



Development Services Department

## Palomar Gateway District Specific Plan



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# Palomar Gateway District Specific Plan

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# **INTRODUCTION**

## **1.1 What is a Specific Plan?**

According to the State of California Office of Planning and Research, a Specific Plan is “a tool for the systematic implementation of the general plan. It effectively establishes a link between implementing policies of the general plan and the individual development proposals in a defined area. A specific plan may be as general as setting forth broad policy concepts, or as detailed as providing direction to every facet of development from the type, location and intensity of uses to the design and capacity of infrastructure; from the resources used to finance public improvements to the design guidelines of a subdivision.” Specific Plans must comply with Sections 65450 - 65457 of the California Government Code.

Specific Plans must also be consistent with the policies contained within the General Plan and may be adopted by resolution or by ordinance. This differentiation allows cities to choose whether their specific plans, or portions thereof, will be policy driven (adopted by resolution), or regulatory (adopted by ordinance). This Specific Plan is adopted by ordinance. All zoning related portions of this Specific Plan (i.e. land use matrix, permitted uses and development regulations) are prepared to serve as regulatory provisions and supersede other regulations and ordinances of the City for the control of land use and development within the Specific Plan boundaries. Other portions, such as the development design guidelines provide direction for future planning and public improvement efforts. Future development projects, subdivisions, public improvement projects and other implementing programs should be consistent with the adopted Specific Plan.

The Palomar Gateway District Specific Plan (“Specific Plan”) is established pursuant to the authority granted in the Chula Vista Municipal Code Section 19.07, Specific Plans, and the California Government Code, Title 7, Division 1, Chapter 3, Article 8, Sections 65450 through 65457 and contains all the mandatory elements identified in Government Code Section 65451.

## **1.2. Consistency with the General Plan**

The most recent update to the City of Chula Vista General Plan occurred in 2005. The main focus of the General Plan Update (2005) was primarily focused on the currently developed areas of the city, in particular the western portions of the City. Within the Southwest portion of the City, the General Plan designated five areas of change that would need to go through a more detailed planning process. One of these areas is the Palomar Gateway District, which is the subject of this Specific Plan. As such, the planning effort was confronted with balancing “how” the City should grow over the next 25 years given the continued growth projections with “where” the growth should occur, given the numerous established stable neighborhoods. This challenge was seen as an opportunity to utilize the key principles found in smart growth strategies relative to urban revitalization and apply them to areas that have experienced recent decline or

underutilization. The General Plan is based on many of the common elements and concepts of smart growth such as:

- Provide a mix of compatible land uses
- Take advantage of compact building design around transit centers
- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Strengthen and direct development towards existing communities
- Provide a variety of transportation choices

Due to the length of time that build-out of the Specific Plan is expected to take (i.e. 20+ years), as well as the nature of urban revitalization, the exact extent, timing and sequencing of development is difficult to predict. However, the Specific Plan is not a static document and as such will be revisited on an on-going basis to evaluate progress towards build-out projections, establish priority rankings of important public improvements and consider other issues that may arise. A series of checks and balances will be part of that process and may include review under the City's Growth Management Ordinance, the biannual budgetary and Capital Improvements Program (CIP) cycle, and five-year progress check of the Specific Plan.

### **1.3 Purpose and Intent**

The purpose of the Palomar Gateway District Specific Plan is to encourage an appropriate mixture and density of activity adjacent to the existing San Diego Trolley light rail transit station at Palomar Street. The Specific Plan was created to promote a pedestrian, bicycle, public transit, and private automobile-supportive development environment and by integrating these mobility elements with a complementary mix of land uses, all within a comfortable walking and bicycling distance from the light rail station. Transit-oriented development will generally occur as infill and reuse within the Palomar Gateway area. Uses that do not support light rail transit ridership are generally discouraged within the Palomar Gateway District Specific Plan.

