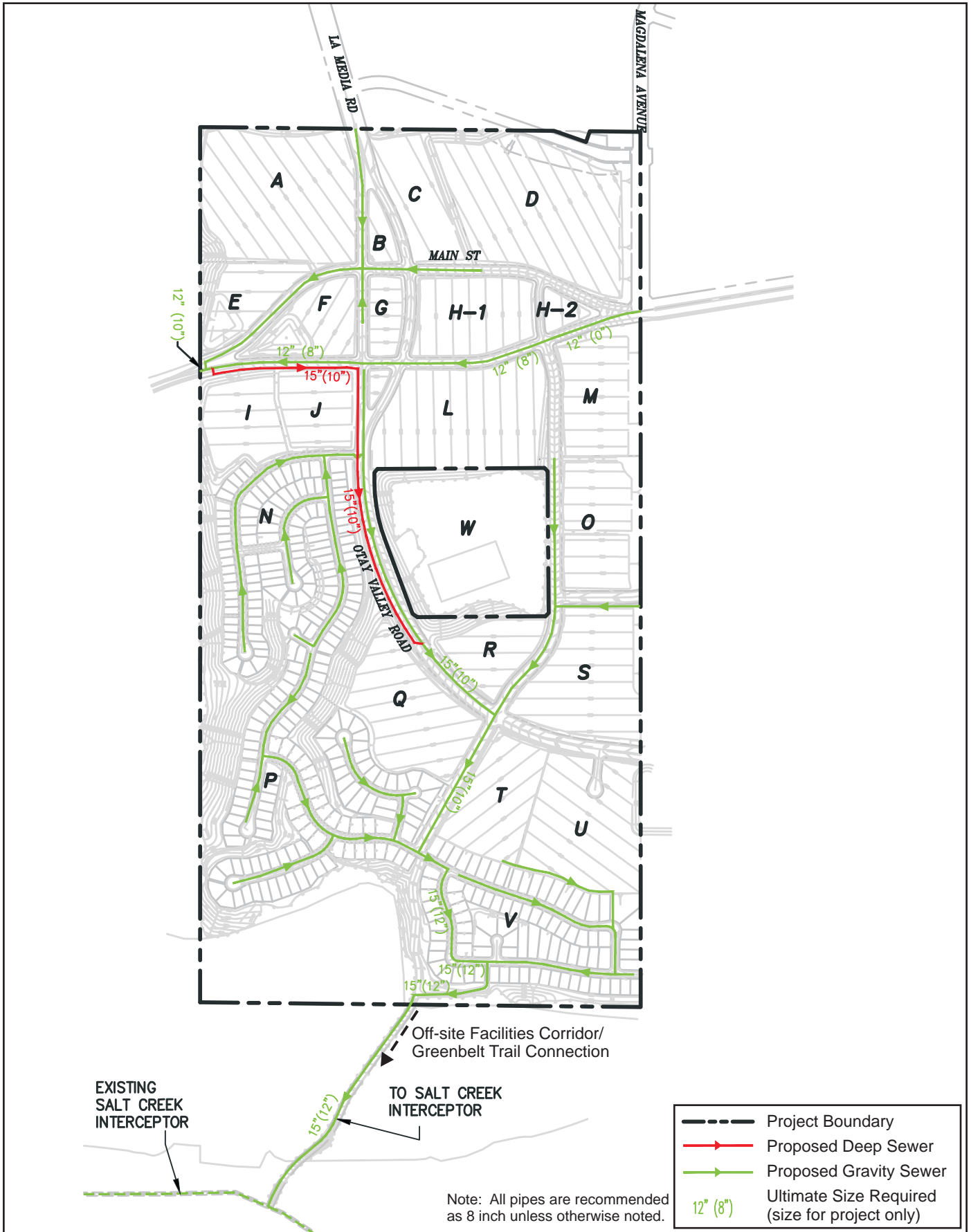
E. Sewer Service

Sewer service to Village 8 West 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 site 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. At project buildout, the average daily flow into the Salt Creek sewer basin from the project would be approximately 0.55 mgd with a projected peak sewage flow of 1.07 mgd.

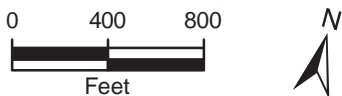
The southern portion of the site would be served by installing 8-inch to 12-inch gravity sewer lines to convey flow south to a single point of connection with the Salt Creek Interceptor located off site. The northern portion of the project would drain by gravity to the western boundary of the project. A deep sewer line is proposed within Village 8 West to convey flows southerly to the gravity sewer system that would serve the project. The sewer system within the project area includes a gravity sewer line within La Media Road to serve the Community Park. On-site sewer lines would also be oversized to accommodate potential off site flows from Village 7. Sewer facilities are illustrated in Figure 3-11.

F. Storm Water Drainage System

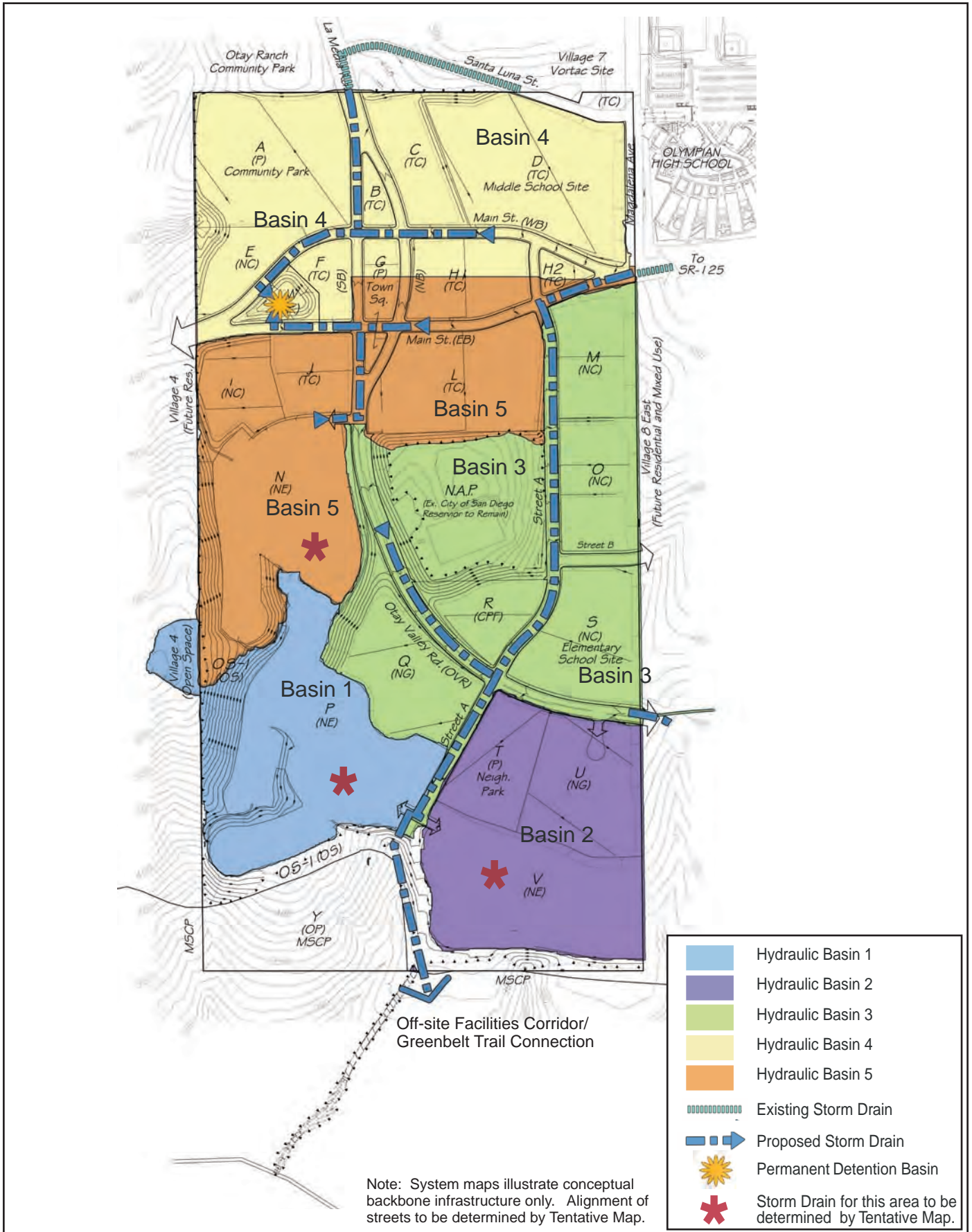
Village 8 West would be divided into five hydrologic basins, as shown in Figure 3-12. Basins 1 through 3 would convey flow from the eastern and southern portions of the site to the Otay River. Basin 3 would also convey flow from a portion of Main Street to the east. Basins 4 and 5 would convey flow westerly to an existing project discharge point tributary to Wolf Canyon. Basin 4 would also convey flow from a portion of La Media Road to the north.



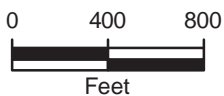
Source: Dexter Wilson Engineering 2010



**SEWER SYSTEM
FIGURE 3-11**



Source: William Hezmalhalch Architects, Inc. 2012



**HYDROLOGIC BASINS AND
PROPOSED DRAINAGE SYSTEM
FIGURE 3-12**

To prevent erosion and maintain continuity of the hydrologic character within Village 8 West, the outlet of the storm drain systems would convey storm water directly to existing discharge points. The southerly system would be extended to the Otay River bottom to avoid potential finger canyon erosion. Bio-retention based best management practices (BMPs) are proposed within the project site to treat urban runoff pollutants generated via the proposed roadways and sidewalks. Prior to discharging into Wolf Canyon, the storm water from Basins 4 and 5 would pass through a detention basin, as shown in Figure 3-12. The proposed drainage facilities for Village 8 West and proposed BMPs are described in greater detail in Section 5.11, Hydrology and Water Quality.

G. Schools

1. Elementary Schools

The project would increase the number of elementary school age students. An 11-acre elementary school site has been designated as Planning Area S on the utilization plan for Village 8 West. This site would be reserved for acquisition by the Chula Vista Elementary School District. If acquired by the district, this school site could accommodate up to 750 students. Construction timing of the school would be determined by the district. Until such time that the school would be completed, students residing within Village 8 West 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 re-designated for multi-family residential uses, but is not allowed to increase the overall residential dwelling unit yield and density of the village.

2. Middle Schools and High Schools

The project would increase the number of middle and high school age students. A 21-acre middle school site has been reserved on the utilization plan for Village 8 West in Planning Area D. This school would be large enough to accommodate up to 1,000 students. The site would be reserved for acquisition by the Sweetwater Union High School District. Construction timing of the school would be determined by the district. Until such time that the school would be completed, students residing within Village 8 West would attend schools in neighboring villages as determined by the district. If the school district decides not to acquire the middle school site, it would be re-designated for mixed use, but would not increase the overall residential density or commercial square footage of the village. High school students residing in Village 8 West would attend Olympian High School, located in Village 7, immediately adjacent to the proposed middle school.

H. Police Protection

The project would increase the demand on police protection services. The Chula Vista Police Department would provide law enforcement services to Village 8 West 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

The project would increase the demand on fire protection services. Village 8 West would be served by the Chula Vista Fire Department (CVFD). The closest fire stations to Village 8 West 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 Eastern Urban Center (EUC), located northeast of Village 8 West, includes a proposed fire station. 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 the SPA Plan to identify fire prevention measures such as fuel modification zones and architectural controls. The proposed fuel modification zones are shown in Figure 3-13. 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

The project would increase the demand on emergency medical services. Currently, American Medical Response provides contract emergency 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 increased population generated by the project would increase the demand for library facilities and amenities. The Chula Vista Library Master Plan identifies library services, which are provided by the City of Chula Vista.

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. Gas, Electricity, Cable, Telephone

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). 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 8 West includes a 5.8-acre CPF Zone located near the intersection of Otay Valley Road and Street A.

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, which requires an AQIP to be submitted with all SPA Plans. The AQIP demonstrates how the final SPA Plan for Village 8 West 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 area 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 by incrementally phasing out agricultural activities during development, if such activities commence prior to development. The Agricultural Plan is discussed in greater detail in Section 5.12, Agricultural Resources.

3. Non-Renewable Energy Conservation Plan

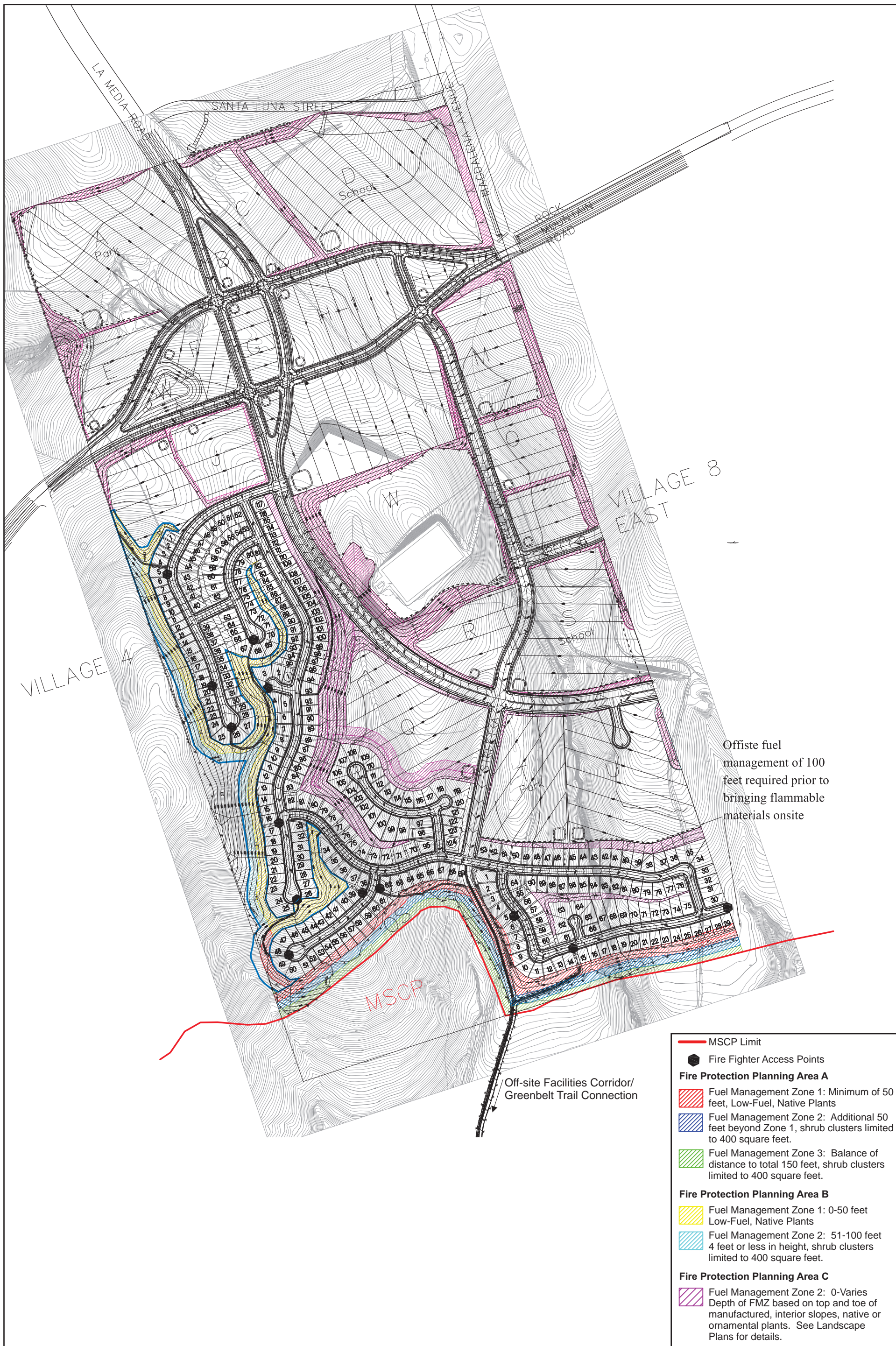
A Non-Renewable Energy Conservation Plan identifies feasible methods to reduce the consumption of non-renewable energy resources. The goals, objectives, and policies of the GDP require that any new projects identify a plan that assists in a long-range strategy that would increase conservation of and decrease the consumption of non-renewable energy resources. The three main categories identified in the SPA Plan where reductions in energy use occur are land use/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 8 West. 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 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 8 West would be consistent with each policy.

5. Fire Protection Plan

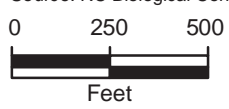
The purpose of a fire protection plan is to address fire safety and compliance with applicable codes, ordinances, and regulations relative to development adjacent to native vegetation. Topics addressed in the Fire Protection Plan include, but are not limited to, the urban-wildland interface, emergency service access, water supply and fire flow, fire history, a 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 in Figure 3-13.



Offsite fuel management of 100 feet required prior to bringing flammable materials onsite

- MSCP Limit
- Fire Fighter Access Points
- Fire Protection Planning Area A**
- Fuel Management Zone 1: Minimum of 50 feet, Low-Fuel, Native Plants
- Fuel Management Zone 2: Additional 50 feet beyond Zone 1, shrub clusters limited to 400 square feet.
- Fuel Management Zone 3: Balance of distance to total 150 feet, shrub clusters limited to 400 square feet.
- Fire Protection Planning Area B**
- Fuel Management Zone 1: 0-50 feet Low-Fuel, Native Plants
- Fuel Management Zone 2: 51-100 feet 4 feet or less in height, shrub clusters limited to 400 square feet.
- 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.

Source: RC Biological Consulting 2012



FUEL MODIFICATION PLAN
FIGURE 3-13

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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 205 affordable housing units would be available in Village 8 West. High-density housing in the Town Center and accessory second units, allowed throughout the project site, provide opportunities for affordable housing.

7. Water Conservation Plan

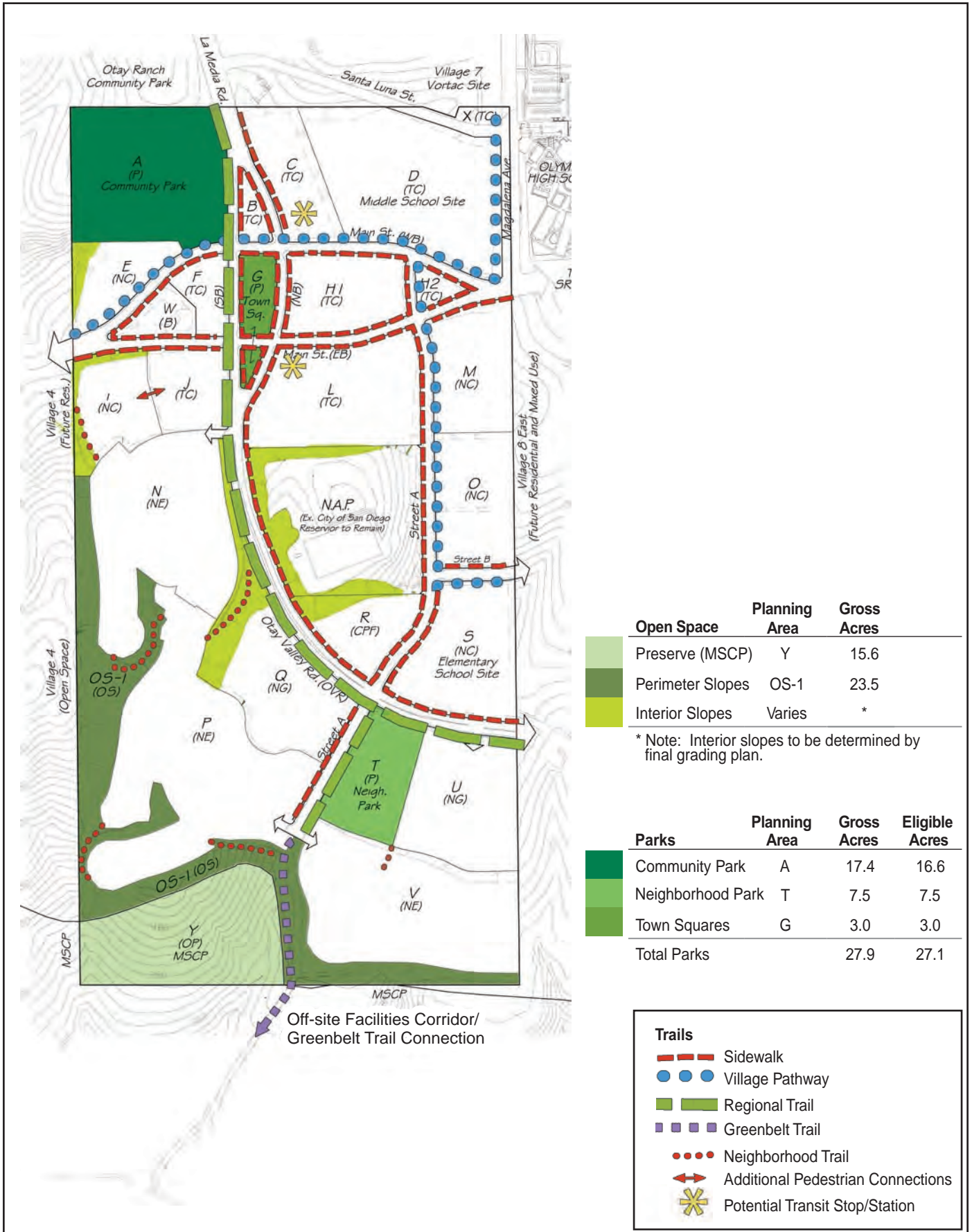
The Village 8 West Water Conservation Plan (WCP) includes water conservation measures that are incorporated into the planning and design of the project, including the requirements outlined in the Chula Vista Landscape Water Conservation Ordinance. The focus of the plan is on additional water conservation 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

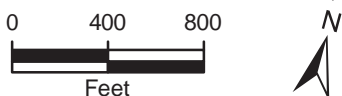
Chapter 7 of the SPA Plan serves as the Parks, Recreation, and Open Space Master Plan required by the Otay Ranch GDP. The Parks and Open Space Master Plan designates a variety of parks and open spaces throughout Village 8 West, as shown in Figure 3-14. The plan implements the goals, objectives, policies, and implementation measures of the GDP, the Chula Vista Parks and Recreation Master Plan (City of Chula Vista 2002), and the Chula Vista Greenbelt Master Plan (City of Chula Vista 2003b). 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 3.3.1.C, Mobility. The proposed park and open space facilities are described in greater detail in Section 5.9, Public Services.

The project would provide a total of 28 gross acres of parks in Village 8 West. An approximately 17 acre portion of the Otay Ranch Community Park would be located in Planning Area A, as designated in the Chula Vista Parks and Recreation Master Plan (November 2002). This park is intended to provide amenities that bring the community together, such as athletic fields, recreation facilities, and group picnic areas. Located in the northwest portion of the Village 8 West, this park acreage is contiguous to the remaining approximately 53 acres of planned community parkland located north and west of the project.

The SPA Plan would also provide a 7.5-acre neighborhood park within Village 8 West in Planning Area T, which 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 3 acres of town square in Planning Area G, which would consist of small plazas or open spaces in the high-density Town Center. These gathering spaces can be used for functions such as farmer's markets and art shows.



Source: William Hezmalchal Architects, Inc. 2012



**PARKS AND OPEN SPACE
FIGURE 3-14**

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 would 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.

An additional 3.5 acres of open space would consist of manufactured slopes that form the perimeter of the developed area in the open space zone. Large slope areas would occur within the area adjacent to roadways, between planning areas, and adjacent to the reservoir. Additional slopes may occur between and within other planning areas as the result of individual subdivision design.

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 plans already developed for the area. These plans are listed below and described 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 8 West 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 8 West would contribute an equitable financial share to the following services for Otay Ranch in accordance with the PFFP:

- | | |
|---------------------------------|---|
| ■ Arts and Cultural Facilities | ■ Community and Regional Purpose Facilities |
| ■ Cemeteries | ■ Social and Senior Services |
| ■ Health and Medical Facilities | ■ Correctional Facilities |

- Justice Facilities
- Animal Control Services
- Civic facilities

This EIR analyzes the worst-case scenario and assumes maximum buildout of the proposed Village 8 West 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.

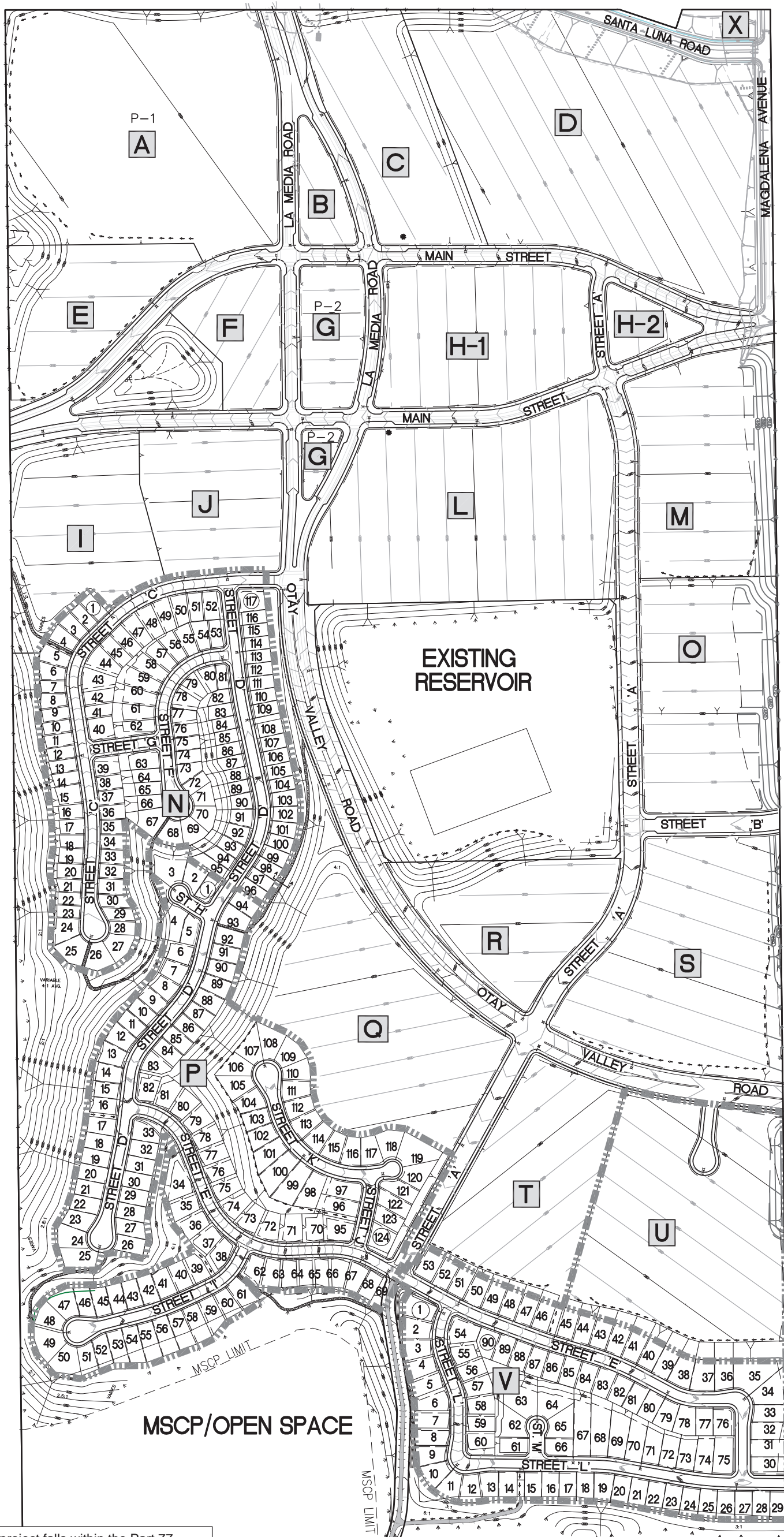
3.3.2 Conceptual Grading Plan and Concept

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, in the 3.5 acres of open space adjacent to the southern edge of the development area, and around the perimeter of the existing San Diego Reservoir site. Slopes over 25 feet in height would feature contour grading and would not have slope gradients that are steeper than 2:1. All slopes would be landscaped. Grading for the project would result in 4.8 million cubic yards of balanced cut and fill material on site. The conceptual grading plan is provided in Figure 3-16, and the cut and fill map is provided in Figure 3-17.

Village 8 West would also require some off-site grading on the City of San Diego reservoir site and for the off-site facilities corridor. No land uses are proposed in the offsite grading areas, but the off-site grading would be required to implement the proposed Village 8 West SPA Plan. Approximately 4.6 acres of off-site grading would be required in the reservoir site, and approximately two acres of grading would be required for the facilities corridor. Limited off-site screening using vegetation would also be implemented between the reservoir and Village 8 West development. The off-site cut and fill material would be used to balance the on-site earthwork.

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 a proposed community. The TM for Village 8 West 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 3-15. 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. The TM for Village 8 West depicts a 46-foot wide easement south of the SPA Plan area. The park access road visualized for this easement is not part of the project and is not included in this EIR. Implementation of the SPA Plan would construct a 12-foot wide paved trail in this corridor to provide access to future recreational opportunities south of Village 8 West, as described in Section 3.3.1(B).



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.

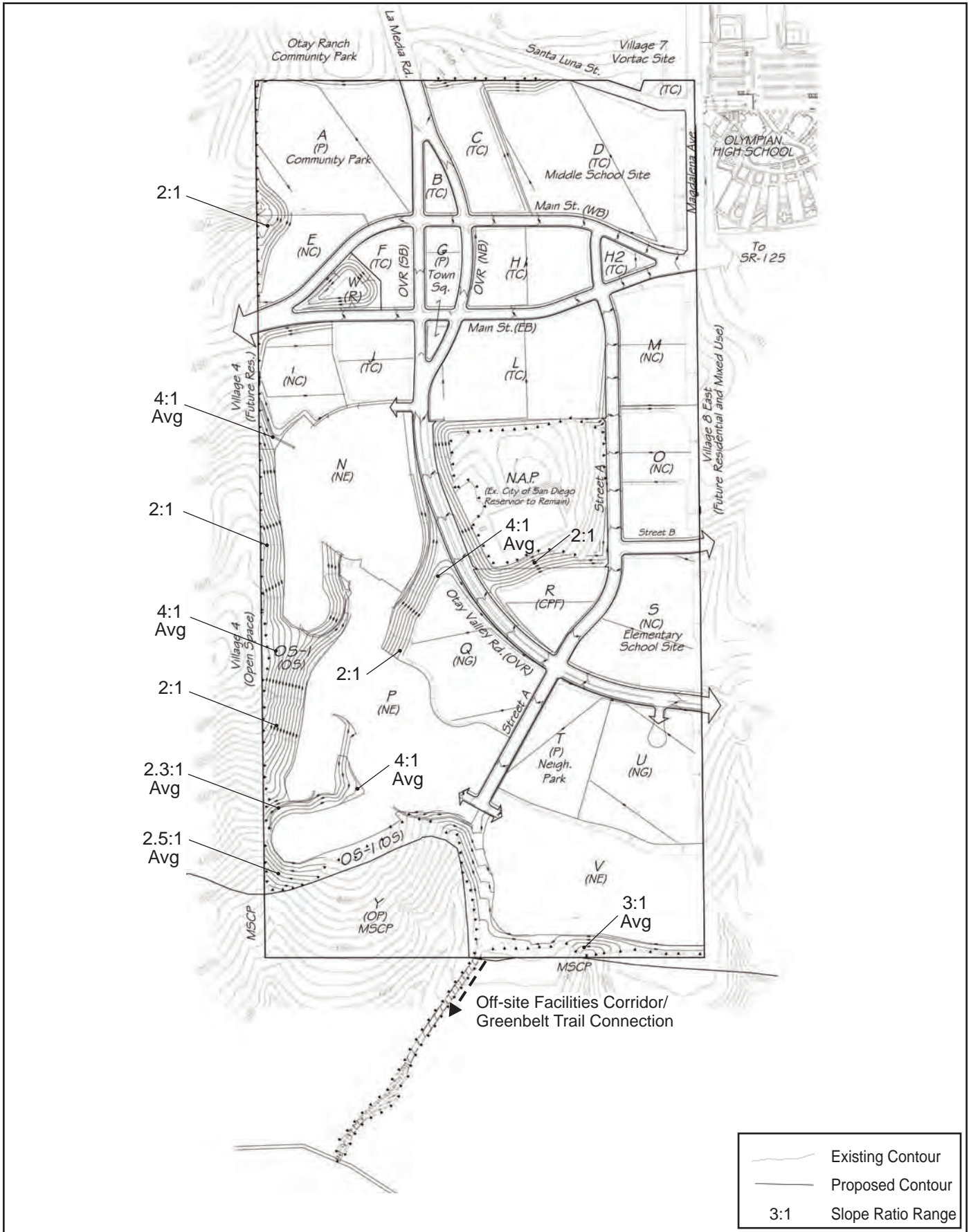
Source: Hale Engineering 2012

No Scale

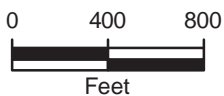


**VILLAGE 8 WEST CONCEPTUAL TENTATIVE MAP
FIGURE 3-15**

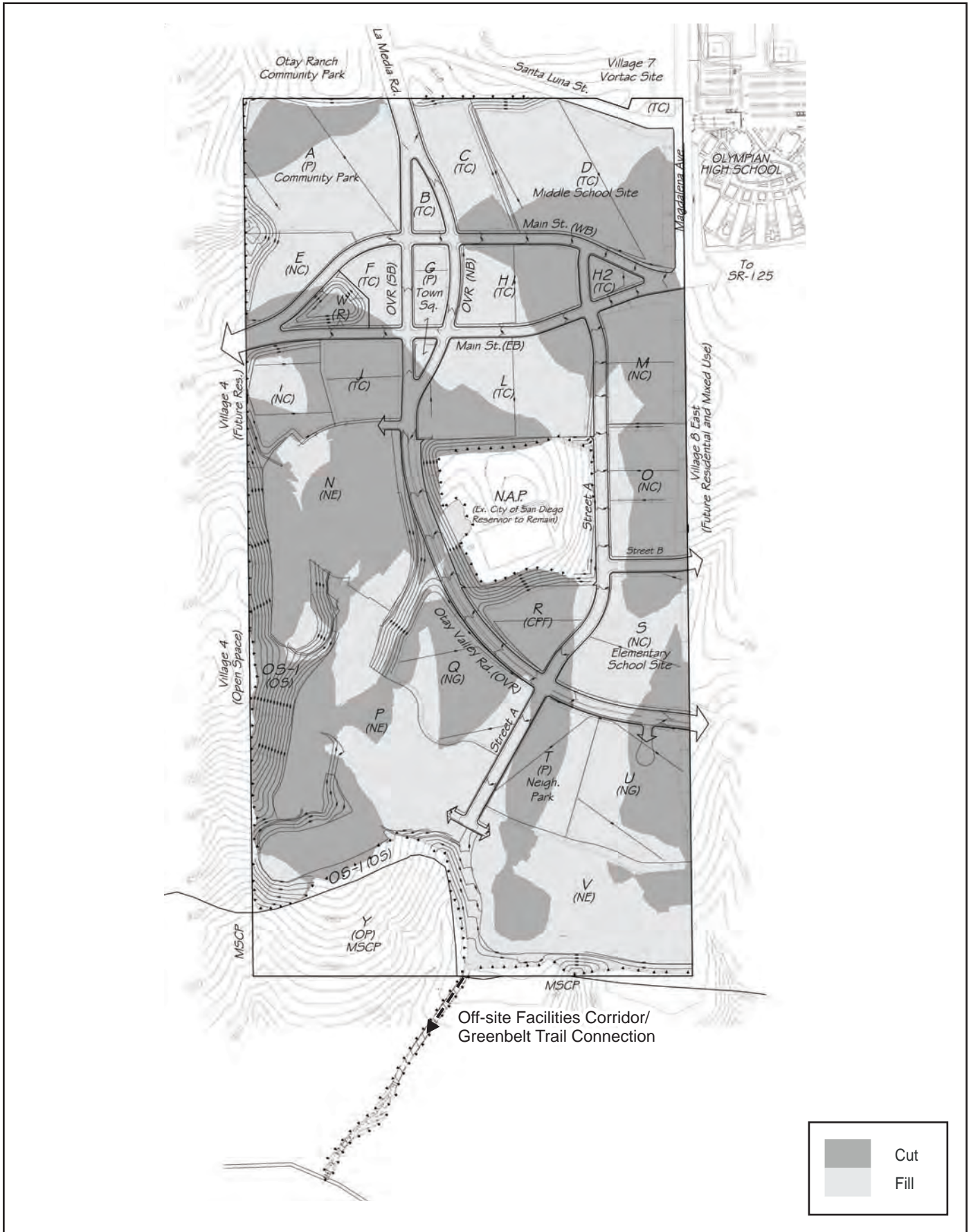
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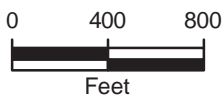
Source: William Hezmalchal Architects, Inc. 2012



**CONCEPTUAL GRADING PLAN
FIGURE 3-16**



Source: William Hezmalhalch Architects, Inc. 2012



CONCEPTUAL CUT AND FILL MAP
FIGURE 3-17

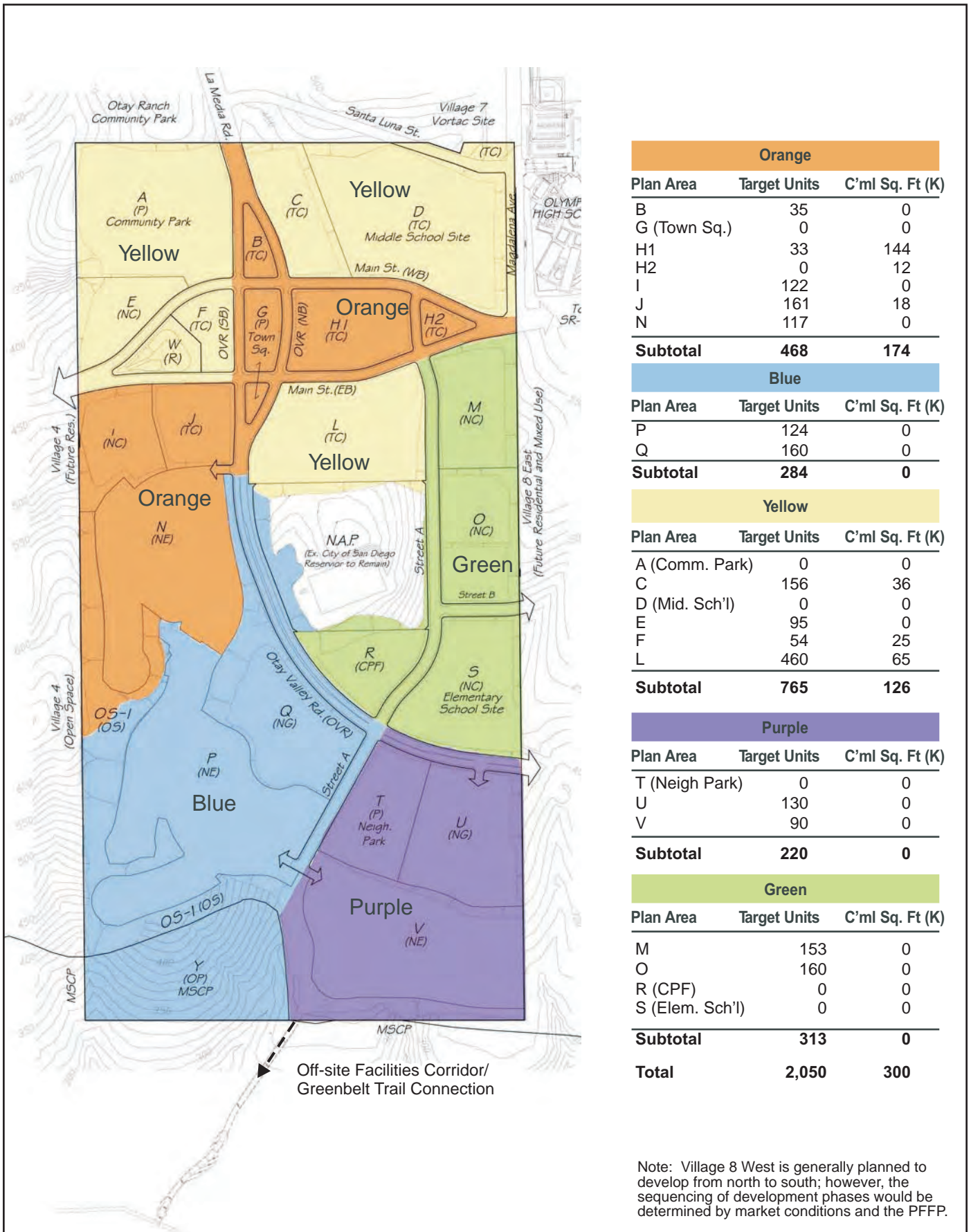
3.3.4 Development Phasing

Development of Village 8 West would be completed in five phases, which are identified in Figure 3-18. 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 areas of development in Figure 3-18 are not labeled in any particular order. The orange phase shown in Figure 3-18 includes Planning Areas B, G, H-1, H-2, I, J, and N. Development in this phase would include a maximum of 351 multi-family residential units, 117 single-family units, and 174,000 square feet of commercial space in primarily the western portion of Village 8 West. The blue phase would develop a maximum of 284 single-family residential units in Planning Areas P and Q, which are located in the southwestern area of Village 8 West. The yellow phase would develop Planning Areas A, C, D E, F, and L which include a maximum of 765 multi-family units and 126,000 square feet of commercial land use in the northern portion of Village 8 West. The purple phase would develop Planning Areas T, U, and V, which include a maximum of 220 single-family residential units in the southeast portion of the project site. The green phase would develop 313 multi-family residential units in Planning Areas M, O, R, and S which are located in the eastern portion of the project site.

3.4 Discretionary Actions

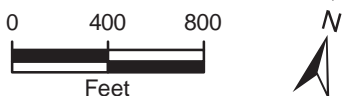
The project is a “discretionary project,” which is defined in Section 15357 of the CEQA Guidelines as “a project that requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity.” The following discretionary actions are associated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

- Adoption of the Village 8 West SPA Plan and associated documents including but not limited to:
 - Village 8 West 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 8 West.
- Approval of a development agreement amendment including conditions of approval for development within the Village 8 West SPA Plan area.
- Certification of a Final EIR and adoption of a mitigation monitoring and reporting program.



Note: Village 8 West is generally planned to develop from north to south; however, the sequencing of development phases would be determined by market conditions and the PFFP.

Source: William Hezmalchal Architects, Inc. 2012



DEVELOPMENT PHASES
FIGURE 3-18

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 USC §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.

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

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Chapter 4 Environmental Setting

4.1 Location

The Village 8 West site is located within the city of Chula Vista, San Diego County, California. The project site is located approximately 0.5 mile west of SR-125. La Media Road currently terminates at the northerly boundary of Village 8 West and a portion of Magdalena Avenue runs along the northeast boundary of the site. Rock Mountain is located to the west and the Otay River Valley is south of the site. A reservoir facility owned and operated by the City of San Diego is located in approximately the center of the project site. This facility is not a part of the proposed Village 8 West SPA Plan.

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 8 West range from 500 feet AMSL near the northern end of the property down to 300 feet AMSL near the southern end of the property. From west to east, elevations range from 400 feet AMSL along the western edge of the property, to 600 feet AMSL in the central portion of the site, to 360 feet AMSL along the eastern edge. The project site generally slopes to the south, toward the Otay River Valley, with a rolling terrain divided by V-shaped drainages, and is currently undeveloped. Four native vegetation communities occur on the site: coastal sage scrub, maritime succulent scrub, mulefat scrub, and freshwater marsh. In addition to native habitats, non-native vegetation communities also occur in the project area, including non-native grasslands, agricultural lands, disturbed vegetation, and developed land. A few dirt and gravel access roadways have been established across the project site, primarily to access the reservoir located in the center of the site.

4.4 Access

Regional vehicular access to Village 8 West is currently provided from SR-125 via Olympic Parkway to La Media Road. As discussed above, La Media Road and Magdalena Avenue currently terminate at the Village 8 West boundary. These roadways provide north/south access to the site, and as part of the project, La Media Road would be extended southward to become Otay Valley Road. Otay Valley Road would curve southeastward to provide another access point along the eastern boundary of the site. Main Street, which currently terminates at the intersection of Heritage Road, would be extended across the site as part of the project to provide the main east/west access.

4.5 Surrounding Land Uses

Village 8 West is surrounded on three sides by undeveloped land. The future locations for Village 8 East, to the east of the site, and Village 4, to the west of the site, are currently undeveloped. Rock Mountain is located directly west of the site, and 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 within the southwestern portion of the project site, as seen in Figure 3-3.

Village 7, to the northeast of Village 8 West, is partially developed and includes Olympian High School and Magdalena Avenue. Village 7 has also been planned in accordance with the traditional village model consisting of predominantly low-medium village residential neighborhoods, a small mixed-use village core, and limited multi-family uses adjacent to SR-125. The Otay Valley Rock Quarry is located approximately 0.3 mile southwest of the project site. The quarry has been approved to expand operations eastward to within approximately 300 feet of the Village 8 West boundary; however, this expansion has not yet occurred. The Otay Landfill is located approximately two miles west of the project site, and the Brown Field Airport is located approximately 1.5 miles to the southwest of Village 8 West.

Chapter 5 Environmental Impact Analysis

5.1 Land Use and Planning

This section describes the existing land use setting of Village 8 West and the surrounding area. Land use and planning impacts are evaluated 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 (09-01). Section 5.1, Land Use, of the final SEIR for the GPA/GDPA (EIR 09-01) analyzed the existing conditions, potential impacts, and mitigation measures related to the proposed land uses for the GPA/GDPA area, including Village 8 West. 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 8 West as a community center that

would provide low to mid-rise residential and commercial buildings within one quarter mile of a transit center. Community centers provide draw from neighboring communities, include mixed-use development, are served by at least one transit line and collector or arterial streets, have frequent transit service, and provide more than one transit stop. Basic smart growth principles from the RCP that are applicable to Village 8 West 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. It 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 December 13, 2005 and most 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 8 West, and the rest of 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 8 West is located in the Central Planning District of the Otay Ranch subarea. According to the element, the central district is intended to provide a mixture of land uses and intensities that include a large community park, a pedestrian-oriented mixed-use town center located along portions of La Media Road and Main Street, single-family and multi-family residential uses surrounding a typical village core, and a middle school.

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 8 West, Village 9, the EUC, the University site, and the RTP are areas within 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 units, for projects consisting of 50 or more dwelling units.

b. Otay Ranch General Development Plan

The Otay Ranch GDP/SRP 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 8 West 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 general development plan 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. 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 the Otay Ranch Preserve. Otay Ranch, including Village 8 West, is considered a "covered project" under the MSCP Subarea Plan. This means that the areas proposed to be preserved (100 percent conservation areas) either are 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 will 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 8 West 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 would cover portions of Salt Creek Canyon to Otay Valley. 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 RMP identifies vernal pools, coastal sage scrub habitat, coastal California gnatcatcher populations, and potential wetlands restoration areas as important target lands for the Preserve. The RMP includes conveyance procedures for dedicating parcels of land to the resource preserve and for determining the proportionate share for each village. 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 Sec. 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 Growth Management Oversight Commission (GMOC) "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. Based on the village boundaries in the 1993 GDP, parkland identified in the SPA Plan area includes community and neighborhood parks. That plan requires a total of 70 acres of community parks to be developed in Otay Ranch, but does not specify a precise location.

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 8 West. 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 wide with two-foot 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 8 West 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 300 acres. The SPA Plan area ranges in elevation from 500 feet AMSL near the northern edge of the property, 300 feet AMSL near the southern corner of the property, 400 feet along the western edge of the property near Rock Mountain, up to 600 feet AMSL in the central and eastern portions of the site, and 360 feet AMSL along the eastern edge. The site consists of vacant, ranch, and dry-farmed lands. An existing City of San Diego Reservoir facility is located within the central area of Village 8 West, but is not part of the SPA Plan or TM. There is no other existing development on the site.

2. Surrounding Land Uses

Village 8 West is located about 0.5 mile west of SR-125 and is surrounded on three sides by undeveloped land. Rock Mountain is located to the west of the site, and the Otay River Valley and Otay Valley Regional Park are located to the south. Village 8 East is located to the east of the site; the Otay Valley Rock Quarry and Village 4 are located west of the site; and the partially developed Village 7, including Olympian High school, is located northeast of the project site. La Media Road, which currently terminates at the northerly boundary of Village 8 West, and Magdalena Avenue and Main Street, which terminate at the northeast corner of the Village 8 West boundary, provide access to the site. The location of Village 8 West and the surrounding land uses are illustrated in Figure 3-2, Existing and Planned Land Uses in the Project Vicinity.

The Otay Valley Rock Quarry produces construction building materials. Rock is extracted on the site and processed into several types of building materials, including aggregates, fill, sand and rip rap. The quarry also offers an on-site recycling service for concrete and asphalt paving materials (Otay Valley Rock, LLC 2010). The active area of the quarry is currently located southwest of Village 4 and is not directly adjacent to the Village 8 West.

Village 7, to the north of Village 8 West, is partially developed with Olympian High School, which is located directly northeast of the project site, across Magdalena Avenue. The portion of Village 7 east of La Media Road and north of Village 8 West is planned for future low-density residential development and is known as the VORTAC site. Main Street is planned for extension along the southern boundary of the high school but has not been fully constructed.

Village 8 East, located to the east of the project site, and Village 4, located north and west of the project site, are currently undeveloped. In accordance with the Otay Ranch GDP, future planned land uses for Village 8 East in the GDP include a mixed-use village core and a range of residential densities. La Media Road and Main Street are planned to provide roadway connections between Village 8 West and Village 8 East. Future land uses planned for Village 4 include low-medium village residential development and a community park.

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 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 8 West is currently undeveloped; thus, the project would not incur an impact relating 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. Construction activities on the project site would be temporary and would not encroach upon surrounding existing developed areas or areas proposed for future development. Short-term construction land use conflicts with surrounding land uses are discussed below.

The majority of Village 8 West is adjacent to currently undeveloped land; therefore, construction activities would not be incompatible with the vacant land to the north, east, and west of the project site. The northeast corner of Village 8 West, which is the proposed town center area, is adjacent to Olympian High School (part of Village 7). Construction activities in this area would have the potential to be incompatible with the high school if equipment generates noise or vibration that would be disruptive to the operation of the school. The potential for construction to result in excessive noise or vibration is addressed in Section 5.5, Noise. As discussed in this section, construction noise and vibration would not significantly impact Olympian High School. No conflict with this existing land use would occur during construction.

The Chula Vista MSCP Subarea Plan Preserve is located within 50 feet of Planning Areas A and E, partially within the project site in the southwest corner of Planning Area Y, and extending further beyond the site to the west and south. Construction would have the potential to result in direct and indirect impacts to the biological resources in the MSCP areas as a result of loss of habitat, storm water runoff, noise, and dust. The mitigation measures in Section 5.11, Hydrology and Water Quality, would protect the MSCP area from storm water runoff from construction. Requirements for noise levels, pre-construction biological surveys, and habitat replacement 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 8 West 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 east of the site, and Village 4, located to the northwest of Village 8 West, are currently undeveloped. These villages are planned for development in accordance with the adopted GDP. A SPA Plan was adopted in 2004 for Village 7, located to the north of Village 8 West. Village 7 is partially developed, including Olympian High School and Magdalena Avenue, located northeast of Village 8 West. A portion of Village 7 is known as the VORTAC site, and is currently undeveloped except for an existing VORTAC facility, which is a ground station that is part of the radio navigation system for aircraft. This site is planned for low-density residential development but would only be developed if the Federal Aviation Administration (FAA) decides to move the VORTAC facility.

The Village 8 West SPA Plan does not include any components that would extend into neighboring villages. Additionally, the land surrounding Village 8 West is currently undeveloped. Therefore, Village 8 West 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 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 8 West would not exceed noise standards at Olympian High School. Planning Area D, located adjacent to Olympian High School, is proposed for a middle school. Operation of the middle school would be similar to Olympian High School, and the middle schools would separate the high school from higher density development in the Town Center. Therefore, land uses in Village 8 West would be compatible with surrounding land uses. Impacts would be less than significant.

San Diego Reservoir Site

An existing reservoir owned by the City of San Diego is located in the middle of Village 8 West. The site would be surrounded by the community purpose facility site to the south, single-family residential development to the west, mixed-use development in the Town Center to the north, and multi-family residential development to the east. The reservoir is a passive facility. It does not include any structures for human occupancy. It does not generate noise, air pollutants, or traffic other than occasional maintenance trips. Operation of the reservoir would not adversely affect development in Village 8 West, and its operation would not be affected by the project. Limited grading and screening are proposed to ensure visual compatibility between the reservoir property and adjacent planned uses. Screening and grading on the reservoir site would not affect operation of the reservoir. Therefore, development in Village 8 West, including proposed grading on the reservoir site, and operation of the reservoir would not result in any land use conflicts.

MSCP Subarea and Otay Ranch Preserve

The open space to the south of Village 8 West is part of the Chula Vista MSCP Subarea Plan Preserve and within the Otay Valley Regional Park boundary. Wolf Canyon to the west of Planning Area E is also part of the Chula Vista MSCP Subarea Plan. The SPA Plan and TM would be compatible with the 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. A 100-foot open space buffer would also be provided between the Wolf Canyon MSCP Preserve boundary and development in Village 8 West. Manufactured slopes in the southwest corner of

the Community Park would provide a 100-foot buffer between the on-site portion of the 70-acre Community Park and Wolf Canyon.

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 areas. Fire protection measures are also included within the SPA Plan and the accompanying fire protection plan to address this wildland interface. Section 5.6, Biological Resources, identifies mitigation measure that would reduce potentially significant indirect impacts to sensitive biological resources to a less than significant level. As discussed in Section 5.5, Noise, the manufactured slope would provide a sufficient buffer so that noise from activity at the Community Park would not significantly impact biological resources. Additionally, 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.

Otay Valley Rock Quarry

Otay Valley Rock Quarry is located southwest of Village 4, approximately 0.3 mile from the project site. The quarry produces rock products for construction material. Potential land use conflicts associated with the quarry would include dust and noise impacts that may be disturbing to nearby residents. However, the project site and the quarry are separated by Rock Mountain. Due to distance, the quarry does not generate dust or noise that affects the project site. Intermittent noise from particularly loud operations, such as blasting, is occasionally audible on the project site and would not be a substantial disturbance to future residents. Additionally, no truck trips from the quarry would be anticipated to traverse the project site due to the quarry's proximity to I-805. The development of Village 8 West would not encroach into the limits of the quarry or affect existing operations at the quarry. Therefore, implementation of the project would not result in a land use conflict with existing operation of the quarry, and impacts would be less than significant. The quarry has been approved to expand operations eastward to within approximately 300 feet of the Village 8 West boundary. Potential land use conflicts as a result of noise impacts associated with the expansion are addressed in Chapter 6, Cumulative Impacts.

3. Internal Land Use Compatibility Within Village 8 West

Several water transmission lines traverse 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 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 rights of way within La Media Road, Otay Valley Road, Street A and the future park access road/service road. If relocation of these water transmission pipelines did 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 walkable and 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 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 facilities.

The potential for 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 MSCP Preserve, including sewer and storm water facilities. These improvements have been located in the least biological 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 and trail 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. 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 8 West, 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 Sections 5.4, 5.5, 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 the 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 8 West as a community center that would provide low to mid-rise residential and commercial buildings within one quarter mile of a transit center. Community centers provide draw from neighboring communities, provide mixed-use development, are served by at least one transit line and collector or arterial streets, have frequent transit service, and provide more than one transit stop. 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. As described in the Chapter 3, Project Description, Village 8 West would be ready for future extension of transit service into the area. A bus route is proposed through the Town Center and two potential transit stops have been identified along Main Street. Safe pedestrian and bicycle access to the transit stops 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 project would be consistent with the community 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. As discussed in this table, 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 8 West SPA Plan with the Applicable Smart Growth Principles of SANDAG’s Regional Comprehensive Plan

Principle	Comparison
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.	Consistent. 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 rural trails. All streets would include sidewalks so that all development would be accessible to pedestrians.
Jobs/Housing Mix. Locate housing near or within major employment areas and provide employment opportunities near major housing areas.	Consistent. Employment opportunities for Village 8 West residents would be provided within the Town Center. Additionally, the planned EUC, University, and RTP and major employment centers in Otay Ranch would be in proximity to Village 8 West. A bus rapid transit line is proposed for Otay Ranch to connect residential and employment centers. The project would provide transit stops, as well as pedestrian and bicycle access to the transit stops to connect Village 8 West to the major employment centers.
Housing Choices. Provide, in each community, a variety of housing types for residents of all incomes.	Consistent. The project would provide single-family and multi-family residential development, including affordable units, in a variety of sizes and types.

Table 5.1-1 Comparison of the Village 8 West SPA Plan with the Applicable Smart Growth Principles of SANDAG's Regional Comprehensive Plan (continued)

Principle	Comparison
Infrastructure Capacity and Location. Provide adequate infrastructure in designated smart growth opportunity areas.	Consistent. 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.
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.	Consistent. 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 the lowest density residential development. Additionally, the Preserve Edge Plan establishes 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.
Travel Choices. Provide people with additional travel choices (walking, biking, rail, bus, and automobile).	Consistent. As discussed in Chapter 3, Project Description, the Village 8 West 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.

2. City of Chula Vista General Plan

Table 5.1-2 compares the SPA Plan for Village 8 West 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.

3. Otay Ranch General Development Plan

Table 5.1-3 compares the SPA Plan for Village 8 West 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). As detailed in Table 5.1-3, 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.

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

Applicable Policies	Evaluation of Consistency
Land Use and Transportation Element	
<p>Objective LUT 1: 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>Policy LUT 1.1: 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>Policy LUT 1.2: 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>Policy LUT 1.4: Seek to achieve an improved balance between jobs and housing in Chula Vista.</p> <p>Policy LUT 1.5: Endeavor to create a mixture of employment opportunities for citizens at all economic levels.</p> <p>Policy LUT 1.6: Attract and maintain land uses that generate revenue for Chula Vista, while maintaining a balance of other community needs, such as housing, jobs, open space, and public facilities.</p> <p>Policy LUT 1.7: Provide high-quality public facilities, services, and other amenities within close proximity to residents.</p> <p>Policy LUT 1.8: Pursue higher density residential categories and retail demand that are not being met within the city.</p> <p>Policy LUT 1.9: Provide opportunities for development of housing that respond to diverse community needs in terms of density, size, location, and cost.</p> <p>Policy LUT 1.10: 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>Policy LUT 1.12: Encourage regional-serving, high-volume retail or other uses to locate near freeway access to minimize traffic on city streets.</p> <p>Policy LUT 1.13: 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>Consistent. The SPA Plan is consistent with Objective LUT 1 and its supporting policies. The SPA Plan proposes a mix of land uses that provide for a variety of uses both residential and commercial to meet the current and future needs of residents. 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 museum to maintain a high quality of life. This mix of uses would generate revenue and provide for the community's needs.</p> <p>Village 8 West 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 Town Center, and a diverse range of housing would be provided throughout the project area, include single-family detached units, attached single-family units, live/work units, and multi-family units. 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. Commercial land uses would be focused along Main Street, which at buildout of the Otay Ranch circulation network will provide access to SR-125 and minimize traffic on city streets.</p> <p>The Town Center would accommodate a variety of retail uses, as well as office use. It would be located in the northeast area of the project area, adjacent to Villages 7 and 8 East and would provide amenities for these villages as well.</p>

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

Applicable Policies	Evaluation of Consistency
<p>Policy LUT 1.15: Allow office uses that are associated with complementary commercial service businesses in commercial service areas.</p> <p>Policy LUT 1.17: 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 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 the Otay Ranch Community Park, neighborhood parks, and a town square. These facilities would be able to accommodate art and cultural events. The Town Center permits art galleries and studios as potential uses. Additionally, Village 8 West would contribute an equitable financial share to the development of arts and cultural facilities within Otay Ranch in accordance with the PFFP.</p>
<p>Objective LUT 3: 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>Policy LUT 3.1: 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>Policy LUT 3.2: 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>Consistent. 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 8 West. As described in the discussion of Objective LUT 1, the project area would include several areas for social and cultural enhancement.</p>
<p>Objective LUT 5: 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>Policy LUT 5.1: 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>Policy LUT 5.2: 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>Consistent. The SPA Plan is consistent with Objective LUT 5 because the project area would include a town center, which would be a mixed-use area that would support adjacent residential neighborhoods and foster walkability. Two transit stops are also proposed in the Town Center. The Town Center 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 Town Center locates neighborhood-serving commercial uses near employment opportunities.</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 of the 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>

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

Applicable Policies	Evaluation of Consistency
<p>Policy LUT 5.3: Authorize and encourage mixed use development in focus areas, including high-density residential housing, neighborhood-serving commercial, and office uses.</p> <p>Policy LUT 5.4: Develop the following areas as mixed use centers: urban core; Palomar trolley station; EUC; and Otay Ranch village cores and town centers.</p> <p>Policy LUT 5.7: 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>Policy LUT 5.8: Encourage a wide variety of retail and commercial services, such as restaurants and cultural arts/entertainment, in appropriate locations.</p> <p>Policy LUT 5.9: Encourage active and inviting pedestrian-friendly street environments that include a variety of uses within commercial and mixed use areas.</p> <p>Policy LUT 5.11: Endeavor to reduce the number of peak hour automobile trips by supporting increased services near workplaces.</p> <p>Policy LUT 5.12: Minimize local and regional traffic by concentrating higher density employment near major transit services.</p> <p>Policy LUT 5.13: 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>The compact, mixed-use Town Center would provide services and workplaces in close proximity to each other. The Town Center would provide residential-serving uses easily accessible to residents in the entire project area, and residential serving use, such as childcare would be permitted throughout the project area to encourage functionality and walkability. Two proposed transit stops are included in the Town Center to provide regional transit access to the employment center of the area.</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 Town Center, which would include transit stops. The Village 8 West SPA Plan minimizes impacts on single-family neighborhoods by gradually reducing densities as distance from the mixed use Town Center increases.</p> <p>The Town Center would accommodate a variety of retail and commercial services. The Town Center and community purpose facilities would provide opportunities for cultural arts/entertainment.</p> <p>As described above, the mixed-use Town Center would be designed with a pedestrian-friendly street environment.</p> <p>The mixed-use Town Center would support office use along with commercial and retail services.</p> <p>The Town Center would be the employment center for Village 8 West, and would be served by bus transit, including rapid bus transit.</p> <p>As described above, the Town Center 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 Town Center to gradually transition to single-family residential neighborhoods.</p>
<p>Objective LUT 6: Ensure adjacent land uses are compatible with one another.</p> <p>Policy LUT 6.1: 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>Policy LUT 6.2: Require that proposed development plans and projects consider and minimize project impacts upon surrounding neighborhoods.</p>	<p>Consistent. The SPA Plan is consistent with this objective and relevant policies. As discussed under Thresholds 1 and 2, the SPA Plan provides design guidance and regulations for development within Village 8 West to protect visual quality. The land uses proposed in the SPA Plan would be compatible with adjacent land uses within Village 8 West and surrounding planning area. For example, the proposed transects and zones in the SPA Plan provide organization for development that focuses activity within the Town Center, 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</p>

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

Applicable Policies	Evaluation of Consistency
<p>Policy LUT 6.3: 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 focused 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>Policy LUT 6.5: Require, through sensitive and attractive design, that neighborhood retail centers and commercial service buildings are compatible with the surrounding neighborhood.</p> <p>Policy LUT 6.6: 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>Policy LUT 6.7: Require that outdoor storage areas or salvage yards be screened from any public right-of-way.</p> <p>Policy LUT 6.10: 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>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 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.</p> <p>The proposed transect planning would transition building heights from taller buildings in the Town Center, to shorter buildings in the single-family residential neighborhoods. The Village 8 West 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 60 feet tall for buildings in the Town Center, which would be the tallest structures in Village 8 West. Chapter 4 of the SPA, Community Design, includes additional design guidelines and development standards to ensure that design throughout Village 8 West would complement the community character of the project and adjacent land uses.</p> <p>Performance standards are provided within Chapter 3 of the Village 8 West 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 proposed plan for Village 8 West extends La Media Road and Main Street, providing a connection between Village 8 West and Village 7. Appropriate adjacencies to the high school have also been proposed by designating a middle school site in this location. The Village Pathway that currently exists along the west side of Magdalena Avenue would also be extended into and through the Town Center and is planned to extend west into Village 4. In response to the planned development of Village 8 East, Village 8 West allows for the continued development pattern of a walkable community by providing additional roadway and pedestrian connections between the villages. The Village 8 West SPA plan considers development in Village 4 by locating multi-family uses immediately adjacent to the future residential areas of Village 4. This land use adjacency allows future residential development in Village 4 to be designed as an extension of the development proposed in this SPA. Main Street will also terminate at this point allowing for future extension through Village 4. The Community Park planned for Village 4 has been</p>

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

Applicable Policies	Evaluation of Consistency
	<p>extended into Village 8 West. The SPA Plan for Village 8 West respects the adjacencies to sensitive open space areas within the MSCP Preserve by designating the adjacent development areas for the lowest density residential development proposed by the plan. In addition, a buffer of open space, the Preserve Edge, provides a buffer between this development and the MSCP area.</p>
<p>Objective LUT 7: Appropriate transitions should be provided between land uses.</p> <p>Policy LUT 7.1: 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>Policy LUT 7.2: Require new or expanded uses to provide mitigation or buffers between existing uses where significant adverse impacts could occur.</p> <p>Policy LUT 7.3: 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>Policy LUT 7.4: 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>Consistent. 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 8 West 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>Objective LUT 16: Integrate land use and transportation planning and related facilities.</p> <p>Policy LUT 16.1: 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>Policy LUT 16.2: Ensure that new development and community activity centers have adequate transportation and pedestrian facilities.</p>	<p>Consistent. 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 8 West would include a mix of residential, retail, office, commercial, and recreational development to create a self-supportive community. 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 stop would be centrally located within the Town Center and would be accessible to pedestrians and cyclists.</p>
<p>Objective LUT 61: Create balanced communities that can provide a high quality of life for residents.</p> <p>Policy LUT 61.1: Adhere to the regulations established in existing GDPs and SPAs.</p> <p>Policy LUT 61.2: Future SPAs shall focus on creating a vibrant sense of community, a vigorous economy, and a healthy environment.</p> <p>Policy LUT 61.3: Require all future community identification signs and monuments to recognize communities as part of Chula Vista.</p>	<p>Consistent. Village 8 West is consistent with this objective, because the SPA Plan includes a mixed-use town 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 will 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>

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

Applicable Policies	Evaluation of Consistency
<p>Objective LUT 72: Develop comprehensive, well-integrated, and balanced land uses within villages and town centers that are compatible with the surroundings.</p> <p>Policy LUT 72.1: 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>Consistent. The SPA Plan is consistent with this objective and supporting policies because the plan proposes a mixed-use town center that would accommodate higher density development that the remaining area. The Town Center would be the commercial center 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 includes a town square and would also include plazas.</p>
<p>Policy LUT 72.2: 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>Policy LUT 72.3: 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>Policy LUT 72.4: Concentrate higher intensity land uses and those uses that generate pedestrian activity within the village core or own center, with densities generally decreasing away from core areas.</p> <p>Policy LUT 72.5: Each village core or town center must provide neighborhood commercial services within ¼-mile walking distance of residents and/or transit.</p> <p>Policy LUT 72.6: Town centers should provide community/neighborhood serving services.</p> <p>Policy LUT 72.7: Provide pedestrian and street connectivity between the villages utilizing a grid circulation pattern that offers a wider range of mobility choices and routes.</p>	<p>The Town Center 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 Town 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 stop 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 Town Center would provide community/neighborhood serving services.</p> <p>The SPA Plan circulation network proposes several connections to adjacent villages. Main Street would connect Village 8 West to Village 4 and Village 8 East. Otay Valley Road would connect Village 8 West to Village 7 and Village 8 East. Both roadways would include an on-street bicycle lane and sidewalks. An off-street village pathway would run along Main Street and provide connections to Village 4 and Village 8 East. A regional trail is proposed along the entire length of Otay Valley Road in the project area.</p>
<p>Objective LUT 74: Accommodate land uses that diversify the economic base within Otay Ranch and the surrounding south San Diego County region.</p> <p>Policy LUT 74.1: Provide sufficient land and infrastructure to accommodate commercial and industrial uses.</p> <p>Policy LUT 74.2: Promote additional business and higher paid employment opportunities for residents of Chula Vista.</p> <p>Policy LUT 74.3: Promote synergistic uses between the villages of Otay Ranch to provide a balance of activities, services and facilities.</p>	<p>Consistent. The proposed Town Center would accommodate 300,000 square feet of commercial and office development that would provide employment opportunities. A wide range of employment land uses would be allowed in the Town Center, including retail and professional services. The Town Center is centrally located in the northern area 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>

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

Applicable Policies	Evaluation of Consistency
<p>Objective LUT 81: Develop a higher intensity, mixed use, transit-oriented town center positioned on the intersection of Main Street and La Media Road, surrounded by lower intensity residential use and a large community park that preserves Main Street as an important landform and visual resource.</p> <p>Policy LUT 81.2: Provide single-family homes in low-medium density locations west of the town center, away from major roadways.</p> <p>Policy LUT 81.3: Development near the significant viewsheds and topographic features of Rock Mountain should be done sensitively to preserve these important visual resources of Otay Ranch.</p> <p>Policy LUT 81.5: Provide for a town center with pedestrian-oriented arterials and transit service at the intersection of Main Street and La Media Road.</p> <p>Policy LUT 81.6: Support larger commercial uses in the town center by providing additional visibility and access for both vehicles and pedestrians.</p> <p>Policy LUT 81.7: Allow arterial traffic into the Village 8 town center through use of the town center arterial, which may include a pedestrian-oriented, one-way couplet street system or other pedestrian-oriented street design.</p> <p>Policy LUT 81.8: Locate a junior high school, designed with a pedestrian orientation, in Village 8 at the corner of the intersection of La Media and Main Street. Because the Sweetwater High School District serves a larger area than the Otay Ranch, the school may need to serve grades 7 through 12. The district will determine at the SPA level the grades to be served and area needed for the school.</p>	<p>Consistent. The project would provide a town center with pedestrian-oriented arterials and mass transit service at the intersection of Main Street and La Media Road. The Town Center would be pedestrian oriented and include an off-street Village Pathway, as well as proposed transit stops. Store fronts would be pedestrian oriented to support commercial use by promoting visibility, and signage would also be provided for vehicles. Main Street would provide a connection to the adjacent Village 8 East town center, including a bicycle land and sidewalks.</p> <p>The highest density development in Village 8 West would be located in the Town Center, including mixed-use commercial and high-density residential. Development would transition to low-density single-family residences on private streets in the southern area of the site, farthest from the Town Center.</p> <p>Main Street and Otay Valley Road would form urban couplets through the Town Center.</p> <p>A middle school is proposed in the northeast corner of the site, near the intersections of La Media Road and Main Street. The school is located in the Town Center and would be easily accessible to pedestrians.</p>
<p>Objective LUT 82: Ensure a cohesive relationship between the town center and adjoining land uses within Village 8.</p> <p>Policy LUT 82.1: Provide access at multiple locations and the Circulation Element Road to ensure connection and circulation throughout the town center and Village 8 in all directions (north/south and east/west).</p> <p>Policy LUT 82.2: Respect topographic differences and minimize the creation of large slopes that are visible to the public.</p>	<p>Consistent. The Village 8 West Town Center and multi-family residential land uses would be similar to the residential and mixed-use development planned for Village 8 East adjacent to Village 8 West. Main Street, Street B, and Otay Valley Road would provide connections to Village 8 East and the surrounding regional circulation network. These roadways also provide bike lanes, sidewalks and off-street pathways and trails to encourage alternative forms of travel between villages.</p> <p>The natural landform character would be maintained in the preserve area at the southern edge of Village 8 West. Along the edge of development adjacent to the Preserve, manufactured slopes would define the edge of development and transition into the surrounding open space. Slopes adjacent to the MSCP area would be subject to the requirements of the Preserve Edge Plan and would be planted with non-invasive, native plants. Section 6.3 of SPA Plan, Grading Concept, requires the creation of 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).</p>

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

Applicable Policies	Evaluation of Consistency
<p>Policy LUT 82.3: Provide enhanced architectural elevations and landscape design to minimize “back of building” appearance throughout town center and Village 8 along circulation thoroughfares and the canyon rim.</p>	<p>Development in the Town Center would be oriented toward Main Street to minimize “back of building” appearances. The SPA Plan is design guidelines and requirements to ensure high quality development, including consideration for all building elevations visible to the public.</p>
<p>Objective LUT 83: Develop a pedestrian-oriented and transit friendly community east and south of the town center in Village 8, including a range of housing types, community facilities and a mixed-use village core.</p> <p>Policy LUT 83.1: In Village 8, provide diverse and less intensive housing types, east and south of the town center.</p> <p>Policy LUT 83.2: Provide transition between the adjoining residential land uses and the village core to ensure a cohesive visual character.</p> <p>Policy LUT 83.3: Limit land uses to lower density residential adjacent to the MSCP Preserve.</p> <p>Policy LUT 83.4: Provide transit service within the mixed use residential designated as village core.</p> <p>Policy LUT 83.5: Provide the needed community facilities, including an elementary school and neighborhood park near the village core.</p>	<p>Consistent. The SPA Plan proposes a pedestrian-oriented Town Center and development that transitions to lower density single-family development to the south of the Town Center, adjacent to the MSCP Preserve. Transit stops are proposed in the Town Center and pedestrian and bicycle facilities are provided on all circulation network roadways. The SPA Plan includes design guidelines and regulations to ensure cohesive development across the project area. An elementary school and neighborhood park are proposed in Village 8 West, which are central to residential development and accessible by all modes of transportation from throughout the project area.</p>
<p>Objective LUT 84: 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>Policy LUT 84.484.2: Prior to approval of any discretionary permit in the Otay Valley District, ensure that the 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>Consistent. The SPA Plan allows for appropriate and carefully planned land uses in Village 8 West, by proposing a variety of parks and recreational facilities, as well as allowing for private facilities. The mixed-use Town Center would be a 24-hour activity center for the project area. The Town Center would be located in the 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 Town Center would be provided from the existing La Media Road to the north of Village 8 West, and Main Street 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>Economic Development Element</p>	
<p>Objective ED 2: Maintain a variety of job and housing opportunities to improve Chula Vista’s jobs/housing balance.</p> <p>Policy ED 2.2: Facilitate increased employment densities near transit stations and routes.</p> <p>Policy ED 2.3: 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>Policy ED 2.5: 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>Consistent. 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 with the SPA Plan area and with surrounding development. A variety of housing types would be accommodated, including high-density multi-family units and single-family homes. A variety of employment opportunities would also be accommodated, including retail and commercial opportunities, and professional offices. 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>

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

Applicable Policies	Evaluation of Consistency
<p>Objective ED 8: Develop and maintain a City-wide image that promotes the City's assets.</p> <p>Policy ED 8.2: Facilitate identification of activity areas throughout the City to aid in promoting recognizable destinations for shopping, recreating, and business.</p>	<p>Consistent. The SPA Plan is consistent with this objective because it would promote a new activity area in the Town Center. This area would provide a destination for shopping, recreating, and business. The design guidelines outlined in the SPA Plan would create a recognizable destination.</p>
<p>Objective ED 9: Develop community-serving and neighborhood uses to serve residents and visitors, alike.</p> <p>Policy ED 9.1: 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>Policy ED 9.5: 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>Policy ED 9.6: 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>Policy ED 9.7: Encourage merchants, neighborhood associations and other groups to enhance business districts and meet the needs of adjacent neighborhoods.</p>	<p>Consistent. The SPA Plan is consistent with this objective and supporting policies because the mixed-use 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 Town Center, commercial uses would be clustered along the Main Street urban couplet. Neighborhood services would also be allowable outside of the Town Center. A community park, town square, and neighborhood park are proposed, and playground and other recreational facilities would be accommodated throughout the proposed neighborhoods. A CPF zone is proposed in the center of Village 8 West. Bicycle and pedestrian facilities would be provided on all circulation network roadways. The facilities would also provide connections to adjacent villages to make Village 8 West facilities available to serve surrounding neighborhoods.</p>
<p>Public Facilities and Services Element</p>	
<p>Objective PFS 19: Provide art and culture programs, childcare facilities and health and human services that enhance the quality of life in Chula Vista.</p> <p>Policy PFS 19.1: 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>Policy PFS 19.3: 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>Policy PFS 19.10: 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>Consistent. The SPA Plan is consistent with this objective and supporting policies because the project area includes the CPF designation within Village 8 West, which can accommodate uses such as art and cultural programs, childcare facilities, and other health and human services. The proposed SPA Plan includes a CPF planning area centrally located in the project area. Implementation of the SPA Plan would provide 5.8 acres of CPF zone in one planning area. The balance of the CPF requirements for Village 8 West (2.2 acres) would be provided <u>in the manner allowed by the CPF Ordinance by the terms of that certain Land Offer Agreement dated April 17, 2008 by the City obtaining ownership of land through a separate contractual obligation which is consistent with the CPF Ordinance.</u> The Town Center also provides opportunities for a variety of art and cultural programs, such as events in the Town Square. Childcare facilities and human services are allowable uses in the Town Center as well as the lower-density residential neighborhoods.</p>
<p>Objective PFS 20: Develop a cultural arts center in Chula Vista.</p> <p>Policy PFS 20.3: 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>Consistent. The SPA Plan promotes the use of public art in public areas of the Town Center 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
Growth Management Element	
<p>Objective GM 2: Provide adequate and sustainable fiscal base.</p> <p>Policy GM 2.1: 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>Policy GM 2.2: 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>Consistent. The Village 8 West SPA Plan would accommodate 300,000 square feet of commercial/retail employment opportunities concurrently with residential development. The PFFP includes a fiscal impact analysis identifying capital budget impacts on the city as well as maintenance and operation costs for each proposed phase of development.</p>
<p>Objective GM 3: Create and preserve vital neighborhoods.</p> <p>Policy GM 3.3: 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>Policy GM 3.8: 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>Consistent. See analysis for Objective GM1. Additionally, 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 205 units for low income households, and a PFFP to identify the applicable funding mechanisms to maintain public services and utilities in the project area.</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals

Applicable Policies	Evaluation of Consistency
Part II, Chapter 1, Section B: Goals, Objectives, and Policies	
<p>Goal: Develop comprehensive, well-integrated and balanced land uses which are compatible with the surroundings.</p> <p>Objective: 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>Objective: 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>Objective: Provide development patterns complementary to the adopted plans and existing development of the adjacent communities.</p>	<p>Consistent. A diverse range of housing and employment opportunities is proposed across the site. The plan is consistent with the GDP specific directives for Villages 8 West to create an intensified village core (composed of mixed-use, commercial, elementary school, neighborhood park, town square and residential land uses) and residential neighborhoods that offer a variety of housing styles and densities. The organization of the land uses within Village 8 West 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. 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>Goal: Environmentally sensitive development should preserve and protect significant resources and large open space areas.</p> <p>Objective: Provide land use arrangements which preserve significant natural resource areas, significant landforms and sensitive habitat.</p>	<p>Consistent. The SPA Plan area 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</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
	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>Goal: Promote villages and town center land uses which offer a sense of place to residents and promotes social interaction.</p> <p>Objective: Organize Otay Ranch into villages and town centers, each having its own identity and sense of place.</p> <p>Objective: 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>Objective: Promote a diverse range of activities and services to encourage a mixture of day/night and weekday/weekend uses.</p>	<p>Consistent. Land uses within the Village 8 West 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 Square would provide opportunities for community events. The Town Center is intended to be a 24-hour activity area and the variety of allowed uses would provide a range of activities and services.</p>
<p>Goal: Diversify the economic base within Otay Ranch.</p> <p>Objective: Create an economic base that will ensure there is adequate public revenue to provide public services.</p>	<p>Consistent. Village 8 West would contribute to the economic base of Otay Ranch with neighborhood-serving businesses. The Town Center would provide a significant employment center for the area. The 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>Goal: Promote synergistic uses between the villages and town centers of the Otay Ranch to provide a balance of activities, services and facilities.</p> <p>Objective: Develop individual villages and town centers to complement surrounding villages/town centers.</p> <p>Objective: 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>Consistent. The SPA Plan proposes a walkable, mixed-use community. The proposed land uses would serve Village 8 West and the surrounding Otay Ranch GDP area, through the establishment of recreational opportunities and 300,000 square feet of commercial, retail, and office uses. Village 8 West would provide a balance of activities, services, and facilities with the Town Center. The town center land uses would include commercial and mixed uses, such as retail, restaurants, etc., which will serve surrounding villages.</p>
<p>Part II, Chapter 1, Section D: Land Use Design, Character, and Policies</p>	
<p>1a. Village/Town Center Land Use Policies</p> <p>Goal: 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>Policy: Phase villages/town centers to ensure the provision of adequate facilities and services.</p>	<p>Consistent. The SPA Plan incorporates the village concept, in an intensified land use pattern. All areas of Village 8 West 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</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy: Land uses, roads and buildings shall be designed and located to encourage walking between uses and foster a pedestrian scale.</p> <p>Policy: 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>Policy: 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>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 that would connect Village 8 West to surrounding villages.</p> <p>Development in Village 8 West would be phased. 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).</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.</p>
<p>1b. Village Core Policies</p> <p>Policy: 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>Policy: Village cores should be centrally located, within approximately one-quarter mile of the majority of a village’s population.</p> <p>Policy: 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>Policy: 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>Consistent. The proposed 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 made up of urban couplets. The siting of the proposed Town Center reflects the GDP plan for surrounding land uses including Villages 4 and 7 to the north and west. The village core area is situated at the intersection of Main Street and La Media Road, adjacent to these villages.</p> <p>Implementation of the SPA Plan would provide 5.8 acres of CPF zone in one planning area. The balance of the CPF requirements for Village 8 West (2.2 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. 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 8 West.</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy: 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>Policy: 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>Policy: Buildings shall have front access and orientation to streets and sidewalks. Access to parking lots shall be secondary to the street.</p> <p>Policy: Avoid street side facades of unarticulated blank walls or an unbroken line of garage doors.</p> <p>Policy: 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>Policy: Use landscape themes to help define village/town center character.</p>	
<p>1c. Village Core/Town Center – Mixed Use Policies</p> <p>Policy: 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>Policy: The mixed use town center areas are contiguous pedestrian zones which includes the following activities:</p> <ul style="list-style-type: none"> ▪ Retail/Office Uses: 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. ▪ Schools: 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. <p>Policy: 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</p>	<p>Consistent. 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 stop 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 8 West and surrounding villages. “Big box” stores would not be allowed. A middle school is proposed adjacent to the Town Center, and an elementary school is proposed 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.</p> <p>Additionally, a CPF zone is proposed. The SPA Plan includes landscaping requirements for Village 8 West.</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<p>facilities” sized in accordance with the requirements of Chapter 5, Capital Facilities and Chapter 19.48 (P-C zone) of the CVMC.</p> <p>Policy: Encourage mixed uses throughout mixed use and town center areas, including residential or office uses above retail uses.</p> <p>Policy: The design and location of residential areas shall complement the pedestrian friendly environment.</p> <p>Policy: 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>Policy: 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>Policy: 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>Policy: 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>1d. Village Core/Town Center Residential Policies</p> <p>Policy: The town center designation allows for higher residential densities than mixed use land designations.</p> <p>Policy: 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>Policy: 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>Consistent. Implementation of the SPA Plan would allow high-density residential uses to be located within the Town Center and the Neighborhood Center Zone, which surrounds the proposed 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 Town Center, to larger lot homes with more set-back in the Neighborhood Center Zone.</p>
<p>1e. Secondary Areas Policies</p> <p>Policy: Secondary areas shall be areas outside of the village core, predominately comprising residential uses.</p> <p>Policy: Outside the village core, densities shall generally decrease with distance from the transit stop or station.</p> <p>Policy: Limited convenience commercial may be located outside the village core or town center. These areas will be delineated at the SPA level.</p>	<p>Consistent. 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>
<p>Part II, Chapter 5 – Capital Facilities, Section B – Goals, Objectives, Policies</p>	
<p>Goal: Assure the efficient and timely provision of public services and facilities of developable areas of Otay Ranch concurrent with need.</p> <p>Objective: Ensure that the pace and pattern of residential, commercial and other non-residential development are</p>	<p>Consistent. The SPA Plan meets these goals and objective 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</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<p>coordinated with the provision of adequate public facilities and services.</p> <p>Objective: Permit development only through a process that phases construction with the provision of necessary infrastructure prior to or concurrent with need.</p> <p>Objective: Development projects shall be required to provide or fund their fair share of all public facilities needed by the development.</p> <p>Objective: 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>Policy: 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>funding. According to the Chula Vista GMO, building permits would not be issued if public services would not be available to serve development</p>
<p>Part II, Chapter 5 – Capital Facilities, Section D – Social Facilities</p>	
<p>Goal: 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>Consistent. The SPA Plan provides areas for indoor and outdoor facilities including contributions to the Otay Ranch Community Park, a neighborhood park, a town square, and a CPF site. 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>Goal: Provide adequate child care facilities and services to serve the Otay Ranch project area.</p> <p>Objective: 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>Consistent. 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>Goal: Ensure provision of and access to facilities which meet the health care needs of Otay Ranch residents.</p> <p>Objective: 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>Consistent. Senior care and health care offices and clinics are permitted uses within the mixed-use Town Center.</p>
<p>Goal: 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>Policy: 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>Consistent. The town center area and the Community Purpose Facility 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 the project area.</p>
<p>Goal: Ensure that Otay Ranch project area residents have adequate access to sources of governmental and private social and senior service programs.</p> <p>Objective: 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>Consistent. Social and senior service needs can be met within allowable Village 8 West use areas and the mixed-use Town Center. This includes mixed use commercial, a CPF site, recreation facilities, and park land uses. Shared use may be available with the schools.</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
<p>Objective: 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>	
Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans	
<p>Goal: 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>Objective: Participate in programs to provide animal control facilities sufficient to provide adequate shelter space per Otay Ranch dwelling unit.</p>	<p>Consistent. Development of Village 8 West would participate in city programs for provision of animal control. Private and public animal control facilities could be accommodated in the mixed-use Town Center.</p>
<p>Goal: 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>Consistent. 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>
Part II, Chapter 8 – Safety	
<p>Objective: Provide for the continuity of government and public order.</p> <p>Objective: Maintain public services and ensure the rapid resolution of emergencies.</p> <p>Objective: Minimize social and economic dislocations resulting from injuries, loss of life and property damage.</p>	<p>Consistent. Future applications for development within Village 8 West 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>Objective: Prevent property damage and loss of life due to fire, crime or hazardous substances.</p> <p>Policy: Fire protection, law enforcement and emergency services facilities shall be available prior to or concurrent with need.</p> <p>Policy: Arrange land uses in a manner consistent with recognized health, fire, crime prevention and protection practices.</p>	<p>Consistent. Village 8 West 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>
Part II, Chapter 9 – Growth Management	
<p>Goal: 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>Objective: 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>Consistent. Village 8 West would be developed in phases that balance market forces with implementation of the facilities, as identified by the PFFP.</p>

Table 5.1-3 Comparison of the Village 8 West SPA Plan with the Applicable GDP Goals (continued)

Applicable Policies	Evaluation of Consistency
Part II, Chapter 10 – Resource Protection, Conservation and Management	
<p>Objective: Provide land use patterns and protect features which result in the conservation of non-renewable energy resources.</p> <p>Policy: Reduce the reliance for project residents to utilize the automobile, thereby minimizing automobile trips and miles traveled.</p> <p>Policy: Encourage the provision of regional mass transit facilities within the Otay Ranch.</p>	<p>Consistent. The proposed land use pattern of Village 8 West 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>

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. As shown in Table 5.1-4, 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 8 West through the implementation of approved site utilization plans and form-based code, as described in Section 3.3.1.A, Development Concept. Village 8 West 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 8 West exceeds 50 acres in size and is held under a single ownership. Therefore, the project is consistent with the zoning code and land use impacts would be less than significant.

Table 5.1-4 Comparison of the Village 8 West SPA Plan to the Requirements of the P-C Zone (CVMC Section 19.48)

Code Requirement	Village 8 West SPA Plan Consistency
<p>Section 19.48.010 A. 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>Section 19.48.010 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>Consistent. The project would be developed in accordance with an approved SPA Plan for Village 8 West 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>Section 19.48.020 A. 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>Consistent. Village 8 West contains approximately 300 acres of contiguous land, which exceeds the minimum area for planned community development.</p>

Table 5.1-4 Comparison of the Village 8 West SPA Plan to the Requirements of the P-C Zone (CVMC Section 19.48) (continued)

Code Requirement	Village 8 West SPA Plan Consistency
<p>Section 19.48.020 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>Consistent. Village 8 West, which is held under the single ownership of the OLC, meets the ownership requirement.</p>
<p>Section 19.48.025 A. All land in the P-C zone, or any section thereof, shall provide adequate land designated as “community purpose facilities.”</p>	<p>Consistent. Implementation of the SPA Plan would provide 5.8 acres of CPF zone in one planning area. The balance of the CPF requirements for Village 8 West (2.2 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>Section 19.48.040 B.6.d. Recreational facility land uses shall not utilize more than 35 percent of the overall CPF zone 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>Consistent. 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 8 West includes a PFFP, AQIP, and 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 GMOC quality of life threshold standards related to traffic, police and fire services, parks, schools, libraries, sewers, storm drainage, air quality, and water. The project would be consistent with GMOC 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 and middle school to serve the project, and Olympian High School can accommodate growth from Village 8 West. 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 residential units would generate a need for 17.8 acres of parkland. As discussed in Section 5.9, Public Services, Village 8 West would provide a total of 28 acres of parks, including 17.4 acres of land that would be added to the Otay Ranch Community Park, a 7.5-acre neighborhood park, and a 3-acre town square in the Town Center. Consistent with the Otay Ranch RMP, the project would also provide approximately 19.1 acres of open space and would retain 15.6 acres of the existing on-site Otay Ranch MSCP Preserve as an open space preserve, and provide for an off-site trail connection to the Otay Valley Regional Park.

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. 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 identifies a range of passive and activity park elements to serve the residents of Village 8 West. Based on the Otay Ranch village boundaries at the time the Parks and Recreation Master Plan was prepared (at that time, the current limits of Village 8 West included portions of Villages 4 and 7), the adopted Master Plan requires 5.6 acres of community or neighborhood parks to be developed in Village 4, and 8 acres of parks to be developed in Village 8. The plan specifically lists a 5-acre neighborhood park in Village 4 and a 7-acre neighborhood park in Village 8 as part of the future facilities for the city. It is anticipated that a portion of these facilities would be developed off-site in Villages 4, 7, and 8 East. However, in and of itself Village 8 West would provide a total of 27.9 acres of parks, including a 7.5-acre neighborhood park. Therefore, the project is generally consistent with the Master Plan defined range of recreational experiences anticipated to serve the demands of the Village 8 West residents. 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. As shown in this section, 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 8 West is the regional trail that extends along Street A. 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 8 West and other future parks along the Greenbelt. The regional trail is intended to connect

active and passive users and provide them with the opportunity to stop and enjoy an enhanced open space areas. The regional 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 trail will begin at the southerly terminus of Street A, follow the alignment of the proposed sewer corridor, and will 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 the regional trail along Otay Valley Road and the village pathway along Main Street. These trails connect the land uses within Village 8 West 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 8 West 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 8 West 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 8 West 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 8 West 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 8 West 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. Otoy Valley Regional Park Concept Plan

Village 8 West is located north of the “Heritage Road (Paseo Ranchero) to Otoy Lake Vicinity” segment of the Otoy 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 8 West is not directly adjacent to the Otoy Valley Regional Park; however, it does propose a trail that extends south from the project site and would eventually connect to the proposed regional park trail system. Policies for the Heritage Road (Paseo Ranchero) to Otoy Lake Vicinity segment include creation of the Otoy Ranch Preserve and preservation of wildlife corridors between Poggi and Wolf Canyons and the regional park. As discussed in Section 5.6, Biological Resources, Village 8 West would retain 15.6 acres of Preserve on the project site. The Wolf Canyon habitat linkage is located west of Village 8 West and the Otoy River is the main east-west habitat linkage in the project vicinity. The canyons located west of the Village 8 West are within designated conservation areas, and the biological open space around Rock Mountain provides access to Wolf Canyon. However, as discussed in Section 5.6, implementation of Village 8 West 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 Otoy Ranch RMP are the habitat conservation and community habitat conservation plans applicable to Village 8 West. For development projects located within Otoy Ranch, the MSCP Subarea Plan relies on the preserve design and policies contained in the Otoy Ranch RMP as the framework for conservation and management of biological resources within Otoy 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 8 West is consistent with the Chula Vista MSCP Subarea Plan and the Otoy 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 Otoy Ranch RMP. The Otoy Ranch RMP established performance standards for achieving an 11,375-acre Otoy Ranch open space preserve. Compliance relies on progressive acquisition, or funding for acquisition, of the designated Otoy 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 Otoy 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 8 West is approximately ~~232.7220.6~~ 232.7220.6 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 8 West 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 that would also provide a pedestrian trail connection to the Otay Valley Regional Park. The trail would traverse an area within the MSCP Preserve. 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 8 West and an analysis of Village 8 West's consistency with the Otay Ranch RMP.

The analysis in Section 5.6 concludes that the infrastructure and trail that would traverse the Preserve are 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 8 West. 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 8 West 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 8 West.

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 8 West.

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 8 West, 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 8 West 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 8 West.

5.1-2 **Waterline Relocation.** Prior to issuance of the first grading permit within Village 8 West, 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 8 West 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 8 West. 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 8 West is not located within Zone A. Village 8 West 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 and consists of a 28-mile open space system encircling the city.

The Chula Vista General Plan identifies primary gateway locations throughout the city. See Figure 5-6 of the General Plan, Entryways and Gateways. 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 adjacent to Village 8 West. The Main Street Gateway extends eastward from SR-125 to East Lake Parkway, and would provide access to the University Campus Focus Area east of Village 8 West. This gateway is located in the project vicinity, but is oriented away from Village 8 West.

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 of the General Plan). Main Street and La Media Road are designated as scenic roadways, including the portion of Main Street that would traverse the project site. The portion of La Media Road that would traverse the site as Otay Valley Road is not designated as scenic. Main Street currently runs along the southern side of Olympian High School and ends at the eastern boundary of Village 8 West. La Media Road extends south from Olympian Parkway ends at the northern boundary of Village 8 West. General Plan Policy LUT 13.4 provides guidance for projects located adjacent to scenic routes such as the project.

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 within the Otay Valley Parcel; therefore, 9,566 acres 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 8 West is dominated by open rolling hills. Surface elevations across the site range from 500 feet AMSL near the northern boundary, 300 feet AMSL near the southern boundary, 400 feet along the western area near Rock Mountain, up to 600 feet AMSL in the central and eastern portions of the site, and 360 feet AMSL along the eastern edge.

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. Wolf Canyon is located approximately 50 feet west of the project site and is partially visible from the western areas of the site. Rock Mountain is located to the west of the site, and bluffs abutting the Otay River Valley are located to the south. Rock Mountain peaks at approximately 660 feet AMSL. A steep canyon is located to the east. The ground elevation reaches its lowest point in the river valley at around 200 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 8 West.

2. Vegetation

Coastal sage scrub, maritime succulent scrub, mulefat scrub, freshwater marsh, non-native grasslands, agricultural lands, disturbed vegetation, and developed land is found on the project site and surrounding areas. Along the river alignment, vegetation consists of larger shrubs and is more riparian in nature. North and northwest of Village 8 West is developed. Vegetation in these areas consists of landscaping, such as trees along roadways and lawns, and grass for sports fields at Olympian High School.

3. Steep Slopes

The GDP considers steep slopes to be visual resources. Approximately 29 acres of natural slopes with gradients greater than 25 percent exist on Village 8 West. The entire project slopes to the south; however, the steepest slopes are located in the southern portion of the site along the drainages.

4. Development

Development has occurred or is occurring to the north in Otay Ranch Villages 2 and 7. North of Village 8 West, a portion of Village 7 known as the VORTAC site is undeveloped and could be planned for residential development should the VORTAC be relocated. The area south of Village 8 West will be preserved as open space. Planned development for the areas adjacent to the site includes mixed-use and residential development in Village 8 East and open space, park, and low-density residential development in Village 4. Immediately northwest of the project area is the future site of the Otay Ranch Community Park.

5. Light and Glare

Two astronomical observatories are located within 50 miles of the project area: Mount Laguna Observatory, located approximately 20 miles from the site 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 the 15-mile radius. Village 8 West 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 8 West and the areas adjacent to the project site to east, west, and south are undeveloped and not lit at night. Additionally, these areas do not contain expanses of material that would result in glare. To the north of Village 8 West 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 8 West is not visible from the residences to the north. The site is partially visible from Olympian High School by students, faculty and visitors. Motorists along La Media Road, Santa Luna Street, Magdalena Avenue, Main Street (formerly Rock Mountain Road), and SR-125 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 8 West. 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. There are no designated scenic vistas located within Village 8 West that are currently accessible to the public. The existing public view corridors of the project area are the views south from the terminus of La Media Road, west from the terminus of Main Street, and north from the sewer access road located south of the project site in the Otay River Valley. However, the future extensions of Main Street across the project site, and La Media Road from the northern project boundary to Main Street, are currently designated scenic roadways in the General Plan.

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.

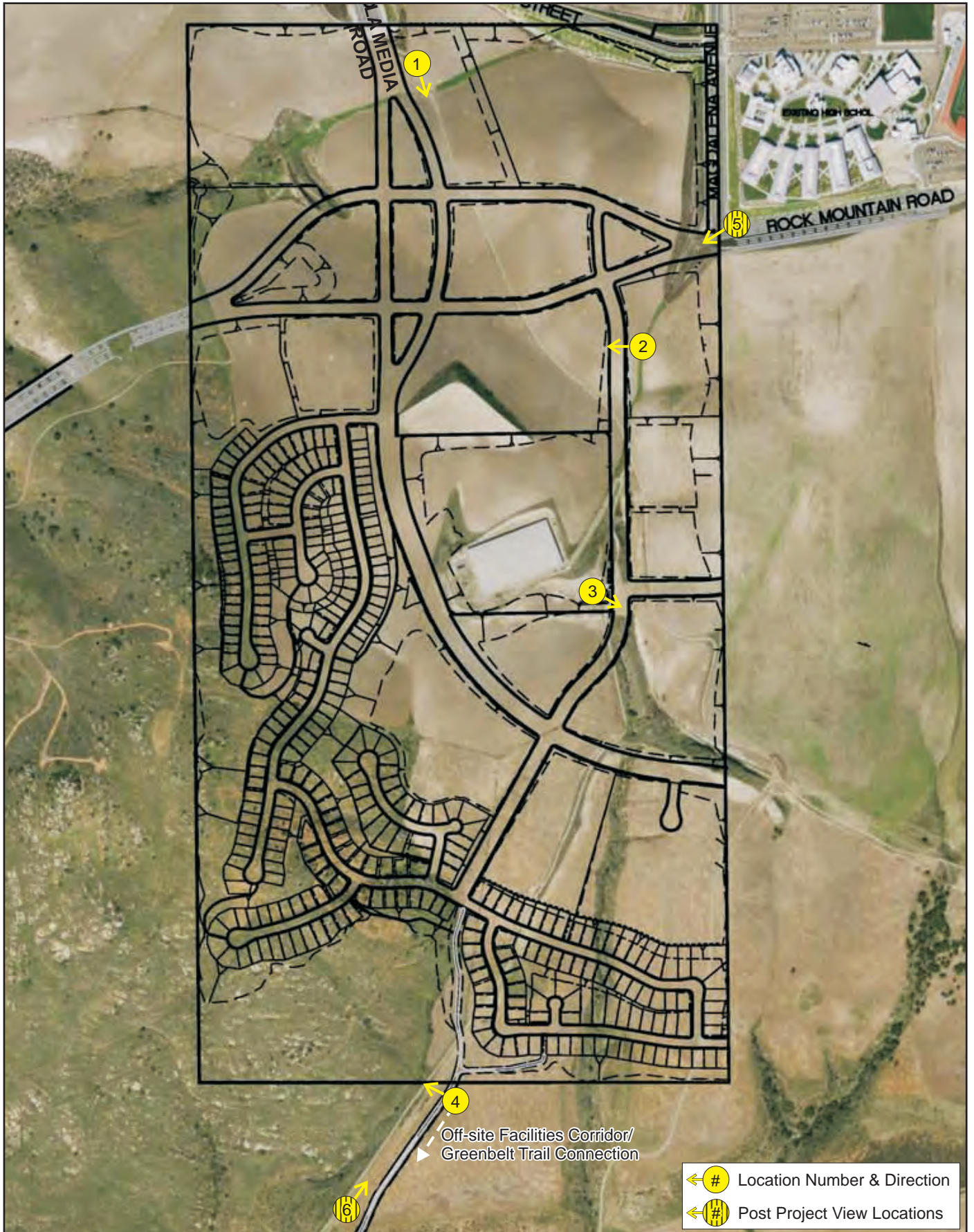
The analysis of the project's potential impacts on views considers the changes in key views to and from Village 8 West, as discussed below. The analysis includes anticipated changes to key views, including the existing and future views from the proposed Main Street and La Media Road alignments.

1. On-Site Views

a. Key View Point 1

KVP 1 (see Figure 5.2-2) shows the view south from the northern portion of the site, at the gravel access road that extends from the end of La Media Road. This view shows the rolling hills of Village 8 West, trending down toward the Otay River Valley. Foreground and midground views are characterized by grassy vegetation and the unpaved gravel access road. Also visible within Village 8 West are rock outcroppings, a fence, and a rolling hill to the west. Background views include the Otay River Valley and Otay Mesa. Brown Field Airport is visible on top of the mesa. Views of the Otay River Valley are considered scenic in the Chula Vista General Plan, and are available in the southern portion of Otay Ranch.

Due to the downward slope and intervening topography, the project area is currently not visible for public views from La Media Road, which is a designated scenic roadway. The extension of La Media Road from the northern project boundary to Main Street is also designated as scenic. Although access to the site is currently not available to the public, existing views from the proposed Main Street and La Media Road alignments include rolling hills, Rock Mountain, and the Otay River Valley. Partial views of Wolf Canyon are available from the western edge of the project site along the Main Street alignment.



Source: Hale Engineering 2011

Not to Scale



**VIEWPOINT LOCATIONS
FIGURE 5.2-1**



Key View 1: View south of the site from the northwestern portion of the site.



Key View 2: View west of the site from the proposed site of Street A adjacent to Planning Areas L and M.

Source: Atkins 2011

KEY VIEWS 1 AND 2
FIGURE 5.2-2

Future viewers would include residents and visitors to Village 8 West. The post-project view from location KVP 1 would include the entryway into Village 8 West from the north and would show the Town Center and the Community Park. The foreground of the view would be the extension of La Media Road, which would split into the urban couplet in the midground of the view. An entry monument would be included along La Media Road in this view corridor. The conceptual design for the monument consists of a dressed stone pillar, approximately 18 feet high, located in a landscaped median. The Town Square would also be prominent in the midground of the view. Views to the east and background views to the south would be dominated by mixed-use town center development. Views to the southwest would be of the Community Park, which would include athletic fields, recreation facilities, and group picnic areas. Rock Mountain would likely be partially visible beyond the park. Due to the intensity of development and maximum allowable height limits in the Town Center (up to 60 feet, as defined in the zone standards for the Town Center in Section 3.3.7 of the SPA Plan), views of the Otay River Valley and Otay Mesa would be obscured from this KVP.

Section 5 of the SPA Plan, Circulation and Corridor Design, includes a landscape plan for La Media Road and also includes requirements for sidewalks and minimum setback. Section 3.7 of the SPA includes sign regulations for the entire area, including the Town Center. Additionally, development of the Town Center is consistent with Objective 81 of the General Plan, which is the development of a higher density, mixed-use, transit-oriented town center centered on the intersection of Main Street and La Media Road. Views of Rock Mountain would continue to be available from La Media Road across the Community Park. Implementation of the project would be consistent with the design objectives of the General Plan, and provide views of Rock Mountain, a unique natural feature. Therefore, the project would not result in adverse impacts from this KVP.

b. Key View Point 2

KVP 2 (see Figure 5.2-2) shows a view due west from the future site of Street A adjacent to Planning Area M. The foreground and midground of this view are dominated by a gently sloping valley covered with non-native grasses. A steeper slope extends from the western side of the valley in the midground of the view. Off-site Rock Mountain is visible in the background of this view, notable by its rugged surface and patches of shrubs.

The post-project view from KVP 2 would also be dominated by the Town Center. As described above for KVP 1, views would include mixed-use development up to 60 feet tall, hardscaped and landscaped open space areas, pathways, and enhanced sidewalk features. Town center development would cover the slope visible from this KVP and would be visible in foreground, midground, and background views. Development along the top of the slope in the midground view would block views of Rock Mountain from this KVP. However, this location is not an existing public view corridor or designated as scenic. The building and design regulations included in the SPA Plan establish standards to protect visual quality in the project area and would ensure that on-site views of the Town Center for future residents and visitors would have a consistent and cohesive aesthetic character. Therefore, implementation of the SPA Plan and TM would not result in adverse impacts to this KVP.

c. Key View Point 3

The existing view from KVP 3 shown in Figure 5.2-3 presents the view east from the middle of the site, on the east side of the existing San Diego Reservoir. The rolling hills of Village 8 West also dominate this view. Foreground views are characterized by a downward slope toward the south and a valley that is dotted with manholes and includes a dirt access road. The rolling hills become slightly more rugged at

the southern edge of the middle view (as seen on the right side of the photograph). Midground views include a rolling hill and a second dirt access road. A portion of SR-125 is visible in the background of this view where Village 8 West slopes to the south. The view of the toll road is blocked elsewhere on the site because the road is at a lower elevation than the on-site hills. Background views also include the mountains to the east of Village 8 West, including the San Ysidro Mountains. Distant development is visible on top of Otay Mesa across Otay River Valley to the southeast, and in between mountain ranges. The slope up to the Otay Mesa includes several dirt roads.

Post-project views from KVP 3 would be characterized by the Neighborhood Center Zone, which would primarily consist of multi-family development. The foreground of this view would include the sidewalk and landscaping along Street A. The slope visible in the midground and background would be developed with multi-family residential development, including multi-story structures up to 45 feet in height, roadways, and landscaping. The maximum building height limit for this zone is established in the zone standards for the Neighborhood Center Zone, Section 3.3.6 of the SPA Plan. The elementary school would be visible in the background to the south. In the Neighborhood Center Zone the focus would be on common open space and strong pedestrian linkages along public sidewalks and internal development pathways. The parks and pathways would break up the intensity of development in views from KVP 3. Across the project area, service and loading activities and utility connections would be oriented away from the street frontage or screened from public view of the street. All ground mounted or roof mounted mechanical equipment, including HVAC units, would also be required to be completely screened from public view and surrounding properties. The existing infrastructure in the midground of KVP 3 would be removed or replaced and screened from public view. Buildings up to 45 feet tall would likely block views of the nearest mountain range currently visible in the distant background. However, due to the height limit, the peaks of the farthest ranges would remain visible from this view location.

Similar to KVP 2, this location on site is not a designated scenic public view corridor. The SPA Plan includes architecture and site design guidelines and requirements for multi-family and single-family development. Therefore, the project would not result in adverse impacts to KVP 3.

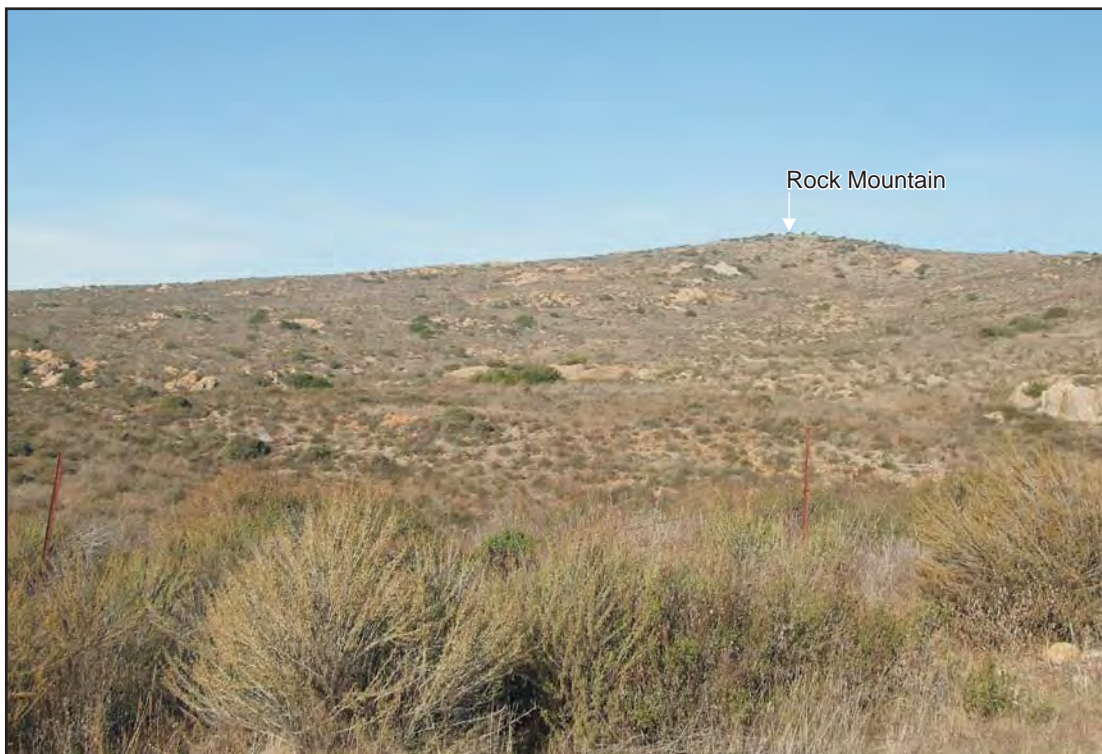
d. Key View Point 4

KVP 4 (see Figure 5.2-3) shows a northwestern view from the southern boundary of Village 8 West, at the site of the future greenbelt trail connection to the Otay Valley Regional Park. This view is looking west toward Rock Mountain and differs from the other three on-site views because it is characterized by the scrubby, rocky topography seen at the southern end of the site. The foreground of this view includes shrubs in the MSCP Preserve and a rusted wire fence. The midground and background of this view is a slope covered with patches of grasses and shrubs. Rock outcroppings are also scattered across the slope.