The specific objectives of this district are to:

- create a vibrant, safe, pedestrian friendly live/work/play environment that emphasizes the area as a southern gateway to the City of Chula Vista;
- achieve a compact pattern of development conducive to walking and bicycling;
- encourage light rail transit use and convenient access to services and jobs;
- allow for a mix of uses, designed to attract pedestrians;
- maintain an adequate level of parking and access for automobiles and integrate automobile use safely with pedestrians, bicyclists, and other users;
- provide sufficient density of employees, residents, and recreational users to support transit; and
- generate a relatively high percentage of trips serviceable by transit.

## 1.4 Community Outreach Process

Creating and implementing a strong public engagement strategy is at the core Chula Vista's specific planning efforts for the Palomar Gateway District. The community outreach effort was designed to involve the various citizens and interest groups of Chula Vista in the Specific Plan process. Careful initial steps were taken to involve the citizens of Chula Vista. The following is a summary of the outreach efforts included in the public participation process that helped to shape the Specific Plan.

In developing a public participation strategy for the Palomar Gateway District Specific Plan, staff was fortunate to be able to build this effort on top of several preexisting community outreach and education efforts that had been conducted in the Southwest of the City beginning in 2007. In 2007-2008 the City began the "Southwest United in Action" community strengthening process. One goal of this effort was to foster dialogue between the City and the Southwest Community in advance of specific planning this area. Through community events, surveys, and meetings, the Southwest United in Action process attempted to clarify the priorities of the community. The final component of this effort was the "Southwest Leaders' Conference" which took place in May and June 2009, and worked to provide greater detail on subjects ranging from planning to municipal finance to leaders who had emerged in the Southwest United in Action process.

Many of the graduates from the Leaders' Conference went on to become active participants in the first stage of the specific planning process for the Southwest, a series of three Urban Design Workshops, each focusing on different "areas of change" that had been identified by the 2005 General Plan Update. Public notification of the workshops was provided through a variety of means, including direct mailings, posting flyers at local businesses and public buildings (e.g. library), e-mail and Nixle blasts to interest lists, press releases, and publication in local newspapers. Flyers promoting these meetings were distributed in both English and Spanish.

These workshops also attracted new participants -- business owners, residents and community members with a particular interest in each district. These workshops were held in June and July 2009 and were intended to bring forth the community's diverse perspectives for implementing the General Plan in each district. The workshop for the Palomar Gateway District was attended by 18 community members from various backgrounds. Participants listened to an informational presentation about specific planning, took a walking tour of the Palomar Gateway District and the other Southwest Districts, and collaboratively worked to map out their future vision for the area. The results of these workshops have been summarized in an informational booklet titled "Urban Design Workshop Summary."

### *Southwest Working Group*

In developing a public participation strategy for the Palomar Gateway District specific plan, staff worked to incorporate both the feedback received from earlier planning

efforts, and to work with community members who had already demonstrated their commitment to planning the future of the area through their participation in the initial steps of the planning process.

From the Southwest Leaders' Conference and the Urban Design Workshops, staff identified and reached out to a group of individuals with interest, knowledge of the area, and leadership abilities to participate in the Southwest Working Group (SWWG). The SWWG represented a cross-section of the southwest community, including community organizations, businesses, and residents. This group was tasked both with providing oversight for the southwest planning efforts, and with working to engage other members of the community with the process. SWWG participants met monthly to review and direct the latest efforts, and have attended more targeted workshops for individual planning areas, including the Palomar Gateway District.



In addition to these working group meetings, the SWWG participated in several workshops designed specifically to get input on the Palomar Gateway District SP. Working group participants would be encouraged to get other members of their communities/ organizations to attend both working group meetings and these broader workshops to ensure that as many members of the public are involved as possible.