Post-project views from KVP 4 would include open space in the MSCP Preserve and would be similar to existing conditions. Views of Rock Mountain from this viewpoint would be unchanged. Some single-family development and manufactured slopes may be visible in the background to the east but would not interfere with views of Rock Mountain. The manufactured slopes would be landscaped in accordance with the Preserve Edge Plan to ensure visible compatibility with the Preserve. Homes would be set back from the slope and each other by backyard and side yard space. A fence would be designed to create a physical barrier, but preserve community character and views by using clear materials or large areas of space between posts. Fencing materials would be tubular steel or tempered glass. As described above, the building and design guidelines in the SPA Plan would ensure that the residences, if visible, would be visually appealing. A significant adverse impact to views from KVP 4 would not occur.



Key View 3: View east of the site from east of the existing San Diego Reservoir.



Key View 4: View northwest of the site from the southern boundary of the site at the site of the proposed Greenbelt Trail.

Source: Atkins 2011

KEY VIEWS 3 AND 4
FIGURE 5.2-3

In addition to the KVPs described above, additional views of the distant mountains, Rock Mountain, Wolf Canyon, and the Otay River Valley from are currently available from the site. However, as described above, views from on site are not designated public view corridors. Currently, public access is not allowed on Village 8 West. Due to variations in topography on the project site, and in the proposed building massing and intensity, these views would remain available from various locations throughout the project area, with greater public access to the views.

The natural slope of the project site toward the south would preserve distant views from the higher elevations within Village 8 West, which would become more available to the public. Views from development would also be facilitated from the upper floor of buildings in the Town Center and by placing development along the tops of the natural hills. Views of Wolf Canyon are currently limited to the western edge of the project site. Partial views of Wolf Canyon would be available to the residences along the western edge of the project site in Planning Area E, and additional viewpoints would be available from Planning Area A due to grading and development of the Community Park. Development in the Neighborhood Edge Zone would utilize a development pattern that takes advantage of the rolling topography of the project site to offer views of the Otay River Valley. Thus, alteration of scenic views as a result of development of Village 8 West would be less than significant.

2. Off-Site Views

a. Key View Point 5

The existing view from KVP 5 (see Figure 5.2-4) is shown looking southwest from the intersection of Main Street and Magdalena Avenue. The foreground view includes the fence along the project boundary and a hill along the northeastern edge of the site. This hill blocks views of the remaining site and any midground views. Located off site, Rock Mountain is visible in the background of this view. Figure 5.2-5 shows both the near-term and long-term post-project views from this location. Main Street is designated as Scenic Roadways in the Chula Vista General Plan. The proposed extension of Main Street would traverse the site through the Town Center as an urban. In the near-term view, the foreground includes the extension of Main Street. The hill that was previously seen in the foreground of this view would be graded and paved with the westbound side of Main Street. Entryway signage and landscaping is also seen in the foreground. Mixed-use town center development would characterize the midground of this view, consistent with the General Plan Objective 81 vision for this area. Single-family and multi-family development would be visible in the background beyond the Town Center. Rock Mountain would remain visible over the development in the project area, and through roadway corridors.

The long-term post-project depicts the mature landscaping, which would partially screen the town center development in the midground and residential development in the background. The trees would also partially obstruct views of Rock Mountain. However, Rock Mountain would remain the prominent visual feature in the background of development in Village 8 West. This is similar to existing conditions, where views of Main Street are obscured by the slopes adjacent to Main Street and Magdalena Avenue. Rock Mountain is only completely visible at the western end of Main Street, and the view is dominated by the foreground slope.



Key View 5: View southwest and west of the northern portion of the site from the intersection of Rock Mountain Road and Magdalena Avenue.



Key View 6: View north from the slope south of the site in the Otay River Valley.

Source: Atkins 2011

KEY VIEWS 5 AND 6
FIGURE 5.2-4



Key View 5 Near-term: Post-project view from intersection of Rock Mountain Road and Magdalena Avenue.



Key View 5 Long-term: Post-project view from intersection of Rock Mountain Road and Magdalena Avenue.

Source: Hale Engineering 2011

**POST PROJECT VIEW FROM KEY VIEW 5
FIGURE 5.2-5**

Future development of Main Street would be subject to the City design review in addition to compliance with the SPA guidelines. As discussed above, the Town 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. Section 5 of the SPA Plan, Circulation and Corridor Design, includes a landscape plan for Main Street and also includes requirements for sidewalks and minimum setback. Section 3.7 of the SPA Plan includes sign regulations for the entire area, including the Town Center. Additionally, development of the Town Center is consistent with Objective 81 of the General Plan, which is the development of a higher density, mixed-use, transit-oriented town center centered on the intersection of Main Street and La Media Road. Partial views of Rock Mountain and Wolf Canyon (as one travels westward from KVP 5) would be available from some portions of Main Street, particularly west of the Town Center in the lower intensity Neighborhood Center Zone. Implementation of the project would be consistent with the design objectives of the General Plan, and provide views of Rock Mountain, a unique natural feature. Therefore, the project would not result in a significant adverse impact to views from KVP 5.

b. Key View Point 6

The existing view from KVP 6 shown in Figure 5.2-4 presents a view north from the slope south of the site in the Otay River Valley. Foreground, midground, and background views are characterized by rolling hills covered with grasses and shrubs. The foreground view shows the gentle slope from the river valley floor to the project site. The midground view shows the upward slope to the top of the hill that is the southern boundary of Village 8 West. An existing gravel access road is also visible in the midground. Background views include rolling hills on the project site.

Figure 5.2-6 shows the near-term view from KVP 6, including the off-site trail connection to the Otay Valley Regional Park. The project would not substantially alter the topography in the foreground with the exception of the trail corridor. The intervening rolling hills would not be disturbed. The paved trail and fencing connecting Village 8 West to the regional park would be visible in the foreground. The trail would also include a wooden fence and signage. The land surrounding the trail would not be landscaped and would remain similar to existing conditions.

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 open space, as seen in Figure 5.2-6. The slope up to Village 8 West visible in midground views would be landscaped to indicate the transition to the developed areas. A view fence would also be provided to define the edge of development, but would preserve views. This view also includes the single-family residential development in the Neighborhood Edge Zone. Due to the change in topography, the residences along the southern edge of Village 8 West are the only development that is visible. The rolling hill that was visible in the background of the view would be graded and it is not a significant feature; only a very small part of the peak appears in the existing view.

Figure 5.2-6 also shows the long-term view from KVP 6 after landscaping has matured. The appearance would not be altered substantially from the near-term view. Trees would be visible in the midground and screen views of some homes along the project boundary. No significant views are currently available from this KVP. Therefore, the project would not result in significant adverse impact to views from KVP 6.



Key View 6 Near-term: Post-project view from Otay River Valley.



Key View 6 Long-term: Post-project view from Otay River Valley, including mature trees.

Source: Hale Engineering 2011

**POST PROJECT VIEW FROM KEY VIEW 6
FIGURE 5.2-6**

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. Implementation of the proposed Conceptual Grading Plan (Figure 3-16) would result in grading a portion of the east-facing slope of Rock Mountain, a designated scenic resource. There would be no physical impact to the landmark peak of the mountain. The resulting manufactured slope would be approximately 90-120 feet above the ground surface at its tallest point, with slope ratios ranging from 2:1 to 4:1. Implementation of the Conceptual Grading Plan would change the topography of the east-facing slope of Rock Mountain compared to existing conditions.

The Otay Ranch GDP and Design Plan, the City's Subdivision Manual and the Village 8 West 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 8 West 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
- to complement landform grading, landform planting techniques will be utilized.

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
- landscape grading slopes with native and indigenous plant materials to blend with existing planting when adjacent to new landscaping.

Section 6.3 of the SPA Plan lists objectives that would implement the GDP and Design Plan. These objectives are addressed in their entirety under Threshold 5; however, objectives applicable to the grading of the Rock Mountain slope include:

- 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).
- 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.
- Create and maintain on- and off-site views in areas where grading will not cause adverse visual, public safety, and environmental impacts.

- When significant land forms are modified for project implementation, round the landform as much as possible to blend into the natural grade.
- 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.

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. Provide a landscape design that addresses streetscape and provides landscaping intensity zones, greenbelt edge treatments and slope treatments for erosion control.
2. Provide grading concepts that ensure manufactured slopes that are contoured, blend with and mimic adjacent natural slopes.
3. Create landscaping concepts that provide for a transition from the manicured appearance of development areas to the natural landscape in open space areas.
4. Create landscaping concepts that include plantings selected to frame and maintain views. Landscaping should not block views created through grading and /or site design.
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.

While the Otay Ranch GDP and Design Plan, the City's Subdivision Manual and the Village 8 West SPA Plan all have landform grading guidelines and landscaping concepts that reduce aesthetics impacts to Rock Mountain, until a Landscape Master Plan is prepared that demonstrates conformance with the foregoing guidelines and requirements, this impact would be potentially significant.

A portion of the Otay Ranch Preserve is also located within Village 8 West. The MSCP Preserve area contributes to the scenic value of the Otay River Valley by maintaining natural open space. The 15.6 acres of MSCP Preserve within the project site would be retained for future conveyance into the Otay Ranch Preserve. Also, there are no historic buildings or state scenic highways located within Village 8 West. Impacts to views from scenic roadways designated in the General Plan are addressed above under Threshold 1. As discussed under Threshold 1, the project would not result in a substantial adverse effect to views from any designated scenic roadway. Therefore, the project 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.

As new land uses are introduced into the landscape, they become part of the visual environment. The visual environment can be subject to fragmentation and integrity loss. The project would allow the construction of new development within currently undeveloped open space resulting in the permanent alteration of the existing rolling hills, thus affecting the landform and visual quality of the project area.

Analysis of the project's impacts on visual quality and character considers the changes in key views from and to Village 8 West. As discussed under Threshold 1, KVPs 1 to 3 present on-site views within the project site. KVPs 4, 5 and 6 present views of the site from three 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, transit-oriented town center centered on the intersection of Main Street and La Media Road, surrounded by lower density residential use and a large community 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 8 West 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 8 West 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 community centered on a pedestrian oriented town center. Uses are envisioned to include retail, residential, institutional, social, and community services that support adjacent residential neighborhoods. The SPA Plan development guidelines would unify buildings through a common design theme expressed in landscaping and community elements such as walls, fences, lighting and street furniture. These elements are also intended to create a walkable, bicycle friendly community. The Town Center would be organized to create a series of corridors that emulate a traditional urban neighborhood within a system of "blocks" or planning areas. Requirements for block sizes and circulation through the Town Center have been defined in the SPA to maximize walkability and promote a vibrant town center area.

Outside of the Town Center, residential neighborhoods would reflect traditional Chula Vista neighborhoods. Design of these neighborhoods would also transition from more uniform architecture and landscaping of the multi-family neighborhoods to more eclectic architecture and landscaping in single-family neighborhoods. Within and near the Town Center, corridors would be well defined by taller buildings and relatively shallow setbacks.

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.

As discussed above, the SEIR for the GPA/GDPA identified a significant impact to visual character as a result of development of the land uses proposed in the GPA. The SEIR identified mitigation measure 5.2.5-1 from the 2005 GPU EIR to reduce impacts related to visual character. The mitigation measure consists of requirements for building and grading plans to protect visual character to the extent feasible. The proposed SPA Plan for Village 8 West would implement the requirements of SEIR mitigation measure 5.2.5-1, including a grading plan in conformance with the city grading ordinance; grading standards that ensure manufactured slopes are contoured, blend, and mimic with 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 specifies development standards for the entire project area, specific transect zones, as well as individual development types. Chapter 4 of the SPA Plan, Community Design, establishes design guidelines for the project area as a whole, as well for specific land uses and the Town Center. However, a landscape plan is required to provide specific direction on landscape treatments specific to each manufactured slope area. 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 (with the exception of the reservoir) and there are no on-site sources of light. The existing land uses immediately adjacent to the site include Olympian High school and residential land uses in Village 7. In addition, surrounding roadways include La Media Road, Magdalena Avenue, and Rock Mountain Road, which border the site to the north and east. The development and roads in the project vicinity exhibit considerable ambient nighttime illumination levels. Artificial light sources from surrounding land use include interior and exterior lighting for security, parking, architectural highlighting, incidental landscape lighting, and illuminated signage. Automobile headlights, streetlights and stoplights for visibility and safety purposes along the surrounding roadways contribute to overall ambient lighting levels as well. Village 11 to the northeast is currently under construction. The EUC to the northeast, Village 4 to the west, and Village 8 East 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 for design review, 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 3.7, Sign Regulations.** Illumination of wall and projecting signs shall be limited to external (spot lights) or decorative (gooseneck, etc.) types.
- **Section 4.2.5, Community Lighting.** Building illumination should be directed and concealed from view. Indirect wall lighting, wall washing from concealed fixtures, and landscape lighting is encouraged, provided it is subtle and not overly bright. All exterior lighting shall be selective and shielded to confine light within the site and prevent glare onto adjacent properties or street.
- **Section 4.6, Community and Neighborhood Facility Design Guidelines.** When lighting would be provided for outdoor utilities and services activities, a timer would be provided
- **Section 7.2, Open Space.** No lighting would be permitted in areas designated Open Space: Preserve
- **Section 7.3, Parks.** Lighting in the Community Park shall be designed to minimize light spillage onto neighboring properties, especially adjacent to the MSCP Preserve. Lighting shall be designed to minimize light spillage onto neighboring properties in areas designated Neighborhood Park or Town Square

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 4 or Village 8 East).

The project site proposes development adjacent to the MSCP Preserve area in the southwest corner of project site, and approximately 50 feet from MSCP Preserve in Wolf Canyon. Development adjacent to the MSCP Preserve (Planning Area Y) would consist of single-family residences that would include minimal nighttime lighting for security. The Wolf Canyon MSCP Preserve area is located approximately 50 feet west of the proposed Community Park, which could include bright nighttime lighting for evening and nighttime uses, such as evening sporting events. However, 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 mitigation measure 5.6-11i would reduce indirect lighting impacts to a less than significant level.

Given the degree of ambient lighting that currently surrounds 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 includes requirements for buildings that would limit glare. Section 3.7, Sign Regulations, requires that metal or glass awnings have a matte finish. Outside of the Town Center, residential and commercial development would also be required to incorporate variety into building façades, including porches and use of variety of materials, 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 8 West 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 and Shadow

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. As described in the Section 3, project development would be phased over multiple years. Buildout is not anticipated until 2030. The SPA Plan focuses on land uses instead of building placement, and it envisions a vibrant community that promotes pedestrian walkways, public spaces, such as parks and outdoor gathering areas. Buildings can be up to four stories, or 60 feet, in height in the Town Center, and three stories tall, or 45 feet, 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 Town Center and Neighborhood Center Zone to be shadowed by an adjacent building or buildings depending on certain conditions. In addition, wind access can be affected by building height and mass. Because the potential impacts associated with shade, shadow and wind access impact cannot be determined until the specific location, size, and orientation of future buildings are established, this impact could be potentially significant.

E. Threshold 5: Alter areas of sensitive landforms and grade steep slopes that may be visible from future development and roadways.

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 8 West 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. The RMP established a ranch-wide steep slope standard that requires preservation of at least 83 percent of the natural steep slopes (natural

slopes with gradients of 25 percent or greater) throughout the Otay Ranch to protect these sensitive landforms.

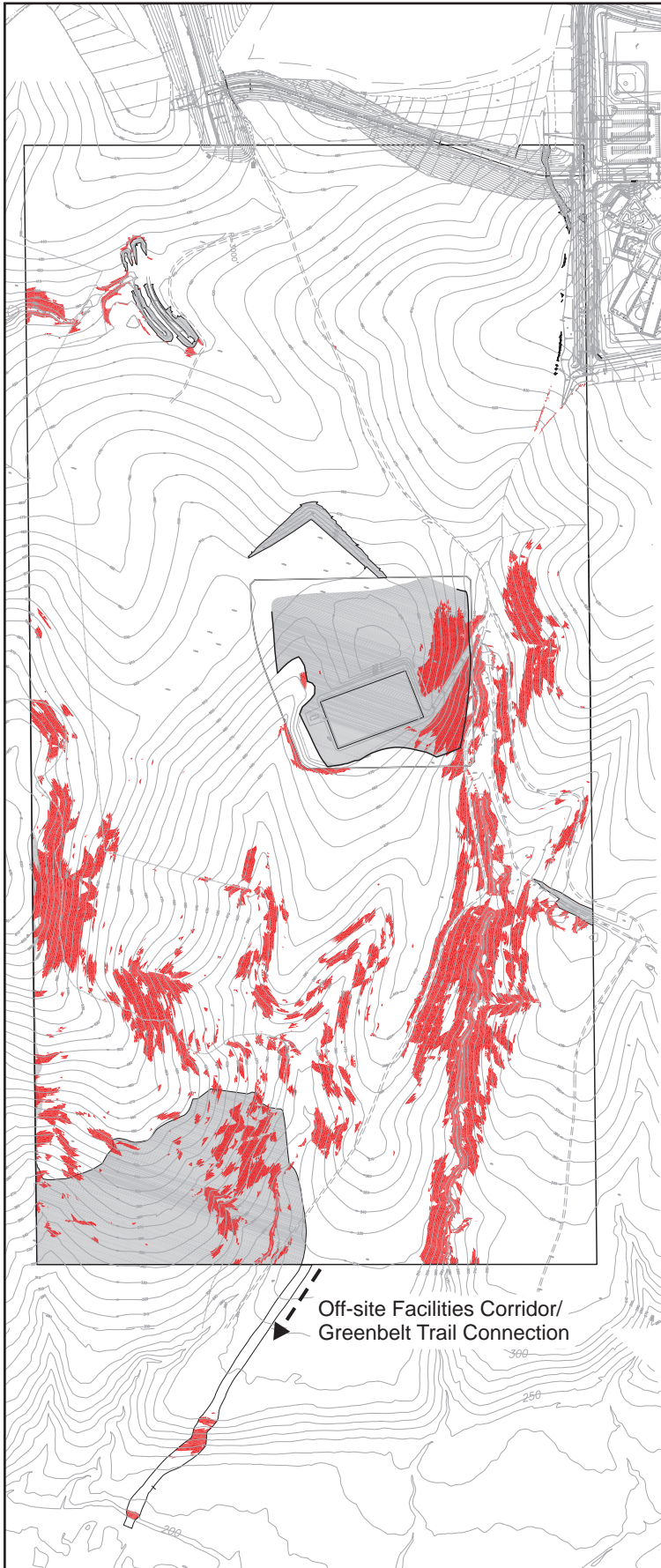
1. Ranch-wide Steep Slope Preservation

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 8 West would impact approximately 29 acres of steep slopes within the Otay Valley Parcel. 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 29 acres within Village 8 West. Combined with existing steep slope impacts (i.e., 255 acres), Ranch-wide impacts are estimated at 1,403 acres. Figure 5.2-7 and Table 5.2-1 provides a summary of the projected Ranch-wide impacts to steep slopes at build-out.

Table 5.2-1 Otay Ranch Steep Slope Impacts

Parcel	Existing Steep Slopes (Slope Gradient \geq 25%)	Steep Slope Impacts (City of Chula Vista)	Projected Steep Slope Impacts (County of San Diego)
Otay Valley Parcel			
<i>Approved SPA Plans:</i> Villages 1 and 1 West, 2, 4 (Park Portion), 5, 6, 7, 11, and Planning Area 12 (Eastern Urban Center 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 ⁽¹⁾	-
Proctor Valley			
<i>Remaining SPA Plans:</i> Village 13, 14, 16, and 19	486.3	-	378.3
San Ysidro Mountains			
<i>Remaining SPA Plans:</i> Villages 15 and 17	560.1	-	488.0
Outside Development Areas	8,052.7	N/A	N/A
Ranch-wide Totals	9,821.3	1,403.2	
Notes: Slope impacts are based on best available data including currently proposed projects (SPA Plans/Tentative Maps) and current GDP/SRP development areas. Excludes acreages associated with Wildlife Agency conservation acquisitions that would no longer be developable: (a) 108 acres within Proctor Valley, and (b) 72.1 acres within San Ysidro Mountains. Assumes development will impact 100% of steep slopes (slope gradient \geq 25%) within current GDP/SRP development areas.			

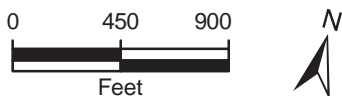
Based on these results, future impacts to steep slopes would exceed the 1993 Otay Ranch GDP/RMP estimate of 1,301 acres (based on 83 percent of the originally estimated 7,651 acres of steep slopes Ranch-wide). As previously discussed however, deviations from the RMP are permissible provided the project's 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 current, detailed 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.



Slope	Percent	Acre
>25%		
On Site (in grading footprint):	8.89%	28.42
On Site (MSCP/outside grading footprint):	0.93%	2.98
Total		31.40
Reservoir Site		
>25% (in grading footprint):	1.68%	0.33
>25% (outside grading footprint)	12.29%	2.41
Offsite Sewer and Storm Drain		
>25% (in grading footprint):	17.3%	0.32
		28.42
		0.33
		<u>0.32</u>
Total Impact Area		29.07

Existing Steep Slopes
 Outside Grading Footprint

Source: William Hezmalhalch Architects, Inc. 2012



STEEP SLOPE ANALYSIS
FIGURE 5.2-7

2. Proposed Steep Slopes

Based on the Conceptual Grading Plan (Figure 3-16), several manufactured slopes would be created in highly visible locations, including the following:

1. 40 feet high slope with an average slope ratio of 2:1 at the northwest corner of Planning Areas C and D;
2. 20 feet high slope with an average slope ratio of 2:1 at the northwest corner of Planning Area I;
3. 50 feet high slope with an average slope ratio of 2:1 along Otay Valley Road at the northwest corner of City of San Diego reservoir site;
4. 60 feet high slope with an average slope ratio of 2:1 at the northwest corner of Planning Area R;
5. 40 to 70 feet high slopes with an average slope ratio of 2:1 on the west side of Planning Area N;
6. 70 feet high slope with an average slope ratio of 2:1 northwest of Planning Area "Q";
7. 90-120 feet high slopes with average slope ratios ranging from 2:1 to 4:1 on the west side of Planning Area P; and
8. 50 feet high slope with an average slope ratio of 3:1 on the south side of Lot V.

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.

As noted under Threshold 2, Chapter 6 of the SPA Plan outlines the grading concept for the Village 8 West SPA Plan area. In addition to the objectives listed above under Threshold 2, 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 smooth transitions between the project area and surrounding properties and the existing San Diego Reservoir.
2. 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.
3. Create usable areas that provide for a variety of residential housing types.
4. Minimize, where feasible, impacts to sensitive areas adjacent to Wolf Canyon and the Otay River Valley.
5. 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 8 West

SPA Plan, Subdivision Manual and Grading Ordinance. Landform grading has been proposed as shown on the Tentative Map. 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.

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 8 West SPA Plan 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. As shown in these tables, 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>Objective LUT 8: 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>Policy LUT 8.1: 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>Policy LUT 8.2: 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>Policy LUT 8.3: 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>Policy LUT 8.4: 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>Policy LUT 8.5: 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 pedestrians; 5) ground floor residential and commercial entries that face and engage the street; and 6) pedestrian-oriented streetscape amenities.</p> <p>Policy LUT 8.6: 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>Consistent. 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 of two urban couplets 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 Town Center by all modes of transportation from the throughout Village 8 West. The 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. These uses would be concentrated in the Town Center to create a 24-hour activity center for the community, which would be designed according to the SPA Plan to ensure a safe, healthy, and vibrant heart for the community.</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 8 West, and the Land Use plan developed for the project area ensures that compatibility use are placed next to each other, as discussed in Section 5.1, Land Use and Planning.</p>

Table 5.2-2 Project Consistency with Applicable General Plan Landform and Visual Policies (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy LUT 8.7: 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 SPA Plan encourages urban open spaces. A town square is proposed within the Town 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 Town Center is the use of façades that include variety and spontaneity to activate the pedestrian experience.</p> <p>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 Town Center and in public open spaces.</p> <p>Performance standards 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>Objective LUT 10: 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>Policy LUT 10.1: The city shall create unique landscape designs and standards for medians for each major thoroughfare to distinguish each from the other and to provide a special identity for districts and neighborhoods.</p> <p>Policy LUT 10.2: 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>Policy LUT 10.3: Provide well-designed, comfortable bus stops throughout the city.</p> <p>Policy LUT 10.4: 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>Policy LUT 10.5: 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>Policy LUT 10.6: 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>Policy LUT 10.7: 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>Consistent. 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 street scenes 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 to be located within major pedestrian areas, to respect the privacy of residents when located in residential areas, and to include adequate lighting and well-designed shelters.</p> <p>The SPA Plan 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. The applicant will also work with utility providers to ensure that the guidelines would be implemented.</p>

Table 5.2-2 Project Consistency with Applicable General Plan Landform and Visual Policies (continued)

Applicable Policies	Evaluation of Consistency
<p>Objective LUT 11: Ensure that buildings and related site improvements for public and private development are well-designed and compatible with surrounding properties and districts.</p> <p>Policy LUT 11.1: 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>Policy LUT 11.2: 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>Policy LUT 11.4: Actively promote architectural and design excellence in buildings, open space, and urban design.</p> <p>Policy LUT 11.5: 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 Chula Vista Design Manual, General Plan, and appropriate zone or Area Development Plans.</p>	<p>Consistent. 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 8 West, 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>Objective LUT 75: Preserve and protect Otay Ranch’s significant natural resources and open space lands with environmentally sensitive development.</p> <p>Policy LUT 75.1: 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>Policy LUT 75.2: Design villages that have well defined edges such as the Chula Vista Greenbelt, open spaces, or wildlife corridors.</p>	<p>Consistent. The SPA Plan is consistent with this objective and relevant policy. The southwestern edge of Village 8 West adjacent to the Otay Ranch Preserve and MSCP is designated as an Open Space Preserve. This land will be dedicated to the MSCP subarea as part of the Otay Valley Regional Park. This area would remain unimproved with uses restricted to passive recreation, habitat restoration and scientific research. Vegetation would consist of native plants that already occur on site. Manufactured slopes would occur on the edge of development to define the edge of development and transition the edge of Village 8 West into the surrounding open space. Slopes adjacent to the MSCP area, and development within 100 feet of the Wolf Canyon Preserve area west of the site, would be subject to the requirements of the Preserve Edge Plan and would be planted with non-invasive, native plants.</p>
<p>Objective LUT 81: Develop a higher density, mixed use, transit-oriented town center positioned on the intersection of Main Street and La Media Road, surrounded by lower intensity residential use and a large community park that preserves Rock Mountain as an important landform and visual resource.</p> <p>Policy LUT 81.13: Development near the significant viewsheds and topographic features of Rock Mountain should be done sensitively to preserve these important visual resources of Otay Ranch.</p>	<p>Consistent. The project is consistent with this objective and relevant policies. As discussed under Threshold 1 and 2, the SPA Plan proposes a town center at the intersection of Main Street and La Media Road, surrounded by lower intensity residential land uses and a community park. Views of Rock Mountain would be available from some portions of Main Street, particularly west of the Town Center in the lower intensity Neighborhood Center Zone. Views of Rock Mountain are currently not available to the public from within Village 8 West; therefore, implementation of the SPA Plan would improve accessibility to views of Rock Mountain from a scenic roadway and throughout Village 8 West.</p>

Table 5.2-3 Project Consistency with Applicable GDP Landform and Visual Policies

Applicable Policies	Evaluation of Consistency
Part II, Chapter 1 – Section B: Goals, Objectives, and Policies	
<p>Goal: 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>Policy: Establish a unique character and sense of place within each village.</p>	<p>Consistent. The SPA Plan includes design guidelines and regulations for consistent and cohesive development across Village 8 west. 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 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 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>
Part II, Chapter 10 – Resource Protection, Conservation and Management	
<p>Goal: Reduce impacts to environmentally sensitive and potential geologically hazardous areas associated with steep slopes.</p> <p>Objective: Relate development to topography and natural features, and strive to retain the character of the landforms to the extent feasible.</p> <p>Policy: 83% of the steep slopes (steeper than 25%) shall be preserved.</p>	<p>Consistent. As discussed under Threshold 5, development of the SPA Plan area would impact 29 acres of steep slopes. The total amount of disturbed acreage of steep slopes anticipated for all of Otay Ranch (1,403 acres) would be less than the maximum acreage limit (1,670 acres) including impacts in Village 8 West. Therefore the project would be in compliance with the Otay Ranch Phase 2 RMP with respect to preserving 83 percent of natural steep slopes.</p>
<p>Goal: Prevent degradation of the visual resources</p> <p>Objective: Blend development harmoniously with significant natural features of the land.</p> <p>Policy: Develop a comprehensive signage program.</p> <p>Policy: Design development to protect the visual value of scenic highways and open spaces.</p> <p>Policy: Underground visually disruptive utilities to the extent feasible.</p> <p>Policy: Conduct additional analysis of conceptual grading plans for all development at the SPA level to protect and preserve significant visual resources.</p> <p>Policy: 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>Objective: Relate development to topography and natural features, and strive to retain the character of the landforms to the extent feasible.</p> <p>Policy: Roadways shall be designed to follow the natural contours of hillsides and minimize visibility of road cuts and manufactured slopes.</p> <p>Policy: 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>Consistent. 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 SPA Plan area are Rock Mountain, Otay River Valley, and views from the future designated scenic roadways on site: Main Street and Otay Valley Road. 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 8 West 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> <p>Consistent. 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</p>

Table 5.2-3 Project Consistency with Applicable GDP Landform and Visual Policies (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy: Variable slope ratios not exceeding 2:1 shall be utilized when developing grading plans.</p> <p>Policy: 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>Policy: 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>Threshold 5, Chapter 6 of the SPA Plan includes a grading plan for Village 8 West that includes landform-grading objectives that incorporated contoured grading the other grading requirements listed in the GDP.</p>
<p>Goal: 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>Objective: Provide lighting in heavily urbanized areas of the Otay Valley Parcel which ensures a high degree of public safety.</p> <p>Objective: 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>Policy: The Otay Valley Parcel shall conform to the Chula Vista Municipal lighting standards.</p> <p>Policy: All outdoor lighting fixtures shall be shaded on top so that all light will shine downward.</p>	<p>Consistent. As discussed under Threshold 4, lighting within Village 8 West 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

The project would alter a portion of the east-facing slope of Rock Mountain. This impact would be 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 and Glare

New sources of nighttime lighting from parks, mixed-use residential, commercial, multi-family residential, and CPF 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.

E. Landform Alteration

The project would not significantly impact steep slopes; however, grading on a portion of the east-facing slope of Rock Mountain would be a 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

5.2-1 **Landscape Master Plan.** Prior to issuance of the first final map for Village 8 West, 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 Rock Mountain and other visible manufactured slopes greater than 25 feet in height, through plant selection, placement, and density, etc.

C. Visual Character or Quality

Mitigation measure 5.2-1 would also reduce impacts related to visual character or quality.

D. Lighting and Glare

5.2-2 **Lighting Plan and Photometric Analysis - Parks.** Concurrent with the preparation of site-specific plan(s) for park sites, including the town center park, Planning Area A and Planning Area T 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 (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 **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).

5.2-4 **Shadow 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 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 analysis is performed.

E. Landform Alteration

Mitigation measure 5.2-1 would also reduce impacts to landform alteration.

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

Implementation of mitigation measure 5.2-1 would reduce impacts related to scenic resources to a less than significant level.

C. Visual Character or Quality

Mitigation measure 5.2-1 would reduce impacts to visual character or quality. However, because the project would result in development on the site, it would permanently alter the character of the project site from open rolling hills to an urban environment. No mitigation is available to maintain the undeveloped character of the site. Impacts would be significant and unavoidable.

D. Lighting and Glare

Implementation of mitigation measures 5.2-2 through 5.2-4 would reduce impacts related to lighting to a less than significant level.

E. Landform Alteration

Implementation of mitigation measure 5.2-1 would reduce impacts related to landform alteration to a less than significant level.

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 8 West 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.

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) ⁽¹⁾	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	68,700

⁽¹⁾ For Village 8 West, 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 vehicles per day 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 8 West. 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 the Village 8 West 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 classified 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 eight-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 as a four-lane couplet through the project site with two lanes eastbound and two lanes westbound. The speed through the couplet would be set at 25 to 35 mph to complement the pedestrian oriented development and to support on-street parking within the Town Center. 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 proposed Village 8 West as a six-lane prime arterial. La Media Road would be constructed as a four-lane couplet through the project site 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. Sidewalks would also be provided both within the couplet and along the six-lane sections of La Media Road.

Eastlake Parkway is currently constructed as a six-lane roadway between Olympic Parkway and Hunte 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 four-lane roadway north of Olympic Parkway,

a six-lane roadway between Olympic Parkway and Hunte Parkway/Main Street. 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 Olympic Parkway to Eastlake 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 the intersection of Main Street/Magdalena Avenue is direct access point from Village 8 West to Birch Road and La Media Road.

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 Main Street/La Media Road Couplet and would continue southeasterly 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.

Main Street/La Media Road Couplet. Within Village 8 West, the intersection of La Media Road and Main Street would be constructed as a pair of one-way streets that form a couplet. A total of four new signalized intersections would be constructed within the couplet to allow higher volumes traffic to move efficiently between Main Street and La Media Road.

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 8 West. 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 Study 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 Pkwy	Prime Arterial (8)	70,000	40,478	0.46	A
	Eastlake Pkwy to Hunte Pkwy	Prime Arterial (6)	50,000	13,926	0.22	A
	East of Hunte Pkwy	Major Street (4)	30,000	7,846	0.21	A
Birch Road	La Media 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 Pkwy	Does Not Exist				
Hunte Parkway	Eastlake Pkwy to Olympic Pkwy	Prime Arterial (6)	50,000	1,406	0.02	A
	Olympic Pkwy to Otay Lakes Road	Major Street (4)	30,000	9,580	0.26	A
Heritage Road	Telegraph Cyn Road to Olympic Pkwy	Prime Arterial (6)	50,000	12,383	0.20	A
	Olympic Pkwy 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 Avenue de Las Vistas (City of SD)	Class I Collector (2A)	12,000	9,846	0.66	B
La Media Road	Telegraph Cyn Road to Olympic Pkwy	Prime Arterial (6)	50,000	12,658	0.20	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	11,037	0.18	A
	Birch Road to Couplet	Does Not Exist				
Magdalena Avenue	Birch Road to Main Street	Class II Collector (2)	12,000	9,122	0.61	B
Eastlake Parkway	Otay Lakes Road to Olympic Pkwy	Prime Arterial (6)	50,000	18,945	0.30	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	9,199	0.15	A
	Birch Road to Hunte Pkwy-Main Street	Prime Arterial (6)	50,000	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 ramps	Does Not Exist				
	SR-125 ramps to University	Does Not Exist				

Note: 6A = six 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 vehicles per day per lane).

Source: RBF 2013

3. Intersections

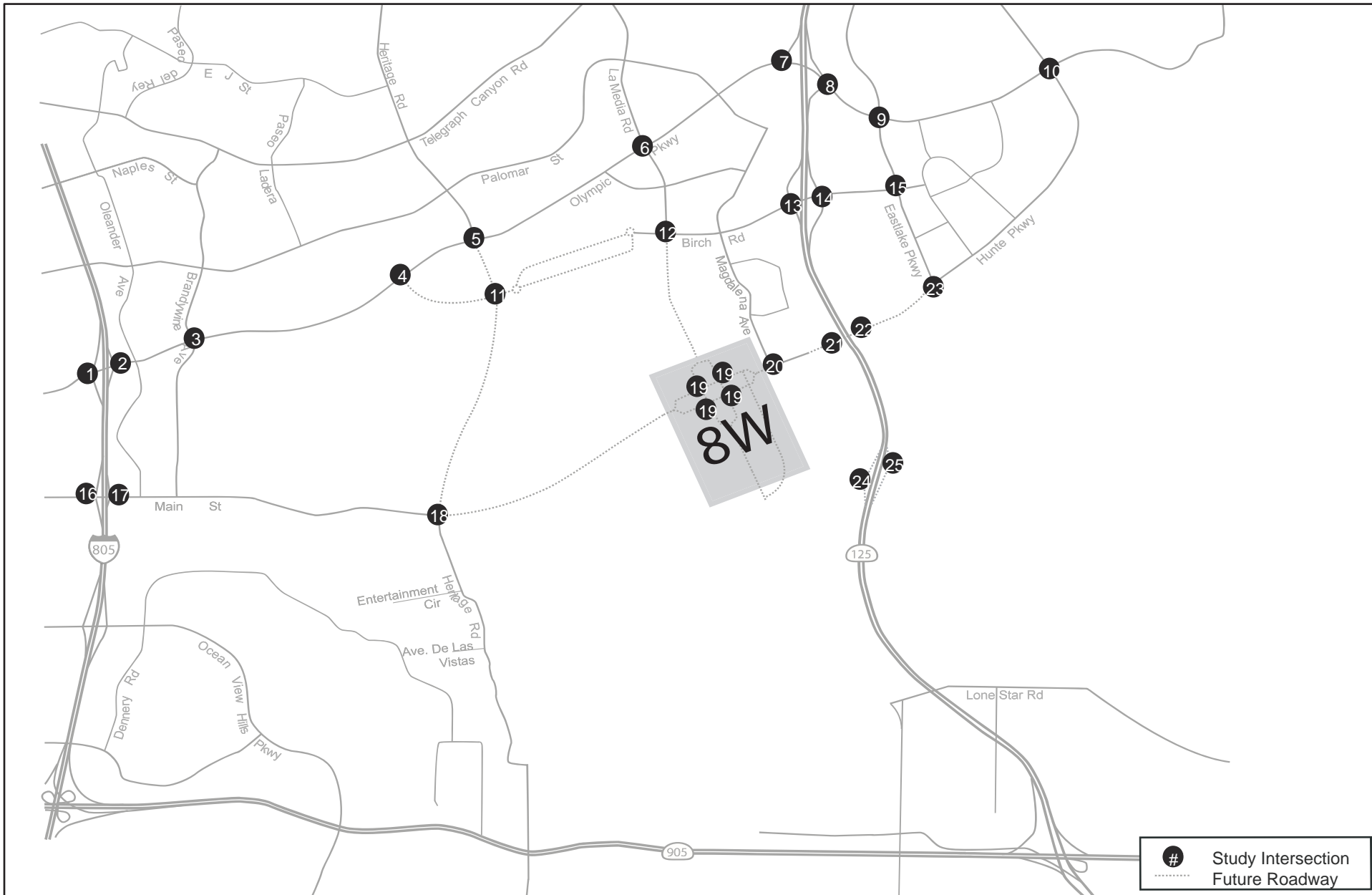
The following 25 intersections were evaluated as part of the traffic analysis for Village 8 West, and are shown in Figure 5.3-1:

- | | |
|--|--|
| 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 8 West. Currently, the nearest public transportation stop to Village 8 West is located approximately 1.5 miles north of the project area.



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	118.4	F	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	<u>11.8-7.4</u>	<u>B-A</u>	<u>11.2-7.6</u>	<u>B-A</u>
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 bold and shading.					
Source: RBF 2013					

5.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would have a significant impact on traffic and circulation if it 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 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 five 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 two hours or LOS E/F for one hour
 - ii. Project trips comprise five 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 five 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 five 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 five 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. 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 eight and thirteen 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 eight years in the future. If the model year is less than seven years in the future, study horizon year 10 would be thirteen 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 five 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 8 West (included as Appendix B to this EIR) evaluated traffic impacts that would occur upon implementation of the project under the following scenarios: Year 2015, 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 8 West. 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 8 West 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 impact of phased development, as discussed in the Year 2015, Year 2020, Year 2025, and Year 2030 scenarios. Development in each interim scenario is based on the development phasing forecast in the Village 8 West Public Facilities Finance Plan.

Year 2015

The scenario for Year 2015 includes project-generated trips associated with the construction of 105 single-family and 246 multi-family residential dwelling units in Village 8 West.

Year 2020

The Year 2020 scenario includes the development assumed to occur by the Year 2015, in addition to project-generated trips associated with the construction of 354 single-family residential dwelling units, 824 multi-family residential dwelling units, 50,000 square feet of office use, 40,000 square feet of commercial retail, and 5.5 acres of park within Village 8 West.

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 162 single-family residential dwelling units, 359 multi-family residential dwelling units, an elementary school, 150,000 square feet of commercial retail, and 13.1 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 a middle school, 60,000 square feet of commercial retail, and 9.4 acres of park space.

b. Traffic Model Methodology

For Village 8 West 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 2015 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

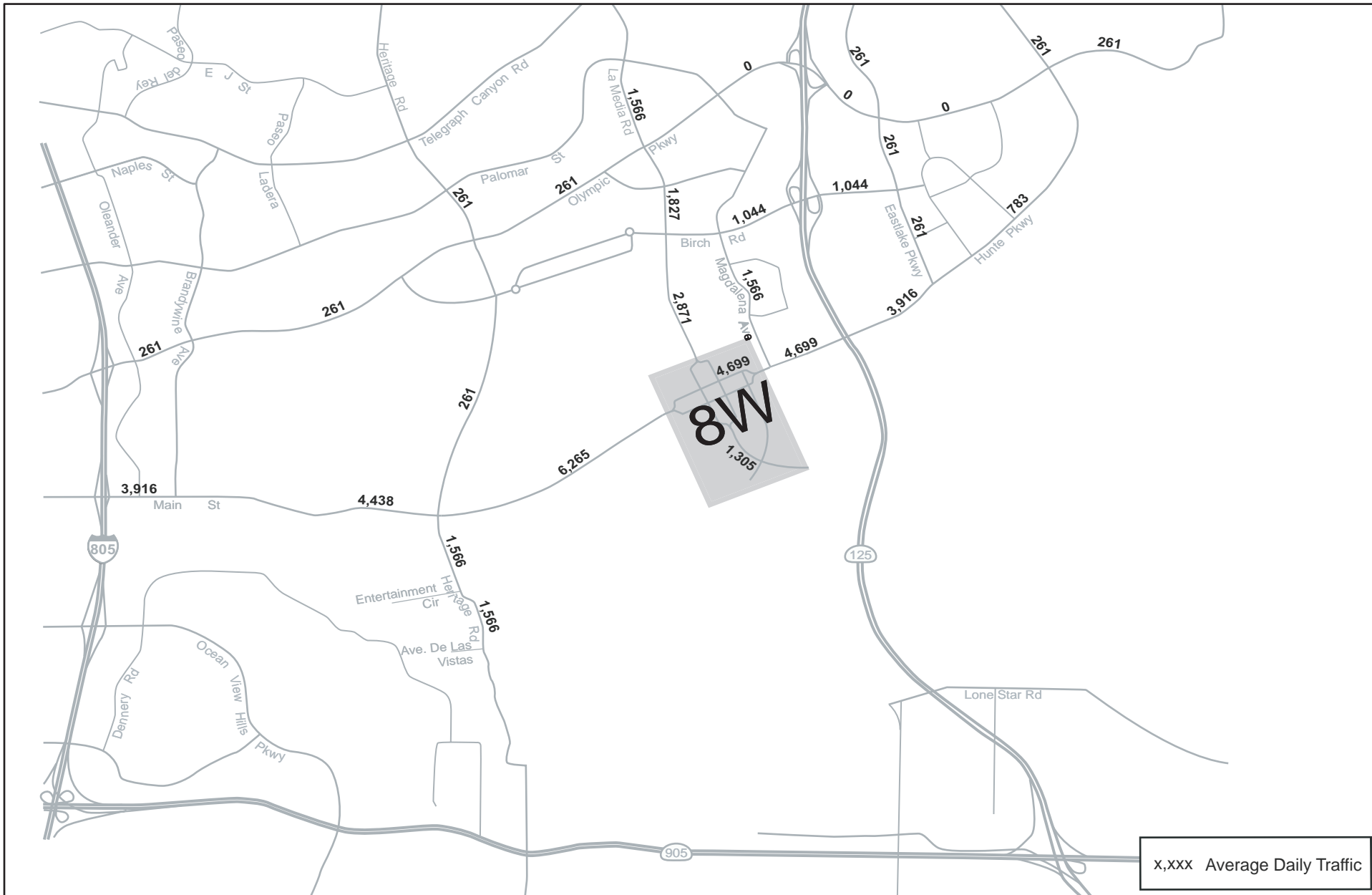
The SANDAG trip generation rates were utilized to determine daily and peak hour trips to be generated by the project. Trip reduction factors were applied to the forecasted trip generation for the project to reflect internally captured trips (trips that do not leave the village), non-motorized trips (pedestrian and bike trips), and transit trips. In addition, a five percent reduction was applied for transit uses for all study years 2020 through 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. At buildout, the project is forecast to generate a total of approximately 43,084 daily trips, including 3,467 AM peak hour trips and 4,286 PM peak hour trips (before internal capture and transit reductions). With internal capture and transit reductions, the project is forecast to generate approximately 26,104 trips per day, including 2,662 AM and 2,769 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
Park (Active Recreation)	17.4 AC	870	35	17	17	70	35	35
Urban/Neighborhood Park	10.6 AC	53	2	1	1	4	2	2
Single-family Residential	621 DU	6,210	497	149	348	621	435	186
Multi-family Residential	1,429 DU	11,432	915	183	732	1,143	800	343
Elementary School	11.4 AC	1,140	365	219	146	103	41	62
Middle School	21 AC	2,205	706	423	282	198	79	119
Office (<100KSF)	50 KSF	1,000	140	126	14	130	26	104
Commercial Retail	250 KSF	20,000	800	480	320	2,000	1,000	1,000
Community Purpose Facility	5.8 AC	174	9	5	3	14	7	7
Subtotal		43,084	3,467	1,604	1,864	4,283	2,425	1,858
Internal Capture ⁽¹⁾		-14,826	-632	-316	-316	-1,300	-650	-650
Transit Reduction ⁽²⁾		-2,154	-173	-80	-93	-214	-121	-93
Total		26,104	2,662	1,208	1,455	2,769	1,654	1,115

Note: Based on SANDAG, Not So Brief Guide, April 2002.
AC = acres, DU = dwelling units, KSF = thousand square feet
⁽¹⁾ Internal Capture Rates provided from ITE Trip Generation Handbook. Internal capture rates vary by each combination of land uses.
⁽²⁾ Transit Reduction Rates provided from SANDAG; a transit reduction of 5% is assumed by project buildout.
Source: RBF 2013



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 2015	3,018	241	57	185	302	211	91
Year 2020	13,875	1,150	375	775	1,422	924	498
Year 2025	22,338	1,932	756	1,175	2,332	1,454	878
Year 2030	26,104	2,662	1,208	1,455	2,769	1,654	1,115
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 26,104 trips per day. Table 5.3-8 summarizes the peak hour level of service for intersections under the Existing Plus Project scenario. As shown in this table, the intersections of Olympic Parkway/I-805 northbound ramps and Main Street/Magdalena were calculated to operate at deficient level of service. For each of these two impacted intersections, the project trips added to the intersections exceed the City of Chula Vista's five percent threshold of significance. Therefore, both intersections were calculated to result in direct project impacts.

Table 5.3-8 Existing Plus Project Intersection Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Pkwy/I-805 southbound ramps	40.4	D	47.9	D
2. Olympic Pkwy/I-805 northbound ramps	120.6	F	49.7	D
3. Olympic Pkwy/Brandywine Avenue	31.6	C	41.5	D
4. Olympic Pkwy/Santa Victoria	Does Not Exist			
5. Olympic Pkwy/Heritage Road	21.9	C	20.2	D
6. Olympic Pkwy/La Media Road	51.5	D	38.8	D
7. Olympic Pkwy/SR-125 southbound ramps	2.7	A	4.4	A
8. Olympic Pkwy/SR-125 northbound ramps	1.3	A	2.4	A
9. Olympic Pkwy/Eastlake Parkway	29.8	C	32.1	C
10. Olympic Pkwy/Hunte Pkwy	33.6	C	34.7	C
11. Santa Victoria/Heritage Road	Does Not Exist			
12. Birch Road/La Media Road	30.6	C	25.1	C
13. Birch Road/SR-125 southbound ramps	15.8-9.8	<u>B-A</u>	17.0-11.0	B
14. Birch Road/SR-125 northbound ramps	5.2	A	12.4	B
15. Birch Road/Eastlake Pkwy	35.8	D	33.8	C
16. Main Street/I-805 southbound ramps	27.8	C	31.9	C
17. Main Street/I-805 northbound ramps	27.0	C	28.9	C
18. Main Street/Heritage Street	2.7	A	0.9	A

Table 5.3-8 Existing Plus Project Intersection Level of Service (continued)

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
19. Main Street/La Media Road (Couplet)				
Westbound Main Street/southbound La Media Road	0.0	A	0.1	A
Westbound Main Street/northbound La Media Road	8.5	A	8.4	A
Eastbound Main Street/southbound La Media Road	0.0	A	0.1	A
Eastbound Main Street/northbound La Media Road	4.5	A	6.3	A
20. Main Street/Magdalena Avenue	78.8	E	164.1	F
21. Main Street/SR-125 southbound ramps	Does Not Exist			
22. Main Street/SR-125 northbound ramps	Does Not Exist			
23. Main Street/Eastlake Pkwy	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 bold and shading .				
Source: RBF 2013				

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: 1) Olympic Parkway from I-805 to Brandywine Avenue (LOS E); 2) Olympic Parkway from Brandywine Avenue to Heritage Road (LOS E); 3) Olympic Parkway from Heritage Road to La Media Road (LOS F); and 4) Magdalena Avenue from Birch Road to Main Street (LOS F). The project trips added to these deficient segments would exceed the City of Chula Vista's five percent threshold of significance. Therefore, all four 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 24 in Appendix B, Existing Plus Project Build-Out Conditions Average Daily Traffic.

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	56,478	E
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	59,061	E
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	65,617	F
	La Media Road to SR-125 ramps	Prime Arterial (6)	50,000	48,302	C
	SR-125 ramps to Eastlake Pkwy	Expressway (8)	70,000	44,786	A
	Eastlake Pkwy to Hunte Pkwy	Prime Arterial (6)	50,000	18,324	A
	East of Hunte Pkwy	Major Street (4)	30,000	10,000	A
Birch Road	La Media to SR-125	Major Arterial (6)	40,000	22,717	A
	SR-125 to Eastlake Parkway	Major Arterial (6)	40,000	18,005	A
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,500	27,327	A
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	18,729	A
	Heritage Road to Couplet	Prime Arterial (6)	50,000	Does Not Exist	
	Couplet to Magdalena Avenue	Prime Arterial (6)	50,000	11,633	A

Table 5.3-9 Existing Plus Project Roadway Segment Level of Service (continued)

Roadway	Segment	Classification (# Lanes)	LOS C Capacity	ADT	LOS
Main Street	Magdalena Avenue to SR-125 ramps	Prime Arterial (6)	50,000	Does Not Exist	
	SR-125 ramps to Village 9 Access Road	Gateway Arterial (6)	68,700	Does Not Exist	
	Village 9 Access Road to Eastlake Pkwy	Gateway Arterial (6)	68,700	Does Not Exist	
Hunte Parkway	Eastlake Pkwy to Olympic Pkwy	Prime Arterial (6)	50,000	2,699	A
	Olympic Pkwy to Otay Lakes Road	Major Street (4)	30,000	10,734	A
Heritage Road	Telegraph Cyn Road to Olympic Pkwy	Prime Arterial (6)	50,000	17,553	A
	Olympic Pkwy 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 Avenue. de Las Vistas (<i>City of SD</i>)	Class I Collector (2A)	15,000	9,846	B
La Media Road	Telegraph Cyn Road to Olympic Pkwy	Prime Arterial (6)	50,000	19,982	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	38,180	A
	Birch Road to Couplet	Prime Arterial (6)	50,000	31,458	A
Magdalena Ave	Birch Road to Main Street	Class II Collector (20)	12,000	20,755	F
Eastlake Parkway	Otay Lakes Road to Olympic Pkwy	Prime Arterial (6)	50,000	24,115	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	14,369	A
	Birch Road to Hunte Parkway-Main St	Prime Arterial (6)	50,000	3,895	A
	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	

Note: Deficient conditions shown in **bold** and shading.
Source: RBF 2013

Year 2015*Average Daily Trips*

By the Year 2015, Village 8 West would include up to 105 single-family and 246 multi-family residential dwelling units. Table 5.3-7 summarizes projected trip generation for the project under the Year 2015 scenario. As shown in this table, by Year 2015 the project is anticipated to result in 3,018 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 Year 2015 to provide access to the initial phases of development within Village 8 West: 1) two lanes of La Media Road from the existing terminus to Main Street; and 2) two lanes of Main Street from La Media Road to Magdalena Avenue. Access to Village 8 West under the Year 2015 would be provided along Main Street, La Media Road and Magdalena Avenue. The Year 2015 roadway system and ADT volumes are shown in Exhibit 28 of Appendix B, 2015 Conditions Average Daily Traffic. A potentially significant impact would occur if these on-site access and frontage improvements are not developed concurrent with need.

Traffic Impacts

Intersections. Table 5.3-10 summarizes the AM and PM peak hour intersection level of service for Year 2015. As shown in this table, one intersection would operate at a deficient level upon implementation of the project under the Year 2015 scenario: Olympic Parkway and I-805 northbound ramps (LOS F – AM Peak Hour).

Olympic Parkway/I-805 northbound ramps. At the intersection of Olympic Parkway/I-805 northbound ramps, the percentage of segment trips attributable to implementation of the project in the Year 2015 would be 0.6 percent. This percentage does not exceed the city thresholds of significance for a direct impact. Therefore, no direct impact to this intersection would occur. However, a cumulative impact would occur.

Table 5.3-10 Year 2015 Intersection Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Pkwy/I-805 southbound ramps	48.4	D	49.0	D
2. Olympic Pkwy/I-805 northbound ramps	116.2	F	42.7	D
3. Olympic Pkwy/Brandywine Avenue	23.1	C	29.6	C
4. Olympic Pkwy/Santa Victoria	Does Not Exist			
5. Olympic Pkwy/Heritage Road	33.1	C	41.9	D
6. Olympic Pkwy/La Media Road	42.3	D	32.8	C
7. Olympic Pkwy/SR-125 southbound ramps	5.2	A	4.8	A
8. Olympic Pkwy/SR-125 northbound ramps	2.2	A	4.0	A
9. Olympic Pkwy/Eastlake Parkway	31.5	C	32.6	C
10. Olympic Pkwy/Hunte Pkwy	34.6	C	34.7	C
11. Santa Victoria/Heritage Road	Does Not Exist			
12. Birch Road/La Media Road	33.0	C	31.8	C
13. Birch Road/SR-125 southbound ramps	7.2	A	8.2	A
14. Birch Road/SR-125 northbound ramps	16.0	B	15.8	B
15. Birch Road/Eastlake Pkwy	35.3	D	34.9	C
16. Main Street/I-805 southbound ramps	30.2	C	40.5	D
17. Main Street/I-805 northbound ramps	29.6	C	30.7	C
18. Main Street/Heritage Street	4.1	A	4.8	A
19. Main Street/La Media Road (Couplet)	10.4	B	9.0	A
20. Main Street/Magdalena Avenue	13.5	B	17.5	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 Pkwy	14.0	B	13.6	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				

Roadway Segments. Table 5.3-11 presents the results of the Year 2015 roadway segment level of service analysis under implementation of the project. As shown in this table, the following roadway segments would operate at deficient level of service under the Year 2015 scenario:

- Olympic Parkway: I-805 to Brandywine Avenue (LOS D)
- Olympic Parkway: Brandywine Avenue to Heritage Road (LOS D)
- Olympic Parkway: Heritage Road to La Media Road (LOS D)
- Olympic Parkway: La Media Road to SR-125 ramps (LOS E)
- Heritage Road: Main Street to Entertainment Circle (LOS E)
- Heritage Road: Entertainment Circle to Avenida de Las Vistas (LOS E)

Olympic Parkway Roadway Segments. The project would add less than 800 trips to all four roadway segments of Olympic Parkway, and would not exceed five percent of the total volume of any segment. Therefore, no significant direct project impacts would occur for any segment of Olympic Parkway. As a part of the City's Growth Management Program, the City monitors the operating conditions along Olympic Parkway on an annual basis. As such, an expanded traffic analysis was prepared to monitor new development in the eastern territories with respect to the existing available capacity on Olympic Parkway east of I-805. The study determined if GMO thresholds are projected to be reached or exceeded, and whether mitigation measures are necessary to remain compliant with the requirements of the Growth Management Program. The analysis demonstrated that GMO thresholds would not be reached along Olympic Parkway until building permits for 2,463 dwelling units have been issued for projects east of I-805. The 2,463 dwelling unit limit is not forecasted to be exceeded by Year 2015; therefore, a cumulative impact would not occur to Olympic Parkway under this scenario. See the discussion under the Growth Management Ordinance heading regarding potentially significant impacts related to the GMO and Olympic Parkway.

Heritage Road. Implementation of the project would not add any trips to the two deficient roadway segments along Heritage Road under the Year 2015 scenario. Therefore, the project would not result in a direct impact to Heritage Road, or contribute to a cumulative impact to either Heritage Road segment.

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 city transportation management plan methodology. The Chula Vista transportation 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.

At the time the traffic impact analysis was completed, the GMO threshold of 2,463 equivalent-dwelling units was not forecast to be exceeded by Year 2015. However, the threshold is likely to be reached during implementation of the SPA Plan and TM. Buildout of Village 8 West would result in development of 2,050 units total east of I-805. Once this threshold is reached, the project would contribute to a significant cumulative impact to traffic on Olympic Parkway.

Table 5.3-11 Year 2015 Roadway Segment Level of Service

Roadway	Segment	Classification (# Lanes)	LOS C Capacity	ADT	LOS
Olympic Parkway	I-805 to Brandywine	Prime Arterial (6A)	50,000	52,150	D
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	54,000	D
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	55,350	D
	La Media Road to SR-125 ramps	Prime Arterial (6)	50,000	57,300	E
	SR-125 ramps to Eastlake Pkwy	Expressway (8)	70,000	45,000	A
	Eastlake Pkwy to Hunte Pkwy	Prime Arterial (6)	50,000	31,400	A
	East of Hunte Pkwy	Major Street (4)	30,000	11,700	A
Birch Road	La Media to SR-125	Major Street (6)	40,000	17,700	A
	SR-125 to Eastlake Pkwy	Major Street (6)	40,000	17,400	A
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,500	37,800	B
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	24,500	A
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	Does Not Exist	
	La Media Road to Magdalena Avenue	Class I Collector	12,000	1,000	A
	Magdalena Avenue to SR-125 ramps	Prime Arterial (6)	50,000	Does Not Exist	
	SR-125 ramps to Village 9 Street A	Gateway Arterial (6)	68,700	Does Not Exist	
	Village 9 Street A to Eastlake Pkwy	Gateway Arterial (6)	61,200 ⁽¹⁾	Does Not Exist	
Hunte Parkway	Eastlake Pkwy to Olympic Pkwy	Prime Arterial (6)	50,000	7,300	A
	Olympic Pkwy to Otay Lakes Road	Major Street (4)	30,000	11,000	A
Heritage Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	32,300	A
	Olympic Pkwy to Main Street	Prime Arterial (6)	50,000	Does Not Exist	
	Main Street to Entertainment Circle	Class I Collector (2A)	12,000	14,700	E
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	Class I Collector (2A)	12,000	14,900	E
La Media Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	13,000	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	15,700	A
	Birch Road to Main Street	Prime Arterial (6)	50,000	2,500	A
Magdalena Avenue	Birch Road to Main Street	Class II Collector (2)	12,000	10,400	B
Eastlake Parkway	Otay Lakes Road to Olympic Pkwy	Prime Arterial (6)	50,000	17,200	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	18,200	A
	Birch Road to Main Street	Prime Arterial (6)	50,000	15,100	A
	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	Major Street (4)	30,000	Does Not Exist	
	Village 9 Access to University	Major Street (4)	30,000	Does Not Exist	

⁽¹⁾ Town Center and gateway arterials are "urban core" classifications. Urban Core facilities are evaluated against a LOS D or better standard.
Note: Deficient conditions shown in **bold** and **shading**.
Source: RBF 2013

Year 2020*Average Daily Trips*

In addition to the development assumed for Year 2015, an additional 354 single-family and 824 multi-family residential dwelling units, 50,000 square feet of office use, 40,000 square feet of commercial retail, and 5.5 acres of park would be constructed within Village 8 West under the Year 2020 scenario. Table 5.3-7 summarizes the forecasted Village 8 West project trip generation under the Year 2020 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 improvement is required by the Year 2020 to provide access to the applicable phases of development within Village 8 West: construction of Otay Valley Road from south of Main Street to Village 8 West Street A as a four-lane major roadway. A potentially significant impact would occur if this on-site access and frontage improvement is not developed concurrent with need.

In addition, the Year 2020 scenario assumes that the mitigation measures identified for the Year 2015 scenario (see Section 5.3.5) would be implemented plus the following off-site improvements: 1) construction of Main Street from Village 9 Street A to Eastlake Parkway; and 2) Otay Valley Road from Village 9 Street A to the University Site (see Table 13, 2015 Roadway Segment LOS, and Table 17, 2020 Conditions Roadway Segment LOS, of Appendix B). The Year 2020 roadway system and ADT volumes are shown in Exhibit 31 of Appendix B, 2020 Conditions Average Daily Traffic. If the mitigation measures from the Year 2015 scenario and the assumed off-site improvements are not constructed prior to Year 2020, significant impacts would occur.

Traffic Impacts

Intersections. Table 5.3-12 summarizes the peak hour intersection level of service under the Year 2020 scenario. As shown in this table, the following intersections would operate at a deficient level of service in Year 2020:

- Olympic Parkway/I-805 northbound ramps (AM – LOS F)
- Olympic Parkway/Brandywine Avenue (PM – LOS F)

Olympic Parkway/I-805 northbound ramps. The percentage of project trips added from implementation of the project would be less than five percent at the Olympic Parkway/I-805 northbound ramps intersection. Therefore, direct impacts are considered less than significant. However, cumulative impacts would be significant.

Olympic Parkway/Brandywine Avenue. The percentage of project trips added from implementation of the project in the Year 2020 scenario would be more than five percent at the Olympic Parkway/Brandywine Avenue intersection. Therefore, implementation of the project would result in a significant direct impact to the Olympic Parkway/Brandywine Avenue intersection. Because the project would result in a significant direct impact, it would also contribute to cumulative impacts to this intersection.

Table 5.3-12 Year 2020 Project Intersection Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Pkwy/I-805 southbound ramps	51.9	D	54.0	D
2. Olympic Pkwy/I-805 northbound ramps	117.7	F	50.5	D
3. Olympic Pkwy/Brandywine Avenue	42.9	D	80.4	F
4. Olympic Pkwy/Santa Victoria	Does Not Exist			
5. Olympic Pkwy/Heritage Road	46.7	D	54.6	D
6. Olympic Pkwy/La Media Road	40.0	D	35.1	D
7. Olympic Pkwy/SR-125 southbound ramps	5.3	A	5.6	A
8. Olympic Pkwy/SR-125 northbound ramps	4.3	A	5.0	A
9. Olympic Pkwy/Eastlake Parkway	33.5	C	32.6	C
10. Olympic Pkwy/Hunte Pkwy	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 Pkwy	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 Pkwy	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 **bold** and shading.
Source: RBF 2013

Roadway Segments. Table 5.3-13 presents the results of the Year 2020 scenario roadway segment level of service. As shown in this table, the following segments were calculated to operate at deficient level of service:

- Olympic Parkway: I-805 to Brandywine Avenue (LOS D)
- Olympic Parkway: Brandywine Avenue to Heritage Road (LOS E)
- Olympic Parkway: Heritage Road to La Media Road (LOS E)
- Olympic Parkway: La Media Road to SR-125 ramps (LOS E)
- Heritage Road: Main Street to Entertainment Circle (LOS F)
- Heritage Road: Entertainment Circle to Avenida de Las Vistas (LOS F)
- Magdalena Avenue: Main Street to Birch Road (LOS D)

Table 5.3-13 Year 2020 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	54,600	D
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	58,200	E
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	60,800	E
	La Media Road to SR-125 ramps	Prime Arterial (6)	50,000	58,700	E
	SR-125 ramps to Eastlake Pkwy	Expressway (8)	70,000	46,700	A
	Eastlake Pkwy to Hunte Pkwy	Prime Arterial (6)	50,000	33,600	A
	East of Hunte Pkwy	Major Street (4)	30,000	14,700	A
Birch Road	La Media to SR-125	Major Street (6)	40,000	37,000	C
	SR-125 to Eastlake Pkwy	Major Street (6)	40,000	37,200	C
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 Couplet	Prime Arterial (6)	50,000	Does Not Exist	
	Couplet to Magdalena Avenue	Prime Arterial (6)	50,000	12,000	A
	Magdalena Avenue to SR-125	Prime Arterial (6)	50,000	Does Not Exist	
	SR-125 ramps to Village 9 Street A	Gateway Arterial (6)	68,700	Does Not Exist	
	Village 9 Street A to Eastlake Pkwy	Gateway Arterial (6)	61,200	17,900	A
Hunte Parkway	Eastlake Pkwy to Olympic Pkwy	Prime Arterial (6)	50,000	11,700	A
	Olympic Pkwy to Otay Lakes Road	Major Street (4)	30,000	12,800	A
Heritage Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	40,500	B
	Olympic Pkwy to Main Street	Prime Arterial (6)	50,000	Does Not Exist	
	Main Street to Entertainment Circle	Class I Collector(2A)	12,000	17,300	F
	Entertainment Circle to Avenida de Las Vistas	Class I Collector(2A)	12,000	16,300	F
La Media Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	19,500	A
	Olympic Pkwy 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	12,500	D
Eastlake Parkway	Otay Lakes Road to Olympic Pkwy	Prime Arterial (6)	50,000	20,700	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	23,200	A
	Birch Road to Main	Prime Arterial (6)	50,000	31,400	A
	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	4,300	A
	La Media 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 conditions shown in **bold** and **shading**.
Source: RBF 2013

Olympic Parkway: I-805 to Brandywine Avenue. Implementation of the project would contribute 1,943 daily trips to this roadway segment, which accounts for 3.6 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: Brandywine Avenue to Heritage Road. Implementation of the project would add 2,498 trips to this roadway segment, which accounts for 4.3 percent of traffic and falls below the thresholds of significance for a direct impact. However, a cumulative impact would occur.

Olympic Parkway: Heritage Road to La Media Road. Implementation of the project would add 4,995 trips to this roadway segment, which accounts for 8.2 percent of traffic and exceeds the city thresholds of significance. Therefore, implementation of 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 contribute to cumulative impacts to this roadway segment.

Olympic Parkway: 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: 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: 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 2015 and Year 2020 scenarios, an additional 162 single-family residential dwelling units, 359 multi-family residential dwelling units, an elementary school, 150,000 square feet of commercial retail, and 13 acres of park space were assumed to be constructed in Village 8 West by Year 2025. Table 5.3-7 summarizes the forecasted Village 8 West 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 8 West: 1) construction of an additional two lanes of Main Street through couplet; 2) construction of an additional two lanes of La Media Road through couplet; 3) construction of Otay Valley Road from Street A to the southeastern project boundary as a four-lane major arterial; and 4) install a traffic signal at the Main Street/Magdalena Avenue intersection and restripe to include dual eastbound left-turn lanes and out eastbound through lane.

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-striping of 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 the Olympic Parkway/Santa Victoria Road intersection; and 5) construction of the Santa Victoria Road/Heritage Road intersection (see Table 16, 2020 Peak Hour Intersection Levels of Service, and Table 20, 2025 Conditions Peak Hour Study Intersection Level of Service, of Appendix B). The Year 2025 roadway system and ADT volumes are shown in Exhibit 34 of Appendix B, 2025 Conditions Average Daily Traffic. 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 5.3-14 summarizes the Year 2025 scenario peak hour intersection level of service. As shown in this table, 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, implementation of the project would result in a direct impact to all three of these intersections.

Table 5.3-14 Year 2025 Project Intersection Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Pkwy/I-805 southbound ramps	43.3	D	46.2	D
2. Olympic Pkwy/I-805 northbound ramps	43.5	D	34.3	C
3. Olympic Pkwy/Brandywine Avenue	30.0	C	36.8	D
4. Olympic Pkwy/Santa Victoria	26.6	C	37.8	D
5. Olympic Pkwy/Heritage Road	37.8	D	50.5	D
6. Olympic Pkwy/La Media Road	45.7	D	47.9	D
7. Olympic Pkwy/SR-125 southbound ramps	5.4	A	5.8	A
8. Olympic Pkwy/SR-125 northbound ramps	4.1	A	4.9	A
9. Olympic Pkwy/Eastlake Parkway	34.9	C	36.8	D
10. Olympic Pkwy/Hunte Pkwy	36.9	D	36.6	D
11. Santa Victoria/Heritage Road	37.5	D	39.5	D
12. Birch Road/La Media Road	234.8	F	190.5	F
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 Pkwy	443.0	F	454.5	F
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

Table 5.3-14 Year 2025 Intersection Level of Service (continued)

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
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 Pkwy	274.4	F	242.8	F
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				

Roadways. Table 5.3-15 presents the calculated Year 2025 roadway segment level of service. As shown in this table, the following segments were calculated to operate at deficient levels of service under the Year 2025 scenario:

- Olympic Parkway: Heritage Road to La Media Road (LOS F)
- Olympic Parkway: La Media Road to SR-125 ramps (LOS D)
- Birch Road: La Media to SR-125 (LOS F)
- Magdalena Avenue: Birch Road to Main Street (LOS F)
- Eastlake Parkway: Birch Road to Main Street (LOS F)

Olympic Parkway: Heritage Road to La Media Road. Implementation of the project would add 3,051 trips to this roadway segment, which accounts for 4.8 percent of total traffic and does not exceed the city thresholds of significance. Therefore, implementation of the project would not result in a direct significant impact to this roadway segment. However, a cumulative impact would occur.

Olympic Parkway: 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: La Media to SR-125. Implementation of the project would add 10,275 trips to this roadway segment, which accounts for 20.1 percent of total traffic and exceeds the city thresholds of significance. Therefore, implementation of 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 contribute to cumulative impacts to this roadway segment.

Magdalena Avenue: Birch Road to Main Street. Implementation of the project would add 5,337 trips to this roadway segment, which accounts for 26.6 percent of total traffic and exceeds the city thresholds of significance. Therefore, implementation of 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 contribute to cumulative impacts to this roadway segment.

Table 5.3-15 Year 2025 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	43,300	B
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	42,600	B
	Heritage Road to La Media Road	Prime Arterial (6)	50,000	62,900	F
	La Media Road to SR-125 ramps	Prime Arterial (6)	50,000	56,200	D
	SR-125 ramps to Eastlake Pkwy	Expressway (8)	70,000	49,700	A
	Eastlake Pkwy to Hunte Pkwy	Prime Arterial (6)	50,000	35,300	A
	East of Hunte Pkwy	Major Street (4)	30,000	18,400	A
Birch Road	La Media to SR-125	Major Street (6)	40,000	51,100	F
	SR-125 to Eastlake Pkwy	Major Street (6)	40,000	47,000	C
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,500	41,600	C
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	31,200	B
	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 Arterial (6)	68,700	Does Not Exist	
	Village 9 Street A to Eastlake Pkwy	Gateway Arterial (6)	61,200	22,600	A
Hunte Parkway	Eastlake Pkwy to Olympic Pkwy	Prime Arterial (6)	50,000	24,800	A
	Olympic Pkwy to Otay Lakes Road	Major Street (4)	30,000	16,000	A
Heritage Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	43,100	B
	Olympic Pkwy 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 San Diego)	Prime Arterial (6)	50,000	19,500	A
La Media Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	19,600	A
	Olympic Pkwy 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	20,100	F
Eastlake Parkway	Otay Lakes Road to Olympic Pkwy	Prime Arterial (6)	50,000	21,200	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	24,700	A
	Birch Road to Main	Prime Arterial (6)	50,000	54,600	F
	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	7,600	A
	Street A 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 conditions shown in **bold** and **shading**.
Source: RBF 2013

Eastlake Parkway: Birch Road to Main Street. Implementation of the project would add 5,584 trips to this roadway segment, which accounts for 10.2 percent of total traffic and exceeds the city thresholds of significance. Therefore, implementation of 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 contribute to cumulative impacts to this roadway segment.

Year 2030

Average Daily Trips

In addition to the developments assumed through the Year 2025 scenario described above, the Year 2030 scenario assumes buildout of Village 8 West, which would include the construction of a middle school, an additional 60,000 square feet of commercial retail, and 9.4 acres of park space. The Year 2030 scenario assumes the 2025 mitigated street network (see Section 5.3.5). Table 5.3-7 summarizes the forecasted Village 8 West 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 improvement is required by the Year 2030 to provide access to the applicable phases of development within Village 8 West: construction of Street A from Main Street to Otay Valley Road as a two-lane local road. A potentially significant impact would occur if this on-site access and frontage improvement is 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 offsite improvement: construction of Main Street from Heritage Road to La Media Road. If the mitigation measures from the Year 2025 scenario are not constructed prior to the Year 2030, significant impacts would occur.

Traffic Impacts

Intersections. Table 5.3-16 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/Magdalenia (AM – LOS F, PM – LOS F)
- Main Street/Eastlake Parkway (AM – LOS F)

Table 5.3-16 Year 2030 Intersection Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Olympic Pkwy/I-805 southbound ramps	29.1	C	34.8	C
2. Olympic Pkwy/I-805 northbound ramps	23.7	C	23.2	C
3. Olympic Pkwy/Brandywine Avenue	27.9	C	39.2	C
4. Olympic Pkwy/Santa Victoria	12.7	B	13.3	B
5. Olympic Pkwy/Heritage Road	37.4	D	54.4	D
6. Olympic Pkwy/La Media Road	37.6	D	39.2	D
7. Olympic Pkwy/SR-125 southbound ramps	6.6	A	7.8	A
8. Olympic Pkwy/SR-125 northbound ramps	2.6	A	3.0	A
9. Olympic Pkwy/Eastlake Parkway	33.8	C	36.5	D
10. Olympic Pkwy/Hunte Pkwy	38.9	D	39.2	D
11. Santa Victoria/Heritage Road	37.0	D	42.3	D
12. Birch Road/La Media Road	91.0	F	116.2	F
13. Birch Road/SR-125 southbound ramps	7.8	A	6.1	A
14. Birch Road/SR-125 northbound ramps	112.4	F	31.8	C
15. Birch Road/Eastlake Pkwy	117.2	F	65.8	E
16. Main Street/I-805 southbound ramps	46.2	D	55.9	E
17. Main Street/I-805 northbound ramps	39.6	D	57.8	E
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	103.2	F	48.0	D
Eastbound Main Street/southbound La Media Road	140.3	F	95.2	F
Eastbound Main Street/northbound La Media Road	80.9	F	42.5	D
20. Main Street/Magdalena Avenue	131.3	F	143.8	F
21. Main Street/SR-125 southbound ramps	Does Not Exist			
22. Main Street/SR-125 northbound ramps	Does Not Exist			
23. Main Street/Eastlake Pkwy	141.9	F	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 bold and shading.				
Source: RBF 2013				

Birch Road Intersections. Implementation of the project would account for more than five percent of traffic at these intersections and would exceed the city thresholds of significance for all identified Birch Road intersections. Therefore, implementation of the project would result in a direct impact to the intersections of Birch Road with La Media Road, the SR-125 northbound ramps, and Eastlake Parkway. Because the project would result in significant direct impacts, it would also contribute to cumulative impacts to these intersections.

Main Street Intersections. Implementation of the project would account for more than five percent of traffic on three Main Street intersections and the couplet. Therefore, the project would result in a direct impact to the couplet and the intersections of Main Street with the I-805 northbound ramp, Magdalena

Avenue, and Eastlake Parkway. The Main Street/I-805 southbound ramp intersection would experience a cumulative impact and not a direct impact.

Roadway Segments. Table 5.3-17 and Figure 5.3-3 presents the results of the Year 2030 scenario roadway segment level of service. As shown in this table, the following segments were calculated to operate at deficient levels of service:

- Olympic Parkway: east of Hunte Parkway (LOS D)
- Birch Road: La Media to SR-125 (LOS F)
- Birch Road: SR-125 to Eastlake Parkway (LOS F)
- Main Street: I-805 to Brandywine Avenue (LOS D)
- Main Street: Brandywine to Heritage Road (LOS D)
- Heritage Road: Telegraph Canyon to Olympic Parkway (LOS D)
- Heritage Road: Main Street to Entertainment Circle (LOS E)
- Heritage Road: Entertainment Circle to Avenida de Las Vistas (LOS D)
- Magdalena Avenue: Birch Road to Main Street (LOS D)
- Eastlake Parkway: Birch Road to Main Street (LOS D)

Olympic Parkway: 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: La Media to SR-125. Implementation of the project would add 1,044 trips to this roadway segment, which accounts for 1.9 percent of traffic volume and does not exceed the city thresholds of significance. Therefore, implementation of the project would not result in a direct significant impact to this roadway segment. However, a cumulative impact would occur.

Birch Road: SR-125 to Eastlake Parkway. Implementation of the project would add 1,044 trips to this roadway segment, which accounts for 1.6 percent of traffic volume and does not exceed the city thresholds of significance. Therefore, implementation of the project would not result in a direct significant impact to this roadway segment. However, a cumulative impact would occur.

Main Street: I-805 to Brandywine Avenue. Implementation of the project would add 3,916 trips to this roadway segment, which accounts for 6.4 percent of traffic volume and exceeds the city thresholds of significance. Therefore, implementation of 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 contribute to cumulative impacts to this roadway segment.

Main Street: Brandywine to Heritage Road. Implementation of the project would add 4,438 trips to this roadway segment, which accounts for 8.5 percent of traffic volume and would exceed the city thresholds of significance. Therefore, implementation of 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 contribute to cumulative impacts to this roadway segment.

Heritage Road: Telegraph Canyon 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, direct and cumulative impacts would be less than significant.

Table 5.3-17 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	48,300	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 Pkwy	Expressway (8)	70,000	49,400	A
	Eastlake Pkwy to Hunte Pkwy	Prime Arterial (6)	50,000	34,200	A
	East of Hunte Pkwy	Major Street (4)	30,000	30,100	D
Birch Road	La Media to SR-125	Major Street (6)	40,000	54,200	F
	SR-125 to Eastlake Pkwy	Major Street (6)	40,000	65,200	F
Main Street	I-805 to Brandywine Avenue	Prime Arterial (6A)	58,000	61,300	D
	Brandywine Avenue to Heritage Road	Prime Arterial (6)	50,000	52,200	D
	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 Arterial (6)	68,700	35,400	A
	Village 9 Street A to Eastlake Pkwy	Gateway Arterial (6)	68,700	24,500	A
Hunte Parkway	Eastlake Pkwy to Olympic Pkwy	Prime Arterial (6)	50,000	40,000	B
	Olympic Pkwy to Otay Lakes Road	Major Street (4)	30,000	20,700	A
Heritage Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	50,700	D
	Olympic Pkwy to Main Street	Prime Arterial (6)	50,000	42,300	B
	Main Street to Entertainment Circle	Prime Arterial (6)	50,000	61,400	E
	Entertainment Circle to Avenida de Las Vistas	Prime Arterial (6)	50,000	52,600	D
La Media Road	Telegraph Cyn to Olympic Pkwy	Prime Arterial (6)	50,000	29,900	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	28,300	A
	Birch Road to Couplet	Prime Arterial (6)	50,000	38,000	B
Magdalena Ave	Birch Road to Main Street	Class II Collector (2)	12,000	12,700	D
Eastlake Parkway	Otay Lakes Road to Olympic Pkwy	Prime Arterial (6)	50,000	24,000	A
	Olympic Pkwy to Birch Road	Prime Arterial (6)	50,000	27,600	A
	Birch Road to Main	Prime Arterial (6)	50,000	41,300	D
	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	7,300	A
	Street A 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 conditions shown in **bold** and **shading**.
Source: RBF 2013

Heritage Road: Main Street to Entertainment Circle. Implementation of the project would add 1,566 trips to this roadway segment, which accounts for 2.6 percent of traffic volume and does not exceed the city thresholds of significance. Therefore, implementation of the project would not result in a direct significant impact to this roadway segment. However, a cumulative impact would occur.

Heritage Road: Entertainment Circle to Avenida de Las Vistas. Implementation of the project would add 1,566 trips to this roadway segment, which accounts for three percent of traffic volume and does not exceed the city thresholds of significance. Therefore, implementation of the project would not result in a direct significant impact to this roadway segment. However, a cumulative impact would occur.

Magdalena Avenue: 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: Birch Road to Main Street. Implementation of the project would add 261 trips to this roadway segment, which accounts for 0.6 percent of traffic volume and does not exceed the city thresholds of significance. Therefore, implementation of the project would not result in a direct significant impact to this roadway segment. However, a cumulative impact would occur.

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 implementation of the project and without implementation of the project. The results of the freeway segment level of service are shown in Table 5.3-18.

Table 5.3-18 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
2030 Without Project Conditions								
2030 Conditions (Northbound)								
From Main Street to Olympic Parkway	7,810	C	64.6	25.9	10,113	E	57.8	37.6
From Olympic Parkway to Telegraph Canyon Road	7,738	C	64.7	25.7	10,020	E	58.3	36.9
2030 Conditions (Southbound)								
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
2030 With Project Conditions								
2030 Conditions (Northbound)								
From Main Street to Olympic Parkway	7,886	D	64.6	26.2	10,172	E	57.5	38.0
From Olympic Parkway to Telegraph Canyon Road	7,839	D	64.6	26.0	10,099	E	57.9	37.5
2030 Conditions (Southbound)								
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
APCS = Average Passenger Car Speed (mph) D = Density, Passenger Cars per Mile per Lane Note: Deficient freeway segment operation shown in bold and shading . Source: RBF 2013								

The acceptable level of service for freeways is LOS D. As shown in Table 5.3-18, 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 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.

Intersection Lane Volume Analysis. Caltrans requires that an ILV analysis be conducted for all state-owned facilities that may be impacted by a project. Due to the fact that Village 8 West is located near the ramp to I-805, the ILV method was conducted for the interchanges within the project study area.

Table 5.3-19 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 without or without implementation of the project; therefore, a cumulative impact would occur, but the project would not result in a significant direct impact.

Table 5.3-19 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	Capacity	Capacity
Main Street/I-805 northbound ramps	AM	Capacity	Capacity
	PM	Capacity	Capacity
Note: Deficient ramp operation shown in bold and shading. Source: RBF 2013			

On-site Intersection Analysis. An operational analysis of all internal intersections where the project would connect to the roadway network was conducted for the Year 2030. Forecast Year 2030 traffic volumes for the on-site project intersections are illustrated in Figure 5.3-4. Table 5.3-20 summarizes the results of the operational analysis of the key internal project intersections. As shown in this table, all intersections were calculated to operate at an acceptable level of service. Therefore, impacts would be less than significant.

Table 5.3-20 Year 2030 Internal Intersection Operational Analysis

Internal Intersection	AM		PM	
	Delay	LOS	Delay	LOS
Westbound Main Street/Street A	6.1	A	5.1	A
Eastbound Main Street/Street A	30.0	C	29.9	C
Otay Valley Road/Street C	5.5	A	5.4	A
Otay Valley Road/Street A	34.5	C	45.0	D
Street A/Street B	20.4	C	24.4	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, traffic signals would be appropriately placed at these intersections. 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 5.3-21 provides the forecast daily traffic volume for the intersections where traffic signals are warranted along with the thresholds established in the MUTCD. As shown in this table, all proposed traffic signal locations were calculated to meet the minimum traffic signal warrants by Year 2030. 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.

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 5.3-21. 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 5.3-21 2030 Traffic Signal Warrants and Daily Traffic Volumes

Intersection	Street (Major or Minor)	Year 2030 ADT	ADT Thresholds ⁽¹⁾		Signal Warranted?
			Condition A: Minimum Volume	Condition B: Interruption of Continuous Traffic	
WB Main Street/ Street A	Major: Main Street	12,550	9,600	14,400	Yes (Condition A)
	Minor: Street A	2,730	2,400	1,200	
EB Main Street/ Street A	Major: Main Street	12,550	9,600	14,000	Yes (Condition A)
	Minor: Street A	5,460	2,400	1,200	
Otay Valley Road/ Street C	Major: Otay Valley Road	12,400	9,600	14,000	Yes (Combination)
	Minor: Street C	2,000	2,400	1,200	
Otay Valley Road/ Street A	Major: Otay Valley Road	11,400	9,600	14,000	Yes (Combination)
	Minor: Street A	1,975	2,400	1,200	
Street A/ Street B	Major: Street A	9,000	8,000	12,000	Yes (Condition A)
	Minor: Street B	2,500	2,400	1,200	
⁽¹⁾ 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 would be 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, most if not all material hauling will occur within the Otay Ranch, which limits the sphere of potential construction impacts from haul trips to the Otay Ranch area. Up to 140 workers would be required on site for construction within Village 8 West. 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 for lunch, materials, meetings, etc, the trip generation rate per construction worker is approximately three 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 the SPA Plan and TM 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 2015, Year 2020, Year 2025, and Year 2030). Construction traffic would incrementally contribute to these impacts; therefore, impacts from construction traffic would be 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 and reductions in vehicle miles traveled.

Village 8 West would be accessible by bus service, including BRT. Additionally, Class II bicycle facilities are planned along all circulation element roadways through Village 8 West. Sidewalks would also be provided throughout Village 8 West 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 vehicles trips by approximately 39 percent compared to project with similar land uses that does not propose the same transit and alternative transportation facilities. Additionally, as discussed in Section 5.10, Global Climate Change, these facilities would reduce the ADT length for Village 8 West to 4.62 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 2015, 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 8 West is located approximately 1.5 miles to the northeast of Brown Field airport, a City of San Diego municipal airport. Village 8 West is located within 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 project area 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 8 West.

However, as discussed in greater detail in Section 5.13, Hazards and Hazardous Materials, the 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 8 West SPA, it is not anticipated that development of even the tallest structures would result an obstruction to air traffic. However, because the project area 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 8 West and connecting to the surrounding roads. As part of the design review process, site access and circulation Village 8 West would be reviewed by the City of Chula Vista's Public Works and Engineering Departments. Additionally, the La Media Road and Main Street urban couplets 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. 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. 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 8 West. In addition to urban couplets, Village 8 West 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. 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. The land uses planned for the areas surrounding the project would be similar to those proposed for Village 8 West and would generate similar types of traffic. As discussed in Section 5.12, Agricultural Resources, potential agriculture use in Village 8 West 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 city emergency response plans because it does not interfere with any existing roadways or evacuation routes. Evacuation from and emergency response within Village 8 West would be enhanced by the proposed circulation system, which provides multiple accesses to any point within the site and to the surrounding regional circulation system. Additionally, the circulation design of the project facilitates emergency vehicle access to all areas of the villages. Individual developments within Village 8 West 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 5.3-22, and a consistency analysis with the GDP is provided in Table 5.3-23. As shown in these tables, the project would not conflict with any General Plan or GDP policies; therefore, impact would be less than significant.

Table 5.3-22 Project Consistency with Applicable General Plan Transportation Policies

Policy	Project Consistency
<p>Objective LUT 14: 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>Policy LUT 14.1: Support the study, design, expansion, and construction of a regional freeway system that will have the capacity to carry forecasted regional traffic demand in and through Chula Vista.</p> <p>Policy LUT 14.2: Support planning for regional freeways and state highways to allow mitigation of anticipated impacts from external trips on the Chula Vista circulation system.</p> <p>Policy LUT 14.3: Plan for high capacity regional freeway and Transit First facilities to adequately serve the regional travel demand resulting from the land uses associated with adjacent areas.</p>	<p>Consistent. The circulation system proposed for Village 8 West 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. As discussed in Section 3.5.1.2, Mobility, La Media Road/Otay Valley Road and Main Street are major streets proposed in the project area that would connect Village 8 West to surrounding villages. These roadways would ultimately connect to the SR-125 freeway. Main Street is a major east-west roadway that would effectively distribute traffic from Village 8 West and surrounding villages to the SR-125. The project also proposes residential collector streets and parkway residential streets. The roadways are sized throughout the area to have the appropriate capacity to carry traffic in each area. The proposed circulation network includes sidewalks and trails, bicycle routes, and transit stops to connect to regional alternative transportation systems.</p>

Table 5.3-22 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p>Policy LUT 14.4: Focus regional traffic corridors traversing the General Plan area to I-5, I-805, SR- 54, and SR-125. Major east-west roads should be used to effectively distribute traffic to the freeways and tollways.</p> <p>Policy LUT 14.5: Continue to actively participate in regional organizations and processes to ensure the integration of Chula Vista circulation system facilities with circulation systems planned for by other agencies.</p> <p>Policy LUT 14.6: Define and evaluate quality of life standards for transportation, and establish an implementation plan for financing needed facilities.</p> <p>Policy LUT 14.7: Coordinate with regional agencies to ensure adequate transportation links with regional population, employment and activity centers.</p> <p>Policy LUT 14.8: 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>Policy LUT 16.3: Provide direct and convenient access to public transit stops within residential, commercial, and industrial areas.</p> <p>Policy LUT 16.4: 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>With implementation of mitigation measures 5.3-1 through 5.3-20, the project would implement or pay its fair share into the Chula Vista’s Transportation Development Impact Fee program for intersection and roadway improvements required as a result of project-generated traffic.</p> <p>Chapter 5 of the SPA Plan, Circulation and Corridor Design, defines the quality of life standards for transportation in the area and the PFFP established the financing plan for transportation facilities. Besides connecting Village 8 West to the region via the SR-125, as described above, the proposed circulation network would connect Village 8 West to employment and activity centers in surrounding villages.</p> <p>As discussed above, implementation of the project would include paying its fair share into the Chula Vista Transportation Development Impact Fee program for regional transportation improvements.</p> <p>Consistent. La Media Road/Otay Valley Road and Main Street are major streets proposed in the area that would connect land uses within Village 8 West, and connect Village 8 West to surrounding villages. Main Street and La Media/Otay Valley Road would include sidewalks and Class II bike lanes that would connect to surrounding planning areas.</p> <p>Consistent. Village 8 West 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.</p>
<p>Objective LUT 17: Plan and coordinate development to be compatible and supportive of planned transit.</p> <p>Policy LUT 17.1: 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>Policy LUT 17.2: 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>Policy LUT 17.3: Establish new town centers in the East Planning Area to be transit-oriented and include a transit stop or station.</p> <p>Policy LUT 17.4: Require developers to consult and coordinate with SANDAG and the City of Chula Vista to ensure that development is compatible with and supports the planned implementation of public transit.</p>	<p>Consistent. 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 station. Village 8 West density would also reflect the density approved in the GPA/GDPA and is designed to be transit-oriented. A BRT route and transit station would be located within Village 8 West and the OLC has been coordinating with SANDAG regarding the location and design of the BRT route and transit stations.</p>

Table 5.3-22 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p>Objective LUT 18: Reduce traffic demand through Transportation Demand Management (TDM) strategies, increased use of transit, bicycles, walking, and other trip reduction measures.</p> <p>Policy LUT 18.1: Support and encourage the use of public transit.</p> <p>Policy LUT 18.2: Provide an efficient and effective paratransit service for elderly and handicapped persons unable to use conventional transit service.</p> <p>Policy LUT 18.3: 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>Policy LUT 18.4: Use master planning techniques in new development and redevelopment projects to enable effective use of public transit.</p> <p>Policy LUT 18.5: Implement TDM strategies, such as carpooling, vanpooling, and flexible work hours that encourage alternatives to driving alone during peak hours.</p> <p>Policy LUT 18.6: Encourage employer-based TDM strategies, such as employee transportation allowances; preferential parking for rideshare vehicles; workplace-based carpool programs; and shuttle services.</p> <p>Policy LUT 18.7: Support the location of private “telework” centers.</p> <p>Policy LUT 18.8: 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>Consistent. Village 8 West would reduce traffic demand and support the use of public transit by providing a central mixed-use town center and residential and commercial development throughout area in order to provide jobs and resident-serving retail in close proximity to all homes within Village 8 West. All areas of the project would be accessible to pedestrians and cyclists, including the proposed transit stops in the Town Center. Location of the transit stops in the Town Center 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 8 West residents. Transit stops are also proposed in the surroundings planning areas to create an accessible transit network to 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 8 West is anticipated to consist of bus service, including BRT. The front of every Chula Vista Transit bus has priority seating for our Senior and Disabled riders. All buses have lift or ramp mechanisms to assist customers in wheelchairs or with other mobility impairments to board. 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 transit stops in the Town Center would encourage extension of this service to Village 8 West.</p> <p>The SPA Plan cannot implement carpooling, van pooling, flexible work hours, or other employer-based strategies on behalf of the employers that would be located within Village 8 West; however, as discussed above, Village 8 West provides opportunities for alternative transportation that would reduce vehicle trips.</p> <p>The SPA Plan states in Section 4.3.7, Parking Lots and Structure, that a pedestrian-friendly 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. The proposed transit stations would also be located in the Town Center; therefore, parking would be available near the transit center.</p>
<p>Objective LUT 20: Make transit-friendly roads a top consideration in land use and development design.</p> <p>Policy LUT 20.1: 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>Consistent. 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 consist of no more than two travel lanes and would include sidewalks, parallel parking, and a striped bike lane. 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. 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>

Table 5.3-22 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
	<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 urban couplets, Village 8 West 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>Objective LUT 23: 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>Policy LUT 23.1: Encourage the use of bicycles and walking as alternatives to driving</p> <p>Policy LUT 23.2: Foster the development of a system of inter-connecting bicycle routes throughout the city and region.</p> <p>Policy LUT 23.3: 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>Policy LUT 23.4: Link major residential areas with principal trip destinations, such as schools; parks; community centers; and shopping centers.</p> <p>Policy LUT 23.5: Provide linkages between bicycle facilities that utilize circulation element alignments and open space corridors.</p> <p>Policy LUT 23.6: 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>Policy LUT 23.7: Provide bicycle support facilities at all major bicycle usage locations.</p> <p>Policy LUT 23.10: Promote the system of trails envisioned within the Chula Vista Greenbelt.</p> <p>Policy LUT 23.11: Implement recommendations of the city Bikeway Master Plan or Greenbelt Master Plan.</p> <p>Policy LUT 23.12: Provide opportunities for use of personal mobility devices.</p> <p>Policy LUT 23.13: New overpasses and interchanges should be designed to accommodate bicycles and pedestrians.</p> <p>Policy LUT 23.14: Require new development projects to provide internal bikeway systems with connections to the citywide bicycle networks.</p>	<p>Consistent. The project is consistent with these relevant policies because it would provide bicycle and walking facilities. Within the Village 8 West Town Center, on-street bike lanes would be provided so that bicycles do not conflict with the high levels of pedestrian activity anticipated in this urban center. 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. 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 that currently terminates at the south end of Magdalena Avenue would be extended through Village 8 West and a connection would be provided to Village 8 East via Street B and Village 3 and 4 via Main Street. 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 greenbelt trail would begin at the southerly terminus of Street A, follow the alignment of a proposed sewer main, and would ultimately connect to the Greenbelt/Otay Valley Regional Park trail system. This trail, which would double as a utility access road for sewer utilities, 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 8 West would also include a sidewalk, providing connections between destinations including residential neighborhoods, the Town Center, parks, schools, and rural trails through open space. Neighborhoods trails would include off-street trails that would provide pedestrian connections between neighborhoods and they would typically occur where direct connections between the Town Center and adjacent villages are needed. The intent of Village 8 West would be to promote walkability by providing more direct pedestrian connections than would otherwise occur along public roadways.</p>

Table 5.3-22 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p>Objective LUT 30: 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>Policy LUT 30.1: 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>Policy LUT 30.2: 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>Policy LUT 30.3: 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>Consistent. Village 8 West is consistent with this relevant policy because within the Town Center, 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>Objective LUT 31: Provide parking facilities that are appropriately integrated with land uses, maximize efficiency, accommodate alternative vehicles, and reduce parking impacts.</p> <p>Policy LUT 31.1: 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>Policy LUT 31.2: Encourage consolidation of surface parking lots into structured parking facilities where appropriately located and well-designed.</p> <p>Policy LUT 31.3: Provide parking and recharging facilities for alternative vehicles such, as bicycles and electric and low-emission vehicles.</p>	<p>Consistent. Village 8 West is consistent with these relevant policies because the project would provide extensive bicycle facilities and parking. Within Village 8 West, 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 four feet for pedestrians to pass. Streets within Village 8 West 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 Town Center to support town center commercial and office development, and to provide parking close to the proposed transit stop. 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>Objective LUT 32: Evaluate the use and applicability of various strategies to provide parking.</p> <p>Policy LUT 32.1: 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>Policy LUT 32.2: 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>Policy LUT 32.3: 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>Policy LUT 32.4: 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>Consistent. Village 8 West 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.</p> <p>Additionally, Village 8 West 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 Town Center. The SPA Plan includes parking requirements to ensure that adequate parking is provided for the proposed land uses.</p>

Table 5.3-22 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p>Objective LUT 33: 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>Policy LUT 33.1: <u>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. 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.</u></p> <p>Policy LUT 33.2: <u>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. Encourage consolidation of surface parking lots into structured parking facilities where appropriately located and well-designed.</u></p>	<p>Consistent. 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. <u>Section 4.3.7 of the SPA Plan establishes design guidelines for parking lots and structures. 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 as retail spaces on the ground floor, attractive design elements, and a pedestrian entry space. For example, each road within Village 8 West would consist of no more than two travel lanes and would include sidewalks, parallel parking, and a striped bike lane. Reduced street width, shade trees, minimized setbacks, and urban uses required along the couplet create a visual street frame and a pedestrian friendly atmosphere. Additionally, on-street parking and only the minimum required off-street parking would be provided to reduce the impact of parking lots and structures on the streetscape and promote the use of bicycles, transit, and alternative modes of travel.</u></p>
<p>Objective LUT 63: Provide efficient multi-modal access and connections to and between activity centers.</p> <p>Policy LUT 63.1: 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>Consistent. 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 8 West 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>Objective LUT 73: 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>Policy LUT 73.1: Provide for walking and biking on streets designed to link neighborhoods, activity centers, and community destinations.</p> <p>Policy LUT 73.2: 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>Policy LUT 73.3: Higher residential densities in town centers and village cores should be located within a one-quarter mile radius of transit stations.</p> <p>Policy LUT 73.4: Locate High to Medium-High density residential within ¼-mile radius to the village core(s), town center(s) or transit.</p> <p>Policy LUT 73.5: Locate activity centers adjacent to transit stations, which should be designed with inviting pedestrian access and public spaces.</p>	<p>Consistent. The proposed circulation network is designed to be multi-modal, including a safe and efficient network for pedestrians, bicycles, transit, and LSVs with connections to the Greenbelt trail system.</p> <p>Streets within Village 8 West would be designed as ‘Complete Streets’ which consider all modes of travel including automobiles, bicycles, pedestrians, transit, LSVs, and alternative vehicles. Bicycle lanes and sidewalks are proposed on all major roadways, as well as on off-street village pathway, greenbelt trail, and regional pathway.</p> <p>Transit stops for bus service, including BRT, are proposed in the Town Center, within ¼-mile of residential and commercial development.</p> <p>The Town Center is proposed to be a 24-hour activity center and would include a town square and other public spaces.</p> <p>The Town Center 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 8 West, and a BRT stop is proposed in the Town Center.</p>

Table 5.3-22 Project Consistency with Applicable General Plan Transportation Policies (continued)

Policy	Project Consistency
<p>Policy LUT 73.6: Use town centers to promote pedestrian travel within the villages and the use of bicycles and BRT for trips outside the villages.</p> <p>Policy LUT 73.7: 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>Policy LUT 73.8: 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>Objective LUT 82: Ensure a cohesive relationship between the town center and adjoining land uses within Village 8.</p> <p>Policy LUT 82.4: Provide transit service throughout Village 8.</p>	<p>Consistent. A proposed transit stop would be centrally located within the Town Center and would be accessible to pedestrians and cyclists.</p>

Table 5.3-23 Project Consistency with Applicable GDP Transportation Policies

Applicable Policies	Evaluation of Consistency
<p>Part II, Chapter 1, Section B: Goals, Objectives, and Policies</p>	
<p>Goal: Reduce reliance on the automobile and promote alternative modes of transportation.</p> <p>Objective: 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>Objective: 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>Objective: 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>Objective: Develop the EUC to promote alternative modes of transportation. Specifically, through the provision of light rail right-of-way and the incorporation of multi-modal access from residential neighborhoods and villages.</p>	<p>Consistent. Land uses within Village 8 West are designed to provide for the daily needs of the residents by including uses such as mixed use, community purpose facility, park and school uses, The provision for a land use mix that minimizes the need for automobile travel coupled with the pedestrian oriented design of the villages. The Town Center incorporates transit routes through the project area and would accommodate BRT. The SPA Plan provides for future dedicated transit lanes along Main Street, through the Town Center. Two stops/stations, one for each direction of travel are proposed within the Town Center.</p>
<p>Part II, Chapter 1, Section D: Land Use Design, Character, and Policies</p>	
<p>1a. Village/Town Center Land Use Policies</p> <p>Goal: 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>Policy: Connect open spaces, schools, parks and neighborhoods with convenient and safe pedestrian walkways and bikeways.</p>	<p>Consistent. 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 the Town Center. The location of medium and high-density residential, elementary school, shopping, work, entertainment and neighborhood park uses near the Town Center would also encourage non-vehicular trips.</p>

Table 5.3-23 Project Consistency with Applicable GDP Transportation Policies (continued)

Policy	Project Consistency
<p>Policy: 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>Policy: Promenade Streets shall extend from secondary areas into the village core or town center to accommodate pedestrian and bike access.</p> <p>Policy: 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>1f. Transit Policies</p> <p>Policy: 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>Policy: 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>Policy: 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>Policy: Provide adequate space for bus service or a feeder network to support transit within each village core or town center.</p> <p>Policy: Locate commercial uses close to primary village transit stops.</p> <p>Policy: 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>Policy: 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>Policy: Bicycle parking shall be provided at transit stations and, in general, activity nodes throughout the village core or town center.</p> <p>Policy: The design of transit facilities should complement the surrounding architecture.</p>	<p>Consistent. The project proposes transit stops, one in each direction, on Main Street. Pedestrian, bicycle, LSV, 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 SPA Plan provides for future dedicated transit lanes along Main Street, through the Town Center, to support future bus service, including BRT.</p> <p>Consistent. The proposed transit stops are located in the Town Center, the primary commercial center of the project area. 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>1g. Village/Town Center Street System Policies</p> <p>Policy: Access from villages to prime arterials roads should be limited to maintain prime arterials as high-capacity regional connections.</p> <p>Policy: Provide four-lane road connections for pedestrian, automobile and buses between villages, reflective of topographic conditions.</p>	<p>Consistent. Access to prime arterial roadways is limited to Main Street and La Media Road/Otay Valley Road. These roadways would also be the only through roads in the area. Pedestrian and bicycled facilities would be provided along all circulation network roads. The project includes a grid system of streets formed by urban couplets within the proposed Town Center to provide pedestrian-friendly access throughout the core area. Other than the major arterial roads, roads in the area would generally</p>

Table 5.3-23 Project Consistency with Applicable GDP Transportation Policies (continued)

Policy	Project Consistency
<p>Policy: 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>Policy: With the exception of town centers, prohibit direct routes through villages to discourage through traffic.</p> <p>Policy: 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>Policy: 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>Policy: Alleys within the village core may serve residential and commercial areas and encourage service access at the rear of buildings.</p> <p>Policy: 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>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 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 Town Center to promote pedestrian activity.</p>
<p>1h. Parking Policies</p> <p>Policy: Parking facilities shall allow for easy pedestrian access.</p> <p>Policy: Parking facilities shall be segmented into reasonably sized areas to prevent vast expanses of asphalt.</p> <p>Policy: Parking facilities shall be located and designed for visual accessibility to the driving public.</p> <p>Policy: Parking lots should be designed to accommodate future redevelopment into buildings with integrated parking structures.</p>	<p>Consistent. 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 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 5.3-23 Project Consistency with Applicable GDP Transportation Policies (continued)

Policy	Project Consistency
<p>Policy: Parking structures are permitted. Encourage ground floor retail use.</p> <p>Policy: 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>Policy: 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>Policy: 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>Policy: 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>Policy: Parking may be provided in structures with potential for use of the ground level for retail space.</p>	
<p>Part II, Chapter 2 - Mobility</p>	
<p>Goal: Provide a safe and efficient transportation system within Otay Ranch with convenient linkages to regional transportation elements abutting the Otay Ranch.</p> <p>Objective: Ensure timely provision of adequate local circulation system capacity to respond to planned growth, maintaining acceptable levels of service.</p> <p>Objective: Plan and implement a circulation system such that the operational goal of LOS 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>Objective: 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>Objective: Provide an efficient circulation system that minimizes impacts on residential neighborhood and environmentally sensitive areas.</p> <p>Policy: 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>Policy: 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>Consistent. Streets surrounding and internal to Village 8 West are designed in compliance with the goals and objectives of the GDP. Street design and phasing strives 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 Village 8 West plan utilizes various circulation elements such as couplets and bulb-outs to promote pedestrian safety and comfort. The proposed mitigation measures for Threshold 1 require the applicant to implement traffic improvements and to pay the development’s fair share of regional circulation improvements.</p>
<p>Goal: Achieve a balanced transportation system which emphasizes alternatives to automobile use and is responsive to the needs of residents.</p> <p>Objective: Study, identify, and designate corridors, if appropriate, for transit facilities.</p>	<p>Consistent. The land plan for Village 8 West 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. Village 8 West has provided for future dedicated transit</p>

Table 5.3-23 Project Consistency with Applicable GDP Transportation Policies (continued)

Policy	Project Consistency
<p>Policy: 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>Objective: 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>Policy: 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>Policy: 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>Policy: 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>	<p>lanes and two stops/stations (one in each direction) along Main Street, through the Town Center to implement these objectives.</p>
Part II, Chapter 6 – Air Quality	
<p>Goal: Create a safe and efficient multi-modal transportation network which minimizes the number and length of single passenger vehicle trips.</p> <p>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.</p> <p>Policy: 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>Policy: Promote telecommuting and teleconferencing programs and policies in employment centers.</p> <p>Policy: Establish or participate in education based commute programs, which minimize the number and length of single passenger vehicle trips.</p> <p>Policy: Provide on-site amenities in commercial and employment centers, to include childcare facilities, post offices, banking services, cafeterias/delis/ restaurants, etc.</p> <p>Policy: Should Otay Ranch include a college or university, the facility should comply with Regional Air Quality Strategy (RAQS) TDM strategies relating to such uses.</p>	<p>Consistent. 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 Town Center. Close proximity between work, shopping, and public facilities within the 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>Objective: 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>Consistent. Development of Village 8 West would contribute to highway and transit improvements through the Transportation Development Impact Fee (TDIF) and contribution of its fair share to regional circulation improvements, as required as mitigation for significant impacts to the regional circulation system (Threshold 1).</p>

Table 5.3-23 Project Consistency with Applicable GDP Transportation Policies (continued)

Policy	Project Consistency
<p>Objective: Provide a safe, thorough and comprehensive bicycle network which includes bicycle paths between major destinations within, and adjacent to, Otay Ranch.</p>	<p>Consistent. 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>Objective: Design arterial and major roads and their traffic signals to minimize travel time, stops and delays.</p> <p>Policy: 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>Policy: Bicycling shall be promoted through bicycle lane maps and bicycle destination signage.</p> <p>Policy: Provide secure bicycle storage facilities at transit stops, and employment and retail centers.</p> <p>Policy: Convenient bicycle access shall be provided to transit nodes.</p>	<p>Consistent. The major roads internal to Village 8 West have been designed in accordance with city standards. Traffic signals would be located as determined by the traffic impact analysis (Table 5.3-21) to facilitate traffic flow and to provide access to neighboring land uses.</p>
<p>Objective: Design arterial and major roads and their traffic signals to minimize travel time, stops and delays.</p> <p>Policy: 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>Policy: Minimize the number of ingress and egress to major arterial roads.</p> <p>Policy: Traffic signals at the street end of freeway on and off-ramps shall be coordinated and integrated with the surrounding street systems.</p> <p>Policy: Promote street design to give first priority to transit vehicles.</p>	<p>Consistent. The traffic impact analysis determined which intersections in the project area would require a traffic signal. See Table 5.3-21.</p>
<p>Objective: Facilitate access to public transit</p> <p>Policy: Bus facilities, park-and-ride lots and other ridesharing facilities should be addressed early in the design of villages.</p> <p>Policy: 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>Policy: Streets and intersections used by transit vehicles should be built to accommodate the weight and size of these larger vehicles.</p> <p>Policy: Streets should consider transit circulation patterns, minimizing turning movements between stops.</p> <p>Policy: Bicycle lanes, and secure bike racks/storage areas should be located near transit stops.</p>	<p>Consistent. Pedestrian and bicycle paths would link all uses in Village 8 West to public transit lines. A transit stop 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>Objective: Encourage pedestrian traffic as an alternative to single vehicle passenger travel.</p> <p>Policy: Sidewalks should directly connect schools, parks, open spaces and transit facilities and village core areas.</p> <p>Policy: Distances between higher density residential areas and bus stops should reflect the average walking distances of pedestrians (approximately 1/4 mile).</p> <p>Policy: Provide multiple pedestrian area walkways to residential areas to reduce walking distances.</p>	<p>Consistent. The extensive system of trails and pathways throughout Village 8 West would provide pedestrian and bicycle access to destinations such as the 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 5.3-23 Project Consistency with Applicable GDP Transportation Policies (continued)

Policy	Project Consistency
<p>Policy: 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>Policy: Buildings should be connected to abutting land uses with paved walkways.</p> <p>Policy: Buffer walkways with landscaping such as berms, trees and other vegetation.</p> <p>Policy: Scale the size of facilities, including walkways, to correspond to anticipated pedestrian volumes and include signs, benches and trash receptacles.</p> <p>Policy: 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>Objective: Locate and design buildings within cores to facilitate transit and pedestrian access.</p>	<p>Consistent. Buildings within Village 8 West 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>Objective: Manage parking facilities transit, ridesharing and pedestrian access.</p> <p>Objective: Manage parking facilities to encourage a reduction in the number of single vehicle trips.</p> <p>Policy: 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>Policy: Allow preferential (free or reduced fee parking) parking for carpools and vanpools, near entrances to activity centers.</p> <p>Policy: Joint parking is strongly encouraged for proximate uses. Retail, office, entertainment, and some housing could share parking areas and quantities.</p>	<p>Consistent. Parking areas within Village 8 West would be located to maintain a pedestrian-oriented village streetscape and direct access. Preferential parking is encouraged. Parallel parking will be provided on public streets and within parking lots and/or structures. Joint parking use may be proposed in the Town Center.</p>
<p>Objective: Configure internal village streets to give pedestrian traffic a priority.</p> <p>Policy: Arterials should not traverse village cores.</p> <p>Policy: Provide multiple routes to village core areas.</p> <p>Policy: Encourage the extensive planting of street trees, while remaining consistent with water conservation goals.</p>	<p>Consistent. 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)
- Main Street /Magdalena Avenue (AM – LOS E, 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 2015, Year 2020, Year 2025, and Year 2030 scenarios.

b. Year 2015

Under the Year 2015 scenario, no direct impacts to intersections would occur from implementation of the project. However, one intersection would experience a cumulative impact:

- Olympic Parkway/I-805 northbound ramps (AM – LOS F) (0.6%)

c. Year 2020

Under the Year 2020 scenario, the following intersection would experience a direct impact from implementation of the project:

- Olympic Parkway/Brandywine Avenue (PM – LOS F)

Under the Year 2020 scenario, the following intersection would experience a cumulative impact:

- Olympic Parkway/I-805 northbound ramps (AM – LOS F)

d. 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)

e. Year 2030

Under the Year 2030 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/SR-125 northbound ramps (AM – LOS F)
- Birch Road/Eastlake Parkway (AM – LOS F, PM – LOS E)
- Main Street/I-805 northbound ramps (PM – LOS E)
- Main Street/La Media Couplet
 - Westbound Main Street/northbound La Media Road (AM – LOS F)
 - Eastbound Main Street/southbound La Media Road (AM – LOS F, PM – LOS F)
 - Eastbound Main Street/northbound La Media Road (AM – LOS F)
- Main Street/Magdalena Avenue (AM – LOS F, PM – LOS F)
- Main Street/Eastlake Parkway (AM – LOS F)

Under the Year 2030 scenario, the following intersection would experience a cumulative impact:

- Main Street/I-805 southbound ramps (PM – LOS E)

Based on the ILV 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.