Meetings were held throughout 2010 and 2011. Topics included an introduction to the Palomar Gateway District Specific Planning process, including the scope of work for the process. The working group participants had a generally positive reaction to the scope of work for the program. Another meeting featured a presentation by SANDAG staff explaining the 2030 Regional Comprehensive Plan, and how the local efforts in Chula Vista relate to this process. In March 2010, SWWG participants were provided with a "SWOT" Analysis (aka

Strengths, Weaknesses, Opportunities and Threats) prepared by staff for the Palomar Gateway District, and asked to augment the list as they saw fit. This early input helped form the baseline conditions for the specific planning effort. The SWWG participants were provided with an overview of the existing conditions findings for the Palomar Gateway District. Working group members expressed frustration with the limited area to be studied under the Specific Plan, suggesting that much of the success or failure of the Palomar Gateway District will rest upon the surrounding areas. In particular, Working Group Participants were concerned about the pedestrian connectivity to the Palomar



Gateway District down Palomar and Orange Avenues, which continue to have areas with informal or unpaved sidewalks.

Working group participants were also particularly focused on how to resolve traffic congestion in the Palomar Gateway district, and suggested widening streets, or creating a Main Street exit off the I-5 to relieve congestion at the Palomar exit. Presentations by planners from SANDAG on the 2030 Regional Comprehensive Plan and the 2030 Regional Transportation Plan suggested that future grade separation of the trolley and improvements to the Blue Line overall may also help reduce traffic congestion in the area.



As the planning process advanced, staff sought to involve SWWG participants in the selection of consultants to perform the traffic, market, and environmental studies conducted for the Palomar Gateway District SP. Consultants often met with the SWWG as one of their initial steps in the process, and SWWG participants provided valuable input on drafts of the Market Study and other documents, reflecting their day-to-day, practical experience of the Palomar Gateway District.

The finished Palomar Gateway District SP document bears the mark of this extensive public outreach process. Staff and SWWG members have worked hard to develop a plan that both allows transit-oriented development in the Palomar Gateway District, and at the same time doesn't overburden this already-congested area with additional auto trips. Ideally, SWWG efforts to balance the demands of this area will be supported by broader infrastructure change that will allow intensification in the Palomar Gateway District while still ensuring that it is a pleasant place to live, work, and enter the Southwestern portion of Chula Vista.



## 2.0 Existing Conditions: Land Use and Infrastructure

### 2.1 Location

The approximate 100-gross acres Palomar Gateway District is located at the interchange of Palomar Street and the Interstate 5 freeway. The Palomar Gateway District is considered the major southern gateway to the City of Chula Vista for visitors entering both from the freeway and from the San Diego Trolley Blue Line. The Palomar Street/I-5 Freeway interchange is considered one of the busiest traffic interchanges in the City. The district radiates from the Palomar Transit Station at the intersection of Palomar Street and Industrial Boulevard. The Palomar Gateway District includes the properties north of Palomar Street around Walnut Street, Trenton Street and Industrial Boulevard. Further east, the district also extends north from Palomar to Oxford Street to include several warehouse buildings that contain a variety of commercial and industrial uses. South of Palomar Street, the Palomar Gateway District extends along Industrial Boulevard and Frontage Road to Anita Street, and contains a variety of single-family and multi-family residential uses, as well as a few commercial and industrial uses. Below



is a detailed description of each of these areas.

### 2.2 History

The area we now know as the Palomar Gateway District was settled by Native American cultures for more than 9,000 years prior to Spanish Colonization. The early Native American inhabitants established settlements, hunted game, and utilized the area's abundant resources including its natural salt flats.

The first western settlers were Spanish missionaries sent by the King of Spain to establish missions along the coast of California. Subsequently, land was granted by the King of Spain to settlers of the region for use as pastureland for large "Ranchos." The area that encompasses the Palomar Gateway District was part of Rancho Melijó, which was awarded in 1833 to Emigdio Arguello, the son of Don Santiago Arguello, one of San Diego's early military Comandantes<sup>1</sup>. Don Santiago Arguello had twenty two children, and the grant of Rancho Melijo as well as Rancho Tijuana (encompassing present-day Tijuana) was given by Governor Figueroa for the purpose of helping Emigdio's father support his large family<sup>2</sup>.