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: I-805 to Brandywine Avenue (LOS E)
- Olympic Parkway: Brandywine Avenue to Heritage Road (LOS E)
- Olympic Parkway: Heritage Road to La Media Road (LOS F)
- Magdalena Avenue: Birch Road to Main Street (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 2015, Year 2020, Year 2025, and Year 2030 scenarios.

b. Year 2015

Under the Year 2015 scenario, no direct or cumulative impacts to roadway segments would occur from implementation of the project. However, a potentially significant impact would occur related to compliance with the GMO.

c. Year 2020

Under the Year 2020 scenario, the following roadway segment would experience a direct impact from implementation of the project:

- Olympic Parkway: Heritage Road to La Media Road (LOS E)

Under the Year 2020 scenario, the following roadway segments would experience a cumulative impact:

- Olympic Parkway: I-805 northbound ramps to Brandywine Avenue (LOS D)
- Olympic Parkway: Brandywine Avenue to Heritage Road (LOS E)
- Heritage Road: Main Street to Entertainment Circle (LOS F)
- Heritage Road: Entertainment Circle to Avenida de Las Vistas (LOS F)

d. Year 2025

Under the Year 2025 scenario, the following roadway segments would experience a direct impact from implementation of the project:

- Birch Road: La Media Road to SR-125 (LOS F)
- Magdalena Avenue: Birch Road to Main Street (LOS F)
- Eastlake Parkway: Birch Road to Main Street (LOS F)

Under the Year 2025 scenario, the following roadway segment would experience a cumulative impact:

- Olympic Parkway: Heritage Road to La Media Road (LOS F)

e. Year 2030

Under the Year 2030 scenario, the following roadway segments would experience a direct impact from implementation of the project:

- Main Street: I-805 to Brandywine Avenue (LOS D)
- Main Street: Brandywine to Heritage Road (LOS D)

Under the Year 2030 scenario, the following roadway segments would experience a cumulative impact from implementation of the project:

- Birch Road: La Media Road to SR-125 (LOS F)
- Birch Road: SR-125 to Eastlake Parkway (LOS F)
- Heritage Road: Main Street to Entertainment Circle (LOS E)
- Heritage Road: Entertainment Circle to Avenida de Las Vistas (LOS D)
- Eastlake Parkway: Birch Road to Main Street (LOS D)

4. Circulation System Assumptions

If the assumed roadway improvements are not in place prior to commencement of each scenario, additional traffic impacts could occur. Therefore, a potentially significant impact would occur if assumed improvements are not developed as prescribed in the traffic impact analysis.

B. Congestion Management

The project would have the potential to exceed the city level of service standards under the Existing Plus Project, Year 2015, 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 8 West 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.

1. 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 2015, Year 2020, Year 2025, and Year 2030 scenarios. Therefore, the mitigation measures identified for the Year 2015, Year 2020, Year 2025, and Year 2030 scenarios would mitigate intersection and roadway segment impacts that would occur under the existing plus project scenario.

2. 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 2,463rd 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.

a. On-site Circulation Mitigation

- 5.3-2 **Main Street/La Media Road Intersection:** Prior to the issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct a traffic signal at the intersection of Main Street and La Media Road.
- 5.3-3 **Main Street/Magdalena Avenue Intersection:** Prior to the issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct the west leg of this intersection and modify existing striping to provide access to Village 8 West. The applicant shall secure or construct a stop sign on the southbound approach.
- 5.3-4 **Main Street:** Prior to the issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct Main Street from La Media Road to Magdalena Avenue as a two-lane, two-way street to provide access to Village 8 West.
- 5.3-5 **La Media Road:** Prior to the issuance of the final map that contains the first equivalent dwelling unit, the applicant shall secure or construct La Media Road from existing terminus south of Santa Luna Street to Planning Areas N, I and J south of Main Street as a two-lane, two-way street to provide access to Village 8 West.
- 5.3-6 **Otay Valley Road:** Prior to the issuance of the final map that contains the 302nd equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from south of Main Street to Village 8 West Street A as four-lane major 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 comes first.

- 5.3-7 **Main Street (La Media Road to Magdalena Avenue):** Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall secure or construct the remaining two lanes of Main Street through the couplet, install traffic signals at new couplet intersections, and restripe Main Street as a one-way segment for each leg of couplet, 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 **La Media Road:** Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall secure or construct the remaining two lanes of La Media Road through the couplet, install traffic signals at new couplet intersections, and restripe La Media Road as a one-way segment for each leg of couplet, 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.
- 5.3-9 **Otay Valley Road:** Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road as a four-lane major roadway from Village 8 West Street A to the Village 8 West eastern project boundary and install stop control on side streets until a traffic signal is 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.
- 5.3-10 **Main Street/Magdalena Avenue Intersection:** Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall re-stripe the Main Street/Magdalena Avenue intersection to include dual eastbound left turn lanes and one eastbound through lane, and secure or construct a traffic signal, 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.
- 5.3-11 **Village 8 West Street A:** Prior to the issuance of the final map that contains the 2,234th equivalent dwelling unit, the applicant shall secure or construct Street A as a local street from Main Street to Otay Valley Road and provide signalized access at Otay Valley Road and at Main Street, 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).

b. Direct Impact Mitigation

- 5.3-12 **Olympic Parkway/Brandywine Avenue Intersection:** Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall: 1) secure or construct a northbound right turn overlap phase to reduce delay to the northbound right turning volume and provide an overall capacity improvement to the intersection, and 2) secure or construct the extension of the westbound left turn pocket, if not already completed by 2015.
- 5.3-13 **Olympic Parkway: Heritage Road to La Media Road:** Prior to the issuance of the final map that contains the 1,388th equivalent dwelling unit, the applicant shall secure or construct Santa Victoria Road from Heritage Road to La Media Road and shall construct Heritage Road from Olympic Parkway to Santa Victoria Road.

- 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:** Prior to the issuance of the final map that contains the 2,234th equivalent dwelling unit, the applicant shall secure or construct Main Street from the existing terminus east of Village 8 West to Eastlake Parkway, including the construction of an overcrossing at SR-125.
- 5.3-15 **Birch Road/La Media Road, Birch Road/SR-125 Northbound Ramps, Birch Road/Eastlake Parkway, Main Street/I-805 Southbound Ramps, and Main Street/I-805 Northbound Ramps Intersections; Birch Road, La Media to SR-125; Birch Road, SR-125 to Eastlake Parkway; Main Street, I-805 to Brandywine Avenue; and Main Street, Brandywine Avenue to Heritage Road:** Prior to the issuance of the final map that contains the 2,610th equivalent dwelling unit, the applicant shall construct SR-125 northbound and southbound ramps at Main Street.
- 5.3-16 **Main Street/La Media Road Couplet, Main Street/Magdalena Avenue, and Main Street/Eastlake Parkway Intersections:** Prior to the issuance of the final map that contains the 2,610th equivalent dwelling unit, the applicant shall secure or construct Otay Valley Road from the Village 8 West eastern boundary to Village 9 Street A, including the construction of an overcrossing at SR-125.

c. Cumulative Impact Mitigation

- 5.3-17 Prior to the issuance of each building permit, the applicant shall pay their fair share into Chula Vista's Transportation Development Impact Fee program for cumulative impacts related to:
- i. Olympic Parkway/I-805 northbound ramps intersection
 - ii. Olympic Parkway: I-805 to Brandywine roadway segment
 - iii. Olympic Parkway: Brandywine to Heritage Road roadway segment
 - iv. Olympic Parkway: Heritage Road to La Media Road
 - v. Heritage Road: Main Street to Entertainment Circle roadway segment
 - vi. Heritage Road: Entertainment Circle to Avenida de Las Vistas roadway segment
 - vii. Eastlake Parkway: Birch Road to Main Street roadway segment

d. Circulation System Assumptions

- 5.3-18 The Year 2020 scenario assumes the following roadway improvements:
- i. Construction of Main Street from Village 9 Street A to Eastlake Parkway as a six-lane gateway
 - ii. Construction of Otay Valley Road, from Village 9 Street A to the University site four-lane major street.

If the project equivalent dwelling unit limit for study Year 2015 (302 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 8 West 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 a 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 Olympic Parkway/Santa Victoria intersection
- ii. Construction of Santa Victoria/Heritage Road intersection
- iii. 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
- iv. Widening of Heritage Road from Main Street to Avenida de la Vistas from a Class II collector to a six-lane prime arterial.

If the project equivalent dwelling unit limit for study Year 2020 (1,388 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 8 West 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 a transportation development impact fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the city in accordance with the 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 improvement:

- i. Construction of Main Street from Heritage Road to La Media Road as a six-lane prime arterial

If the project equivalent dwelling unit limit for study Year 2025 (2,234 equivalent dwelling unit) is exceeded prior to this roadway segment 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 8 West shall stop until the assumed future roadway is constructed by others; or

- ii. City and the applicant shall meet to determine the need for the incomplete roadway segment. 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 link and receive a transportation development impact fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the city in accordance with the Chula Vista Growth Management Ordinance.
- v. All to the satisfaction of the City Engineer.

B. Congestion Management

The project would have the potential to exceed the city level of service standards under the Existing Plus Project, Year 2015, 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 5.3-20.

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 5.3-24 compares the calculated level of service at the impacted intersections with and without mitigation. Table 5.3-25 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 5.3-24 and 5.3-25. Table 27, 2030 Study Intersections LOS With Mitigation, and Table 28, 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 5.3-20, roadway and intersection impacts related to the implementation of the SPA Plan and TM would be reduced to below a level of significance. The mitigated Year 2030 circulation network is shown in Figure 5.3-5.

Table 5.3-24 Recommended Mitigation Measures – Intersections

Location	Study Year LOS		Impact	Recommended Mitigation	LOS with Mitigation	
	AM Delay – LOS	PM Delay – LOS			AM Delay – LOS	PM Delay – LOS
2015 (302 Equivalent Dwelling Units)						
The cumulative impact to Olympic Pkwy/I-805 northbound ramps would be mitigated by the TDIF fee.						
2020 (1,388 Equivalent Dwelling Units)						
Olympic Pkwy/ Brandywine Ave	42.9 – D	80.4 – F	Direct	Mitigation measure 5.3-12: Install northbound right turn overlap and extend westbound left turn pocket.	42.9 – D	46.4 – D
The cumulative impact to Olympic Pkwy/I-805 northbound ramps would be mitigated by the TDIF fee.						
2025 (2,234 Equivalent Dwelling Units)						
Birch Road/La Media Road	234.8 – F	190.5 – F	Direct	Mitigation measure 5.3-14: Construct Main Street from Village 8 West eastern boundary to Eastlake Parkway including bridge over SR-125.	37.9 – D	37.1 – D
Birch Road/Eastlake Pkwy	443.0 – F	454.5 – F	Direct		39.0 – D	40.3 – D
Main Street/Eastlake Pkwy	274.4 – F	242.8 – F	Direct		24.6 – C	24.1 – C
2030 (2,610 Equivalent Dwelling Units)						
Birch Road/La Media Road	91.0 – F	116.2 – F	Direct	Mitigation measure 5.3-15: Construct SR-125 northbound and southbound ramps at Main Street.	37.6 – D	41.9 – D
Birch Road/ SR-125 NB ramps	112.4 – F	31.8 – C	Direct		13.0 – B	6.2 – A
Birch Road/Eastlake Pkwy	117.2 – F	65.8 – E	Direct		37.2 – D	38.7 – D
Main Street / I-805 SB ramps	46.2 – D	55.9 – E	Cumulative		34.5 – C	55.0 – D
Main Street/ I-805 NB ramps	39.6 – D	57.8 – E	Direct		39.2 – D	54.7 – D
Main Street/La Media Road Couplet						
WB Main Street/ NB La Media	103.2 – F	48.0 – D	Direct	Mitigation measure 5.3-16: Construct Otay Valley Road from Village 8 West eastern boundary to Village 9 Street A including SR-125 overcrossing.	43.0 – D	41.1 – D
EB Main Street/ SB La Media	140.3 – F	95.2 – F	Direct		44.0 – D	47.5 – D
EB Main Street/ NB La Media	80.9 – F	42.5 – D	Direct		26.7 – C	36.1 – D
Main Street / Magdalena Avenue	131.3 – F	143.8 – F	Direct		32.1 – C	35.7 – D
Main Street/Eastlake Pkwy	141.9 – F	52.1 – D	Direct		52.5 – D	27.2 – C
NB = northbound; SB = southbound; WB = westbound; EB = eastbound Source: RBF 2013						

Table 5.3-25 Recommended Mitigation Measures – Roadway Segments

Study Roadway Segment	Study Year LOS			Impact	Recommended Mitigation	LOS With Mitigation	
	LOS C Capacity	ADT	LOS			ADT	LOS
2015 (302 Equivalent Dwelling Units)							
No calculated impacts							
2020 (1,388 Equivalent Dwelling Units)							
Olympic Parkway: Heritage Road to La Media Road	50,000	60,800	E	Direct	Mitigation measure 5.3-13: Construct Santa Victoria from Heritage Road to La Media and Heritage Road from Olympic Parkway to Santa Victoria.	55,600	D
The cumulative impacts to Olympic Pkwy from I-805 to Heritage Road and Heritage Road from Main Street to Avenida de Las Vistas would be mitigated by the TDIF fee.							
2025 (2,234 Equivalent Dwelling Units)							
Birch Road: La Media to SR-125	40,000	51,100	F	Direct	Mitigation measure 5.3-14: Construct Main Street from Village 8 West eastern boundary to Eastlake Parkway including bridge over SR-125.	23,200	A
Magdalena Avenue: Birch Road to Main Street	12,000	20,100	F	Direct		11,500	C
Eastlake Parkway: Birch Road to Main Street	40,000	54,600	F	Direct		35,400	C
The cumulative impact to Olympic Pkwy from Heritage Road to La Media Road would be mitigated by the TDIF fee.							
2030 (2,610 Equivalent Dwelling Units)							
Birch Road: La Media Road to SR-125	40,000	54,200	F	Cumulative	Mitigation measure 5.3-15: Construct SR-125 northbound and southbound ramps at Main Street	26,200	A
Birch Road: SR-125 to Eastlake Parkway	40,000	65,200	F	Cumulative		37,200	C
Main Street: I-805 to Brandywine Avenue	58,000	61,300	D	Direct		59,300	D
Main Street: Brandywine to Heritage Road	50,000	52,200	D	Direct		50,200	D
The cumulative impacts to 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 5.3-20 would also reduce impacts related to congestion management to a less than significant level.

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.

5.4 Air Quality

This section describes existing air quality conditions of the project site and the 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 GPA/GDPA area, including Village 8 West. 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 8 West SPA Project Air Quality Technical Report, prepared by Atkins in May 2013. The Air Quality Technical Report is included as Appendix C of this EIR. The analysis in the air quality technical report also provides the basis for the Village 8 West AQIP, included as part of the 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 ⁽¹⁾	Federal Standards ⁽²⁾	
		Concentration ⁽³⁾	Primary ^(3,4)	Secondary ^(3,5)
Ozone (O ₃)	1-hour	0.09 ppm (180 µg/m ³)	--	Same as Primary Standard
	8-hour	0.070 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)	
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m ³	--	
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate Standard	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	None
	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	53 ppm (100 µg/m ³) ⁶	Same as Primary Standard
	1-hour	0.18 ppm (470 µg/m ³)	100 ppb (188 µg/m ³) ⁶	None
Sulfur Dioxide (SO ₂)	24 Hour	0.04 ppm (105 µg/m ³)	--	--
	3 Hour	--	--	0.5 ppm (1300 µg/m ³) ⁷
	1-hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³) ⁷	--
Lead (Pb) ⁽⁸⁾	30 Day Average	1.5 µg/m ³	--	--
	Calendar Quarter	--	1.5 µg/m ³	Same as Primary Standard
	Rolling 3-Month Avg ⁽⁹⁾	--	0.15 µg/m ³	
	Visibility Reducing Particles	8-hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more due to particles.	No Federal Standard
Sulfates	24 Hour	25 µg/m ³	No Federal Standard	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m ³)	No Federal Standard	
Vinyl Chloride ⁽⁸⁾	24 Hour	0.01 ppm (26 µg/m ³)	No Federal Standard	

ppm = parts per million; ppb = parts per billion

⁽¹⁾ California standards for ozone, PM₁₀, CO, NO₂, SO₂ (1-hour and 24-hour), 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.

⁽²⁾ National standards, other than 1-hour ozone, 8-hour ozone, 24-hour PM₁₀, 24-hour PM_{2.5}, 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 PM₁₀ standard is attained when the 3-year average of the 99th percentile 24-hour concentrations is below 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of the 98th percentile 24-hour concentrations is below 65 µg/m³.

⁽³⁾ 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.

⁽⁴⁾ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

⁽⁵⁾ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

⁽⁶⁾ 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.

⁽⁷⁾ On June 2, 2010, the EPA established a new 1-hour SO₂ 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 using ultraviolet technology, but will retain the older pararosaniline methods until the new methods have adequately permeated state monitoring networks. The EPA also revoked both the existing 24-hour SO₂ standard of 0.14 ppm and the annual primary SO₂ standard of 0.030 ppm, effective August 23, 2010. The secondary SO₂ 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.

⁽⁸⁾ The CARB 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.

⁽⁹⁾ 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 8 West 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 also 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 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 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. 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).

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 8 West 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_x), sulfur dioxide (SO₂), and most fine particulate matter including lead and fugitive dust (PM₁₀ and PM_{2.5}) are primary air pollutants. Of these, carbon monoxide, sulfur dioxide, PM₁₀, and PM_{2.5} 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 PM₁₀ 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_x) 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 (NO₂). 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 (PM₁₀) 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_{2.5}) 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 PM₁₀ and PM_{2.5} 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 PM₁₀ 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_{2.5} 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 PM₁₀, PM_{2.5}, 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
Carbon Monoxide (CO)				
Maximum 8-hour concentration (ppm)	Chula Vista	1.43	1.56	-- ⁽¹⁾
Days above state or federal standard (>9.0 ppm)		0	0	-- ⁽¹⁾
Nitrogen Dioxide (NO₂)				
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
Ozone (O₃)				
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
Sulfur Dioxide (SO₂)				
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
Respirable Particulate Matter (PM₁₀)				
Peak 24-hour concentration (µg/m ³)	Chula Vista	58	45	46
Days above state standard (>50 µg/m ³)		2	0	0
Days above federal standard (>150 µg/m ³)		0	0	0
Fine Particulate Matter (PM_{2.5})				
Peak 24-hour concentration (µg/m ³)	Chula Vista	43.7	22.7	27.9
Days above federal standard (>35 µg/m ³)		1	0	0
⁽¹⁾ Insufficient data was available to CARB to determine the value ppm = parts per million, µg/m ³ = 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 ₂)	Attainment	Attainment
Ozone (1-hour)	Serious Non-attainment	-- ⁽¹⁾
Ozone (8-hour)	Serious Non-Attainment	Non-attainment
Lead (Pb)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Respirable Particulate Matter (PM ₁₀)	Non-attainment	Unclassified
Fine Particulate Matter (PM _{2.5})	Non-attainment	Attainment\Unclassified
⁽¹⁾ The federal 1-hour ozone standard was revoked in 2005 and is no longer in effect for California. Source: CARB 2011, EPA 2011a		

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. Village 8 West is currently undeveloped and no sensitive receptors are located on the site. The sensitive receptors closest to the project site include the following:

1. Olympian High School, approximately 100 feet east of the northeast corner of the project site;
2. Wolf Canyon Elementary school, approximately 875 feet (0.2 mile) northeast of the project site;
3. Residences located approximately 1,500 feet (0.3 mile) northeast of the project site; and
4. Residences located 1,750 feet (0.3 mile) north of the project site.

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) ⁽¹⁾	75	55
Nitrogen Oxides (NO _x)	100	55
Sulfur Oxides (SO _x)	150	150
Respirable Particulate Matter (PM ₁₀)	150	150
Fine Particulate Matter (PM _{2.5})	55	55
⁽¹⁾ 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 SEIR determined that potential impacts related to construction 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 SEIR air quality report does not quantify the potential impacts of construction of the Village 8 West 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 8 West is approximately 300 acres; however, only 261 acres of the site would be disturbed by onsite construction. The remaining onsite area consists of areas designated for open space. An additional 1.95 acres would be disturbed for installation of the off-site improvements and 4.57 acres would be graded on the City of San Diego reservoir property, for a total disturbance area of approximately 268 acres.

Development within Village 8 West would include single-family residences, multi-family residences, mixed-use commercial development, a community purpose facility, a middle school, and elementary school, 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. Village 8 West would be constructed in five development phases, as shown in Figure 3-16, and would include the following components:

- The **Orange** phase would develop a maximum of 351 multi-family residential units, 117 single-family units, a town square, and 174,000 square feet of commercial space in primarily the western portion of the site.
- The **Blue** phase would develop a maximum of 284 single-family residential units in the southwestern area of the site.
- The **Yellow** phase would include a maximum of 765 multi-family units, 126,000 square feet of commercial land use, a community park, and a middle school in the northern portion of the site.

- The **Purple** phase would develop a maximum of 220 single-family residential units and a neighborhood park in the southeast portion of the site.
- The **Green** phase would develop 313 multi-family residences, a community purpose facility, and an elementary school in the eastern portion of the site.

The sequencing of phases would be determined by market conditions. However, it is assumed that the Orange and Blue phases would be constructed prior to the Yellow, Green, and Purple phases because the Orange and Blue phases require blasting.

Regional impacts for construction are assessed using the Urban Emissions Model (URBEMIS 2007, version 9.2.4) distributed by the CARB. The URBEMIS 2007 model uses EMFAC 2007 emission factors for vehicle traffic and Off-Road 2007 for construction equipment. The construction activities, scheduling, grading quantities, and the construction equipment list (including size of equipment engines and load factor) described below were provided by the project applicant. Project development would be constructed in sequential phases starting in 2013, and to be conservative, the most intensive development phase was used for the worst-case daily construction emissions. A complete listing of the assumptions used in the analysis and model output is provided in Appendix C.

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 improvements would also require grading, trenching, and paving. 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 activities of the previous phase.

Table 5.4-5 Approximate Duration of Project Construction Activities Per Development Phase

Construction Activity	Duration
Mass Grading	3 months
Trenching	2 months
Surface Improvements	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 is assumed that 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 4.7 million cubic yards would be graded as a result of the project and replaced within the disturbance area, or 940,000 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. The Orange and Blue phases of construction would involve blasting during the grading operations and would require additional construction equipment compared to the Yellow, Green, and Purple phases, including a rock drill, crushing unit, and rock spread. Use of this equipment is included in the daily emission calculation for the grading activity. Typical grading equipment that would be used for grading in all phases 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 area (31 acres). Approximately six acres would be paved during each phase and would be accomplished in approximately two months. Approximately two acres would be required for the off-site improvements during one phase of development. A maximum of approximately 8 acres would be paved during one phase. Typical construction equipment required for paving would include graders, pavers, and rollers. Because building construction within Village 8 West would be completed by multiple developers, multiple areas 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 architectural coating activities would occur simultaneously with the building construction activities; therefore, the coating activities would also last approximately two years. The Yellow phase is projected to require the most and greatest diversity of development, including the highest number of residential units, almost one half of the proposed commercial development, the largest proposed recreational use, and a middle school. Therefore, the land uses proposed in the Yellow phase were used to determine maximum daily emissions from architectural coating and building construction. Construction of the off-site improvements 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 mentioned earlier, the Yellow phase was chosen as the basis for the worst case daily emissions). As shown in Table 5.4-6, 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 project would exceed the significance thresholds for nitrogen oxides, PM_{10} , and $PM_{2.5}$ during grading, and the nitrogen oxide threshold during surface improvements (paving). Impacts to air quality resulting from grading and surface improvement 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 simultaneously on one day. Since other development phases would be less intensive than the Yellow 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 combine to exceed the significance thresholds for nitrogen oxides, VOCs,

PM₁₀, and PM_{2.5} emissions. Therefore, simultaneous construction activities between development phases would potentially worsen significant impacts during construction.

Table 5.4-6 Maximum Daily Emissions per Construction Activity

Construction Activity	Pollutant Emissions (pounds/day)					
	CO	VOC	NO _x	SO _x	PM ₁₀	PM _{2.5}
Mass Grading ⁽¹⁾	174	44	379	0	4,345	918
Trenching ⁽²⁾	22	6	51	0	2	2
Surface Improvements (paving) ⁽³⁾	52	15	121	0	5	4
Building Construction and Coating Phases ⁽⁴⁾	161	36	81	0	4	3
Combined Daily Total for all Construction Activities	409	101	632	0	4,356	927
Significance Threshold	550	75	100	150	150	55
Significant Impact?	No	Yes	Yes	No	Yes	Yes

Bold = Exceeds significance threshold
CO = carbon monoxide; VOC = volatile organic compound; NO_x = nitrogen oxides; SO_x = sulfur oxides;
PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter
Modeling assumptions: Emissions are based on assumptions for the Yellow development phase, plus additional equipment added to account for blasting within the Blue and Orange phases, and off-site improvements. Worst-case construction activities for the Yellow development phases were assumed to occur during 2013-2015.

⁽¹⁾ Assumes a three-month period and a maximum land disturbance of 20 acres per day. A total of approximately 268 acres would be disturbed over five development phases. A total of 4.7 million cubic yards would be graded and replaced within the disturbance area, or 940,000 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. A drill rig, crushing unit, and tractor would be required for blasting in the Orange and Blue phases and are included in the modeled equipment list.

⁽²⁾ Assumes a two-month period. Equipment list includes two excavators, two dump trucks, a dozer, two backhoes, and a water truck.

⁽³⁾ Assumes a two-month period. Paving and surface improvements would be required for approximately 12 percent of the SPA area (31 acres), or six acres per phase. Assumes an additional two acres for off-site improvements. Equipment list includes a grader, a paver, a roller, and 27 dump trucks and concrete trucks.

⁽⁴⁾ 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 Yellow phase, which includes development of 765 multi-family units, 126,000 square feet of commercial land use, a community park, and a middle school. Assumes model defaults for low VOC coating (250 grams of VOC per liter or less).

Source: URBEMIS 2007. See Appendix C for data sheets.

The blasting operations in the Orange and Blue phases would also generate fugitive dust. The URBEMIS 2007 model takes into account emissions from construction equipment required for blasting, but does not include particulate emissions that would result from use of explosives. Therefore, fugitive dust emissions during grading of the Orange and Blue phases would be higher than estimated on the days that blasting occurs. However, blasting activities would only occur on a few days. Additionally, the project would result in significant particulate matter emissions during grading with or without blasting; therefore, mitigation is already required to minimize dust. However, because blasting would contribute to the potentially significant particulate matter impact from grading activities on the days that it would occur, specific dust-minimizing measures to be applied during blasting activities would be required.

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 area. 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 site. Impacts would cease once construction is complete. However, the Biological Resources Report prepared for Village 8 West (URS 2012) determined that potential indirect impacts to biological resources, including dust from construction, would be potentially significant.

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 source emissions were calculated using an ADT estimate of 26,104 trips provided in the traffic impact analysis (Appendix B) and the estimated vehicle trip length for Village 8 West of 4.62 miles that was determined in conjunction with SANDAG, as discussed in Section 5.10, Global Climate Change. Area sources of air emissions include natural gas combustion from water and space heating, landscape equipment, consumer products, and architectural coatings. All air quality modeling output files are provided in Appendix C.

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 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 project is 26,104 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. Two bus stops are proposed in the Village 8 West Town Center, one along west-bound Main Street and one along east-bound Main Street. The projected ADT also takes into account the TDM program included in the 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 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 nitrogen oxides, VOCs, and PM₁₀ during operation of the development in Village 8 West. 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 8 West. The findings in this report are consistent with the 2013 GPA/GDPA SEIR conclusion that significant impacts would occur.

Table 5.4-7 Operation Maximum Daily Emissions

Emissions Source	Pollutant Emissions (pounds/ day)					
	CO	VOC	NO _x	SO _x	PM ₁₀	PM _{2.5}
Vehicular Sources ⁽¹⁾	368	40	31	1	201	39
Area Sources						
Natural Gas ⁽²⁾	20	3	34	0	0	0
Hearth (fireplaces) ⁽³⁾	1	0	4	0	0	0
Landscape	38	6	0	0	0	0
Consumer Products	0	105	0	0	0	0
Architectural Coatings ⁽⁴⁾	0	15	0	0	0	0
Total Emissions	427	169	69	1	201	39
Significance Thresholds	550	55	55	150	150	55
Significant Impact?	No	Yes	Yes	No	Yes	No
<p>Bold = Exceeds significance threshold CO = carbon monoxide; VOC = volatile organic compounds; NO_x = nitrogen oxides; SO_x = sulfur oxides; PM₁₀ = respirable particulate matter; PM_{2.5} = 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>⁽¹⁾ Based on an ADT of 26,104 trips and an estimated vehicle trip length of 4.62 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 Village 8 West SPA Plan. A four percent vehicular emission reduction for VOC, NO_x, CO, and PM₁₀ emissions was applied for traffic light synchronization based on the SCAQMD CEQA Air Quality Handbook (1993).</p> <p>⁽²⁾ Assumes buildings comply with 15% above 2005 Title 24 standards.</p> <p>⁽³⁾ Assumes 15 percent of homes would have fireplaces, consistent with assumptions of the GPA/GDPA SEIR. No wood burning fireplaces would be allowed.</p> <p>⁽⁴⁾ Includes the use of low VOC coatings (250 grams of VOC per liter or less).</p> Source: CARB 2007. See Appendix C for data sheets.						

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 pollutants of concern regarding health effects for land development 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 State 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 as a result of development under the GPA/GDPA 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.

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 C. The traffic study prepared for Village 8 West (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 Plus Project scenario, as well as three interim scenarios (2015, 2020, 2025) and full project buildout (2030). The traffic study concluded that within each analysis scenario, some intersections would operate at an 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) Plus Full Project Buildout:** Main Street/Magdalena Avenue – LOS F (PM peak hour), 164 second delay
- **2015 Plus Phased Project Buildout:** Olympic Boulevard/I-805 northbound on-ramp – LOS F (AM peak hour), 116 second delay
- **2020 Plus Phased Project Buildout:** Olympic Boulevard/I-805 northbound on-ramp – LOS F (AM peak hour), 117 second delay
- **2025 Plus Phased Project Buildout:** Birch Road/Eastlake Boulevard – LOS F (PM peak hour), 454 second delay
- **2030 Plus Full Project Buildout:** Main Street/Magdalena Avenue – LOS F (PM peak hour), 144 second delay

The California Line Source (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 °F 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. See Appendix C for model output data sheets.

The highest estimated 1-hour carbon monoxide concentration would be 3.5 ppm at the Olympic Parkway/I-805 northbound on-ramp intersection during the 2015 Plus 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 2.4 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. Therefore, potential carbon monoxide impacts are less than significant.

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/Magdalena Avenue	2.8	2.0	No
2015 + Phased Project Buildout	Olympic Parkway/I-805 northbound on-ramp	3.5	2.4	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 C 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 °F 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.

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 health risk assessment as part of the CEQA review of the project. Attendant health risks identified in the assessment 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.

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 health risk assessment 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 3.6 million gallons per year), or within 300 feet of a dry cleaning facility that uses perchloroethylene (CARB 2005). Although the SPA Plan would include primarily residential and commercial uses, the proposed 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 8 West would be possible, but would be subject to the CARB siting recommendations and would not be allowed within 50 feet of a sensitive receptor. 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 8 West comply with SDAPCD standards, the impact associated with risk of toxic exposure to sensitive receptors is considered less than significant.

The 2005 GPU EIR lists the Otay Landfill as a major toxic emitter, and therefore new sensitive uses such as residences should not be located within 1,000 feet of this facility. The health risk assessment included in the technical appendices for the Final EIR for the Otay Landfill Development and Expansion Plan indicated that the incremental excess cancer risk of 10 in 1 million was limited to an area within 1,000 feet of the landfill (County of San Diego 2000). The proposed residences in Village 8 West would be located more than 2 miles east of the Otay Landfill. Therefore, potential impacts associated with TACs from the Otay Landfill are considered less than significant.

Exposure to diesel particulate matter generated by traffic on roadways is also a concern identified in the Chula Vista General Plan and CARB *Air Quality and Land Use Handbook*. City and CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway should be avoided. CARB also recommends siting sensitive land uses more than 500 feet from urban roads with 100,000 vehicles per day. The air quality report prepared for the GPA/GDPA SEIR determined that significant impacts from diesel particulate matter would not occur because the GPA/GDPA area, including Village 8 West, lies outside of the land use avoidance guidelines established by the CARB for roadways generating more than 100,000 vehicle trips per day (I-805 and SR-905).

The nearest sensitive receptors to these roadways would be the single-family residences proposed at the southern end of the project site. The nearest roadway, SR-905, is located approximately 1.5 miles south of the project site and is outside of the avoidance guidelines. SR-125 would carry less than 100,000 trips per day. Additionally, this roadway is located approximately 2,000 feet east of the project site. SR-125 would not result in significant diesel particulate matter concentrations at the project site. The traffic impact analysis prepared for the project does not identify any roadway segments that would carry more than 100,000 vehicles per day at build-out of the project (RBF 2013). Consequently, the project lies well outside of the land use avoidance guidelines established by the CARB, thus impacts related to toxic air emissions would be less than significant.

Sensitive receptors may also 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 measure 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 trucks that would frequent the area would not idle for extended periods of time. Village 8 West 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 8 West 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 area. Diesel particulate emissions from construction would be substantially reduced following completion of grading. Additionally, the majority (98 percent) of particulate matter emissions during grading are from fugitive dust. 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.

C. Threshold 3: Based 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 two miles west of the project area, 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 GPU EIR included a summary of the health risk assessment that was conducted to support the Final EIR prepared for the Otay Landfill Development and Expansion Plan (County of San Diego 2000). As part of the expansion, the landfill was also 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. 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 8 West (two miles) is beyond the screening distance (1,000 feet) established by the 2005 GPU EIR as resulting in a significant impact. However, even at a distance of two 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 8 West. 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 8 West, 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 8 West by 494 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.

Additionally, the project would also 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. As shown in Table 5.4-7, pollutant emissions from

vehicular emissions alone would exceed the thresholds for PM₁₀. Additionally, construction of the project would result in temporary significant emissions of nitrogen oxides, VOCs, PM₁₀, 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 growth projections in the RAQS and would exceed the significant thresholds for ozone precursors and particulate matter during construction and operation. Therefore, impacts related to consistency with applicable air quality plans would be potentially significant.

Table 5.4-9 Project Consistency with RAQS Control Measures

RAQS Control Measure	Project Consistency
Transit Improvements	Village 8 West 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 8 West 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 stops are proposed on the project site.
Park-and-Ride Facilities	The SPA Plan and TM does not specifically propose park and ride facilities; however, the SPA Plan is designed to provide transit stops in easily accessible areas and provide bicycle and pedestrian connections to transit stops so the transit riders would not need to drive to transit stops.
Bicycle Facilities	Within the Town Center, on-street bike lanes would be provided. Main vehicular thoroughfares would 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 that currently terminates at the south end of Magdalena Avenue would be extended through the project site and would provide a multi-use trail. A greenbelt trail would ultimately connect to the Salt Creek Trail as part of the Otay Valley Regional Park system.
Smart Growth Development	SANDAG'S Smart Growth Concept Map identifies Village 8 West as a Community Center to provide low to mid-rise residential and commercial buildings within one quarter mile of a transit center. The SPA Plan is consistent with this concept. The project promotes smart growth principles 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.
Pedestrian Facilities	The pedestrian circulation network includes an interconnected system of village pathways, sidewalks, and rural trails. All streets in Village 8 West would include a sidewalk or trail. 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 8 West and to adjacent villages.
Traffic Calming Practices	The SPA Plan and TM would implement several traffic calming measures including urban couplets; intersection bulb-outs; narrow, multi-modal streets; 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 8 West supports extension of the transit system by providing accessible transit stops and accommodating reserved transit lanes on project roadways.

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 evaluates 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>Objective E 6: 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>Policy E 6.1: Encourage compact development featuring a mix of uses that locate residential areas within reasonable walking distance to jobs, services, and transit.</p> <p>Policy E 6.2: Promote and facilitate transit system improvements in order to increase transit use and reduce dependency on the automobile.</p> <p>Policy E 6.6: 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>Policy E 6.7 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>Consistent. 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 best management practices 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
Part II, Chapter 6 – Air Quality	
<p>Goal: Minimize the adverse impacts of development on air quality.</p>	<p>Consistent. The Village 8 West 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 8 West AQIP has incorporated mitigation measures 5.4-1, 5.4-2, and 5.4-3 to further minimize criteria air pollutant emissions.</p>
<p>Goal: Land development patterns which minimize the adverse impacts of development on air quality.</p> <p>Objective: Encourage mixed use development to promote linking of trips, reduce trip length and encourage alternative mode usage.</p>	<p>Consistent. 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.</p>

Table 5.4-11 Project Consistency with Applicable GDP Air Quality Policy (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy: 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>Policy: Locate sensitive receptors, such as schools, day care facilities and similar uses away from emissions generating uses.</p> <p>Policy: Minimize "drive-in" establishments to reduce emissions from idling vehicles.</p>	<p>Consistent. 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>Policy Arterials and transit stops should be linked by a network of sidewalks and bike paths.</p> <p>Policy: 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>Policy: 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>Policy: Locate employment centers close to housing, transit and HOV lane corridors.</p>	
<p>Objective: Minimize particulate emissions, which are the result of the construction process.</p> <p>Policy: Minimize particulate emission during construction to control fugitive dust.</p> <p>Policy: Minimize simultaneous operation of multiple construction vehicles and equipment, use low polluting construction equipment.</p> <p>Policy: Manage unpaved roads to minimize particulate emissions during the construction and development activities, and during interim agricultural/off road activities.</p>	<p>Consistent. Mitigation measure 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 have the potential to result significant criteria pollutant emissions 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 (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, PM₁₀, and PM_{2.5} 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, PM₁₀, and PM_{2.5} 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 C).

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 PM₁₀ 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:

- 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 (PM₁₀ and PM_{2.5}). 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 the 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.
- x. During blasting, utilize control measures to minimize fugitive dust. Control measures may include, but are not limited to, blast enclosures, vacuum blasters, drapes, water curtains, or wet blasting.

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 contaminant 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 the 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 (PM₁₀ and PM_{2.5}). 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 8 West 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, PM₁₀, and PM_{2.5} 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, PM₁₀, and PM_{2.5}. 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 _x	SO _x	PM ₁₀	PM _{2.5}
Unmitigated Emissions						
Mass Grading Total Emissions ⁽¹⁾	174	44	379	0	4,345	918
Trenching ⁽²⁾	22	6	51	0	2	2
Surface Improvements (paving) ⁽³⁾	52	15	121	0	5	4
Building Construction and Coating Phases ⁽⁴⁾	161	36	81	0	4	3
Combined Daily Total for all Construction Activities (unmitigated)	409	101	632	0	4,356	927
Mitigated Emissions⁽⁵⁾						
Mass Grading Total Emissions ⁽¹⁾	174	44	323	0	2,460	522
Trenching ⁽²⁾	22	6	44	0	1	1
Surface Improvements (paving) ⁽³⁾	52	15	103	0	4	3
Building Construction and Coating Phases ⁽⁴⁾	161	36	72	0	4	3
Combined Daily Total for all Construction Activities (mitigated)	409	101	542	0	2,469	529
Significance Threshold	550	75	100	150	150	55
Significant Impact?	No	Yes	Yes	No	Yes	Yes
<p>Bold = Exceeds significance threshold CO = carbon monoxide; VOC = reactive organic gases; NO_x = nitrogen oxides; SO_x = sulfur oxides; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter Modeling assumptions: Emissions are based on assumptions for the Yellow phase, plus additional equipment added to account for blasting within the Blue and Orange phases, and off-site improvements. Worst-case construction activities for the Yellow phase were assumed to occur during 2013-2015.</p> <p>⁽¹⁾ Assumes a three-month period and a maximum land disturbance of 20 acres per day. A total of approximately 268 acres would be disturbed over five development phases. A total of 4.7 million cubic yards would be graded and replaced within the disturbance area, or 940,000 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. A drill rig, crushing unit, and tractor would be required for blasting in the Orange and Blue phases and are included in the modeled equipment list.</p> <p>⁽²⁾ Assumes a two-month period. Equipment list includes two excavators, two dump trucks, a dozer, two backhoes, and a water truck.</p> <p>⁽³⁾ Assumes a two-month period. Paving and surface improvements would be required for approximately 12 percent of the project area (31 acres), or six acres per phase. Assumes an additional two acres for off-site improvements. Equipment list includes a grader, a paver, a roller, and 27 dump trucks and concrete trucks.</p> <p>⁽⁴⁾ 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. Based on the Yellow phase, which includes development of 765 multi-family units, 126,000 square feet of commercial land use, a community park, and a middle school. Assumes model defaults for low VOC coating emissions (250 grams of VOC per liter or less).</p> <p>⁽⁵⁾ 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 PM₁₀ and PM_{2.5} 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 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: CARB 2007. See Appendix C 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 SPA Plan. 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 nitrogen oxides, VOCs, and PM₁₀ would be significant and unavoidable.

Mitigation measure 5.4-4 ensures that any use within Village 8 West that emits TACs would comply with SDAPCD criteria, and therefore impacts would be less than significant after mitigation.

B. Sensitive Receptors

With the implementation of mitigation measure 5.4-4 identified above, air quality impacts related to sensitive receptors would be reduced to below a level of significance.

C. Objectionable Odors

Impacts would be 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, PM₁₀, and PM_{2.5}. 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 GPA/GDPA SEIR air quality analysis.

E. Consistency with Air Quality Policies

Impacts would be less than significant without mitigation.

5.5 Noise

This section describes the existing noise environment of Village 8 West 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 8 West. 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 8 West 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

CVMC Chapter 19.68, 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) ^(1,2,3)	
	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
⁽¹⁾ Environmental Noise – Leq in any hour, Nuisance Noise – not be exceeded any time ⁽²⁾ 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. ⁽³⁾ 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		

CVMC 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.

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		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night
	— 20 —	
		Broadcast/recording studio
	— 10 —	
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 8 West 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	Western edge of Planning Area E in the north-west area of Village 8 West. Proposed site of multi-family housing in Neighborhood Center Zone.	Birds, planes taking off from Brown Field, distant traffic	3-18-2011 / 9:11 a.m.	53	68	41
2	Northern boundary of Planning Area L in the middle of Village 8 West. Proposed site of mixed-use development in the Town Center.	Distant construction noise and traffic, birds, rustling grasses	3-18-2011 / 9:36 a.m.	42	55	37
3	Lot 56 in Planning Area B in the southeast area of Village 8 West. Proposed site of single-family development in the Neighborhood Edge Zone.	Birds, distant traffic and construction, plane and helicopters flyovers	3-18-2011 / 9:58 a.m.	43	50	36
4	Eastern end of Main Street on the northeast edge of Village 8 West at the intersection of Magdalena Avenue and Main Street.	Occasional traffic on Main Street and Magdalena Avenue, loudspeaker announcements at Olympian High School, distant noise from children playing	3-18-2011 / 12:01 p.m.	55	71	33
5	Southeast corner of Fleishbein Street and 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 42 dBA and 55 dBA Leq within the project site. This is consistent with the noise measurement taken along the northern border of the project site for 2013 GPA/GDPA SEIR, which measured a noise level of 52 dBA Leq. The primary noise sources included birds, planes and helicopters taking off from Brown Field, and distant traffic and construction. Although the SR-125 is the closest major roadway to the project site, traffic noise was primarily from the I-805, located west of the project site. 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 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 and TM.

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: Hale Engineering 2010

Not to Scale



**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 1.5 miles to the southwest of Village 8 West. This general aviation airport is located in and operated by the City of San Diego. It accommodates propeller and jet powered aircraft and serves as a port of entry for private aircraft entering the United States from Mexico. It is also used for military and law enforcement agencies and is classified as a “reliever airport” by the FAA. According to the ALUCP for Brown Field, the airport has an 8,000 foot long runway. The predominant runway alignments are east-west. The types of aircraft that use the airport vary from small single-engine pistons to large corporate jets and military aircraft, including helicopters. There were 101,117 operations at Brown Field in 2011, and 91,025 operations in 2010. Due to distance and the orientation of the runway, the project area is not located within 60 dBA CNEL noise contour for the airport, or within the airport’s area of influence.

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 the City of San Diego reservoir. Vehicular traffic along roadways in the vicinity contributes to the overall noise environment on the project site. La Media Road currently terminates at the northerly boundary of Village 8 West, and Magdalena Avenue terminates at the northeast corner of the Village 8 West boundary. Magdalena Avenue serves Olympian High School, which currently generates traffic and traffic noise, particularly at the beginning and end of school days. Major roadways in the area surrounding Village 8 West include SR-125, located approximately 0.5 mile east of the project site, and Olympic Parkway, which is located approximately 0.75 mile north of the project site. Table 5.5-5 shows the existing noise levels generated by the roadways surrounding the project site. As shown in Table 5.5-5, 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.

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 utilize 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 Chula Vista near I-5, approximately 6 miles west of the project site. Due to distance, railway noise is not audible at 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
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).

3. Operational Noise Sources

The project site is currently undeveloped. A City of San Diego Reservoir facility is located approximately in the center of the site, and is a passive facility that does not generate operational noise. The lands surrounding the project site on the south, west, and east are primarily undeveloped. Village 7, to the north of the project site, is partially developed. Olympian High School and Magdalena Avenue border the northeast corner of Village 8 West. Land uses north of the high school include an elementary school and residences. The portion of Village 7 east of La Media Road and north of Village 8 West is designated for future low density residential development. Village 7 has been planned in accordance with the traditional village model consisting of predominantly low-medium village residential neighborhoods, a small mixed use village core, and limited multi-family uses adjacent to SR-125.

Olympian High School is a source of operational noise. Noise sources associated with Olympian High School includes bells, other signaling devices, and activities on the campus such as crowd noise and loudspeakers at football games. Bells and other signaling devices are classified as stationary non-emergency signaling devices by the city, and schools are prohibited in the noise ordinance 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. Typically, the main sources of noise from high schools to

the surrounding area are organized sports activities at the football stadium that involve amplified speakers and crowd noise. The football field is located on the east side of the campus, approximately 0.25 mile from the project site, and is separated from the site by the campus buildings.

The Noise Technical Report for Otay Ranch Villages 2 and 3, Planning Area 1B, and a Portion of Village 4 (RECON 2005) determined that the worst-case noise level for a championship game event at the Otay Ranch High School would be 71 dBA at a distance of 50 feet from stadium loudspeakers located approximately 30 feet above the playing field. This type of event is considered a worst-case scenario for game noise because championship games generally include a full stadium of spectators. Otay Ranch High School has a maximum stadium capacity of 5,500 people. The maximum capacity of the Olympian High School stadium is 3,071 people; therefore, this estimate is conservative for Olympian High School (SUHSD 2011). When the speakers were not in use, crowd noise was estimated to emit a noise level of approximately 65 dBA at 60 feet from the top of the stadium stands. Based on these estimates, football games currently generate a noise level of 43 dBA at the Village 8 West site when speakers are in use, and 39 dBA when crowd noise is the noise source, and thus do not exceed city noise standards. However, large events may occasionally be audible in the northeastern area of the SPA.

Village 8 East, to the east of the site, is also planned for mixed-use and residential development in the GDP. Future land uses planned for Village 4, to the west of the project site, include residential development and a community park. However, these areas have not yet been developed and do not generate operational noise. Otay Valley Regional Park and the Otay River Valley form the southerly boundary of the project site and are proposed to remain undeveloped.

Otay Valley Rock Quarry produces rock products for construction material. Rock material is extracted on the site and processed into several types of building material, including aggregates, fill, sand, and rip rap. The quarry also offers an on-site recycling service for concrete and asphalt paving materials (Otay Valley Rock, LLC 2010). The quarry is located southwest of Village 4, approximately 0.3 mile from the project site. The project site and the quarry are separated by Rock Mountain and operation of the quarry is generally not audible on the project site. Intermittent noise from particularly loud operations, such as blasting, is occasionally audible on the project site. The quarry has been approved to expand operations east to within approximately 300 feet of the Village 8 West boundary. The Otay Valley Quarry Reclamation Plan Amendment was approved, and the accompanying EIR certified, in June 2011.

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 across Magdalena Avenue from the project, approximately 150 feet east of the northeast corner of the project site. Other NSLU in the project vicinity are the Wolf Canyon Elementary school and residences located north of the high school. The elementary school is located approximately 875 feet (0.2 mile) northeast of the project site, and the nearest residence is located approximately 1,500 feet (0.3 mile) northeast of the project site. Residences are also located 1,750 feet (0.3 mile) north of the project site. The Chula Vista MSCP Subarea Plan defines sensitive wildlife species as noise sensitive. MSCP Preserve area is located adjacent to the southern boundary of Village 8 West, and approximately 50 feet west of Planning Area E.

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 2.25 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 ground borne vibration or ground borne 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 Village 8 West 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 8 West 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 Town Center. 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; as such, 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 have the potential to generate noise that may exceed the city 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 only permitted in the Town Center. Within the mixed-use Town Center, residential development and commercial development would be located adjacent to or with the same building as each other. The proposed middle school is in the Town Center would potentially be exposed to excessive noise from a commercial HVAC unit. Additionally, multi-family and single-family residences or other NSLU located on the northern edge of Planning Area N in the Neighborhood Edge Zone, and the eastern edge of Planning Areas E and I and western edge of Planning Areas M and O in the Neighborhood Center Zone would be located adjacent to Town Center development and may be exposed to HVAC noise. Single-family residences in the Planning Areas Q and U, the elementary school in Planning Area S, and multi-family residences in Planning Area O would be located near the CPF site. HVAC noise would have the potential to exceed city nighttime noise standard of 45 dBA at single-family residences up to 500 feet from the source. Therefore, proposed parks within 500 feet of a commercial HVAC unit, schools within 155 feet of a commercial HVAC unit, multi-family residences within 275 feet of a commercial HVAC unit, and single-family residences within 500 feet, could be exposed to noise levels that exceed city noise standards. A potentially significant noise impact would occur.

Olympian High School is located approximately 150 feet east of the project site, and approximately 400 feet northeast of 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 nearest off-site residences are located approximately 1,800 feet north of the project site on Fleishbein Street. 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 8 West would involve deliveries of supplies to the offices and commercial uses. State law currently prohibits heavy-duty diesel delivery trucks from idling more than five minutes, so noise from idling trucks would be limited to five minutes. Additionally, truck trips would be periodic throughout the Town Center 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, including compliance with city noise ordinance standards. 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 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 area of the site in the Town Center and Neighborhood Center Zone. 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 Town Center and Neighborhood Center Zone) 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 prohibits nuisance noise from exceeding the noise standards at any time. Compliance with the noise ordinance would limit exposure to excessive nuisance noise. The Chula Vista Police Department enforces the nuisance noise provisions of the 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. Community Park

Visitors to the Community Park would participate in active and passive recreational activities. Visitors and recreational activity participants are expected to generate a range of noise levels typical of recreational activities. Community centers and parks would generate incidental recreational noise such as cheering for sports activities or children at play. Potential Community Park amenities and facilities include play equipment, seating areas, athletic fields, a skate park, sport courts, multi-purpose fields, a gymnasium, a recreation complex building, and walking trails. Passive recreational activities such as walking, reading, and dining in open turf areas and group picnic areas will typically generate lower noise levels as compared to active sports play. Normal park operating hours would be daily from 6:30 a.m. to 10:30 p.m.; however, indoor use areas (such as the gymnasium or recreation complex building at the Community Park) may be in use past 10:30 p.m.

The Community Park in the northwest area of Village 8 West is part of a larger proposed community park. The remaining park area is located in Village 4. The EIR for the Otay Ranch Village 2, 3, and Portion of 4 SPA Plan (SCH #2003091012) included an analysis of noise that would potentially be generated by activity at the Community Park (City of Chula Vista 2006). The analysis determined that multi-purpose fields would have the potential to generate noise levels of approximately 54 dBA at 50 feet, and a skate park facility would have the potential to generate noise levels of 70 dBA at 50 feet. The locations of any potential Community Park uses are not known at this time. However, consistent with the Community Park analysis in the EIR for the Villages 2, 3, and Portion of 4 SPA Plan, skate park noise is considered the worst-case noise level that could be generated at 50 feet from the Community Park. Therefore, the Community Park would have the potential to exceed the daytime one-hour 60 dBA Leq limit if the loudest noise sources are placed within 160 feet of the multi-family Town Center and Neighborhood Center Zones. Potentially affected would be the residences in Planning Areas B, C, E, and F.

According to Section 2.66.270 of the Chula Vista Municipal Code, some parks in the city stay open as late as 10:30 p.m.; therefore, the Community 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 if noise-generating activities are expected to operate after 10:00 p.m. However, it is reasonable to assume that noise levels would generally be lower than 70 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 afternoon skate park 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 Community 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 Library and Recreation. If a permit is not obtained, Section 2.66.185 of the Chula Vista Municipal Code 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 continuous 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 Community Park would not result in significant impact.

Scheduled maintenance by maintenance crews would occur on a daily basis at the Community 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. Neighborhood Park

A Neighborhood Park is proposed in the southern area of the project site and would accommodate uses such as athletic fields, sports courts, play equipment, and picnic areas. As discussed above under Community Park, athletic fields would potentially generate noise levels of 54 dBA at 50 feet. Therefore, the Neighborhood Park would generally not exceed the daytime noise limit of 55 dBA more than 45 feet from the park. However, some residences may be located at the western edge of Planning Area T within 45 feet of the park and would have the potential to be exposed to excessive noise.

As noted earlier, some parks in the city remain open until 10:30 p.m.; therefore, the Neighborhood Park could be subject to the stricter city nighttime one-hour noise standard of 45 dBA between 10:00 p.m. and 10:30 p.m. for single-family residential uses if noise-generating activities from sports fields are expected to operate after 10:00 p.m. Similar to the Community Park, it is reasonable to assume that noise levels would generally be lower than those occurring during peak park activity hours. Therefore, noise levels from Neighborhood Parks would not be expected to exceed nighttime noise standards between 10:00 p.m. and 10:30 p.m.