In order to confirm his right to Rancho Melijó, Emigdio constructed an adobe on a portion of the area known as "La Punta"<sup>3</sup>. The La Punta Adobe was located on a hill at the Southern extreme

<sup>1</sup> (Pourade 1963)

<sup>2</sup> (Corona 2004)

<sup>3</sup> (Committee 1986)

of San Diego Bay, at the end of present-day Anita Street, just beyond the southern boundary of the present day Palomar Gateway District. After the Mexican-American War and the annexation of California in 1848, the property rights of many Spanish land-grant holders were called into question, including the right of the Arguello family to Rancho Melijó<sup>4</sup>. The US Land Commission rejected the Arguello Family's claim to Rancho Melijó in 1853, and despite twenty years of efforts to prove their title, the Arguello Family never regained their rights to the land<sup>5</sup>. In the meantime, settlers moved onto the land, unaware of the conflict regarding the property rights. Pioneer families built homes and planted fields in the area known today as the "Palomar Gateway District," and the La Punta Adobe itself was used as a temporary waystation for settlers seeking to establish themselves in the region<sup>6</sup>.

The 1850s through 70s also saw the beginning of industrial development at the southern extremes of San Diego Bay. By 1871 the "La Punta Salt Works" was producing salt at the southern end of San Diego bay at the site now occupied by Western Salt Works<sup>7</sup>. In 1868, the Kimball brothers bought the Spanish land grant of Rancho de la Nación, which lay directly north of Rancho Melijó, and began planning and developing National City with the expectation that it might be a terminus for a transcontinental railroad. By 1882 the California Southern Railroad connected National City to Colton, California, and began to spur economic development along the southern reaches of San Diego Bay<sup>8</sup>. By 1886 the Kimball brothers financed the National City and Otay Railway Company, which ran an additional rail line from National City to the Southern end the bay and which was largely used to transport salt.

The old Rancho La Punta Adobe and the area around the Salt Works continued to be a waystation for settlers newly arrived to the Chula Vista area through the turn of the century. Some of the settlers took jobs in the Salt Works, while others farmed the surrounding area known as "Las Salinas"<sup>9</sup>. The railroad connection to National City helped crops and salt get to market, and supported the growth of the area. Additional settlement came to the Palomar Gateway District in the teens and twenties as a result of prohibition and the popularization of the automobile. Broadway (formerly known as National Boulevard) had long been an informal route south to the border, and in the 1920s thousands drove their Model T's across the border to indulge in activities that were banned by the Volstead Act in the US. Bus routes running from San Diego to Tijuana used Broadway as their primary route, and led to the commercialization of the corridor, and eventually the area near the Palomar Gateway District<sup>10</sup>. Broadway's more auto-focused, large scale businesses soon dwarfed the older, agriculturally-based Third Avenue. The Harborside neighborhood north of the Palomar Gateway District was subdivided for housing in the early 1920s, while the area around Rancho La Punta within the bounds of the Palomar Gateway District itself remained more ad hoc and agricultural.

Significant change came to the area in the 1950s with the construction of the I-5 Montgomery Freeway connecting San Diego to the border. The construction of the I-5 led to the demolition of the Rancho La Punta Adobe, which lay directly in the path of construction<sup>11</sup>. It also led to the

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<sup>4</sup> (Corona 2004)

<sup>5</sup> (Committee 1986)

<sup>6</sup> (Schoenherr 2011)

<sup>7</sup> (EDAW (Gustafson, A. and Gregory C.) 2001)

<sup>8</sup> (Committee 1986)

<sup>9</sup> (Schoenherr 2011)

<sup>10</sup> (Schoenherr 2011)

<sup>11</sup> (Schoenherr 2011)

construction of the segment of Palomar Street between Broadway and the I-5 in the early 1960s. This segment became an important connector between interstate and Broadway, expanding from a two lane road in the 1960s to a four lane road in 1970s, and eventually to its current six lanes in the early 90s. In 1977 Metropolitan Transit opened the Blue Line Trolley on the California Southern rail right of way. The trolley connection strengthened the importance of the Palomar area as a “gateway” to the Broadway, and to the area that would become Southwest Chula Vista after the Montgomery Annexation of 1986.