Similar to the Community Park, use of electronic amplification equipment would be subject to the City's permit and operation of landscaping equipment would be subject to the City's one-hour noise limits. Therefore, a significant impact would not occur as a result of these activities.

5. Town Square and Other Recreation Facilities

A Town Square would be located in the middle of the Town Center in Planning Area G. Additional parks, trails, and playgrounds are a permitted use throughout the SPA. The proposed trails throughout the project site and the off-site trail connection to the Otay River Valley would be used for walking and bicycling and would generally not support activities that would generate noise levels higher than normal conversation. The Town Square and small playgrounds would not include athletic fields or other major active use facilities. The Town Square and playground would generate noise levels less than the Neighborhood Park noise level of 54.3 dBA at 50 feet. The neighborhood playgrounds would generally not be in use after dark, and nighttime activity in the Town Square would be expected to be limited to normal conversation levels. Therefore, these facilities would not generate noise levels that exceed the City's noise level limits and significant impact would not occur. Similar to the Community Park and Neighborhood Park, use of electronic amplification equipment and maintenance activities at these facilities would not result in a significant impact.

6. Schools

A middle school and elementary school are proposed along the eastern boundary of the project site. The middle school would be located in Planning Area D in the Town Center, and the Elementary School would be located in Planning Area S in the Neighborhood Center Zone. 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 middle and elementary school would comply with city noise standards and would not result in significant impact related to bells and loudspeaker announcements.

The middle school and elementary school would also include recreational facilities such as sports fields at the middle school, and an elementary school playground. Noise from these facilities would be limited to daytime hours. The level of activity at these facilities during recess and afterschool activities is assumed to be similar to active use of the multi-purpose fields at the Neighborhood and Communities Parks. 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. All residences would be separated from the elementary school by a roadway and would not be exposed to excessive noise from the elementary school. The middle school site is adjacent to Planning Area C; however, a proposed slope would provide approximately 25 feet of separation between Planning Area C and the Middle School. A potentially significant impact would not occur. Similar to the Community Park and Neighborhood Park, use of electronic amplification equipment and maintenance activities at the schools would not result in a significant impact.

7. Operational Noise Associated with Infrastructure Improvements

The infrastructure improvements associated with Village 8 West 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 to 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 Chula Vista 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 made for buildout (2030) traffic volumes along roadway segments using the FHWA Traffic Noise Model (TNM) Version 2.5 (2004). The modeling calculations take into account the posted vehicle speed, traffic volume, the estimated vehicle mix, and site topography. The traffic volumes are based upon data from the traffic study prepared for the project by RBF Consulting (2013). The Unmitigated Year 2030 scenario represents the worst-case condition for off-site roadway noise impacts. 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, this scenario was used for the analysis of long-term on-site traffic noise impacts on proposed NSLU.

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 based on the project traffic study.

Noise levels were modeled for a series of receiver locations throughout the project area to determine the future noise traffic noise levels at locations where NSLU have been proposed according to the TM for Village 8 West (July 2011), as shown in Figure 5.5-2. In areas where individual lots have not been planned yet, receptor locations were placed 50 to 75 feet from the roadway centerline. Noise levels were modeled for ground level and upper story receptors at each location. Buildings proposed within Village 8 West range from two stories to four stories in height. The maximum floor height for the transect zones ranges from 26 feet (zone T2) to 51 feet (zone T4).

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 those provided in Table 5.5-7. Additionally, ground-level noise contours were calculated for the primary site roadways: La Media Road, Main Street, Otay Valley Road, Street A, Street B, and Magdalena Avenue. 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 Appendix D.

Existing measured daytime ambient noise levels on the project site range from 42 dBA to 55 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 72 dBA (CNEL) at 50 feet from 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 the Chula Vista noise compatibility guidelines. No impact related to existing on-site NSLU would occur.

Table 5.5-6 2030 Buildout On-site Roadway Traffic Volumes

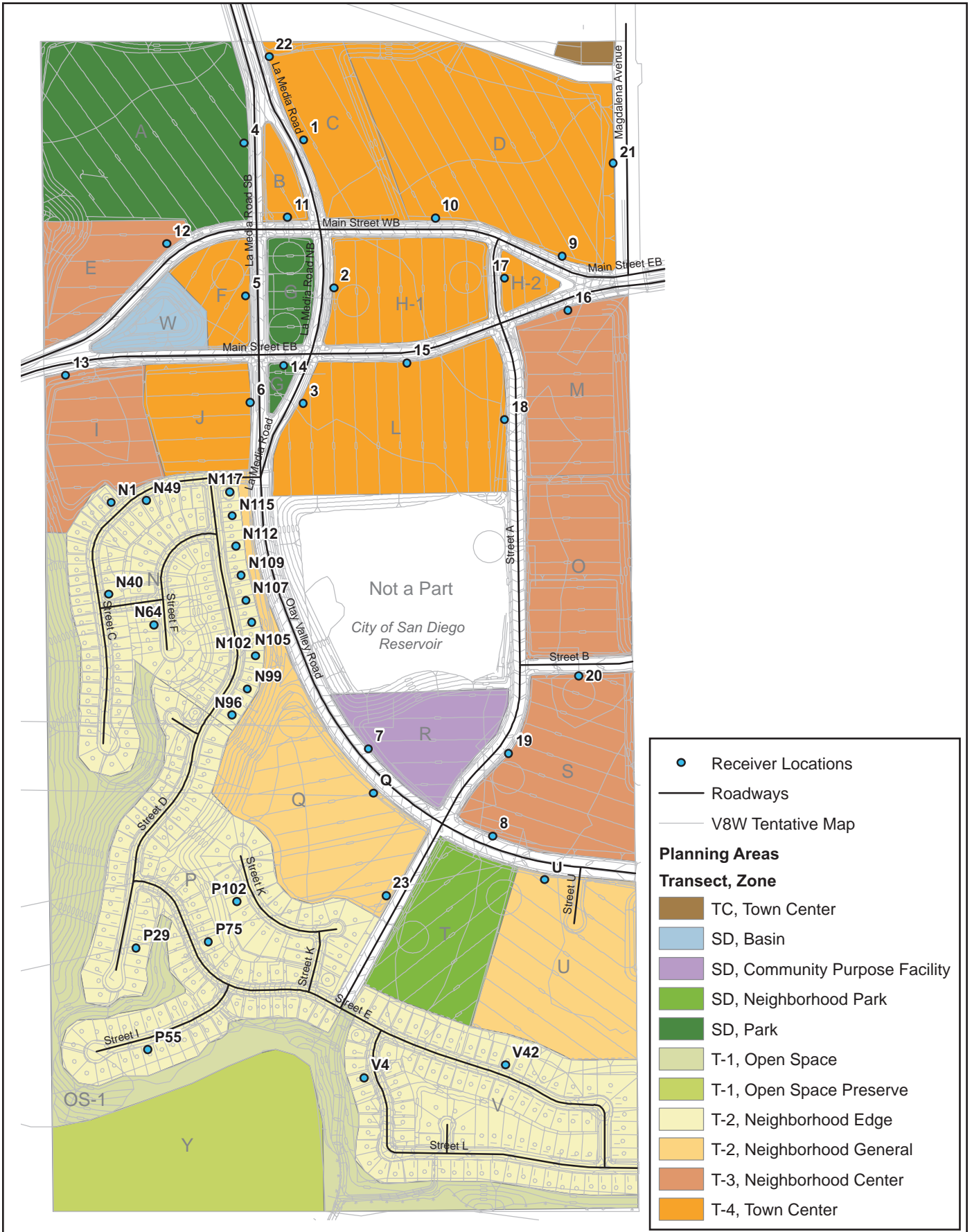
Roadway	Segment	Speed (mph) ⁽¹⁾	ADT Volume ⁽²⁾	Vehicle Mix		
				Autos	MDT	HDT
La Media Road	Northbound, northern project boundary to northern end of couplet	30	10,800	95%	3%	2%
La Media Road	Northbound, eastbound Main Street to westbound Main Street	30	15,100	95%	3%	2%
La Media Road	Northbound, split to eastbound Main Street	30	17,380	95%	3%	2%
La Media Road	Southbound, northern project boundary to northern end of couplet	30	12,150	95%	3%	2%
La Media Road	Southbound, westbound Main Street to eastbound Main Street	30	13,940	95%	3%	2%
La Media Road	Southbound, eastbound Main Street to split	30	18,750	95%	3%	2%
Otay Valley Road	Southern end of couplet to Street A	45	39,530	95%	3%	2%
Otay Valley Road	Street A to eastern project boundary	45	35,400	95%	3%	2%
Main Street	Westbound, eastern project boundary to Street A	30	21,400	95%	3%	2%
Main Street	Westbound, Street A to La Media Road northbound couplet	30	19,450	95%	3%	2%
Main Street	Westbound, La Media Road northbound to southbound couplet	30	11,500	95%	3%	2%
Main Street	Westbound, southbound La Media Road couplet to western project boundary	30	14,810	95%	3%	2%
Main Street	Eastbound, western project boundary to La Media Road southbound	30	19,560	95%	3%	2%
Main Street	Eastbound, southbound La Media Road to northbound La Media Road	30	21,120	95%	3%	2%
Main Street	Eastbound, northbound La Media Road to Street A	30	21,000	95%	3%	2%
Main Street	Eastbound, Street A to eastern project boundary	30	24,450	95%	3%	2%
Street A	Westbound Main Street to eastbound Main Street	30	3,650	97%	2%	1%
Street A	Eastbound Main Street to Street B	30	8,300	97%	2%	1%
Street A	Street B to Otay Valley Road	25	13,750	97%	2%	1%
Street B	Street A to eastern project boundary	25	7,900	97%	2%	1%
Magdalena Ave	Santa Luna Street to Main Street	25	11,100	95%	3%	2%
La Media Road	Northbound, Birch Road to northern project boundary	45	18,000	95%	3%	2%
Street A	South of Otay Valley Road	25	8500	97%	2%	1%

⁽¹⁾ On-site roadway speed is the posted speed limit proposed for the roadway provided in the SPA Plan.

⁽²⁾ ADT volumes are based on the peak hour intersection volumes provided in the TIA in Exhibits 39 and 41 (RBF 2013). ADT is assumed to be ten times the peak hour volume.

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 Year 2030 Mitigated scenario in the project traffic study. Source: RBF 2013.



Source: Atkins 2011



NOISE RECEIVER LOCATIONS
FIGURE 5.5-2

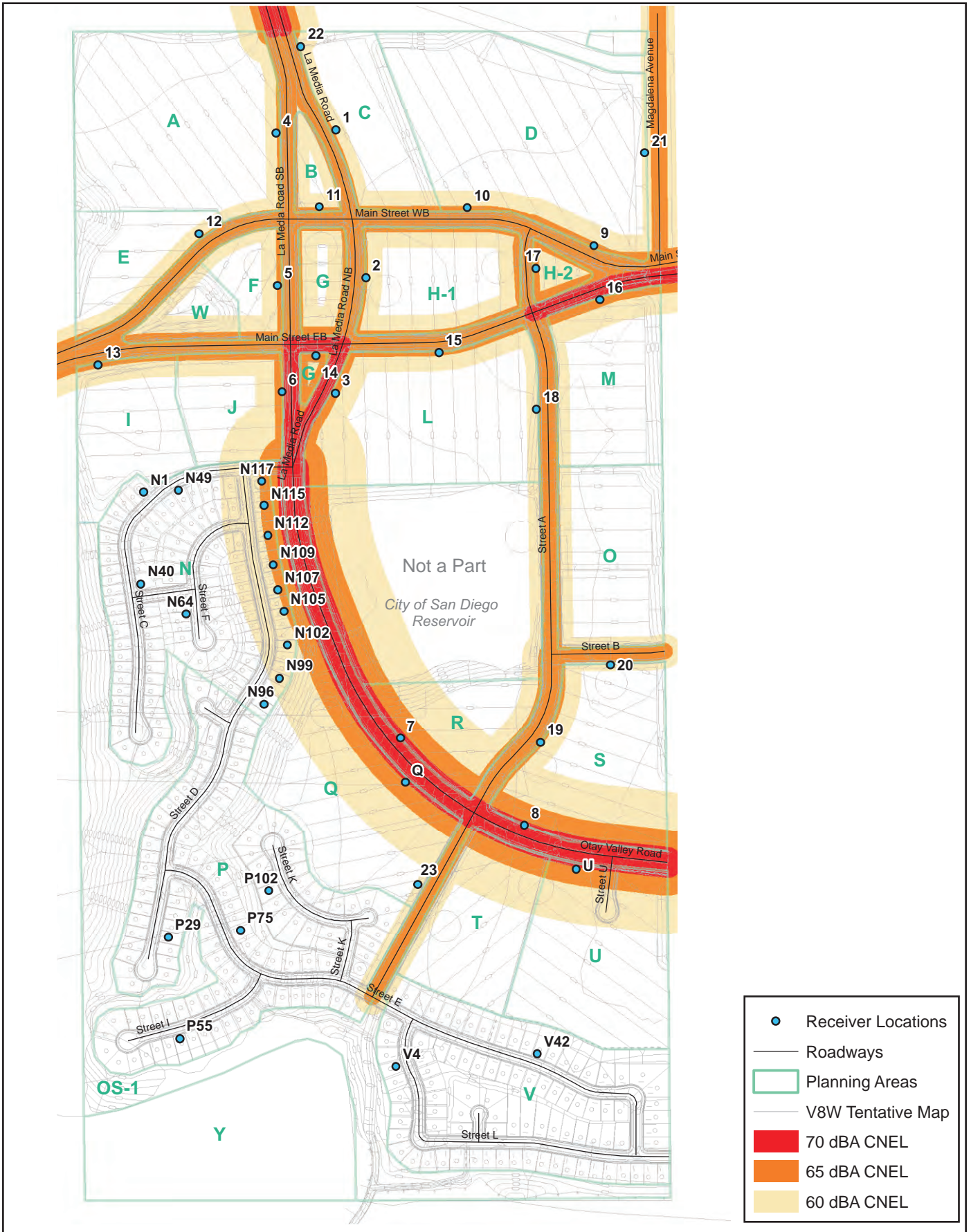


Table 5.5-7 On-site 2030 Buildout Noise Levels

Receiver Location ⁽¹⁾	Planning Area	Receiver Type	Acceptable Noise Level ⁽²⁾	Ground Level Traffic Noise Level (dBA CNEL)	Upper Story Traffic Noise Level (dBA CNEL)	Significant Impact?
Lot N1	N	Single-family Residence	65	59	59	No
Lot P29	P	Single-family Residence	65	56	56	No
Lot N40	N	Single-family Residence	65	59	59	No
Lot N49	N	Single-family Residence	65	59	59	No
Lot N64	N	Single-family Residence	65	57	57	No
Lot N96	N	Single-family Residence	65	59	59	No
Lot N99	N	Single-family Residence	65	61	61	No
Lot N102	N	Single-family Residence	65	62	62	No
Lot N105	N	Single-family Residence	65	65	65	No
Lot N107	N	Single-family Residence	65	65	65	No
Lot N109	N	Single-family Residence	65	66	66	Yes
Lot N112	N	Single-family Residence	65	66	66	Yes
Lot N115	N	Single-family Residence	65	67	67	Yes
Lot N117	N	Single-family Residence	65	67	67	Yes
Lot P55	P	Single-family Residence	65	56	56	No
Lot P75	P	Single-family Residence	65	58	58	No
Lot P102	P	Single-family Residence	65	58	58	No
Lot V4	V	Single-family Residence	65	58	58	No
Lot V42	V	Single-family Residence	65	59	59	No
#1	C	Multi-family Residences, Commercial	65	64	64	No
#2	H-1	Multi-family Residences, Commercial	65	66	65	Yes
#3	L	Multi-family Residences, Commercial	65	67	67	Yes
#4	A	Multi-family Residences, Commercial, Community Park	65	64	64	No
#5	F	Multi-family Residences, Commercial	65	66	65	Yes
#6	J	Multi-family Residences, Commercial	65	68	67	Yes
#7	R	CPF	65	72	72	Yes
#8	S	Elementary School	65	72	71	Yes
#9	D	Middle School	65	67	67	Yes
#10	C/D	Multi-family Residences, Commercial, Middle School	65	66	66	Yes
#11	B	Multi-family Residences	65	66	66	Yes
#12	E	Multi-family Residences, Commercial	65	64	64	No
#13	I	Multi-family Residences	65	67	66	Yes
#14	G	Town Square	65	68	68	Yes
#15	L	Multi-family Residences, Commercial	65	66	67	Yes
#16	M	Multi-family Residences	65	68	68	Yes
#17	H-2	Multi-family Residences, Commercial	65	66	66	Yes
#18	L	Multi-family Residences, Commercial	65	64	64	No

Table 5.5-7 On-site 2030 Buildout Noise Levels (continued)

Receiver Location ⁽¹⁾	Planning Area	Receiver Type	Acceptable Noise Level(2)	Ground Level Traffic Noise Level (dBA CNEL)	Upper Story Traffic Noise Level (dBA CNEL)	Significant Impact?
#19	S	Elementary School and CPF	65	66	66	Yes
#20	S	Multi-family Residences, Elementary School	65	63	62	No
#21	D	Middle School	65	63	62	No
#22	C	Multi-family Residences, Commercial	65	68	67	Yes
#23	Q	Single-family Residences	65	63	64	No
#Q	Q	Single-family Residences	65	70	70	Yes
#U	U	Single-family Residences	65	70	70	Yes

⁽¹⁾ Receivers #1 through 23 are located 50 feet from the roadway centerline. Receptors at Planning Areas Q and U are located 75 feet from the roadway centerline. Lot noise levels are calculated at the lot location and vary in distance from the roadway centerline. See Figure 5.5-2 for receptor locations. Upper story receivers are assumed to be located at a floor height of 26 feet.

⁽²⁾ 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** and **shading**.

Source: FHWA 2004. See appendix for noise model outputs.

As shown in Table 5.5-7 and on Figure 5.5-3, the ground level and upper story receivers in single-family residential lots in Planning Area N closest to Otay Valley Road, just south of the couplet, would potentially be exposed to noise levels in excess of 65 dBA CNEL, which is the city exterior noise level limit for residences. Additionally, as shown in Table 5.5-7 and the noise contours in Figure 5.5-3, ground floor and upper story multi-family residences and outdoor use areas in Planning Areas B, C, H-1, H-2, J, and L; ground level multi-family residences and outdoor use areas in Planning Area F; the Town Square (Planning Area G), and the middle school (Planning Area D) in the Town Center would potentially be exposed to noise levels in excess of the city noise compatibility guidelines from north and southbound La Media Road and east and westbound Main Street. Ground level and upper story multi-family residences and outdoor use areas in Planning Areas I and M would potentially be exposed to excessive noise levels from eastbound Main Street.

The elementary school (Planning Area S) and CPF (Planning Area R) would potentially be exposed to excessive noise levels from Otay Valley Road and Street A, north of Otay Valley Road. The Neighborhood Park (Planning Area T), which is subject to a 65 dBA CNEL standard, would potentially be exposed to excessive noise levels from Otay Valley Road. Single-family residences and outdoor use areas in Planning Areas Q and U along Otay Valley Road would be potentially exposed to excessive noise levels. Finally, some office uses would be potentially located in the Town Center, which are compatible with noise levels up to 70 dBA CNEL. As shown in Figure 5.5-3, traffic noise would not exceed 70 dBA CNEL outside of the roadway right-of-way in the Town Center, except for along La Media Road at the southern end of the couplet. If offices are located in this area, they may be exposed to noise levels in excess of 70 dBA CNEL, allowing for potentially significant impacts to residences, parks, schools, and offices to occur as a result of traffic noise that exceeds the city noise compatibility guidelines. As shown in Figure 5.5-3, noise levels would not exceed 70 dBA CNEL at the Community Park. Therefore, a potentially significant impact to the Community Park as a result of traffic noise would not occur.

Multi-family residences throughout the Town Center and Neighborhood Center Zone would potentially be exposed to exterior noise levels of 65 dBA CNEL or greater from traffic noise, which would exceed the city 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, such as outdoor dining patios, in the Town Center would also potentially be exposed to noise levels in excess of 65 dBA CNEL from traffic noise. Additionally, as shown in Table 5.5-7 and Figure 5.5-3, single-family residences along Otay Valley Road would potentially be exposed to exterior noise levels in excess of 60 dBA CNEL. Interior noise levels would have the potential to exceed 45 dBA CNEL in multi-family residences in the Town Center and Neighborhood Center Zone and single-family residences along Otay Valley Road; therefore, a potentially significant impact related to interior noise levels would also occur.

Also seen in Figure 5.5-3, Street B and Magdalena Avenue 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 Town Center are projected to be below the 75 dBA CNEL standard for commercial uses that do not include outdoor usable areas, and that noise levels for the Community Park would not exceed 70 dBA CNEL. Therefore, impacts to commercial uses and the Community Park 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 8 West would be located adjacent to MSCP Preserve area, and the off-site trail would traverse the Preserve. Residences and trails are not sources of substantial noise. Occasional maintenance activities would be required along the trail and edge of development, such as vegetation and sediment removal. These activities would not require heavy construction equipment that would generate excessive noise. Occasional vehicle trips would not result in a substantial increase in noise levels. As described in the Preserve Edge Plan in the 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.

Another MSCP preserve area (Wolf Canyon) is located approximately 50 feet west of the corner of Planning Area A and E. Planning Area E is planned for residential development and would not be a source of substantial noise. Planning Area A would be developed as a community park. The Community Park would potentially include sports fields, playgrounds, and other uses that could generate noise levels of 60 dBA up to 170 feet from the park. However, an energy dissipater for drainage would be located in the southwest corner of Planning Area A, at the bottom of a steep slope, as shown on the TM provided in Figure 3-17. No park uses would be developed on this steep slope. The steep slope and drainage feature would provide an approximately 170 feet buffer, or more, between the Community Park and the edge of Planning Area A closest to the Preserve. Therefore, the preserve area to the southwest of Planning Area A would be located at least 170 feet from active park uses in the Community Park and would not be exposed to substantial noise levels. Impacts would be less than significant.

10. Impacts from Operation of Off-site Facilities

As discussed above under existing conditions, the Otay Valley Rock Quarry is located southwest of Village 4, approximately 0.3 mile from the project site. According to the EIR prepared for the proposed

quarry reclamation plan amendment, daytime average noise levels along the perimeter of the quarry range from approximately 45 dBA to 55 dBA (City of Chula Vista 2011a). The project site and the quarry are separated by Rock Mountain and operation of the quarry is generally not currently audible on the project site, as demonstrated by the ambient noise measurements taken at the site. Intermittent noise from particularly loud operations, such as blasting, is occasionally audible on the project site. Due to the temporary and periodic nature of noise from the quarry operations, it would not result in a significant impact to development in Village 8 West.

Olympian High School is a source of operational noise from bells or other signaling devices and activities on the campus such as cheering and loudspeakers at football games. As mentioned previously, the football field is located on the east side of campus, approximately 0.25 mile from the project site, and is separated from the site by the campus buildings. Noise levels for a high school championship game have been estimated to be 71 dBA at a distance of 50 feet. 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 43 dBA at the Village 8 West boundary when speakers are in use. The noise measurement taken outside of Olympian High School during lunchtime recess as part of this analysis measured a noise level of 55 dBA Leq at the edge of the project area adjacent to the school, which would not exceed the 60 dBA Leq noise limit for multi-family residences in the Town Center. Therefore, noise from Olympian High School would not result in a significant impact to Village 8 West.

The San Diego Trolley Blue Line and SD&AE freight line pass through the western part of Chula Vista approximately 6 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 8 West would not be exposed to railroad noise. No impact would occur.

B. Threshold 2: Expose persons to or generation of excessive ground borne vibration or ground borne 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 6 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 approximately 0.3 mile (1,600 feet) 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; however, construction activities on site may require blasting, which is also a significant source of groundborne vibration.

The nearest vibration-sensitive land use to the project site is the Sharp Chula Vista Medical Center, located approximately 2.25 miles northwest of the project site on Medical Center Court. At 2.25 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 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 during the Orange phase, it would occur prior to any construction on site; therefore, it would not expose any structures to groundborne vibration. However, blasting in the Blue phase may occur after some construction in the Orange phase is completed. It is unknown how development would be phased within each phase; therefore, development in the Orange phase would potentially be located within 600 feet of blasting in the Blue phase. 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, the Village 8 West 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 under the GPA/GDPA 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 from the GPA/GDPA EIR, and updates the noise analysis based on the project-specific traffic study prepared for Village 8 West by RBF Consulting (RBF 2013), and the Village 8 West SPA Plan (January 2012). The potential for Village 8 West 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 2015 and Year 2020 traffic scenarios were 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 are estimated at locations 50 feet from the roadway centerline. 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 project, are provided in Table 5.5-8. As shown in this table, 17 of the 22 existing roadway segments currently generate noise levels that exceed 65 dBA CNEL, without implementation of the project. In this scenario, project-related traffic noise increases would cause noise along one roadway that currently does not exceed 65 dBA CNEL to exceed 65 dBA CNEL. Project-related traffic noise would result in an increase of three decibels or more along three roadway segments that already exceed 65 dBA CNEL. One roadway that currently does not exist would exceed 65 dBA CNEL with implementation of the project. Five 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
- La Media Road, Olympic Parkway to Birch Road
- La Media Road, Birch Road to Main Street
- Magdalena Avenue, Birch Road to Main Street

Table 5.5-8 Existing Plus Project Traffic Noise Levels

Roadway	Segment	Existing Plus 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	76	Yes	+1	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	67	Yes	+1	No
Birch Road	La Media Road to SR-125	69	72	Yes	+3	Yes
	SR-125 to Eastlake Parkway	68	71	Yes	+3	Yes
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	60	63	No	N/A	No
	Olympic Parkway to Otay Lakes Road	67	68	Yes	+1	No

Table 5.5-8 Existing Plus Project Traffic Noise Levels (continued)

Roadway	Segment	Existing Plus Project				
		Existing	Existing + Project	Exceeds 65 dBA CNEL?	Increase in Noise Level	Significant Impact?
Heritage Road	Palomar Street to Olympic Parkway	69	71	Yes	+2	No
	Main Street to Entertainment Circle	65	65	No	N/A	No
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	65	65	No	N/A	No
La Media Road	East Palomar Street to Olympic Parkway	69	71	Yes	+2	No
	Olympic Parkway to Birch Road	69	74	Yes	+5	Yes
	Birch Road to Main Street	Does Not Exist	72	Yes	N/A	Yes
Magdalena Avenue	Birch Road to Main Street	64	68	Yes	+4	Yes
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	70	71	Yes	+1	No
	Olympic Parkway to Birch Road	68	70	Yes	+2	No
	Birch Road to Main Street	59	64	No	N/A	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. Significant impacts shown in **bold** and shading. See appendix for data sheets.

2. Unmitigated Year 2025 Scenario

The Unmitigated Year 2025 scenario includes development of all proposed residential development, the elementary school, 240,000 square feet of commercial development, and 18.6 acres of park space in Village 8 West, 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 La Media Road/Otay Valley Road to Street A and the half of the Main Street couplet east of Otay Valley Road. Year 2025 traffic noise levels, with and without the project, are provided in Table 5.5-9. As shown in this table, all of the 25 roadway segments that would exist by Year 2025 would exceed 65 dBA CNEL without project traffic.

In the Year 2025 scenario, project-related traffic would result in an increase of three decibels or more along one roadway segment that would exceed 65 dBA CNEL without project traffic. This one roadway segment would result in a significant impact under the Year 2025 scenario:

- La Media Road, Birch Road to Main Street

3. Unmitigated Year 2030 Scenario

The Unmitigated Year 2030 scenario compares buildout (Year 2030) traffic volumes with and without the implementation of 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 8 West development and circulation network, as well as cumulative development through Year 2030. Unmitigated Year 2030 traffic noise levels, with and without the project, are provided in Table 5.5-10. As shown in this table, 27 of the 31 roadway segments would exceed 65 dBA CNEL without project-related traffic.

Table 5.5-9 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	74	75	Yes	+1	No
Main Street	I-805 to Brandywine Avenue	74	74	Yes	0	No
	Brandywine Avenue to Heritage Road	73	73	Yes	0	No
	Street A to Eastlake Parkway	72	72	Yes	0	No
Hunte Parkway	Eastlake Parkway to Olympic Parkway	72	72	Yes	0	No
	Olympic Parkway to Otay Lakes Road	69	69	Yes	0	No
Heritage Road	Palomar Street to Olympic Parkway	74	75	Yes	+1	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	73	74	Yes	+1	No
	Birch Road to Main Street	70	73	Yes	+3	Yes
Magdalena Avenue	Birch Road to Main Street	66	67	Yes	+1	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	75	76	Yes	+1	No
Otay Valley Road	Village 9 Access to University Avenue	Does Not Exist	64	No	N/A	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. Significant impacts shown in bold and shading . 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 Ave to Heritage Rd	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 Pkwy	80	80	Yes	0	No
	Eastlake Pkwy to Hunte Pkwy	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 Ave to Heritage Rd	75	75	Yes	0	No
	Heritage Road to Couplet	70	71	Yes	+1	No
	Magdalena Avenue to SR-125	69	69	Yes	0	No
	SR-125 to Street A	75	76	Yes	+1	No
	Street A to Eastlake Parkway	73	73	Yes	0	No
Hunte Parkway	Eastlake Pkwy to Olympic Pkwy	74	74	Yes	0	No
	Olympic Pkwy to Otay Lakes Rd	70	70	Yes	0	No
Heritage Road	Palomar Street to Olympic Pkwy	75	75	Yes	0	No
	Olympic Pkwy to Main St/Hunte Pkwy	75	75	Yes	0	No
	Main St to Entertainment Circle	73	73	Yes	0	No
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	72	73	Yes	+1	No
La Media Road	East Palomar St to Olympic Pkwy	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	64	65	No	N/A	No
Eastlake Parkway	Otay Lakes Road to Olympic Pkwy	71	71	Yes	0	No
	Olympic Parkway to Birch Road	73	73	Yes	0	No
	Birch Road to Main Street	74	74	Yes	0	No
Otay Valley Road	Street A to SR-125	62	63	No	N/A	No
	SR-125 to Village 9 Access	62	63	No	N/A	No
	Village 9 Access to University Avenue	64	64	No	N/A	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.

In the Unmitigated 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 SPA Plan and TM. The project would not result in any significant impacts from noise increases along roadways under the Unmitigated Year 2030 scenario.

4. Mitigated Year 2030 Scenario

The Mitigated Year 2030 scenario compares buildout (Year 2030) traffic volumes with and without the implementation of the project, assuming implementation of the traffic mitigation measures identified in Section 5.3, Transportation and Traffic. This scenario assumes full buildout of the project development and circulation network, as well as cumulative development through Year 2030. Mitigated Year 2030 traffic noise levels, with and without the project, are provided in Table 5.5-11. As shown in this table, 27 of the 31 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 SPA Plan and TM. The project would not result in any significant impacts from noise increases along roadways under the Mitigated Year 2030 scenario.

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	74	74	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 Couplet	70	71	Yes	+1	No
	Magdalena Avenue to SR-125	70	71	Yes	+1	No
	SR-125 to Street A	77	77	Yes	0	No
	Street A to Eastlake Parkway	75	75	Yes	0	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	75	75	Yes	0	No
	Main Street to Entertainment Circle	73	73	Yes	0	No
	Entertainment Circle to Avenida de Las Vistas (City of San Diego)	72	73	Yes	+1	No

Table 5.5-11 Mitigated Year 2030 Traffic Noise Levels (continued)

Roadway	Segment	Mitigated Year 2030	Mitigated Year 2030 + Project	Exceeds 65 dBA CNEL?	Increase in Noise Level	Significant Impact?
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	64	65	No	N/A	No
Eastlake Parkway	Otay Lakes Road to Olympic Parkway	71	71	Yes	0	No
	Olympic Parkway to Birch Road	73	73	Yes	0	No
	Birch Road to Main Street	72	72	Yes	0	No
Otay Valley Road	Street A to SR-125	64	65	No	N/A	No
	SR-125 to Village 9 Access	64	65	No	N/A	No
	Village 9 Access to University Avenue	64	64	No	N/A	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 development proposed as part of the project would be completed in five phases, generally west to east. The final order of phasing has not been determined; however, the Orange phase and Blue phase would be constructed first because these phases would involve blasting. The Orange phase would involve construction of a portion of the Town Center including the Town Square, multi-family residences, and commercial development. Multi-family and single-family residences in the Neighborhood Commercial and Neighborhood Edge Zones would also be developed. The Blue phase would involve construction of single-family residences in the Neighborhood General and Neighborhood Edge Zones. The Yellow phase would involve construction of the remaining Town Center area, the Community Park, and multi-family development in the Neighborhood Commercial Zone. The Purple phase would involve construction of the Neighborhood Park and single-family residences in the Neighborhood Edge and Neighborhood General Zones. The Green phase would involve construction of multi-family residences in the Neighborhood Commercial Zone, the elementary school site, and the Community Purpose Facility. Construction of the off-site trail and utilities would occur during one of these phases.

The construction timeframe for the entire buildout of the project is expected to begin in 2013 and last for 8 to 12 years. 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. 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. Construction of the off-site improvements would require vegetation clearing, underground utility installation, and paving.

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 construction 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 150 west of the project site. Construction in the northeast corner of the site in the Yellow phase would generate the greatest amount of construction noise at the school. At this distance, the worst-case construction noise level would be approximately 77 dBA during grading operations. Simultaneous construction activities are not likely to occur within the same phase; therefore, the high school would be exposed to Yellow 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 8 West 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.

In addition to the grading, utility installation, surface improvement, and building construction activities required for all five phases, blasting would be required along the southwest boundary of the project site during the grading activities of the Orange phase and Blue phase. A typical blasting operation includes drilling a hole, filling the hole with explosive material, capping the hole, and detonating the material. Sound levels from a rock drill have been measured at 90 to 100 dBA at 50 feet. Blasting is a short-term event, typically lasting no more than several seconds. Additionally, a rock crushing crushing/processing facility would be used during some construction activities in the Orange phase and Blue phase of construction where rock removal is involved.

Noise measurements that have been conducted for portable rock crushing operations indicated that rock crushing activity would generate a 1-hour average noise level of approximately 86 dBA at a distance of 50 feet from the primary crusher (Dudek 2007). All blasting in the Orange phase would take place prior to development on the project site. The nearest existing NSLU is Olympian High School, located

approximately 2,800 feet from the blasting area, which is limited to the western edge of the project site. At this distance, noise from the rock drill and rock crusher would be reduced to 65 dBA and 51 dBA. Although the Chula Vista exterior noise limits do not apply to construction activity, the noise level from rock drilling would not exceed the day time exterior noise standard for non-residential land use. However, rock blasting during the grading phase of the Blue phase would occur during the construction phase of the Orange phase. Some buildings in the Orange phase may be constructed and occupied prior to blasting activities and exposed to substantial noise from rock drilling and blasting activities.

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 areas to the south and west of the project site. The Biological Resources Report prepared for Village 8 West (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 double of distance, construction activities would have the potential to exceed 60 dBA up to 1,100 feet from the source. Blasting activities would have the potential to exceed 60 dBA up to 1,600 feet from the source. Assuming that construction noise would be emanating from a location on the project site closest to the MSCP Preserve areas (in the southern parcels within Planning Area P, the southern and western parcels within Planning Area V, the western portion of Planning Area E, and the southwest area of Planning Area A), construction noise would exceed 60 dBA within the MSCP Preserve areas 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 1.5 miles northeast of the Brown Field airport. As discussed in Section 5.5.2, the project site is currently subject to overflights of planes and helicopters taking off from Brown Field, which 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 Director of Development Services 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, impacts would be less than significant.

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 evaluate the project’s consistency with the GDP. As shown in these tables, 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>Objective E 21: Protect people from excessive noise through careful land use planning and the incorporation of appropriate mitigation techniques.</p> <p>Policy E 21.1: 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>Policy E 21.2: 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>Policy E 21.4: Continue to implement and enforce the City’s noise control ordinance.</p>	<p>Consistent. The proposed SPA Plan is consistent with these noise policies. This noise impact analysis utilized the land use-noise compatibility guidelines in the Environmental Element, the Chula Vista Noise Ordinance, and CCR Title 24 as thresholds for determining significance between different land uses. The 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 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>
<p>Objective E 22: Protect the community from the effects of transportation noise.</p> <p>Policy E 22.1: 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>Policy E 22.3: Employ traffic calming measures, where appropriate, such as narrow roadways and on-street parking, in commercial and mixed use districts.</p> <p>Policy E 22.4: Encourage walking; biking; carpooling; use of public transit; and other alternative modes of transportation to minimize vehicular use and associated traffic noise.</p>	<p>Consistent. The proposed SPA Plan is consistent with these noise policies. Village 8 West would connect to existing arterials, La Media Road and Main Street, 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 bus rapid transit route is provided through the SPA Plan to encourage the use of public transit within Village 8 West 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 Threshold 1 and Threshold 3, the 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
Part II, Chapter 7 – Noise	
<p>Goal: Promote a quiet community where residents live without noise which is detrimental to health and enjoyment of property.</p> <p>Goal: Ensure residents are not adversely affected by noise.</p> <p>Objective: Otay Ranch shall have a noise abatement program to enforce regulations to control noise.</p> <p>Policy: Prohibit excessive noises which are a detriment to the health and safety of residents.</p> <p>Policy: Limit noise at the source, along the path of transmission and/or at the receiver site.</p> <p>Policy: Reduce the need for noise mitigation through site and land use planning techniques, whenever feasible.</p> <p>Policy: Consider the effects of noise, especially from transportation, in land use decisions to ensure noise compatibility.</p> <p>Policy: Comply with applicable noise ordinances and performance standards in zoning ordinances.</p> <p>Policy: Use the Environmental Review Process to evaluate the effects of noise.</p> <p>Policy: 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>Consistent. 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 Village 8 West SPA Plan and TM would have the potential to result in on-site exposure of residential uses to excessive noise levels from traffic noise and operational sources including HVAC equipment, commercial equipment, and recreational facilities.

B. Groundborne Vibration

No significant impacts related to groundborne vibration have been identified for the project.

C. Permanent Increase in Ambient Noise Level

1. Existing Plus Project Scenario and Unmitigated Year 2025 Scenario

Five 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; La Media Road, Olympic Parkway to Birch Road; La Media Road, Birch Road to Main Street; and Magdalena Avenue, Birch Road to Main Street. Traffic-related noise is reduced either by constructing noise barriers, lowering traffic speeds, or by reducing traffic. Implementation of the SPA Plan and TM 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 8 West instead of the surrounding roadways. Additionally, these connections would direct traffic generated by Village 8 West 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, 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 8 West.

2. Unmitigated Year 2025 Scenario

One roadway segment would result in a significant impact under the Year 2025 scenario: La Media Road, Birch Road to Main Street. As described above under the Existing Plus Project scenario, the buildout circulation network for Village 8 West would reduce long-term traffic noise. Mitigation measure 5.3-20 would ensure that the circulation network is implemented concurrently with development.

3. Unmitigated and Mitigated Year 2030 Scenarios

In the Unmitigated and Mitigated Year 2030 (Buildout) scenarios, Village 8 West would 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 in Section 5.6, Biological Resources, would reduce noise impacts to the biological preserve areas during construction to a less than significant level.

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 would be consistent with applicable noise policies within the General Plan and GDP.

5.5.5 Mitigation Measures

A. Excessive Noise Levels

The following mitigation measures would minimize exposure to on-site NSLU from excessive traffic noise, and minimize noise generated from operational sources including HVAC equipment, commercial equipment, and recreational facilities.

5.5-1 Noise Attenuation in the Neighborhood Edge Zone (Planning Area N) and Neighborhood General Zone (Planning Areas Q and U). Prior to the approval of grading permits for residential development along Otay Valley Road within Planning Areas N, Q, and U in the Neighborhood Edge and Neighborhood General Zones (as shown in Figure 3-3, Utilization Plan), the applicant shall be responsible for the preparation of a subsequent acoustical study based on the final map design and implementation of any measures recommended as a result of the analysis to the satisfaction of the Development Services Director (or their designee). The study shall include, but not be limited to the following:

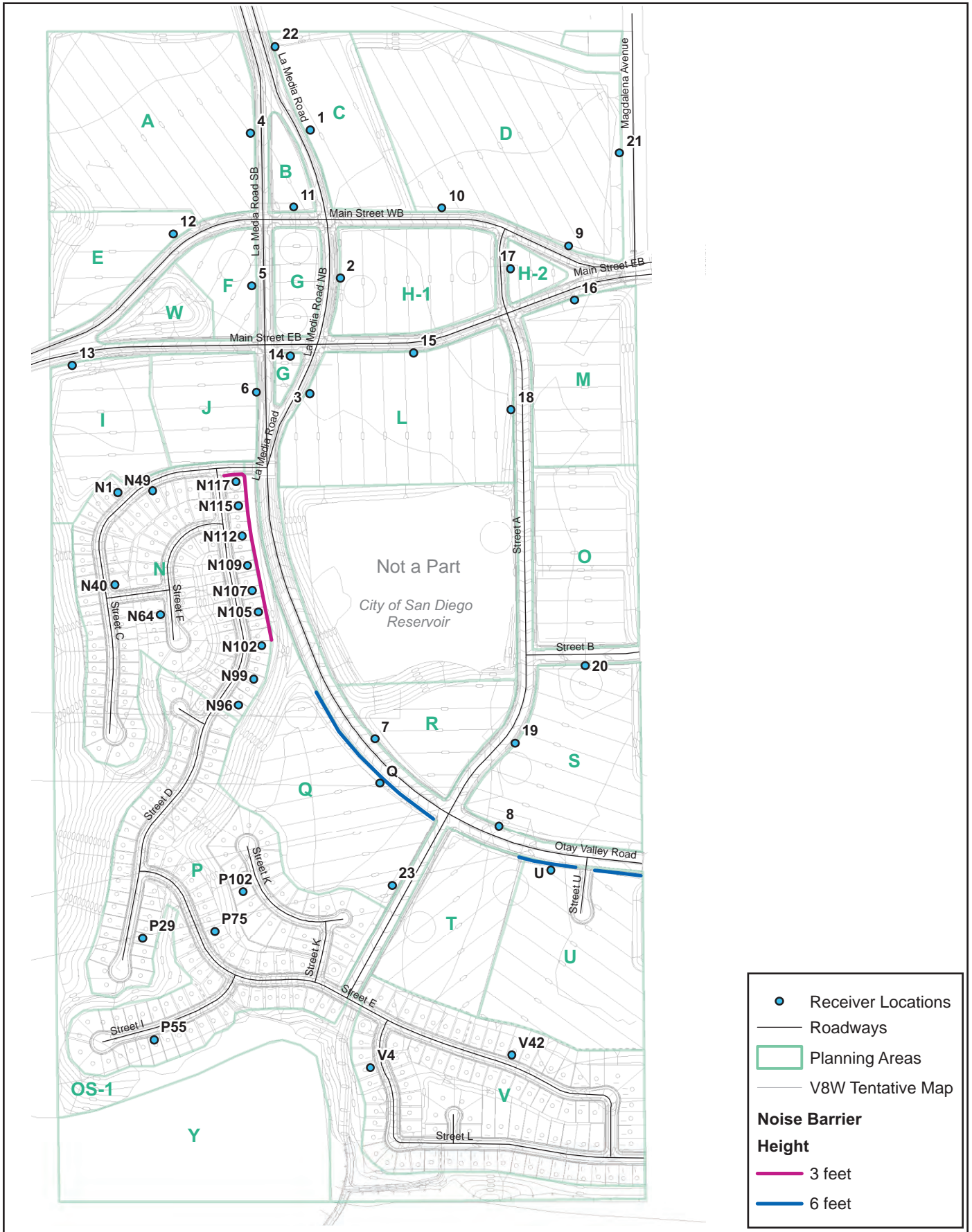
- i. Location, height, and building material of the noise barriers in accordance with Figure 5.5-4. Heights are provided relative to final pad elevation. Required heights may be achieved through construction of walls, berms or a wall/berm combination;

- 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.

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 N, Q, and U), the applicant shall prepare an acoustical analysis ensuring that interior noise levels due to exterior noise sources will be at or below 45 dBA CNEL. 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.

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 second 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 B, C, E, F, H1, H2, I, J, L, M, and O), the applicant shall prepare an acoustical analysis demonstrating compliance with California's Title 24 Interior Noise Standards (i.e., 45 dBA CNEL) and the City's Exterior Land Use/Noise Compatibility Guidelines for outdoor use areas (i.e., 65 dBA CNEL). Design-level architectural plans will be available during design review and will permit the accurate calculation of transmissions 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.

5.5-4 **Site-Specific Acoustic Analysis – Non-Residential Noise Sensitive Land Use.** Concurrent with design review and prior to the approval of building permits for any non-residential noise sensitive land use (schools, neighborhood parks, outdoor use areas, some Community Purpose Facility uses, etc.) area where exterior noise levels exceed 65 dBA CNEL (Planning Areas B, C, D, F, G, H1, H2, I, J, M, L, R, S, and T), the applicant shall be responsible for the preparation of an acoustical analysis ensuring that exterior noise levels at the boundary of the proposed noise sensitive land use will be below 65 dBA CNEL and implementation of any measures recommended as a result of the analysis. 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. The analysis shall also demonstrate that barriers or setbacks have been incorporated into the project design, such that, when considered with proposed construction specifications, ground level and upper story interior noise levels shall not exceed 45 dBA CNEL. 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.



Source: Atkins 2011



APPROXIMATE NOISE BARRIER LOCATIONS
FIGURE 5.5-4

- 5.5-5 **Site-Specific Acoustic Analysis – Office Uses.** Concurrent with design review and prior to the approval of building permits for any office area where exterior noise levels exceed 70 dBA CNEL (Planning Areas H2, J, and L), the applicant shall prepare an acoustical analysis, and construct any attenuation measures identified therein, to ensure that exterior noise levels at the property line of the proposed office building will be below 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. .
- 5.5-6 **HVAC Mechanical Equipment Shielding.** Concurrent with design review and prior to the approval of building permits for non-residential development requiring HVAC equipment, the applicant shall prepare a report demonstrating that HVAC equipment is designed to ensure that noise levels from the equipment will not exceed the Chula Vista noise ordinance standards. Noise from HVAC equipment shall be reduced by either the installation of acoustical shielding around all new rooftop HVAC equipment, or by placing the HVAC equipment below grade in basement space.
- 5.5-7 **Shielded Private Outdoor Usable Space for Town Center Residences.** Private usable outdoor space for new residential or commercial development such as patios, balconies, or outdoor dining areas in the Town Center shall be located or protected from noise to ensure noise levels are below 65 dB CNEL. The proposed plan for private residential open space shall be designed to the satisfaction of the City Engineer prior to design review.
- 5.5-8 **Site Specific Acoustic Analysis - Community Park and Neighborhood Park.** Concurrent with the preparation of site-specific plan(s) and prior to the approval of a precise grading plan for the Community Park or Neighborhood Park, the applicant shall prepare, or in the case the City being the lead on the preparation of the site specific plan, the applicant shall fund the preparation of an acoustical analysis shall be conducted to ensure that noise levels generated from any active uses at the Community Park or Neighborhood Park, such as sports fields and a skate park, do not exceed the exterior noise limits of the receiving land use category as identified in the Chula Vista Noise Ordinance. The applicant shall be responsible for 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 to provide setbacks between active areas and adjacent noise sensitive uses or construction of a wall to provide noise attenuation. Final noise attenuation design shall 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. Groundborne Vibration

No mitigation measures are required.

C. Permanent Increase in Ambient Noise Level

No mitigation measures are required.

D. Temporary Increase in Ambient Noise Level

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 are required.

F. Consistency with 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 La Media Road, Main Street, Street A, or Otay Valley Road north of Planning Area N because a wall would conflict with the Village 9 SPA policies. The SPA Plan requires frontages along all public roads in the Town Center and Neighborhood Center Zone. These roadways include La Media Road/Otay Valley Road (within the couplet), Main Street, and Street A (see pages 3-26 and 3-30 of the SPA Plan). Additionally, the SPA Plan requires that buildings be oriented toward the street (see pages 4-12, 4-17, 4-18, 4-20, 4-22, 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 Village 8 West.

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?
Lot N109	Single-family Residence	66	62	No
Lot N112	Single-family Residence	66	62	No
Lot N115	Single-family Residence	67	61	No
Lot N117	Single-family Residence	67	61	No
Planning Area Q	Single-family Residence	70	65	No
Planning Area U	Single-family Residence	70	65	No

Source: FHWA 2004. See appendix for noise model outputs.
 Note: As part of measure 5.5-1, the noise barrier for receivers in Lots N109-N117 is assumed to be 3 feet in height, and the noise barrier for Planning Areas Q and U is assumed to be 6 feet in height as shown in Figure 5.5-4. Noise levels for upper level receivers were not attenuated discernibly from the implementation of 5.5-1.

Walls are feasible along the portions of Otay Valley Road south of the couplet shown in Figure 5.5-4 because the residences affected by the wall would be oriented towards public residential streets and are not required to provide frontages along Otay Valley Road. Walls are not feasible for all potential traffic noise impacts; 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 (5.5-1 through 5.5-8), 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. Permanent Increase in Ambient Noise Levels

1. Existing Plus Project Scenario and Unmitigated Year 2025 Scenario

Short-term increases in traffic noise off-site on La Media Road, Birch Road, and Magdalena Avenue 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 8 West 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 La Media Road, Birch Road, and Magdalena Avenue 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 and Mitigated Year 2030 Scenarios

Implementation of the project would not result in a significant traffic noise increase on any roadway in the Unmitigated Year 2030 or Mitigated Year 2030 scenarios without mitigation.

C. Groundborne Vibration

Impacts related policy consistency would be less than significant without mitigation.

D. Temporary Increase in Ambient Noise Levels

Impacts related to temporary construction noise would be less than significant with implementation of 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.

5.6 Biological Resources

This section describes existing biological conditions of Village 8 West 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 8 West (Biology Report), prepared by URS Corporation (URS) in October 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 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.C. 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 8 West, the Preserve includes portions of Wolf Canyon, Salt Creek Canyon, and 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 8 West, 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 8 West 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 8 West, including the southwest corner of the site, and approximately 50 feet west of Planning Areas A and E in Wolf Canyon.

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 8 West. Additional details regarding the survey methods and results are provided in Appendix E.

1. Biological Survey Methods

URS Corporation biologists conducted surveys of Village 8 West and the off-site improvement area in May, June, and July 2008, June and July 2009, and May and June 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

Sensitive plant surveys were conducted in 2008 to coincide with the blooming periods of the greatest number of target species as possible. Additional late season sensitive plant species surveys were performed in 2009 and 2010 to target Otay tarplant (*Deinandra conjugens*). Surveys were intensified at locations in unique microhabitats that could potentially support sensitive species, such as clay soils.

b. Wildlife Surveys

Surveys for the California gnatcatcher were conducted during 2008, 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 the Quino checkerspot butterfly (*Euphydryas editha quino*)

(QCB) were conducted in the spring of 2009 and 2010 and followed USFWS protocol. Focused flight surveys took place during QCB flight season to determine presence on site. A burrowing owl habitat assessment also took place in 2009 and 2010. Suitable habitats, including native and non-native grassland, disturbed habitat, and agricultural vegetation communities were surveyed for the 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 2008 and 2010.

2. Survey Results

a. Vegetation Communities

Figure 5.6-1 identifies the location of the vegetation communities identified in the Village 8 West survey area. As shown in Figure 5.6-1, four native vegetation communities occur within on-site and off-site potential impact areas: coastal sage scrub (disturbed and undisturbed); maritime succulent scrub; mulefat scrub; and freshwater marsh. In addition to native habitats, four non-native vegetation categories also occur within on-site and off-site areas: non-native grasslands, agricultural lands, disturbed vegetation, and developed land. Agricultural land is the most dominant vegetation type, followed by coastal sage scrub.

Table 5.6-1 identifies the acreage of various vegetation communities within the project and off-site impact areas, including the off-site improvement area and off-site grading in the reservoir site. These vegetation communities are discussed below.

Table 5.6-1 Existing Vegetation Communities

Vegetation Type	Village 8 West SPA Plan (acres)		Planned and Future Facilities (acres)	Off-site Reservoir Grading Area (acres)	Total Area (acres)
	Development Area and Off-Site Fuel Modification Zone	Open Space Preserve			
Maritime Succulent Scrub	0.56	0	0.49	0	1.05
Coastal Sage Scrub	15.14	14.83	0.01	0	29.97
Disturbed Coastal Sage Scrub	19.83	0	0.16	0	19.99
Non-native Grassland	0.62	0	0.19	0	0.81
Agriculture Land	223.31	0.70	0.97	4.57	229.55
Developed	10.07	0.09	0.05	0	10.21
Disturbed Vegetation	15.36	0	0.01	0	15.37
Freshwater Marsh	0.05	0	0	0	0.05
Mulefat Scrub	0	0	0.07	0	0.07
Total	284.94	15.62	1.95	4.57	307.08

Source: URS 2012

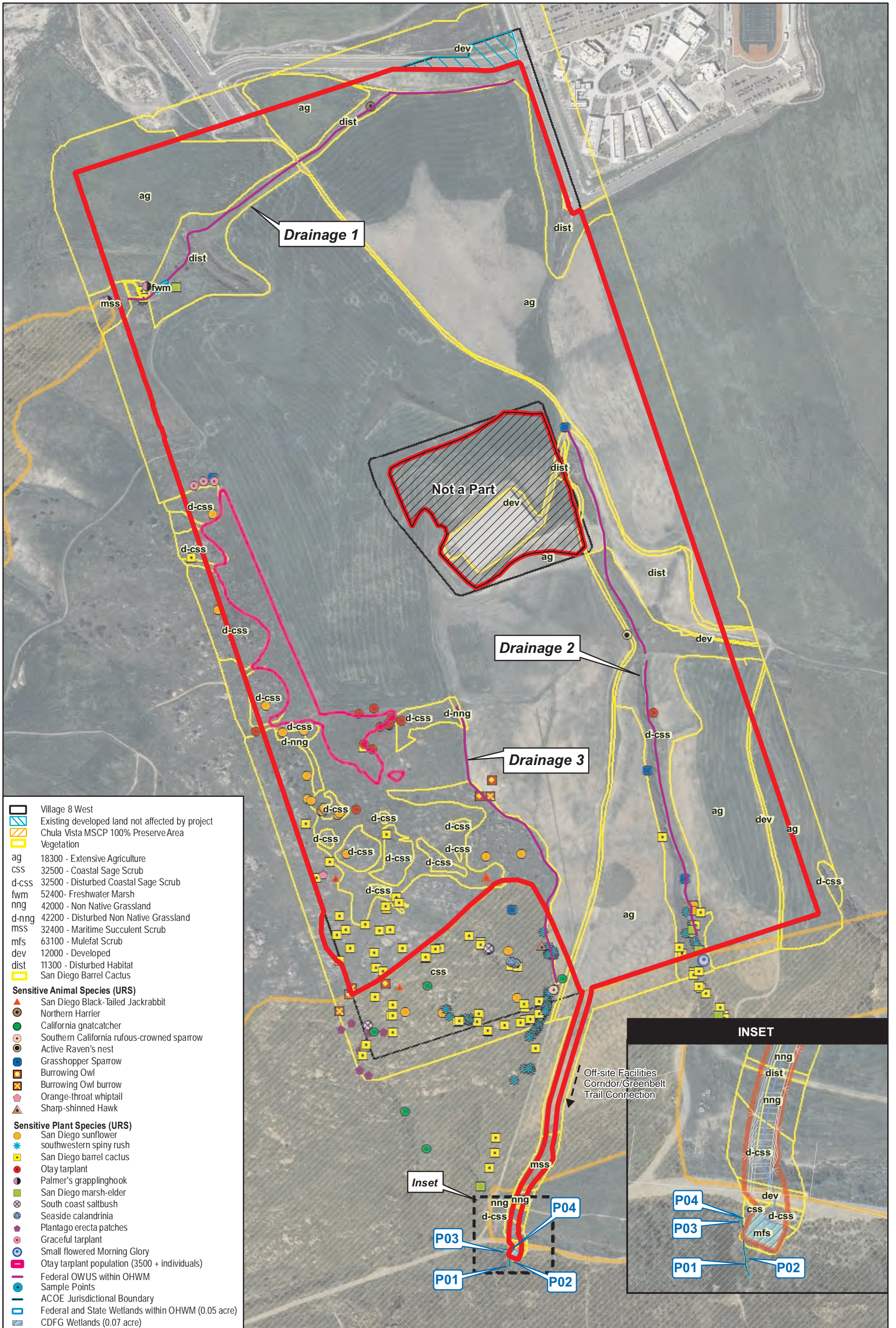
Maritime Succulent Scrub. Maritime succulent scrub, a form of sage scrub, occurs on thin, rocky, or sandy soils on steep slopes or bluffs near the coast. Maritime succulent scrub is present in the canyons along the northwest side of the project area, and in the off-site improvement area. The dominant 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*), coast cholla (*Cylindropuntia prolifera*), coastal prickly pear (*Opuntia littoralis*), fishhook cactus (*Mammillaria dioica*), and chalk-leaf live-forever (*Dudleya pulverulenta*).

Coastal Sage Scrub. Coastal sage scrub is comprised of low, soft-woody sub-shrubs 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 San Diego sunflower (*Viguiera laciniata*), California sagebrush (*Artemisia californica*), jojoba (*Simmondsia chinensis*), and California buckwheat (*Eriogonum fasciculatum*). San Diego sunflower makes up a significant proportion (up to 20 percent) of cover in non-disturbed coastal sage scrub. Coastal sage scrub is generally located in the southwest area of the project site, along the western boundary, and in the off-site improvement area.

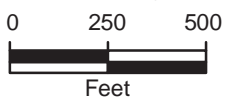
Non-native Grasslands. Non-native grasslands generally occur on fine-textured loam or clay soils which are moist or evenly waterlogged during the winter rainy season and very dry during the summer and fall. This habitat is a disturbance-related community most often found in old fields or openings in native scrub habitats and is characterized by a dominate 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 grasslands include slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis* ssp. *Rubens*), cheatgrass (*Bromus tectorum*), crabgrass (*Cynodon dactylon*), nit grass (*Gastridium ventricosum*), hare barley (*Hordeum murinum* ssp. *leporinum*), goldentop (*Lamarckia aurea*), perennial ryegrass (*Lolium perenne*), canary grass (*Phalaris aquatica*), annual beard grass (*Polypogon monspeliensis*), Mediterranean schismus (*Schismus barbatus*), and wheat (*Triticum aestivum*). Non-native grassland is found in the southwest portion of the project area and in the off-site improvement area.

Agricultural Land. Agricultural land is regularly plowed or cultivated to produce a dense crop of vegetation that functions as forage for cattle. Agricultural land within the project site primarily occurs on the relatively flat mesa tops where repeatedly tilled land had been planted with cereal wheat (*Triticum aestivum*) and cucumber (*Cucumis* sp.). Other subdominant species observed within the agricultural land include wild oat, foxtail chess, fennel (*Foeniculum vulgare*), Russian thistle, and short-pod mustard (*Hirschfeldia incana*). Agricultural land dominates the northern and southeastern areas of the project area, and is located in the off-site improvement area.

Developed. Developed areas support no native vegetation and may be additionally characterized by the presence of human-made structures such as buildings or roads. The level of soil disturbance is such that only the most ruderal plant species would be expected. The agricultural component of developed areas includes actively cultivated lands or lands that support nursery operations; however, pasturelands are mapped as disturbed or undisturbed grassland, depending upon the intensity of grazing. Habitat classified as developed is located in the northern portion of the project area near Magdalena Avenue, and in the southeast corner of the site and off-site improvement area near the existing dirt roads.



Source: RC Biological Consulting 2012



VEGETATION COMMUNITIES AND IDENTIFIED SENSITIVE SPECIES LOCATIONS
FIGURE 5.6-1

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Disturbed Vegetation. Disturbed 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., *Hirschfeldia incana*), fennel, and thistles (*Centaurea* spp., *Silybum* spp., *Carduus* spp. etc.). Often, disturbed vegetation areas have a subdominant cover (less than 50 percent cover) of annual non-native grasses. Disturbed vegetation is located in the northern portion of the project area and along the off-site improvement area.

Freshwater Marsh. Freshwater marsh is dominated by perennial, emergent monocots that grow to 1.3 to 2 meters tall. Uniform stands of bulrushes (*Scirpus* spp.) or cattails (*Typha* spp.) often characterize this habitat. Freshwater marsh occurs in wetlands that are permanently flooded by standing fresh water. Examples of this habitat occur around several of the larger bodies of open water, such as the Sweetwater Reservoir, as well as around many of the smaller lakes, ponds, creeks, and reservoirs in the study region. A small area of freshwater marsh is found in the northwest corner of the project area.

Mulefat Scrub. Mulefat Scrub is characterized as a tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This community is found within intermittent stream channels with fairly coarse substrate and moderate depth to the water table, and is maintained by frequent flooding. Mulefat scrub may also contain several willow species, including arroyo willow (*Salix lasiolepis*), narrow-leaf willow (*Salix exigua*), or red willow (*Salix laevigata*). Mulefat scrub is found in 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 and active burrowing owl nests were identified during the project area surveys. Burrowing owls are known to occupy agricultural areas such as those found on-site, and use such areas for both nest and foraging. Burrowing owls were detected within Village 8 West.

Coastal California gnatcatcher (*Polioptila californica californica*). One occupied territory was identified within the Preserve. Additionally, suitable gnatcatcher habitat, including coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, disturbed maritime succulent scrub were identified in the project area.

Quino Checkerspot Butterfly (*Euphydryas editha quino*). No QCBs were observed in the project area during site surveys; however, patches of the primary larval host plant (dot-seed plantain [*Plantago erecta*]) were observed within the conserved areas of Village 8 West. Although no historical QCB observations are known within the project area, QCB has been documented previously in the open space surrounding the project.

Other Wildlife. The project vicinity 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 north eastern portion of Village 8 West.

Bird species that were commonly observed within the project vicinity included California towhee (*Pipilo crissalis*), western meadowlark (*Sturnella neglecta*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaid macroura*), common raven (*Corvus corax*), and blue grosbeak (*Passerina caerulea*). The project

area also supports sensitive wildlife species including, but not limited to, the northern harrier and southern California rufous-crowned sparrow.

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*), 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 Wolf Canyon wildlife linkage is located west of the project area and the Otay River is the main east-west wildlife linkage in the project vicinity. The canyons west of the project area include conserved open space and the biological open space associated with Rock Mountain provides wildlife movement access to Wolf Canyon.

3. Jurisdictional Delineation Results

Figure 5.6-1 identifies the three primary drainages that traverse the project area. Drainage 1 is located on site along the northern border of Village 8 West, and drains water from a cement culvert that is located at the northeastern corner of the project area. A concrete-lined French drain also feeds into this cement culvert.

Drainage 1 can be distinctly separated into two portions, the eastern portion that has been channelized, and the western portion that appears to be a natural channel. Drainage 2 is located on site throughout most of the eastern border of the site. Drainage 2 flows in a southerly direction, ultimately draining off the site into the Otay River. Drainage 3 is the smallest of the three on-site channels, and is located within the southwestern portion of Village 8 West.

Approximately 0.95 acre of CDFW jurisdictional waters and 0.23 acre of ACOE jurisdictional waters, including 0.5 acre of wetlands were identified within the project area. The wetlands area is also protected under the Chula Vista Wetland Protection Program. Approximately 0.07 acre of mulefat scrub habitat was identified within the off-site improvement area. This mulefat scrub is considered a wetland under the jurisdiction of the CDFW and is also protected under the 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.

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	

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 grassland is also considered sensitive vegetation under the Chula Vista MSCP. Wetland vegetation types are regulated as sensitive resources by federal, state and local wetland regulations and include the freshwater marsh and mulefat scrub vegetation.

6. Sensitive Plant Species

Sensitive 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, ten 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.

Coast barrel cactus (*Ferocactus viridescens* var. *viridescens*). Approximately 200 individuals of coast barrel cactus occur within the project site 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 the maritime succulent scrub communities.

Otay Tarplant (*Deinandra conjugens*). Approximately 3,500 individuals of Otay tarplant occur within the SPA. Otay tarplant is listed as endangered by CDFW; threatened by USFWS; covered and narrow endemic under the MSCP; and on CNPS List 1B.1. Otay tarplant is an annual ranging from 25 to 100 inches tall with yellow flower heads, each of which has a characteristic eight to ten ray flowers. Otay tarplant typically occurs on fractured clay soils with little or no woody shrub cover.

San Diego Marsh Elder (*Iva hayesiana*). Less than ten individuals of San Diego marsh elder occur within the project area. 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.

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.

Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*). A population of approximately 100 graceful tarplant individuals occurs along the western boundary of Village 8 West. Graceful tarplant is on CNPS List 4.2 and a strongly scented glandular annual with yellow flower heads. Graceful tarplant is often abundant where it occurs, usually in mildly disturbed or overgrazed grassland. Since occupied habitat is usually situated on comparatively level, sparsely vegetated terrain, it is presumed that graceful tarplant is substantially declining in San Diego County and western Riverside County due to urban development.

Palmer's Grappling-hook (*Harpagonella palmeri*). A small population of Palmer's grappling-hook was detected within the project area. 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.

San Diego sunflower (*Viguiera laciniata*). San Diego sunflower is a relatively common species in the coastal sage scrub vegetation community within the project site 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.

Seaside Calandrinia (*Calandrinia maritima*). Seaside calandrinia occurs on site, within the open space preserve. Seaside calandrinia is on CNPS List 4.2 and is an annual with flat spoon-shaped leaves and red to purple petals. Seaside calandrinia is severely declining in mainland Southern California, and is approaching extirpation in San Diego County and Orange County. Only a limited number of small sites are now known from San Diego.

Small-Flowered Morning-Glory (*Convolvulus simulans*). A small population of small-flowered morning-glory was in close proximity to the project area, but outside of the SPA and off-site improvement area. 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*). Approximately 50 individuals 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

Sensitive 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, ten sensitive wildlife species occur in the project area. These wildlife species are described below and shown in Figure 5.6-1.

Burrowing Owl. Two active burrows were documented within the project site and three burrowing owls were detected within the open space preserve. No burrowing owls were detected within the off-site improvement area; however, the coastal sage scrub, grassland and agricultural habitats are potentially used by owls as foraging habitat. The burrowing owl is a USFWS bird of conservation concern, a CDFW species of special concern, and a covered species under the MSCP.

Coastal California gnatcatcher. A single adult male coastal California gnatcatcher was observed within the open space preserve. Coastal California gnatcatchers were not detected in the off-site areas, but the coastal sage scrub habitat that occurs within the off-site areas are assumed to be utilized by the gnatcatcher. 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.

Dulzura California Pocket Mouse (*Chaedipus californicus femoralis*). Although no Dulzura California pocket mice were observed during the surveys, this species is presumed to occur within the coastal sage scrub and maritime succulent scrub located within the project site and off-site improvement area. The Dulzura California pocket mouse is a CDFW species of special concern.

Grasshopper Sparrow (*Ammodramus savannarum*). Grasshopper sparrows were detected within Village 8 West. This species was not detected in the proposed off-site improvement areas. The grasshopper sparrow is a CDFW species of special concern and a MSCP covered species.

Least Bell's Vireo (*Vireo bellii pusillus*). No least Bell's vireo individuals were observed on or off the project site; however, the mulefat scrub vegetation located within the off-site facility corridor is considered suitable least Bell's vireo habitat. 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.

Northern Harrier (*Circus cyaneus*). One northern harrier was observed on site, foraging along the northern most drainage (Drainage 1). The northern harrier may use on-site areas as breeding habitat when it is not actively used for agriculture. Breeding activity was not detected on the project area. The northern harrier is a CDFW species of special concern and a MSCP covered species.

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*). Although no Northwestern San Diego pocket mice were observed during the site surveys, this species is presumed to occur within the coastal sage scrub and maritime succulent scrub located within the project site and off-site improvement area. The Northwestern San Diego pocket mouse is a CDFW species of special concern.

Orange-Throated Whiptail (*Aspidocelis hyperythrus ssp. beldingi*). One individual orange-throated whiptail was observed on site, within the western portion of the project area. This species was not observed in the proposed off-site improvement areas. The orange-throated whiptail is a CDFW species of special concern and a MSCP covered species.

Quino Checkerspot Butterfly. No QCBs were detected during the surveys of the project site and off-site improvement area. However, patches of the primary larval host plant (dot-seed plantain [*Plantago erecta*]) were observed on site (see Figure 5.6-1). The QCB is a USFWS endangered species and a MSCP covered species.

San Diego Black-tailed jackrabbit (*Lepus californicus bennettii*). Three San Diego black-tailed jackrabbits were observed within the project site. 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.

San Diego Cactus Wren. No San Diego cactus wrens were observed within the project area; however, one San Diego cactus wren was detected several hundred feet from the southwestern corner of the project area, outside the off-site improvement area. The San Diego cactus wren is a CDFW species of special concern, a USFWS bird of conservation concern, and a MSCP covered species.

San Diego Desert Woodrat (*Neotoma lepida intermedia*). Although no San Diego desert woodrats were observed, this species is presumed to occur within the coastal sage scrub and maritime succulent scrub located within the project area and off-site improvement area. This San Diego desert woodrat is a CDFW species of special concern.

Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*). One individual Southern California rufous-crowned sparrow was observed within the Preserve within the project site. The Southern California rufous-crowned sparrow is on the CDFW watch list and is a MSCP covered species.

White-tailed Kite (*Elanus leucurus*). No white-tailed kites were observed within the project area and off-site improvement area; however, one was detected within the Otay River flood plain in the project vicinity. Therefore, the white-tailed kite may potentially use the project area as foraging habitat. The white-tailed kite is a CDFW fully protected species and a MSCP covered species.

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 on-site populations of small-flowered morning glory, south coast saltbush, and seaside calandrinia because these species are only located in the Preserve within Village 8 West 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 all 200 coast barrel cactus identified within the project site and off-site improvement area. This impact would be significant.

Otay tarplant. Implementation of the project would result in the direct loss of all 3,500 Otay tarplant individuals identified within the project area. This impact would be significant.

San Diego marsh elder. Implementation of the project would result in the direct loss of all ten San Diego marsh elder individuals identified within the project area. This impact would be significant.

Other Sensitive Plant Species. Construction activities associated with the project would result in direct impacts to graceful tarplant, Palmer's grappling-hook, San Diego sunflower, and southwestern spiny rush because individuals from these species would be removed during construction. However, impacts to these species would not be 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 plant species, continued exposure to agricultural pollutants (fertilizers, pesticides, and herbicides), soil erosion, and fire. A Preserve Edge Plan was developed for Village 8 West 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. Occupied burrowing owl habitat and two active burrows in the project area would be affected by implementation of the project. This impact would be significant.

Cactus wren. Although no cactus wrens were observed on or off site, the project would result in a potentially significant impact to the cactus wren if this species is detected in suitable habitat during pre-construction surveys or subsequent construction biological monitoring. 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 would be significant if the cactus wren is detected before or during construction.

California gnatcatcher. Habitat for the California gnatcatcher, including coastal sage scrub and maritime succulent scrub, would be removed upon implementation of the project. The direct loss of California gnatcatcher habitat would be a significant impact.

Least Bell's vireo. Although no least Bell's vireo were observed within the project area or off-site improvement area, implementation of Village 8 West would result in a potentially significant impact to least Bell's vireo if this species is detected in suitable habitat during pre-construction surveys or subsequent construction biological monitoring. Least Bell's vireo occurs in mulefat scrub, which is found in the off-site improvement area. Mulefat scrub, which provides habitat for the least Bell's vireo, would

be removed upon implementation of the off-site access corridor. Loss of this habitat would be a significant impact if least Bell's vireo is detected before or during construction.

Orange-throated whiptail. One orange-throated whiptail was observed on the Village 8 West within coastal sage scrub habitat. Implementation of the project would remove the coastal sage scrub habitat where the orange-throated whiptail was observed. This impact would be significant.

Quino Checkerspot Butterfly. No QCBs were detected during surveys of the site or the off-site improvement area. Additionally, no suitable habitat for the QCB is located within the project area or off-site improvement area. Habitat in the project area, including Category B non-Preserve habitat, Category B Preserve habitat and planned development areas, are excluded from the QCB habitat suitability assessment based on regulatory and habitat considerations. Category B habitat includes habitat with negative survey results for QCB, located within 0.6 mile of a known QCB location. Approximately 60 percent of Category B habitat is proposed for conservation in the MSCP Subarea Plan to supplement Category A land, which has the highest relative potential to support QCB. However, none of the conservation area is located on the project site. The project would not result in a significant impact to QCB due to the absence of this species within the project site or the off-site improvement area and the lack of suitable habitat for the species.

Raptors. The project would reduce on-site agricultural vegetation, which serves as suitable habitat for sensitive raptor species including burrowing owl, white-tailed kite and northern harrier. 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 (January 15 through August 31). Therefore, impacts related to raptors and breeding migratory birds would be significant.

Rufous-crown sparrow. Although no rufous-crown sparrow were observed, development of the project would result in a potentially significant impact to the rufous-crown sparrow if this species is detected in suitable habitat, including coastal sage scrub and maritime succulent scrub, during pre-construction surveys or subsequent construction biological monitoring. Suitable habitat for this species would be removed as a result of the project; therefore, impacts to the rufous-crown sparrow would be significant.

Wildlife Species Not Covered in the MSCP. The project would result in the direct removal of suitable on-site and off-site habitat for the San Diego black-tailed jackrabbit, including coastal sage scrub, maritime succulent scrub and grassland habitats. Implementation of the project would result in the direct removal of suitable on-site and off-site habitat for the Grasshopper sparrow, including grassland and fallow agricultural lands. Although the San Diego black-tailed jackrabbit and the grasshopper sparrow would be adversely affected by the loss of these habitats, this impact is less than significant because this species is still common in the project vicinity. 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. 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, and degradation of water quality. Species potentially affected by such activities include, but are not limited to, California gnatcatchers, 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. As shown in Table 5.6-4, a total of 0.23 acre of ACOE jurisdictional waters and 0.95 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 Habitat Tier ⁽¹⁾	Existing Acreage in Entire Project Area	Village 8 West SPA Plan Area (acres)		Off-site Improvements (acres) ⁽²⁾				Off-site Reservoir Grading Area (Impact Area 6)	Total (Impact Areas 1-6) (acres)
			Village 8 West SPA Development Area and Fuel Modification Zone (Impact Area 1)	Conserved Habitat Area (Preserve)	Off-site Planned and Future Facilities with Planned Active Recreation Area (Impact Area 2)	Off-site Planned Facilities Permanent Impacts within MSCP Preserve (Impact Area 3)	Off-site Future Facilities Permanent Impacts within MSCP Preserve (Impact Area 4)	Temporary ⁽³⁾ Construction Impacts within MSCP Preserve (Impact Area 5)		
Maritime Succulent Scrub	I	1.05	0.56	0	0	0.17	0.08	0.24	0	1.05
Coastal Sage Scrub	II	29.97	15.14 ⁽⁵⁾	14.83	0	0	0	0.01	0	15.15
Disturbed Coastal Sage Scrub	II	19.99	19.83	0	0.16	0	0	0	0	19.99
Non-Native Grassland	III	0.81	0.62	0	0.19	0	0	0	0	0.81
Agriculture Land ⁽⁴⁾	IV	229.55	223.31	0.70	0	0.39	0.19	0.39	4.57	228.85
Developed ⁽⁴⁾	IV	10.21	10.07	0.09	0.05	0	0	0	0	10.12
Disturbed Vegetation ⁽⁴⁾	IV	15.37	15.36	0	0.01	0	0	0	0	15.37
Freshwater Marsh	wetland	0.05	0.05	0	0	0	0	0	0	0.05
Mulefat Scrub	wetland	0.07	0	0	0	0	0.01	0.06	0	0.07
Grand Total		307.08	284.94	15.62	0.41	0.56	0.28	0.70	4.57	291.46

⁽¹⁾ 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 considered significant.

⁽²⁾ 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 and pedestrian trail with post and rail fencing along the trail alignment.

⁽³⁾ Construction would result in direct impacts to these areas; however, impact would be temporary because habitat would be replaced following construction.

⁽⁴⁾ These habitats are not considered sensitive and impacts to these habitats are not significant.

⁽⁵⁾ Includes 0.26 acre in fuel modification zone.

Source: URS 2012

Table 5.6-4 Impacts to Jurisdictional Waters and Wetlands

	ACOE Jurisdictional Water					CDFW Jurisdictional Channels				
	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)
On-site Area										
Drainage 1 - Jurisdictional Water	1,828	1-3	3,644	0.08	0.16	1,828	4-6	9,996	0.23	0.46
Drainage 1 - Wetland	726	3	2,178	0.05	0.1	726	3	2,178	0.05	0.1
Drainage 2 - Jurisdictional Water	2,953	1	2,953	0.07	0.14	2,953	8	22,651	0.52	1.04
Drainage 3 - Jurisdictional Water	1,403	1	1,403	0.03	0.06	1,403	2.5	3,508	0.08	0.16
Off-site Improvement Area										
Storm Drain Outfall - Wetland	0	0	0	0	0	0	0	3,050	0.07	0.14
Total	6,910		10,178	0.23	0.46	6,910		41,383	0.95	1.90
Note: Numbers may be off due to rounding. Source: URS 2012										

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, drainage, and hydromodification reports prepared for Village 8 West (Appendices K1 through K3), 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 8 West 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 8 West 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.

Village 8 West currently supports a wildlife movement for California gnatcatcher and cactus wren. Installation of underground utilities in the MSCP Preserve would result in temporary construction impacts related to wildlife movement, but would not interfere with wildlife movement over the long term. Wolf Canyon would not be isolated by development of the project and the continuity of suitable wildlife habitat associated with the adjacent east-west trending Otay River Valley and Rock Mountain open space 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 impact 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 8 West 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 component includes the construction of a sewer lateral and associated access road (planned facilities) and a storm drain pipeline and a pedestrian trail (future facilities) 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 within the Preserve (Chula Vista MSCP Subarea Plan 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 facilities 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 reduce the corridor width to 30 feet wide, instead of the standard width of 20 feet typically required for each facility. The paved access road associated with the planned sewer lateral would be used to not only access the storm drain pipeline but would also serve as the future pedestrian trail connection to the Otay Valley Regional Park. As a result, a separate right-of-way would not be required for the construction of the pedestrian trail. Temporary impacts associated with the construction of the project's off-site facilities component would be addressed pursuant to a revegetation plan required as part of mitigation for direct impacts to sensitive species. 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 sensitive species and their habitats. Given the relatively even distribution of coastal sage scrub, maritime succulent scrub, and non-native grasslands located along the southern boundary of Village 8 West, moving the alignment further east or west would not substantially reduce impacts to these habitat communities and the sensitive species that they support. Although sensitive habitat communities would not be entirely avoided, the majority of the off-site facilities alignment have been sited through less biologically sensitive agricultural areas and designated active recreation development areas.

Impacts to sensitive species, their potential habitats and wetlands were minimized by co-locating the facilities and minimizing the extent of the construction footprint. The proposed alignment avoids direct impacts to narrow endemic species. All temporarily disturbed areas 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 and pedestrian trail that would be paved with concrete or asphalt. The access road would not impede a major regional wildlife linkage and

culverts would not be required within the Preserve. In addition, the post and rail fence associated with pedestrian trail would be designed and constructed to allow for continued wildlife movement through this area. 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 would be 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 would be used for both sewer and storm water facilities, thus avoiding redundant access roads through the Preserve and minimizing impacts to wildlife habitats. The inclusion of the pedestrian trail would not cause additional habitat impacts, as the trail throughway would overlap the paved access road.

Given the relatively even distribution of coastal sage scrub, maritime succulent scrub, and non-native grasslands located along southern boundary of the project site, moving the access road/pedestrian trail east or west would not substantially reduce impacts to sensitive habitat communities and the sensitive species that they support. While these sensitive habitat communities cannot be avoided, the majority of the off-site facilities alignment would be sited through less sensitive agricultural, disturbed, and developed areas. 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 Chula Vista MSCP Subarea Plan and consistent with the facility siting criteria in this section.

The off-site storm drain facilities and the pedestrian trail are considered future facilities under the Chula Vista MSCP Subarea Plan. Impacts to sensitive species and habitats in the Preserve would be minimized by co-locating the trail, storm drain, and sewer facilities within a single 30-foot permanent corridor within a 50-foot temporary construction right-of-way through the Preserve. Sensitive species potentially utilizing the area include 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 covered habitat associated with the development of the future facilities would be 0.09 acre (see Table 5.6-3), which is consistent with the two acre per project limitation.

Cumulative deductions from the City's 50-acre allotment for future facilities, including deductions for Villages 2, 3, 4, 11, and Village 8 West total 0.68 acres. 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, no narrow endemic species were observed within the off-site planned and future facilities alignment. Likewise, results for updated QCB surveys that were conducted for the alignment were negative. Therefore, consistent with Section 5.2.8 of the Chula Vista MSCP Subarea Plan, Village 8 West as designed would avoid impacts to sensitive narrow endemic species and QCB, and this criterion is satisfied.

b. 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 will 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 May, June, and July 2008, June and July 2009, and May and June 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 QCBs were detected during these surveys. Therefore, this criterion has been satisfied.

(c) If Quino checkerspot butterfly are observed within the project area, the project will be designed to avoid impacts to Quino checkerspot butterfly habitat to the maximum extent practicable.

No QCBs 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 west of SR-125; therefore, this criterion is not applicable to the project.

(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 would 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 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/pedestrian trail would be 12 feet wide and constructed of concrete or asphalt. The areas on either side would contain aggregate to minimize vegetation growth. Therefore, this criterion has been satisfied.

c. 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 Intercept/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 Village 8 West 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 would be mitigated, erosion control would be implemented 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 Chula Vista MSCP Subarea Plan.

A new access road/trail 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. No narrow endemic species are located within the access road footprint. Therefore, this criterion has been 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; here 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 would 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 has been 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 off-site 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 Chula Vista MSCP Subarea Plan.

The proposed pedestrian trail connection to Otay Valley Regional Park will include signage and lodge pole fencing along the trail throughway to direct pedestrian traffic along designated trail routes and discourage public access to potentially sensitive habitat areas. Access connecting the Village 8 West development area to future Otay Valley Regional Park trail connections to the south would be restricted using gates, fences, and signs, until the Otay Valley Regional Park trail system has been completed in this area. Therefore, this criterion has been satisfied.

d. Adjacency Management

In accordance with Policy 7.2 of the Otay Ranch RMP II, a Preserve Edge Plan was developed for Village 8 West, 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 SPA 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 Village 8 West site. The plan also includes measures to reduce

agricultural impacts such as 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 was developed to address fire safety for Village 8 West, and outlines fire response strategies, fire prevention strategies, and fire potential in relation to the native habitat along the southern edge of the project site, in the Preserve. This document also outlines fuel modification specifications for vegetation, including acceptable plant lists. The fuel modification zone does not encroach into the Preserve located adjacent to the southern edge of the Village 8 West development area, as shown in Figure 3-13. Additionally, the fuel modification zone does not extend beyond the western edge of Planning Areas A and E and would not encroach on the Preserve located west of these planning areas.

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 are required to 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 sensitive 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 foot buffer would be 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 would be installed to control the post-development peak storm water runoff discharge rates and velocities prior to discharging project flows into Wolf Canyon. This is consistent with city 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 documents would reduce short and long-term indirect impacts associated with Village 8 West to a level below significance.

2. Consistency with Chula Vista General Plan Policies

Table 5.6-5 evaluates the consistency of the project with the applicable General Plan policies. As shown, 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>Objective E 1: Conserve Chula Vista's sensitive biological resources.</p> <p>Policy E 1.1: Implement the Chula Vista MSCP Subarea Plan.</p>	<p>Consistent. 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. As shown, 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
Part II, Chapter 10 – Resource Protection, Conservation and Management	
<p>Goal: 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>Objective: Identify sensitive and significant biological, cultural, paleontological, agricultural, and scenic resources within Otay Ranch that require protection and/or management.</p> <p>Objective: Preserve sensitive and significant biological, cultural, paleontological, flood plain, visual, and agricultural resources.</p> <p>Objective: 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>Objective: Establish functional connections for on-site resources and integrate the Preserve into a larger regional system.</p> <p>Objective: Effectively manage the preserve to protect, maintain, and enhance resources in perpetuity.</p> <p>Objective: Identify permitted land uses within the preserve.</p> <p>Objective: Identify allowable uses within appropriate land use designations for areas adjacent to the preserve.</p>	<p>Consistent. 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> <p>Preserve land would be maintained and preserved in accordance with the RMP.</p> <p>Uses of the preserve area in Village 8 West 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.</p> <p>The SPA Plan 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.</p>

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 coast barrel cactus, Otay tarplant, San Diego marsh elder, California gnatcatcher, least Bell's vireo, cactus wren, rufous-crown sparrow, orange-throated whiptail, burrowing owl, raptors and breeding migratory birds.

B. Riparian Habitat and Other Sensitive Natural Communities

The project would result in significant direct impact to coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, non-native grasslands, mule fat scrub, and freshwater marsh habitat, 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. 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

A. Sensitive Plant and Wildlife Species

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 impacts to sensitive plant and wildlife species associated with the project to below a level of significance.

- 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 1.05 acres of maritime succulent scrub will require restoration ~~1.05 acres of maritime succulent scrub~~. 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 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, Otay tarplant, a Chula Vista narrow endemic species, *Plantago erecta* (Quino checkerspot butterfly larval host plant), coast barrel cactus, 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 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.
- 5.6-4 **Burrowing Owl 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 pre-construction surveys for burrowing owls. The surveys shall be performed no earlier than 30 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 0.7 acre of temporary impacts 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).
- 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 Multiple Species Conservation Program 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 8 West 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 8 West 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 8 West 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 and 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 the 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 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.

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 implementation of the SPA Plan 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 implementation of the SPA Plan 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 implementation of the SPA Plan 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. 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 describes cultural and paleontological resources within Village 8 West and evaluates the potential for impacts to cultural and paleontological 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 8 West*, prepared by Gallegos and Associates in February 2009, and updated by Noah Archaeological Consulting in July 2010, provided in Appendix F1 of this EIR. The paleontological resource discussion is based on the *Technical Report, Paleontological Resource Assessment, Otay Ranch–Parcel B–Village 8 West*, 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 certified 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

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 Public Resources Code (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

a. City of Chula Vista

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 8 West 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, research in the Gallegos and Associates research library, and a field survey of the project area parcels. 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 8 West, and 173 cultural resource sites and 49 isolates are recorded within a one-mile radius of the project area. Four cultural resource sites (CA-SDI-12287, CA-SDI-14176, CA-SDI-14235, and CA-SDI-14236) and five isolates (P-37-014531, P-37-014532, P-37-014533, P-37-015008, and P-37-015145) are located within or adjacent to Village 8 West. Two sites (CA-SDI-4789 and CA-SDI-12809) are located within the Area of Potential Effect for the off-site improvement area. The six sites and five isolates located within or adjacent to Village 8 West or the off-site improvement area are described below.

CA-SDI-12287. Site CA-SDI-12287 straddles the project boundary, a portion of the site being within the parcel and a portion adjacent outside the project area. Rader and James (1991a) originally recorded the site as an artifact scatter consisting of one metate fragment, one scraper, and one flake. In 2007, the site was tested using surface collection of artifacts and excavation of nine shovel test pits. As a result of the test program, a total of five debitage and 85 grams of shell fragments were recovered.

CA-SDI-14176. Site CA-SDI-14176 straddles the project boundary, with a portion located within Village 8 West. The site was recorded by BFSa (1996a) for the Otay Valley Parcel of the Otay Ranch project (Smith 1996). The site was described as a temporary camp that consists of flakes, one metate, one chopper, three scrapers, one Tizon Brown Ware pottery shard, and marine shell. This site was not previously tested to determine site significance.

CA-SDI-14235. Site CA-SDI-14235 is located within Village 8 West. The site was recorded by BFSa (1996b) for the Otay Valley Parcel of the Otay Ranch project (Smith 1996). The site was described as a lithic scatter that consists of, 12 flakes, five scrapers and one hammerstone. This site was not previously tested to determine site significance.

CA-SDI-14236. Site CA-SDI-14236 was recorded by BFSa (1996c) for the Otay Valley Parcel of the Otay Ranch project (Smith 1996). The site is located within Village 8 West and was previously described as a lithic scatter that consists of seven flakes, two retouched flakes, and one scraper. Disturbance at the site consists of an adjacent fence and cattle pasture. This site was not previously tested to determine site significance.

P-37-014531. Isolate P-37-014531 was recorded by BFSa (1996d) for the Otay Valley Parcel of the Otay Ranch project (Smith 1996). The isolate consists of one flake.

P-37-014532. Isolate P-37-014532 was recorded by BFSa (1996e) for the Otay Valley Parcel of the Otay Ranch project (Smith 1996). The isolate consists of one scraper.

P-37-014533. Isolate P-37-014533 was recorded by BFSa (1996f) for the Otay Valley Parcel of the Otay Ranch project (Smith 1996). The isolate consists of one flake.

P-37-015008. Isolate P-37-015008 was recorded by Carol Serr (1990) for the Proposed Otay-2 Pipeline project. The isolate consists of one metavolcanic flake.

P-37-015145. Isolate P-37-015145 was recorded by Rader and Mitchell (1991b) for the 22,873-acre Otay Ranch project (ERCE 1991). The isolate consists of one metavolcanic core, which was collected by ERCE.

CA-SDI-4789. Site CA-SDI-4789 is within the off-site improvement area. This site has been previously tested to determine site significance. The researchers concluded that the site was essentially a surface scatter and that the testing and analysis program had exhausted the site's research potential (Schaefer et al. 1994).

CA-SDI-12809. CA-SDI-12809 is in and adjacent to the off-site improvement area. This site was originally recorded by McGowan in 1971. Between 1977 and 1983, the Southwestern College Field School recorded and excavated the site. Extensive pot hunting was noted at the site after the field school was closed. The site was re-recorded and updated by Rosen (1989). The site was described as "an extensive village area, which contains San Dieguito, La Jollan, Late Prehistoric and Ethnohistoric components." Lithics, ground stone, ceramics, shell beads, an abalone pendant, a shell fish hook, glass trade beads, bone tools, hearth features, shell and bone faunal remains, fire-affected rock, and charcoal were recorded at the site. In 1993, site CA-SDI-12809 was tested by McDonald et al. as part of the SR-125 project. As a result of the test, the site was recommended as eligible for the National Register of Historic Places (NRHP) and the CRHR. On May 25, 1995, the OHP concurred with this recommendation. Because the site has had a formal determination of eligibility to the NRHP, it is automatically included in the CRHR. In 2004, monitoring of CA-SDI-12809 was conducted for the Salt Creek Interceptor Sewer project (Hunt 2004). As a result of monitoring, five artifact deposits associated with CA-SDI-12809 were identified. The collected artifacts include lithic tools, debitage, ground stone, pottery, and shell. Hunt (2004) noted that the south side of site CA-SDI-12809 had the potential to produce cultural materials.

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), the site is underlain primarily by four geologic formations: Santiago Peak Volcanics (JKsp), located in the southwestern portion of the site; the Otay Formation (To), which underlies the majority of the site; Quaternary alluvial and terrace deposits (Qoa) in the southeastern portion of the site and portions of the proposed off-site improvements; and Holocene alluvial deposits (Qya) in the southernmost region of the off-site improvement area. The on-site portion of the Santiago Peaks Volcanics formation includes only metavolcanic rocks. Due to the molten origin of volcanic rocks, there is no paleontological sensitivity in the Santiago Peak Volcanics formation on 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 as having 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

Eight 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 east of Village 8 West.

Two of the eight localities were collected from the fluvial gritstone member of the Otay Formation during excavation for the SR-125 toll road. Fossils recovered from the eight localities mentioned above included extinct mammals, lizards and snakes, and the very rare discovery of fossilized eggshell found during grading at the Otay Ranch Village 7 project site to the north of Village 8 West.

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 that no historic or potential historic resources occur in the project area. The project site is currently undeveloped. An existing City of San Diego reservoir is located in approximately the middle of the project site, but it not part of the project and is not a historic resource. 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 8 West and off-site improvement areas: CA-SDI-12287, CA-SDI-14176, CA-SDI-14235, CA-SDI- 14236, CA-SDI-4789, CA-SDI-12809, P-37-014531, P-37-014532, P-37-014533, P-37-015008, and P-37-015145.

Gallegos and Associates (2009) intensively surveyed the entire project area to relocate the previously identified resources and record any additional resources. Testing and evaluation was conducted at three previously identified sites that were able to be located: CA-SDI-12287, CA-SDI-14176, and CA-SDI-14235. A detailed methodology for the survey, testing, and evaluation is included in Appendix F1. Generally, testing at these archaeological sites consisted of collection of surface artifacts, excavation of shovel test pits, and artifact cataloging and analysis. As a result of the survey, five additional isolates were identified in the project area (OR-I-3, OR-I-4, OR-I-5, OR-I-6, and OR-I-7). Site CA-SDI-14236 and six of the previously identified isolates could not be located during the current survey. The significance of each of the previously recorded sites and new isolates is discussed below, based on previous studies and the current field survey. Detailed results and findings from the survey are included in Appendix F1.

Site CA-SDI-12287 was originally recorded by Rader and James (1991a) as an artifact scatter consisting of one metate fragment, one scraper, and one flake. Cultural material recovered by Gallegos and Associates consisted of two debitage, two manos, and one unidentified stone fragment. A test program was previously conducted at CA-SDI-12287 that included collection of surface artifacts and excavation of nine shovel test pits and one test unit (Clowery-Moreno and Smith 2008). As a result of the test program, site CA-SDI-12287 was identified as not significant under CEQA criteria. Following testing,

Gallegos and Associates also determined that this site was not a culturally significant resource given the poor site integrity, low subsurface artifact counts, absence of ecofactual materials, and site disturbance.

Cultural material was recovered from site CA-SDI-14176 and CA-SDI-14235. Lithic samples suggested that these sites were used for two specific reasons: wood working and plant processing. However, sites CA-SDI-14176 and CA-SDI-14235 were determined to have poor site integrity, and produced no faunal materials and a low amount of artifacts. Disturbance at both sites consisted of agricultural activity, cattle ranching, previous grading, and fill soil dumping. Given the poor site integrity, low subsurface artifact counts, absence of ecofactual materials, and site disturbance, sites CA-SDI-14176 and CA-SDI-14235 are identified as not significant under CEQA criteria and are recommended ineligible for listing on the CRHR.

Schaefer et al. (1994) previously tested site CA-SDI-4789, which is in the off-site improvement area. The researchers concluded that the testing and analysis program had exhausted the research potential of the site and identified the site as not culturally significant.

The western edge of CA-SDI-12809 is within the off-site improvement area. This site is listed in the NRHP and CRHR and is considered a significant resource. An extensive testing program was carried out at this site in 1993 (McDonald et al. 1993) and two major site occupational areas were identified. However, the closest of these is located approximately 0.2 mile (1,000 feet) from Village 8 West. No subsurface deposits or artifacts were identified inside of the project area or off-site improvement areas, or within 0.15 mile (800 feet) of the area of potential effect. Therefore, the portion of this site within Village 8 West is not significant. As long as construction activities associated with the development of the project do not extend beyond the defined area of potential effect, no significant impact could occur.

The five additional isolates identified in the project area (OR-I-3, OR-I-4, OR-I-5, OR-I-6, and OR-I-7) each consisted of one metavolcanic debitage, one metavolcanic bifacial fragment, or one metavolcanic steep-edged unifacial tool. No additional features or additional artifacts were noted. None of the six previously identified isolates could be located during the current survey. According to Gallegos and Associates (2009), isolates are by nature not considered culturally significant resources.

Based on these conclusions, none of the archeological resources identified on site are culturally significant as defined in CEQA Guidelines Section 15064.5. Therefore, the project would not result in impacts to known archaeological resources, as long as construction activities do not extend beyond the disturbance limits. However, given the presence of archeological resources on 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 8 West. 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 area. 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.

Direct impacts to paleontological resources would have the potential to occur during earthwork activities, such as mass grading operations on site, or trenching activities associated with the proposed off-site improvements. Ground-disturbing construction would cut into the geological formations within Village 8 West that have a high potential for containing fossilized material. The majority of Village 8 West is underlain by the Otay Formation. This formation would be disturbed by grading activities, especially in the northeastern and southeastern portions of the project area, and during construction of proposed off-site improvements. Quaternary alluvial and terrace deposits, also considered fossiliferous, occur in the southeastern portion of Village 8 West. These sedimentary deposits would be disturbed by grading activities on site, and trenching in the off-site improvement area. These direct impacts would have the potential to adversely affect unique fossilized remains. Therefore, ground-disturbing construction activities associated with Village 8 West 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 Resource Policies

Applicable Policies	Evaluation of Consistency
<p>Objective E 10: Protect important paleontological resources and support and encourage public education and awareness of such resources.</p> <p>Policy E 10.1: 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>Policy E 10.2: 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>Consistent. 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 5.7-5 through 5.7-8, 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>Objective LUT 12: Protect Chula Vista’s important historic resources.</p>	<p>Consistent. 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
Part II, Chapter 10 – Resource Protection, Conservation and Management	
<p>Goal: 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>Objective: Identify sensitive and significant biological, cultural, paleontological, agricultural, and scenic resources within Otay Ranch that require protection and/or management.</p> <p>Policy: Recover any significant fossils unearthed during grading activities for subsequent scientific study and/or display.</p> <p>Policy: 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>Objective: Preserve sensitive and significant biological, cultural, paleontological, flood plain, visual, and agricultural resources.</p> <p>Policy: Preserve significant cultural resources.</p>	<p>Consistent. 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 5.7-8 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 and consistency with cultural resource policies 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. It is not anticipated that construction would extend beyond the defined area of potential effect. However, a mitigation measure is include below, consistent with the recommendations of the cultural resources report (Appendix F1), to avoid a potentially significant impact that could occur if construction activities inadvertently extended in the proximity of site CA-SDI-12809.

C. Human Remains

No known human remains have been identified at Village 8 West. 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 8 West 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 **Protective Fencing.** Prior to the issuance of any land development permits for the SPA Plan and associated off-site facilities, including clearing, grubbing, and grading, the applicant shall install protective fencing (i.e., orange snow fence or similar) along the area of potential effect in the area of CA-SDI-12809 as directed by a qualified archaeologist. A qualified archaeologist shall monitor the site throughout the construction of the off-site facilities (including clearing, grubbing, grading, and installation) to ensure that unanticipated finds are handled in an appropriate and professional manner and that required fencing remains intact and project related construction activities do not extend beyond the approved limits of work.
- 5.7-2 **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 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(s) 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.
- 5.7-3 **Resource Discovery Procedure.** During the initial grading of previously undisturbed soils within Village 8 West 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.

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 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). 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 shall, 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 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).

C. Human Remains

- 5.7-4 **Human Remains Disturbance Protocol.** If human remains are discovered during grading or site preparation activities within Village 8 West or off-site improvement area, 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

- 5.7-5 **Paleontological Resource Mitigation Program.** 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.
- 5.7-6 **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 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).
 - 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).
- 5.7-7 **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.

- 5.7-8 **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 through 5.7-3 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 5.7-4 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 5.7-5 through 5.7-8 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.

5.8 Geology and Soils

This section describes the geologic setting of Village 8 West 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 geology 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 8 West prepared by Advanced Geotechnical Solutions, Inc., dated October 22, 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 8 West 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, relatively undeformed, 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 have been only mildly deformed and are easily recognized as widespread, near-horizontal, sedimentary beds forming the broad tablelands and rolling hills of Otay Mesa.

The north and east portions of the site are underlain by the Otay Formation and consist of gently rolling terrain that is punctuated by south flowing V-shaped drainages. Most of the drainages are broad and relatively shallow; however, some steeper gradients exist. Low-relief river terraces occupy the southernmost portion of this terrain. The southwest portion of the project site reflects more rugged terrain underlain by Santiago Peak Volcanics. Surface outcrops and large in-place exposed boulders are common, reflecting the bedrock's resistant character.

The local stratigraphy reflects the regional, near-horizontal to gently southwest dipping Oligocene Otay Formation, and a Tertiary un-named fan conglomerate. These mapped units overlie volcanic and metavolcanic rocks of the Mesozoic Santiago Peak Volcanics. In turn, various Pleistocene and Holocene non-marine sediments mantle those formations, particularly in the south part of the site. The components of the site stratigraphy are described in greater detail below.

C. 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 study area. The formation is typically brown to light gray sandstone/gritstone. Infrequent to common gray bentonite beds occur throughout the formation. Typically, these beds are one to several feet thick and have relatively sharp contact with the interbedded sandstones. The clay beds are expansive and exhibit low shear strengths when wet. Harder and more resistant gritstone sub-units are common within the Otay Formation and can range from a few feet to tens of feet thick. Breccia sub-units consisting of rounded to angular cobbles to boulder-sized clasts can also be found within the Otay Formation near the contact of the Santiago Peak Volcanics. These beds are likely equivalent to the Tertiary Fanglomerate. The Breccia subunits consist of gravel to cobble-sized clasts. The Otay Formation is less resistant than the Santiago Peak Volcanics and unnamed Fanglomerate and thus forms subdued, rolling topography exemplifying Otay Mesa. Its steepest slopes occur where young tributaries to the Otay River are actively eroding headward and downward.

1. *Santiago Peak Volcanics (Jsp)*

The Santiago Peak Volcanics crop out in the southwest part of the property near Rock Mountain. The Santiago Peak Volcanics are overlain by much younger geologic units. Some of the younger geologic units have been eroded and have revealed portions of this ancient landscape, creating modern topographic highs such as Rock Mountain. The Santiago Peak Volcanics are generally dense and mildly metamorphosed volcanic rocks. Large in-place surface boulders occur on natural slope areas. Outside of boulder areas, this formation is only a few feet thick. Below this formation the rock is very dense. Blasting operations occur in the nearby quarry, where the formation has been mined for aggregate.

2. *Unnamed Fanglomerate Deposits (Tfg)*

A fanglomerate outcropping is located in the lower elevation slopes of the site above the Otay River. Angular metamorphic boulders are typical within the unit. The unit is dense and moderately to well cemented.

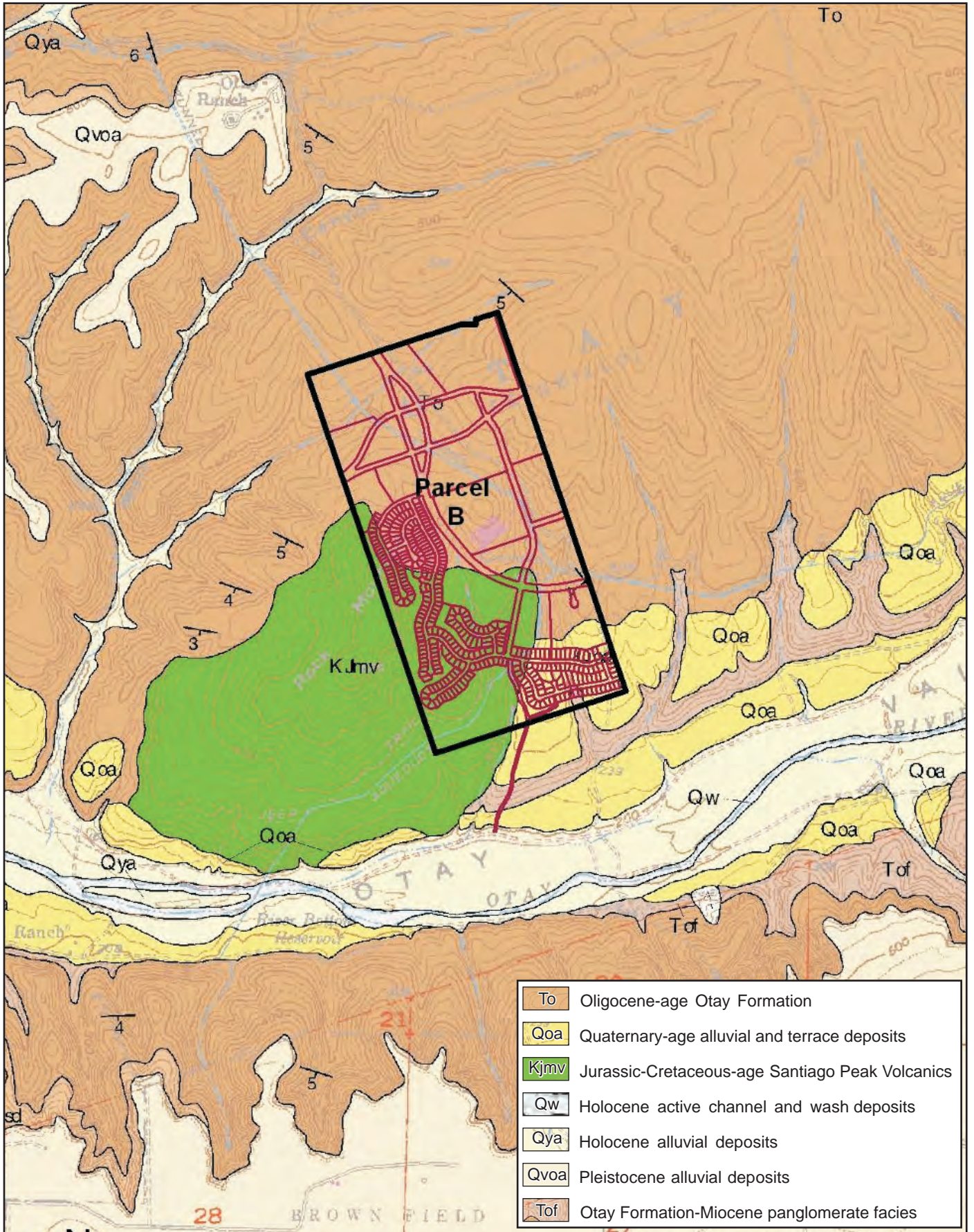
3. *Terrace Deposits*

Veneers of Pleistocene cobbly to bouldery, well oxidized, dense sands have been mapped on surfaces 90 to 170 feet above the modern Otay River channel. These deposits are depicted as terrace deposits in Planning Areas U and V in the southeast corner of Village 8 West and along the majority of the sewer access road alignment. 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 (Qal), Topsoil, and Artificial Fills*

Alluvium is a soil that is deposited by water and occupies the on-site drainages. The alluvium observed is porous, expansive, and exhibits low in-situ density. Typically these sediments vary from a few feet to ten feet in thickness with local variations.

A mantle of residual topsoil is present over much of the rolling hills underlain by Otay Formation. The soils are typically one to five feet thick, low density, organic-rich and porous. Generally, the areas underlain by Santiago Peak Volcanics have thinner soils and are locally absent as evidenced by the frequent occurrence of surface boulders.



Source: William Hezmalhalch Architects, Inc. 2012

No Scale



GEOLOGIC FORMATIONS FIGURE 5.8-1

Significant deposits of artificial fill on the site are associated with the reservoir and also exist over the existing utilities crossing the site. Small prisms of fill that have not been mapped are primarily associated with unimproved trails.

D. 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, especially in the Santiago Peak Volcanics formation, and may be encountered during grading.

E. Geologic Hazards

The following discussion is an assessment of 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 8 West 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 8 West 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, California 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 8 West 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. A listing of active faults within about 65 miles of the site is presented in Table 5.8-1 with the estimated maximum seismic event potential for each fault.

Table 5.8-1 Distance to Known Active Faults

Fault Name	Distance from Project Site (feet)	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 8 West has a very low risk for liquefaction due to the dense nature of the on-site geologic units. The on-site geologic units consist of materials that are not susceptible to liquefaction.

4. Compressible and Expansive Soils

Loose, compressible soils are found on site, including slope wash, topsoil and the undocumented artificial fill, and the highly weathered portions of older alluvium, terrace, Tertiary Fonglomerate, Otay Formation and metavolcanic rock. 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 8 West during site reconnaissance or subsurface investigation. The Otay Formation, which underlies most of Village 8 West (see Figure 5.8-1, Geologic Formations), is susceptible to erosion and slumping in some areas but no slumps or landslides were observed in this formation on site. Surficial slumps and bedrock landslides

were observed within the Otay Formation west of Village 8 West. No indications of past landslides were observed or mapped within the Santiago Peak Volcanics during the geotechnical investigation. This formation is erosion resistant with relatively stable, steep natural slopes.

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 Santiago Formation, Otay Formation, and the Fonglomerate/Terrace deposits on site are not susceptible to subsidence. The surficial units on 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 (1994), 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 8 West 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. Design of future structures within Village 8 West 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.

The potential for liquefaction in Village 8 West 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 8 West is generally comprised of rolling hills covered predominantly with grassland and scrub habitat crossed by dirt roads. Existing runoff from the project site flows in one of two routes. The southern and eastern portions of Village 8 West drain in a southerly direction to the Otay River. The northwestern portion of the site drains in a westerly direction to Wolf Canyon, a tributary to the Otay River.

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 Village 8 West. 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. 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 the 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 8 West would include drainage improvements to minimize soil erosion and loss of topsoil on Village 8 West and along sloped areas. As discussed in detail within Section 5.11, Hydrology and Water Quality, the proposed on-site hydromodification detention basin within the storm drain system would reduce post-construction flows discharging into Wolf Canyon below existing flow volumes. However, the post-project peak flow from the project site to the Otay River is anticipated to increase up to approximately 34 percent over existing flows. 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 downstream of the dam for the Otay River is more than 20,000 cubic feet per second for the 100-year storm event. Village 8 West is downstream of the dam; therefore, the increase in flows associated with the project is a minor portion of the total flow capacity of the Otay River at the point where flows would enter the river. The impact of the increased flow at the project's discharge point is negligible at peak river flow and would actually be considered beneficial to counteract degradation trends by replacing water impounded by the reservoir (see Appendix I1).

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 I1). As a result, the project is not required to reduce post-project flows to pre-project conditions. However, the proposed outlet point from Village 8 West to the Otay River would include an USBR Type IV Energy Dissipater and additional erosion control provided by a section of rip rap. The proposed energy dissipater would reduce flow velocity from Village 8 West and minimize the potential for erosion, although flows to the river would still increase compared to existing conditions. Section 5.11, Hydrology and Water Quality, provides a comprehensive analysis of the existing and proposed hydrology and drainage features of the project. As discussed in Section 5.11, with implementation of the proposed drainage facilities, impacts related to runoff and erosion to 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.

Loose, compressible soils are found over much of the project area, including slope wash, topsoil and the undocumented artificial fill, and the highly weathered portions of older alluvium, terrace, Tertiary Fanglomerate, Otay Formation and metavolcanic rock. 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, liquefaction and/or collapse as a result on compressible soils. 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 (1994), 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 this area, areas 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 in these tables, 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>Objective E 14: Minimize the risk of injury, loss of life, and property damage associated with geologic hazards.</p> <p>Policy E 14.1: 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>Policy E 14.2: 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>Policy E 14.3: 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>Consistent. 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
Part II, Chapter 8 – Safety	
<p>Goal: 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>Consistent. As discussed under Threshold 1, design of future structures within Village 8 West 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>Objective: 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>Policy: 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>Consistent. 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>

Table 5.8-3 Project Consistency with Applicable GDP Geology and Soils Policies (continued)

Applicable Policies	Evaluation of Consistency
<p>Objective: Prevent property damage and loss of life due to landslides, rock falls, and erosion.</p>	<p>Consistent. 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>
Part II, Chapter 10 – Resource Protection, Conservation and Management	
<p>Goal: Minimize soil loss due to development. Objective: Identify development activities, which present a large potential to create excessive runoff or erosion. Policy: Reduce soil loss through slope stabilization, vegetation protection, revegetation and other techniques.</p>	<p>Consistent. 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>Goal: Reduce impacts to environmentally sensitive and potential geologically hazardous areas associated with steep slopes. Objective: Research existing slope conditions prior to land development activities. Policy: Provide geotechnical investigations with each SPA plan.</p>	<p>Consistent. 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 8 are shown on Figure 3-11, 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. However, grading activities could result in slope instabilities or landslides within the project area. 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 presence of loose compressible materials within Village 8 West could become unstable as a result of the project. As a result, there is the potential for landsliding, lateral spreading, liquefaction and/or collapse. These impacts are considered to be potentially significant.

D. Expansive Soils

Soils within Village 8 West 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 implementation of the SPA Plan and TM.

F. Waste Water Disposal Systems

No significant impacts related to alternative waste water disposal systems have been identified for implementation of the SPA Plan and TM.

5.8.5 Mitigation Measures

A. Exposure to Seismic Related Hazards, Slope Stability, and Expansive Soils

5.8-1 Geotechnical Recommendations. Prior to the issuance of each grading permit for Village 8 West, the applicant shall verify that the applicable recommendations in the Geotechnical Investigation prepared by Advanced Geotechnical Solutions, Inc., dated October 22, 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 shear 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 measures 5.8-1 and 5.8-2 would also reduce impacts related to expansive soils.

E. Consistency with Geotechnical Policies

No mitigation measures are required.

F. 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 measures 5.8-1 and 5.8-2 seismic hazard impacts related to the implementation of the SPA Plan and TM 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 measures 5.8-1 and 5.8-2 slope stability impacts related to the implementation of the SPA Plan and TM 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 implementation of the SPA Plan and TM would be reduced to below a level of significance.

E. Consistency with Geotechnical Policies

Impacts would be less than significant without mitigation.

F. Waste Water Disposal Systems

Impacts would be less than significant without mitigation.

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5.9 Public Services

This section describes the public services that would serve Village 8 West 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 8 West. 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 8 West. 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 states that four new fire stations are 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 shows a fire station location within the EUC. 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. The remaining two fire stations that would be needed to

serve the Otay Ranch GDP area at build-out have not yet been planned by the CVFD, due to extensive areas of the GDP in which future development plans are still unknown. 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 identifies two additional planned facilities, but 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 CMVC (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 223,423 people 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 GMOC threshold standard for emergency fire response is 7 minutes or less in 80 percent of calls. The CVFD did not meet the GMOC 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 8 West 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 one mile from the northern border of Village 8 West. Distances to interior locations within Village 8 West increase as much as a mile due to the geographic size of the site. CVFD Fire Station #7 serves the communities of Otay Ranch, Village of Heritage, Heritage Hills, and the Village of Countryside. 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 battalion headquarters for the eastern part of the city.

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
Current Facilities⁽¹⁾			
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 53
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 3
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
Planned Facilities⁽²⁾			
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: ⁽¹⁾ CVFD 2012; ⁽²⁾ 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
Total	134
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 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 Impact 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 fire station would be conditionally permitted in the Neighborhood Edge, Neighborhood General, and Neighborhood Center Zones, and the Town Center. The SPA Plan does not specify the construction of government facilities, but does not preclude them. Construction impacts from general development in Village 8 West would be similar to impacts resulting from construction of a 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. Further environmental review would be required if a specific facility is proposed for construction, but such facilities are not proposed as part of the Village 8 West SPA Plan.

B. Threshold 2: Further reduces 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 GMOC threshold standard of responding to 80 percent of calls within 7 minutes in fiscal year 2011. According to the 2012 GMOC 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 5,737 people and approximately 300,000 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. American Medical Response has indicated that one relocated medical unit and one new medical unit would be needed to adequately serve Village 8 West (PMC 2012).

Fire services and implementation of the CVFD's Fire Station Master Plan 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 8 West 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 SPA Plan has been prepared in coordination with the CVFD in order to meet the GMO standard. For planning purposes, the CVFD generally assumes that development located within 2.5 miles from a CVFD facility can be reached by the CVFD within a five minute response time. According to the CVFD, and demonstrated in the Fire Protection Plan, all areas of Village 8 West are within the five minute response time area of the existing fire station in Village 7 (Gipson 2011). Additionally, the EUC includes a proposed fire station that would serve Village 8 West. Therefore, the project is within a response time area that would meet the GMOC standards for fire protection and would not decrease average response time by locating new facilities outside of the existing CVFD service area.

The city 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 8 West 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 quality of life standards.

While the combination of PFDIF fees from the applicant, implementation of the PFFP, and compliance with existing city policies and mechanisms would ensure that the GMOC 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 is not 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 (0.79 mgd). The OWD approved a WSAV in November 2010 for Village 8 West. 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 8 West project and the existing and other planned development projects to be served by OWD. Furthermore, fire flow requirements for each building within the project site 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. As shown, 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 5.9-3 Project Consistency with Applicable General Plan Fire Service Policies

Applicable Policies	Evaluation of Consistency
<p>Objective LUT 76: Provide public services and facilities to meet the needs of the Otay Ranch residents.</p> <p>Policy LUT 76.1: Services and facilities will be conveniently located and efficiently managed and provided to Otay Ranch residents concurrent with needs.</p>	<p>Consistent. 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 Town Center, which would be accessible by all modes of transportation. Park facilities would be provided throughout the project area, including a neighborhood park, community park, and town square.</p>
<p>Objective PFS 5: Maintain sufficient levels of fire protection, emergency medical service and police services to protect public safety and property.</p> <p>Policy PFS 5.1: Continue to adequately equip and staff the Fire Department to ensure that established service standards for emergency calls are met.</p>	<p>Consistent. With implementation of the PFFP, the project would be consistent with this objective and supporting policies. The PFFP for Village 8 West 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>

Table 5.9-3 Project Consistency with Applicable General Plan Fire Service Policies (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy PFS 5.2: Upgrade fire and emergency medical equipment, as required, to protect the public from hazards and to ensure the safety of firefighters.</p> <p>Policy PFS 5.3: Support the provision of new fire stations, as deemed necessary through the existing or updated FSMP.</p> <p>Policy PFS 5.7: 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>Objective PFS 6: Provide adequate fire and police protection services to newly developing and redeveloping areas of the city.</p> <p>Policy PFS 6.1: Continue to require new development and redevelopment projects to demonstrate adequate access for fire and police vehicles.</p> <p>Policy PFS 6.2: Require new development and redevelopment projects to demonstrate adequate water pressure to new buildings.</p>	<p>Consistent. 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 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>Objective GM 1: Concurrent public facilities and services.</p> <p>Policy GM 1.9: Require that all major development projects prepare a PFFP that articulates infrastructure and public facilities requirements and costs and funding mechanisms.</p> <p>Policy GM 1.11: 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>Consistent. With implementation of the PFFP, the SPA Plan would be consistent with this General Plan objective and policies because the PFFP will identify the fire 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. 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>Objective GM 3: Create and preserve vital neighborhoods.</p> <p>Policy GM 3.3: 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>Consistent. See analysis for Objective GM 1.</p>

Table 5.9-4 evaluates the consistency of the project with the applicable GDP objectives. As shown, 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.

Additionally, implementation of Village 8 West would not interfere with implementation of the fire station guidelines in the existing FSMP. An updated FSMP has been prepared and identifies two additional planned facilities, but is pending review and approval by the City Council. Development in Village 8 West would be required to conform to any approved Fire FSMP. Therefore, the proposed project would not result in any conflict with the FSMP.

Table 5.9-4 Project Consistency with Applicable GDP Fire Service Policies

Applicable Policies	Evaluation of Consistency
Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans	
<p>Goal: 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>Objective: 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>Policy: Otay Ranch SPA plans shall include emergency disaster plans to become operative during periods of major emergency.</p> <p>Policy: Otay Ranch shall participate in cooperative agreements with urban and rural emergency services providers.</p> <p>Policy: Incorporate the Otay Ranch project area into existing regional disaster preparedness programs.</p> <p>Policy: Otay Ranch shall site fire and emergency services facilities consistent with the following factors:</p> <ol style="list-style-type: none"> 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. <p>Policy: 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>Policy: 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>Policy: Fire protection and emergency services facilities shall be available or will be available concurrent with need.</p> <p>Policy: 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>Policy: 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>Consistent. The CVFD did not meet the GDP Objective of responding to 85 percent of calls within 7 minutes in fiscal year 2011. In addition, the Fire Protection Plan demonstrates that the project site is within 2.5 miles of the nearest fire station. The increase in residential and employment population in Village 8 West 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 is met. Implementation of the PFFP and compliance with the city’s growth management ordinance 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 8 West 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. 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 8 West 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 8 West 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>Policy: 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>Policy: 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>	

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

The anticipated increase in residential population of 5,737 people and the employment base from 300,000 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 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.

- 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.

C. Consistency with Fire and Emergency Medical Service Policies

Mitigation measures 5.9.1-1 through 5.9.1-3 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 5.9.1-3 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 5.9.1-3 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 respond 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 seven miles from Village 8 West. 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 8 West 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 GMOC 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 GMOC 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 8 West 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 GMOC 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 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 8 West 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 8 West 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 4.7.5, Community Use Landscaping)
- Enhancing pedestrian visibility in the Town Center (SPA Section 5.8, Traffic Calming)
- Locating bicycle parking facilities 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)
- Requiring commercial entries to be visible from the public street frontage (SPA Section 3.4, Building Configurations)

- Orienting of single-family residences to provide a front door that is visible from the street (SPA Section 4.4, Attached Residential Design Guidelines, and Section 4.5, Detached Residential Design Guidelines)
- Maintaining landscaping to avoid overgrown trees and shrubs (SPA Section 3.6, Performance Standards)
- Using of urban couplets to promote activity and visibility in the Town Center (Section 5.4, Vehicular Circulation Network)
- Orienting community-use buildings and buildings in the Town Center toward public streets, pedestrian pathways and/or active spaces (SPA Section 4.6, Community Use Facility Design Guidelines, and Section 4.3, Town Center Design Guidelines)
- Orienting the front door entrance of multi-family residences along the public street. Internally, buildings would be oriented toward common open space areas and major pathways whenever possible (SPA Section 4.4, Attached Residential 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 4.4, Attached Residential Design Guidelines)
- Lighting would be provided at activity areas, parking lots, and along major pathways (SPA Section 4.6, Community Use Facility Design Guidelines)
- Including adequate lighting and well-designed shelters at transit stops (SPA Section 5.2, Multi-modal Planning Principles)
- Allowing 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 4.0, 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)
- Encouraging surveillance by providing on-street parking and slower vehicle speeds (Chapter 5.0, 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 Village 8 West does not incrementally decrease the CVPD's ability to meet the GMOC 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 these tables, 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

Applicable Policies	Evaluation of Consistency
<p>Objective PFS 5: Maintain sufficient levels of fire protection, emergency medical service and police services to protect public safety and property.</p> <p>Policy PFS 5.4: Provide adequate law enforcement staff and equipment pursuant to Police Department strategic plans to meet established service standards.</p> <p>Policy PFS 5.5: Explore the need to establish local, community-based satellite or storefront police offices to enhance community well-being.</p> <p>Policy PFS 5.6: Encourage crime watch programs in all neighborhoods.</p> <p>Policy PFS 5.7: 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>Consistent. 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>Objective PFS 6: Provide adequate fire and police protection services to newly developing and redeveloping areas of the city.</p> <p>Policy PFS 6.1: Continue to require new development and redevelopment projects to demonstrate adequate access for fire and police vehicles.</p> <p>Policy PFS 6.3: Encourage CPTED techniques in new development and redevelopment projects.</p>	<p>Consistent. The SPA Plan is consistent with these relevant policies. Refer to Objective PFS 5.</p> <p>The circulation design of Village 8 West 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 8 West 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 under Threshold 2.</p>
<p>Objective GM 1: Concurrent public facilities and services.</p> <p>Policy GM 1.9: Require that all major development projects prepare a PFFP that articulates infrastructure and public facilities requirements and costs and funding mechanisms.</p>	<p>Consistent. With implementation of the PFFP, Village 8 West 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>Objective GM 3: Create and preserve vital neighborhoods.</p> <p>Policy GM 3.3: 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>Consistent. See analysis for Objective GM 1.</p>

Table 5.9-6 Project Consistency with Applicable GDP Police Service Policies

Applicable Policies	Evaluation of Consistency
Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans	
<p>Goal: Prevent injury, loss of life and damage to property resulting from crime occurrence through the provision of justice facilities.</p> <p>Objective: Make provisions for justice facilities, including jails, courts, and police facilities adequate to serve the Otay Ranch project area.</p>	<p>Consistent. The SPA Plan does not contain justice facilities but police facilities area permitted use in the mixed-use Town Center.</p>
<p>Goal: Prevent injury, loss of life and damage to property by having adequate justice facilities to serve Otay Ranch residents.</p> <p>Objective: 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>Objective: Justice facilities serving Otay Ranch residents will be sited in appropriate locations and in a timely manner, irrespective of jurisdictional boundaries.</p> <p>Objective: Enhance public safety by utilizing land use and site design techniques to deter criminal activity.</p>	<p>Consistent. The SPA Plan does not propose any justice facilities; however, the design of Village 8 West 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>Goal: Protection of life and property and prevention of crime occurrence.</p> <p>Objective: Make provisions for criminal justice facilities, including jails, courts, and police facilities adequate to serve the Otay Ranch project area.</p> <p>Objective: Enhance conditions for public safety by utilizing land use and site design techniques to deter criminal activity and promote law enforcement.</p> <p>Objective: Site law enforcement facilities to appropriate locations in order to serve the population.</p> <p>Policy: 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>Policy: 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>Consistent. As discussed above, police facilities may be located in the Town Center. The design of Village 8 West 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 8 West, when these services will be required and the appropriate funding mechanism(s) to ensure that facilities, equipment and personnel 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 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.
- 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 and

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 soil 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 45 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 7 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 was 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.

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.

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		

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 2,050 residential units would generate approximately 556 elementary school students, as shown in Table 5.9-8. To provide for future elementary school demand, an 11-acre elementary school site has been designated as Parcel S on the site plan (see Figure 3-3, Site Utilization Plan). This site would be reserved for acquisition by the school district. If selected by the Chula Vista Elementary School District, this school site would be large enough to accommodate up to 750 students and would be adequate to serve the project. Construction timing of the school would be determined by the school district. Until such time that the school would be completed, students residing within Village 8 West would attend schools in neighboring villages as determined by the school district.

Table 5.9-8 School Obligations

	Units	Elementary School ⁽¹⁾		Middle School ⁽²⁾		High School ⁽²⁾	
		Rate	Students	Rate	Students	Rate	Students
Mixed Use	899	x 0.2091	188	x 0.0810	73	x 0.1171	106
Multi-Family	530	x 0.2091	111	x 0.0810	43	x 0.1171	63
Single-Family (Attached/Cluster)	290	x 0.4114	120	x 0.0936	28	x 0.1939	57
Single-Family Detached	331	x 0.4114	137	x 0.0936	31	x 0.1939	65
Total	2050		556		175		291

⁽¹⁾ Elementary school generation rates were negotiated with the Chula Vista Elementary School District.

⁽²⁾ High school and middle school student generation rates were negotiated with Sweetwater Union High School District.

Source: Otay Land Company 2012

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 for 1,728 elementary school students. There is sufficient capacity throughout the district at this time to accommodate additional elementary school students.

2. Middle Schools

The district wide student enrollment for middle school age children in the SUHSD is stable. According to the SUHSD, the Village 8 West project is within the EastLake Middle School attendance area. Historically, enrollment at this school has met or exceeded capacity (SUHSD 2012). The project would generate approximately 175 middle school students, as shown in Table 5.9-8. To fulfill the educational need of new middle school students, a 21-acre middle high school site has been designated on the site plan in Planning Area D. This school would be large enough to accommodate up to 1,000 students; therefore, it would be adequate to serve buildout of the project. The site would be reserved for acquisition by the Sweetwater Union High School District. Construction timing of the school would be determined by the school district. Until such time that the school would be completed, students residing within Village 8 West would attend schools in neighboring villages as determined by the school district. This could result in temporary impact on neighboring schools; however, impacts would be less than significant following completion of the new middle school.

3. High Schools

The project would generate approximately 291 high school students, as shown in Table 5.9-8. According to the SUHSD, high school students residing in Village 8 West would attend Olympian High School, located in Village 7, adjacent to the proposed middle school. Olympian High School was constructed according to the GDP in order to accommodate planned growth in the area surrounding the school, including Village 8 West. However, as shown in Table 5.9-8, this high school does not have the capacity to accommodate all of the high school students from Village 8 West. In the future, high school students from Village 8 West or currently attending Olympian High School 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.

Provisions for continuing education are not required; however, the project site is located approximately three miles from Southwest College and one mile from 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 schools are proposed in Village 8 West: an 11-acre elementary school located on the western border of the project area north of Otay Valley Road, and a 21-acre middle school located at the northeast corner of the project area. With respect to proximity to airports, the project site is located approximately one mile to the north of the Brown Field boundary within the airport's area of influence. Village 8 West is located within the FAA Height Notification Boundary and Airport Overflight Notification Area so 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 the limited height permitted as part of the SPA Plan (no more than four stories), 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 is bounded by Otay Valley Road, Street A, and Street B. Adjacent to the school, Otay Valley Road would be a four-lane major roadway but would include bike lanes and a sidewalk on the side of the road adjacent to the school. The roadway would be separated from the pedestrian facilities by a landscaped parkway. Street A and Street B are low-speed, residential collector streets. A sidewalk would also be provided along Street A. The village pathway on Street B would be adjacent to the school boundary. The middle school would be bounded by westbound Main Street and Magdalena Avenue. Both streets would be part of the village pathway, which would be located along the school boundary. Main Street is a low-speed street within Village 8 West and would also include bike lanes. Intersection bulb-outs, which would slow traffic and improve pedestrian visibility, would be included at the intersection of Street A and Street B, Magdalena Avenue and Main Street, and Main Street and Street A. Therefore, the roadways that would surround the proposed schools would be separated from the schools by pedestrian facilities and would include traffic calming measures 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. Both schools are located along the village pathway. Additionally, both schools would be located within 0.4 mile of a transit stop. As such, the proposed alternative transportation network would support the future elementary and middle schools, and adjacent traffic would safely accommodate bicycle, pedestrian, and vehicle traffic. Vehicular traffic generated by the proposed schools is addressed in Section 5.3, Transportation/Traffic. The proposed elementary school site is 11 acres; therefore, the school meets the minimum site requirement of 10 acres.

Private schools are conditionally permitted throughout Village 8 West. 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 proposed middle school and elementary schools sites are both located adjacent to residential development and less than one-quarter mile from a park. Therefore, the schools are located in central residential areas in Village 8 West, adjacent to parks.

The proposed school sites must comply with the CVESD and state standards regarding health and safety issues, including the potential for toxins in the soil. 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 5.13-3, 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 8 West 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.

C. Threshold 3: Be inconsistent with General Plan, GDP, and other objectives and policies regarding school services thereby resulting in a significant physical impact.

Table 5.9-9 compares the project to the General Plan policies related to school services and Table 5.9-10 compared the project to the GDP. 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>Objective PFS 9: 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>Policy PFS 9.1: 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>Policy PFS 9.3: Assist school districts in identifying and acquiring school sites for new construction in needed timeframes.</p>	<p>Consistent. The Village 8 West SPA Plan is consistent with these General Plan policies. The applicant and City have been coordinating with the CVESD in the site selection for an elementary school and middle schools within Village 8 West. High school students generated by Village 8 West would attend Olympian High School in Village 7.</p>
<p>Objective PFS 10: Efficiently locate and design school facilities.</p> <p>Policy PFS 10.3: 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>Policy PFS 10.6: 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>Consistent. The SPA Plan is consistent with these General Plan policies. In coordination with the school district, the OLC has identified an approximately 11-acre elementary school site adjacent to a neighborhood park and residential neighborhoods, and a 22-acre middle school site in the mixed-use 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 8 West would be mitigated to a less than significant level with implementation of mitigation measures 5.5-4 and 5.5-6.</p> <p>With the implementation of General Plan policies to require the coordination of siting needs with the CVESD, compatibility issues related to the school site would be reduced to below significance.</p>

Table 5.9-10 Project Consistency with Applicable GDP School Policy

Applicable Policies	Evaluation of Consistency
Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans	
<p>Goal: 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>Goal: Coordinate the planning of adult educational facilities with appropriate district.</p> <p>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.</p> <p>Objective: 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>Consistent. Two potential school sites are provided within Village 8 West 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 elementary and middle schools unless construction of an elementary school, a middle school, and high school coincides with student generation and associated service demands.

B. School 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 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 D or S, designated for future schools, the applicant shall provide evidence from the Chula Vista Elementary School District or Sweetwater Unified High School District that the site has not been determined by the district to be needed for use as a school site.

B. School Siting

Mitigation measures 5.8-1 and 5.8-2 in Section 5.8, Geology and Soils, and 5.13-1 in Section 5.13, Hazards and Hazardous Materials, would reduce impacts related to school siting.

C. Consistency with School Policies

No mitigation measures are required.

5.9.3.6 Level of Significance After Mitigation

A. School 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. School Siting

With implementation of mitigation measures 5.8-1, 5.8-2, 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 5.5 miles from Village 8 West, 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 Village 8 West, 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 one mile northeast of Village 8 West, and consists of approximately 3,400 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 30,000 square feet in size, at the intersection of East H Street and Paseo Ranchero, approximately three miles from Village 8 West. However, the Rancho del Rey Library has been delayed indefinitely due to budget constraints (City of Chula Vista 2011c).

The GMOC threshold standard for libraries is 500 square feet of library space per 1,000 residents. According to the 2012 GMOC Annual Report, the current 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 GMOC 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 8 West would generate a demand for approximately 2,868 square feet of additional library facilities within the city. While the SPA Plan permits public community facilities such as libraries throughout the SPA, 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. Impacts specifically related to new governmental facilities would be less than significant.

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 8 West would generate a demand for approximately 2,865 square feet of additional library facilities within the city. As discussed above, the city does not currently meet the GMOC 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 8 West. 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 8 West, and maintain acceptable service ratios. Library facilities would also be permitted throughout Village 8 West. 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 GMOC 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 8 West. 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 8 West 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. As shown in these tables, the project would be consistent with applicable policies. The Chula Vista Public Library Strategic Facilities Plan does not identify any library facilities for Village 8 West. As discussed under Threshold 1, no libraries are specifically planned for Village 8 West, but the SPA Plan does not preclude their development. Therefore, Village 8 West 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>Objective GM 1: Concurrent public facilities and services.</p> <p>Policy GM 1.9: Require that all major development projects prepare a PFFP that articulates infrastructure and public facilities requirements and costs and funding mechanisms.</p>	<p>Consistent. 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>Objective GM 3: Create and preserve vital neighborhoods.</p> <p>Policy GM 3.3: 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>Consistent. See analysis for Objective GM 1.</p>

Table 5.9-12 Project Consistency with Applicable GDP Library Policy

Applicable Policies	Evaluation of Consistency
Part II, Chapter 5 – Capital Facilities, Section E – Community Facility Plans	
<p>Goal: Sufficient libraries to meet the information and education needs of Otay Ranch residents.</p> <p>Objective: Provide high quality and contemporary library facilities and services, which meet the needs of the entire Otay Ranch project area.</p> <p>Objective: City of Chula Vista: 500 square feet of adequately equipped and staffed library facilities per 1,000 populations.</p> <p>Objective: County of San Diego: 350 square feet (gross) of adequately equipped and staffed regional/area library facilities per 1,000 populations.</p> <p>Objective: Otay Ranch libraries will be equitably financed by all new development that will benefit from the facilities.</p>	<p>Consistent. Library facilities are a permitted use on the CPF site 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 8 West 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 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 **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 8 West 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, Park Land Dedication Ordinance, which 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 Park Land Dedication Ordinance, 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 8 West and other future parks along the greenway. The village greenway is intended to connect active and passive users, provide them with the opportunity to stop and enjoy an enhanced open space area, and ensure connectivity to the Greenbelt Trail system. Under the Greenbelt Master Plan, the greenway trail through Otay Ranch that would provide a link through Otay Ranch and Wolf Canyon that would connect Salt Creek to 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 requires 5.6 acres of community or neighborhood parks to be developed in Village 4 and 8.0 acres of parks to be developed in Village 8, based on the 1993 GDP Village boundaries. The plan specifically lists a 5-acre neighborhood park in Village 4 and 7-acre neighborhood park in Village 8 as part of the future facilities.

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 8 West, including 7.5 acres of neighborhood parks and 3.0 acres of town squares. The plan also contains several policies that address the design and delivery of park sites.

B. Existing Parks and Recreational Facilities

The 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 seven existing parks located within two miles of Village 8 West. These parks are Heritage Park and Community Center, Harvest Park, Santa Cora Park, Santa Venetia Park, Windingwalk Park, All Seasons Park, and Cottonwood 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 1.25 miles northwest of Village 8 West. 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.

Harvest Park, 1550 East Palomar Street: This 6.8 acre park is located approximately 1.5 mile north of Village 8 West. Facilities include barbeque facilities, an open green space/multi-purpose field, a park shelter/gazebo, picnic area, play equipment, restrooms, and a soccer field.

Santa Cora Park, 1365 Santa Cora: This park encompasses 5.7 acres and is located approximately 1.5 miles north of Village 8 West. Facilities include barbeque facilities, a tennis court, a basketball court, an open green space, a picnic area, and play equipment.

Santa Venetia Park, 1500 Magdalena: This park encompasses 7.7 acres and is located approximately 1.5 mile northeast of Village 8 West. Facilities include picnicking and barbeque facilities, an open green space, a park shelter/gazebo, play equipment, basketball courts, restrooms, a multi-purpose field, and ball field.

Windingwalk Park, 1675 Exploration Street: This park encompasses 7.1 acres and is located approximately two miles northeast of Village 8 West. 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.

Cottonwood Park, 1778 East Palomar Street: This 6.57 acre park is located approximately two miles north of Village 8 West. Facilities include barbeque facilities, a ball field, a basketball court, an open green space, a park shelter/gazebo, picnic areas, play equipment, restrooms, and a multi-purpose field.

2. Regional and County Parks and Preserve

Otay Valley Regional Park. This park is located coincident with the southern border of Village 8 West and is bisected by the SR-125. The Otay Valley Regional Park will ultimately encompass 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 3.5 miles east of Village 8 West. 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: 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.

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 8 West. According to the GDP and the Quimby Act, Village 8 West would be required to provide three acres of neighborhood and community parkland for every 1,000 residents. The projected population of

Village 8 West would be a maximum of 5,737 people, assuming 2.58 persons per household for multi-family dwelling units and 3.3 persons per household for single-family dwelling units. Therefore, approximately 17.2 acres of parkland would be required by the GDP under the Quimby Act. According to the 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 8 West would be obligated to provide approximately 17.8 acres of parkland. The project would exceed the requirements of the GDP, Quimby Act, and CVMC. The project would provide a total of 27.9 acres of parks, of which 27.1 acres are eligible for credit to meet city and GDP parkland requirements. Proposed parks include 17.4 acres of land that would be added to the Otay Ranch Community Park (16.6 acres eligible for park credit), a 7.5 acre neighborhood park, and a three acre town square in the Town Center. The project would also provide approximately 39.1 acres of open space and provisions for an off-site trail connection to the Otay Valley Regional Park. In addition to dedicating land for development of parks, development in Village 8 West would also pay the PFDIF for park facilities, which provides for development of major recreational facilities, including community centers and aquatic facilities.

The Otay Ranch Community Park would be a gathering place for residents of Village 8 West and surrounding villages. The Community Park area is identified in the Chula Vista Parks and Recreation Master Plan and would be an extension of the approximately 53 acre community park proposed north and west of Village 8 West in Village 4. Recreational facilities over the entire park would include ten lighted softball fields, six lighted soccer fields, four lighted tennis courts, four lighted basketball courts, a lighted skate (skateboard and/or roller skate) facility, picnic facilities (with BBQs), play areas with play equipment, walkways (with security lighting), pathways, trails, multi-purpose open turf areas, lighted parking lots, other park support fixtures and furnishing, a 65,000 square feet aquatic complex with support buildings, a 21,000 square feet recreation center, and restrooms. Vehicular access to the park from Village 8 West would be provided via Main Street. 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, lighted sport courts, age-appropriate play grounds, and picnic areas. The Community Park and Neighborhood Park would comply with applicable city policy documents including, but not limited to, the Chula Vista Parks Master Plan, Parks Facility Master Plan and the PFDIF Plan.

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 Square in Village 8 West would serve as a central gathering place 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 Square may also include gardens and urban spaces for quiet reflection.

Additionally, 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 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. Therefore, the project would provide adequate parks and recreational facilities for new residents in Village 8 West.

With implementation of the project, Village 8 West would not increase the use of existing facilities such that substantial deterioration would not occur. However, if construction of new parks would not coincide with development of residences in Village 8 West, 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 Village 8 West and would not directly impact off-site areas, including adjacent villages or regional open space or habitat areas, with the exception of the provisions for the trail to the Otay Valley Regional Park. 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 8 West recreational facilities to a less than significant level, including off-site impacts associated with the trail to the regional park. 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. 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 the 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 8 West would be obligated to provide approximately 17.8 acres of parkland. Village 8 West would provide a total of 27.1 acres of eligible parks, including 16.6 acres of land that would be added to the Otay Ranch Community Park, a 7.5 acre neighborhood park, and a 3-acre town square in the Town Center, also described under Threshold 1. The SPA Plan and TM would exceed the city threshold for parkland following implementation of the proposed parks.

Additionally, 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 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. However, if construction of new parks would not coincide with development of residences in Village 8 West, 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, the project would be consistent with policies that would specifically apply to the project.

Table 5.9-13 Project Consistency with Applicable General Plan Park Policies

Applicable Policies	Evaluation of Consistency
<p>Objective LUT 81: Develop a higher density, mixed use, transit-oriented town center positioned on the intersection of Main Street and La Media Road, surrounded by lower intensity residential use and a large community park that preserves Rock Mountain as an important landform and visual resource.</p> <p>Policy LUT 81.1: Develop approximately 70 acres of Village 4 west of La Media as a large community park to serve Otay Ranch.</p>	<p>Consistent. The project would be consistent with this policy because the SPA Plan would dedicate 17.4 acres to the Otay Ranch Community Park at the intersection of Main Street and La Media Road. The remaining portion of the park would be provided in Village 4.</p>
<p>Objective PFS 15: Provide new park and recreation facilities for residents of new development, city-wide.</p> <p>Policy PFS 15.1: 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>Policy PFS 15.7: 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>Consistent. The project would be consistent with these policies. As discussed under Threshold 3, the project would exceed the city-wide standard of three acres per estimated one thousand new residents by providing 27.1 eligible acres of parkland, including a community park, neighborhood park, and town square. The City of Chula Vista would have discretionary approval of the SPA Plan and future development, including the proposed parks, trails, and other recreational facilities.</p>
<p>Objective PFS 16: 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>Consistent. 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 Otay Valley Regional Park Concept Plan. As discussed in Section 5.6, Biological Resources, the project would be consistent with the MSCP and RMP.</p>
<p>Objective PFS 18: Allow the appropriate joint-use of school and park facilities.</p> <p>Policy PFS 18.3: 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>Consistent. The SPA Plan is consistent with this objective and policy because the proposed elementary school is located adjacent to the Neighborhood Park.</p>
<p>Objective E 11: 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>Policy E 11.1: 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>Policy E 11.2: Plan for the long-term preservation and enhancement of open space within the Chula Vista greenbelt.</p>	<p>Consistent. 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 connects Village 8 West to the Otay Valley Regional Park via a dual purpose multi-use trail/sewer access road. 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.</p>

Table 5.9-13 Project Consistency with Applicable General Plan Park Policies (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy E 11.5: Encourage the creation of connected sidewalks and trails between community activity areas and enhance with kiosks and rest stations.</p> <p>Policy E 11.7: 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>Village 8 West also proposes a village pathway along Main Street and a regional trail along Otay Valley Road that connects the activity areas in the Town Center, as well as connects the Town Center to the surrounding neighborhoods and villages.</p> <p>As discussed in Section 5.10, Global Climate Change, Village 8 West would be subject to the California Green Building Standards. Additionally, Village 8 West proposes a community park, neighborhood park, and town square, and would accommodate additional smaller parks, which would potentially accommodate gardens. Community gardens would be permitted within all residential, mixed-use, park, and CPF sites.</p>
<p>Objective E 12: Provide connections between Chula Vista’s open space and trails network and the regional network.</p> <p>Policy E 12.1: 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>Consistent. The SPA Plan proposes a Greenbelt trail that connects Village 8 West to the Greenbelt Trail System and the Otay Valley Regional Park trail system. This trail would connect to a regional trail along Otay Valley Road. The regional trail and a proposed village pathway along Main Street would provide regional connections to surrounding villages.</p>

2. Otay Ranch General Development Plan

Table 5.9-14 evaluates the consistency of the project with the applicable GDP objectives. As shown, the project would be consistent with policies that would specifically apply to the project.

Table 5.9-14 Project Consistency with Applicable GDP Park Policies

Applicable Policies	Evaluation of Consistency
Part II, Chapter 4 – Parks, Recreation, Open Space	
<p>Goal: 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>Objective: Identify park, recreational and open space opportunities, where appropriate, to serve the South County region and San Diego County as a whole.</p> <p>Policy: Provide 15 acres of regional park and open space per 1,000 Otay Ranch residents.</p> <p>Policy: 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>Objective: Maximize conservation, joint uses and access and consider safety in the design of recreational facilities.</p> <p>Policy: Encourage public transit service to regional parks and provide access to handicapped and disabled persons, in accordance with the latest federal guidelines.</p>	<p>Consistent. The SPA Plan proposes diverse park and recreational opportunities to meet the recreational, conservation, preservation, cultural, and aesthetic needs of all residents. The Village 8 West parks, pathways, and trails would be located in several areas throughout Village 8 West, as shown in Figure 3-15, Parks and Open Space. The distribution of the parks and plazas in Village 8 West is intended to facilitate pedestrian access, with each unit in the Village 8 West no more than a few minutes 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 Square would be the site of community gatherings and events. The Community Park would provide amenities that bring the community together, such as lighted athletic fields, recreation facilities, and group picnic areas. The Neighborhood Park is a medium sized parks</p>

Table 5.9-14 Project Consistency with Applicable GDP Park Policies (continued)

Applicable Policies	Evaluation of Consistency
<p>Policy: Commercial recreation opportunities may be permitted within town square, community and regional parks to generate revenue to defray park operational expenses.</p> <p>Policy: 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>Policy: 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>Objective: Provide neighborhood and community park and recreational facilities to serve the recreational needs of local residents.</p> <p>Policy: 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>Policy: 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>that provides active and passive recreation for the surrounding neighborhood and include amenities such as multi-purpose play fields, lighted sport courts, age-appropriate play grounds, and picnic areas. 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; to incorporate a pedestrian open space/trail corridor across the Village 8 West which ties parks and other land uses together; to provide a network of pedestrian spaces, plazas, malls, promenades, and squares to create a pedestrian oriented environment; to integrate pedestrian plazas with individual buildings and building clusters; and to incorporate fountains or artistic features as visual focus. A town square and neighborhood park are proposed in the project area. The regional trail would traverse Village 8 West and directly connect the Community Park, Town Square, and Neighborhood Park. The SPA Plan includes design guidelines to develop pedestrian oriented development, including pedestrian spaces, and focal objects and other forms of architectural relief.</p> <p>As discussed in Section 5.3, Transportation/Traffic, pedestrian facilities are available to connect all uses in the SPA.</p> <p>Village 8 West 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> <p>Approximately 17.2 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. Village 8 West would provide a total of 27.1 acres of eligible parkland.</p> <p>The SPA Plan does not include a joint use with schools districts; however, the proposed elementary school is located adjacent to the Neighborhood Park.</p>

3. Greenbelt Master Plan

The proposed project includes a greenbelt trail that will begin at the southerly terminus of Street A, follow the alignment of the proposed sewer main, and will ultimately connect to the Greenbelt Trail as part of the Otay Valley Regional Park system. The trail would be open to bicycles, pedestrians, and other non-motorized modes of transportation. Connections to this trail would be provided by the regional trail along Otay Valley Road and the village pathway along Main Street. These trails would provide internal connections as well as linkages with several other villages, consistent with the Greenbelt Master Plan. The trail would connect regional trail users with the Otay Valley, also consistent with the Greenbelt Master Plan. The pathways would be constructed of decomposed granite or concrete, and would be a minimum of 10 feet wide, subject to review and approval.

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 and would have a less than significant impact with respect to 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	Evaluation of Consistency
<p>Goal 1.0: 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>Consistent. The SPA Plan and TM would implement the village pathway, connecting Village 8 West with Village 3, Village 4, Village 7, and Village 8 East; and the regional trail, connecting Village 8 West with Village 7 and Village 8 East. Along these routes through Village 8 West, these trails would connect three parks (Community Park, Town Square, and Neighborhood Park), the proposed school sites, the open space along the western and southern borders of the SPA, the greenbelt trail, and the Otay Ranch Preserve. The width of the trails and connectivity to several park areas would accommodate and allow access to destination uses and activity areas in Village 8 West. The regional trail would consist of a 10-foot-wide trail outside the Town Center. In the Town Center, this trail would transition into a paved trail that is more consistent with the urban character of the area. The village pathway would be paved throughout the SPA, consistent with the urban character of the Town Center and surrounding area. These trails would accommodate pedestrians and bicyclists.</p>
<p>Goal 2.0: 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>Consistent. The project would incorporate a segment of the village greenway through implementation of the village pathway, the regional trail, and greenbelt trail 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>
<p>Policy 2.1: 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.</p>	<p>Consistent. As discussed in Section 5.6, Biological Resources, the proposed trail in the Village 8 West 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.</p>
<p>Policy 2.5: The city will locate trails in areas that avoid or minimize conflicts with natural resources.</p>	<p>Consistent. The mitigation measures identified in Section 5.6, Biological Resources, would reduce all impacts to sensitive natural resources from buildout of Village 8 West to a less than significant level, including proposed trails. The proposed trail in the Village 8 West preserve area would be consistent with the requirements of the Chula Vista MSCP and Otay Ranch RMP to protect natural habitat.</p>
<p>Policy 2.6: All proposed trails shall adhere to guidelines contained within the city-adopted MSCP as well as stipulations contained in other mitigation agreements.</p>	<p>Consistent. As discussed in Section 5.6, Biological Resources, the proposed trail in the Village 8 West preserve area would be consistent with the requirements of the Chula Vista MSCP and Otay Ranch RMP</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	Evaluation of Consistency
<p>Policy 2.7: Impervious trails should be avoided in watershed and flood plain areas where potential contamination of resources could occur.</p>	<p>Consistent. The greenbelt trail and village pathway would be paved and impervious; however, the Village 8 West site 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 as all surface water runoff would be collected in a storm water drainage system and routed to master drainage facilities, including detention/storm water quality management basins.</p>
<p>Goal 3.0: To establish a greenbelt that ensures public access within the greenbelt through an active and passive recreation park system with trails connecting each segment.</p>	<p>Consistent. The village pathway and regional trail through Village 8 West would connect and provide public access to the Town Center, schools, residential neighborhoods, and the three parks in the SPA Area, as well as providing ultimate connection to on-site and off-site parks and recreational sites, including the Otay Valley Regional Park.</p>
<p>Policy 3.1: The city will actively pursue open space programs and develop trail links connecting to parks and regional trails.</p>	<p>Consistent. The project would support this policy through the provision of a segment of the village pathway, as previously discussed under Goal 3.0.</p>
<p>Policy 3.2: The city will design trails that will accommodate a wide range of number of users anticipated.</p>	<p>Consistent. Please refer to Goal 1.0, above.</p>
<p>Policy 3.3: The city will develop a greenbelt system that offers a variety of active and passive recreation experiences.</p>	<p>Consistent. Please refer to Goal 1.0, above.</p>
<p>Policy 3.4: The city will develop trails, wherever possible, which provide for accessibility for all, including those with disabilities.</p>	<p>Consistent. As the village pathway and regional trail would take the form of major pathways through Village 8 West, these facilities would be consistent with all state-mandated ADA requirements.</p>
<p>Policy 3.5: The city will locate staging areas, parking areas, and other amenities in areas that enhance the greenbelt system.</p>	<p>Consistent. The village pathway and regional trail would pass through the Town Center, where visitor parking areas would be readily available. Other amenities, including access to the Town Center and neighborhood 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.</p>
<p>Goal 4.0: To provide a Greenbelt system that receives the necessary resources for open space acquisition, park and trail development, maintenance, and to establish volunteer programs.</p>	<p>Consistent. The SPA Plan provides the necessary resources for acquisition and development of a greenbelt system in Village 8 West. The SPA Plan includes village pathway and regional trails through Village 8 West, which would be privately developed concurrently with the phased development of Village 8 West, would be acquired by the city as public sidewalks. Maintenance districts or other mechanisms may be established to ensure proper management and maintenance. The internal trails would connect to the greenbelt trail system to the south and future trails within adjacent villages to the east and west of the site.</p>
<p>Policy 4.4: The city will collaborate with private organizations for constructing, maintaining, and monitoring trails.</p>	<p>Consistent. The project would support this policy through the private development of a segment of the village pathway, as discussed under Goal 4.0.</p>

Table 5.9-16 Project Consistency with Parks and Recreation Master Plan

Parks and Recreation Master Plan Policy	Project Consistency
<p>Policy 1.1: 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>Consistent. The project would be consistent with Policy 1.2 because it would meet the Park Land Dedication ordinance of three acres per 1,000 people under the ordinance's existing coefficient factors.</p>
<p>Policy 1.11. The city will require new community parks and neighborhood parks in the developing master plan communities to be distributed and sized in accordance with the following table in order to maintain a balanced system for both community parks and satellite neighborhood parks.</p> <ul style="list-style-type: none"> ▪ Otay Ranch Community Park – 70 acres ▪ Village 4 Neighborhood Park – 5.6 acres ▪ Village 8 Neighborhood Park – 8 acres 	<p>Consistent. Village 8 West would provide 17.4 acres dedicated to the Community Park; the remainder would be developed in Village 4. The SPA Plan also proposes a 7.5 acre neighborhood park. Therefore, the project is generally consistent with the Master Plan defined range of recreational experiences anticipated to serve the demands of the Village 8 West residents.</p>
<p>Policy 1.12: Community parks are redefined as a community park has a minimum net-useable area of 30-acres or more, which is designed to serve more than one neighborhood. The minimum acreage for future community parks, that already have an approved GDP/SPA or are in the Western part of the city, may be waived if the city determines that existing land use constraints prevent development of a 30 acre park. Typical facilities contained in a community park include lighted ball fields and courts, recreation complexes, and parking areas as needed for programmed uses. The field areas provided shall be of a flexible design so they can be scheduled primarily for competition games and practice games but also for non-programmed use. In addition, community parks include facilities that are also found in neighborhood parks, such as picnic facilities, informal fields, and children's play areas.</p> <p>Policy 1.14: The city will require the following primary facilities and support facilities to be located in future community parks.</p> <p>Primary Facilities: Athletic field(s) with lighting, hard court(s) with lighting, picnic shelters, picnic tables, play area with play equipment, in-season league storage area(s), restrooms, maintenance building, community center building and at least two recreation components from the following: gymnasium, gymnasium, community pool, senior annex, or teen annex.</p> <p>Support Facilities: Open lawn areas, paved walkways with lighting, parking areas with lighting</p>	<p>Consistent. The proposed Community Park would be consistent with Policy 1.12 and Policy 1.14 because it would have a useable area of more than 30 acres, would serve more than one neighborhood, and would include a variety of facilities, including play fields, picnic facilities, and play areas. Final design of the Community Park would be required to include all of the facilities listed in Policy 1.12; however, not all of these facilities are required to be provided in the Village 8 West portion of the park.</p>
<p>Policy 1.15: Community parks shall be sited adjacent to middle schools where feasible.</p>	<p>Consistent. The SPA Plan would be consistent with this policy because the Community Park and middle school would both be located along the northern edge of the project area, separated by a portion of the Town Center. They would be connected by the off-street village pathway.</p>
<p>Policy 1.16: 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,</p>	<p>Consistent. 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. Facilities would include athletic fields, sports courts, picnic areas, play equipment, restrooms, open play areas, and walkways.</p>

Table 5.9-16 Project Consistency with Parks and Recreation Master Plan (continued)

Parks and Recreation Master Plan Policy	Project Consistency
<p>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>Policy 1.18: The city will require the following Primary facilities and support facilities to be located in future neighborhood parks:</p> <p>Primary Facilities: Athletic field(s), hard court(s), picnic shelters, picnic tables, play area with play equipment, restrooms.</p> <p>Support Facilities: Open lawn areas, paved walkways with lighting, maintenance building.</p>	
<p>Policy 1.19: Neighborhood parks will be sited adjacent to elementary and middle schools where feasible.</p>	<p>Consistent. The SPA Plan would be consistent with Policy 1.19 because the Neighborhood Park is proposed adjacent to the proposed elementary school.</p>
<p>Policy 1.21: The city will promote and facilitate the integration of public art in Chula Vista parks.</p>	<p>Consistent. 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 and community use facilities, such as parks.</p>

4. Chula Vista Parks and Recreation Master Plan

The Chula Vista Parks and Recreation Master Plan identifies a range of passive and activity park elements to serve the residents of Village 8 West. The existing plan, which was prepared in 2002 and is based on the 1993 GDP, specifically lists a 5-acre neighborhood park in Village 4 and 7-acre neighborhood park in Village 8 as part of the city's future facilities. The project would provide a total of 27.9 acres of parks, including a 7.5-acre neighborhood park. Therefore, the project is generally consistent with the Master Plan's park guidelines. The 2010 draft of the updated Parks and Recreation Master Plan identifies 7.5 acres of neighborhood parks and three acres of town squares for Village 8 West. As discussed above, the project would include a 7.5 acre neighborhood park and three acres of town squares. 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 PRMP. Impacts would be less than significant.

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 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 Director of Library and 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 8 West 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 Library and 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 Library and Recreation. Park facilities such as the Neighborhood Park and Town Square indentified as being required to meet the overall park obligation shall be identified on the first final map.
- 5.9.5-5 **Town Square Park.** Prior to issuance of the final map containing the 383rd residential building permit, the Town Square Park shall be completed to the satisfaction of the Director of Library and Recreation.
- 5.9.5-6 **Park Development Agreement.** Prior to the approval of the first final map for Village 8 West 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 Library and Recreation. 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.

B. New Recreational Facilities

No mitigation measures are required.

C. Parks and Recreation Growth Management Threshold Standard

Mitigation measures 5.9.5-1 through 5.9.5-6 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 5.9.5-6 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 5.9.5-6 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. The 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 8 West. The project specific calculations are provided as Appendix H2.

5.10.1 Existing Conditions

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 CO₂ equivalent (MMT CO₂e).
- **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 CO₂e. 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 these 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 late 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 CO₂e 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 CO₂e 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 CO₂e (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. By CARB expects that this measure will reduce transportation-related GHG emissions by about 5 MMT CO₂e 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 SCS 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, the 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 CO₂e.

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. Senate Bill 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 Utility 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 ground-up 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 (CO₂) 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 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. 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.

f. 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:

1. *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.
2. *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.

3. *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.
4. *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.
5. *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.
6. *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.
7. *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.

g. 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.

h. 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 energy efficiency standards.

CVMC Section 15.26.030 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 8 West project site is within 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.

i. City of Chula Vista Mandatory Construction and Demolition Debris Recycling Ordinance

Section 8.25.095 of the CVMC 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 (CO₂), methane (CH₄), ozone (O₃), nitrous oxide (N₂O), and sulfur hexafluoride (SF₆). 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 (CO₂e) 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 CO₂e, 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 account for 56.6 percent of the total emissions of 49,000 MMT CO₂e. 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 CO₂e. 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 CO₂e in 2008 (RECON 2012). 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 CO₂e, resulting in net emissions of about 474 MMT CO₂e.

Table 5.10-2 State of California GHG Emissions by Sectors in 2008

Sector	Total Emissions (MMT CO ₂ 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
Total (Gross) Emissions	477.74	100
MMT CO ₂ 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 ₂ 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
Total	35.5	100
MMT CO ₂ 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 2005d, 2008b).

In 2008, community GHG emissions in the city totaled 934,630 MT CO₂e. 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 Village 8 West SPA GHG Emissions

Village 8 West 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 2012). The 2008 University of San Diego School of Law Energy Policy Initiative Center study predicts a countywide increase to 43 MMT CO₂e 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. As discussed in greater detail in the Climate Change Analysis prepared for the GPA/GDPA SEIR, 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.

The following analysis incorporates the methodology of the Global Climate Change Analysis prepared for the 2013 SEIR (EIR 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 (CO₂, CH₄, and N₂O) that would be emitted from the construction of Village 8 West, 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 was based on methodologies recommended and used the SCAQMD and CARB.

To evaluate the projected emissions from development in Village 8 West 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 8 West. 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 full buildout of Village 8 West, including 2,050 residential units and 300,000 square feet of office and commercial uses. 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 CO₂e.

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 this analysis, annual fuel consumption is based on the traffic study prepared for the 2013 GPA/GDPA SEIR (LLG 2010) to be consistent with the methodology in the Global Climate Change Analysis for the SEIR. This traffic analysis is conservative compared to the traffic analysis prepared for Village 8 West because it does not take into account the trip reductions that would occur as a result of smart growth development in Village 8 West. The traffic study for the 2013 GPA/GDPA SEIR (EIR 09-01) estimates that the proposed buildout of

Villages 8 West would generate 43,564 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 252,671 vehicle miles would be traveled each day and 13,440 gallons of vehicle fuel would be consumed each day under BAU conditions.

Construction emissions were estimated by multiplying the proposed residential and commercial quantities by annual construction emission rates of 0.077 MT CO₂e per dwelling unit and 0.006 MT CO₂e per square foot of commercial. These values were obtained through review of other project-level analyses completed for the city of San Diego.

GHG emissions associated with electricity use were calculated by multiplying the total number of dwelling units, commercial, and industrial square footage by average electricity use rates obtained from the U.S. Energy Information Administration and by the electricity generation emission factors contained in Table 5.10-4. Statewide monthly average natural gas consumption rates were obtained from the Energy Information Administration and SCAQMD to calculate BAU emissions.

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 ft³)
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

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 8 West would result in a water demand of approximately 0.8 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. These values were then multiplied by emission factors used in the EPA Waste Reduction Model.

The Village 8 West 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 8 West Emissions

As noted earlier, the BAU condition represents a standard development scenario that does not incorporate any features that would result in reduction 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 emission 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 8 West is 88,639 MT CO₂e. The greatest source of emissions would be from transportation, accounting for approximately 45 percent of the total. The second greatest source is electricity, accounting for approximately 39 percent of BAU emissions.

Table 5.10-5 Annual Business-as-Usual Village 8 West GHG Emissions

Emission Source	BAU Emissions (MT CO₂e)	Percent of Total Emissions
Transportation	43,696	45
Electricity	22,790	39
Natural Gas	7,459	<1
Water Use	1,589	2
Solid Waste	1,504	2
Construction ⁽¹⁾	11,601	12
Total	88,639	100
⁽¹⁾ Total construction impacts (not annual). MT CO ₂ e = Metric tons carbon dioxide equivalent. Source: Atkins 2012		

2. Village 8 West 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 8 West. 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 8 West 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 was able to determine a trip length for Village 8 West 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 8 West would be 4.62 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 8 West SPA Plan, Air Quality Improvement Plan, would assist development in Village 8 West 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 8 West 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 8 West 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 8 West 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 88,639 MT CO₂e each year, the development proposed in the SPA Plan and TM would be required to reduce annual GHG emissions to below 70,911 MT CO₂e 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 were considered to be consistent with the Climate Change Scoping Plan and AB 32 Year 2020 goals if the total annual GHG emissions resulting from electricity, natural gas/water use, solid waste disposal, and construction activities, would be equal to or less than 70,911 MT CO₂e. As shown, emissions associated with buildout of Village 8 West including the project-specific reduction features would be 59,915 MT CO₂e. The greatest source of emissions would be from transportation, accounting for just under half of emissions. The second greatest source would be electricity, accounting for approximately 40 percent of project emissions.

Table 5.10-6 Annual Village 8 West GHG Emissions with Reduction Features

Emissions Source	Buildout Emissions (MT CO ₂ e)	Percent of Total Emissions
Transportation	24,364	38
Electricity	15,953	40
Natural Gas	5,221	<1
Water Use	1,271	2
Solid Waste	1,504	2
Construction ⁽¹⁾	11,601	18
Total	59,915	100
⁽¹⁾ Total construction impacts, not annual. MT CO ₂ 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 32 percent compared to BAU. Therefore, GHG emissions for Village 8 West are consistent with AB 32 and would result in a less than significant impact.

Table 5.10-7 Village 8 West Annual GHG Emissions Comparison

Emissions Source	BAU Emissions (MT CO₂e)	Village 8 West Emissions with Reduction Features (MT CO₂e)	Percent Reduction Compared to BAU
Transportation	43,696	24,364	44
Electricity	22,790	15,953	30
Natural Gas	7,459	5,221	30
Water Use	1,589	1,271	20
Solid Waste	1,504	1,504	0
Construction ⁽¹⁾	11,601	11,601	0
Total	88,639	59,915	32
⁽¹⁾ Total construction impacts, not annual. MT CO ₂ e = Metric tons carbon dioxide equivalent 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 8 West would have the potential to result in increased exposure to adverse effects. The potential for the 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. As discussed in Section 5.4 under Threshold 1, operation of the project would have the 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 (EIR 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 projected 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 mixed-use areas, transit use, and availability of pedestrian and bicycle facilities 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 5.9, Public Services and 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 8 West 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 8 West 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 increased exposure to water supply shortages.

3. Rise in Sea Levels

Village 8 West is located approximately 10 miles inland and separated from the Pacific Ocean and San Diego Bay by hilly topography. Ground elevations within the project site range from 300 feet AMSL to 600 feet AMSL. Therefore, Village 8 West 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 32 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 8 West would ultimately discharge to San Diego Bay. However, the project would minimize impacts on 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 and 5.11-2 would require 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 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 8 West 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, 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 within Village 8 West would be designed to stay cool and protect residents from rising temperatures. The Non-Renewable Energy Conservation Plan for Village 8 West, a SPA component, discusses features that would reduce energy demand. The SPA Plan proposes street trees and narrow street width. 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 provides shade that enhances the reduction of heat from roadways. The 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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