While the commercial strip on Palomar developed from the 1970s through the 1990s, the Palomar Gateway district area itself remained primarily residential, retaining some of its earlier agricultural flavor, with the large parcel at the intersection of Industrial and Palomar serving as a seasonal Christmas tree lot and pumpkin patch. The area became increasingly congested, partially as result of conflict between the trolley line and automobile traffic seeking to enter the I-5, and partially due to the intense commercial uses on both sides of Palomar Street itself. Street improvements completed in 2008 at the intersection of Palomar and Industrial Blvd. improved the environment for pedestrians and transit riders, with the addition of street trees and the City’s first traffic circle. Future improvements such as the grade separation of the blue line trolley may eventually reduce congestion, and help preserve the mixed residential and commercial character of this important gateway to Chula Vista.

**2.3 Existing Land Uses**

The district consists of a variety of existing land uses, including residential, commercial and industrial uses. Existing residential development in the area contains a range in densities of approximately 5 to 20 dwelling units per acre. North of Palomar Street is a mix of industrial and multi-family housing. Across Industrial Boulevard to the east is the major commercial nucleus of Southwest Chula Vista - an area which attracts shoppers and employees from points north and south.



**2.4 Surrounding Land Uses**

Interstate 5 frames the west side of the district with businesses and housing west of I-5 in the West Fairfield district; to the north between I-5 and Industrial Boulevard is a mobilehome park; east of Industrial Boulevard is the San Diego County Health and Human Services Agency building, Harborside Elementary School and Harborside Park. Community commercial centers with large anchor businesses such as Target, Costco and Walmart are east of the Harborside Park; and commercial retail and employment uses are south of Palomar Street and east of Industrial Boulevard. South of Anita Street is primarily industrially designated employment uses.

**2.5 Detailed Existing Conditions of the Various Areas within the Palomar Gateway District**



### Area North of Palomar Street

#### Walnut Street

Walnut Street area is characterized by a mixture of uses, including residential, commercial, and industrial. Current uses include retail stores, an Arco gas station, auto towing and storage yard, the Palomar Motel, office building, and residences north of Palomar Street. Walnut Street is improved with pavement, gutters, curbs, parkways, and sidewalks, which are in need of replacement. Walnut Street is very short (approximately 700 feet long) that dead-ends at an irregular cul-de-sac, and lacks regular street improvements at the end.



#### Trenton Avenue

Trenton Avenue is a short (approximately 440 feet long) street that contains mostly single-family residences with several small multi-family buildings. The street contains street improvements, which include pavement, gutters, curbs, parkways, and sidewalks. The street ends at a cul-de-sac that provides auto access to the vehicle storage facility in the SDG&E Right of Way. This cul-de-sac also provides access, via an easement over part of the SDG&E Right of Way, to three homes that are located away from the street.

### Area Northeast of Industrial Boulevard and Palomar Street

This is an area that has been developed with commercial/industrial uses. There is a mixture of retail, warehousing, and wholesaling uses in large multi-tenant buildings. The lot and building layout form an irregular configuration, which has resulted in land use inefficiencies and potential traffic conflicts that limit maximum site utilization. On the western part of this area is the MTDB property that provides pedestrian and vehicular access between Palomar Street and Oxford Street. North of this area, across Oxford Street, is the San Diego County Health and Human Services Agency and the new Harborside Park, as well as the Walmart/Costco center.

### Area South of Palomar Street

#### Palomar Street

This east-west street serves as the entrance to the District and City from I-5. The Palomar Inn Motel is on the south side of Palomar Street across from the Arco gas station that is on the north side of the street; these two uses are conveniently located adjacent to I-5. The properties located on the south side of Palomar Street between Frontage Road and Industrial Boulevard are currently vacant. The Palomar Trolley Station parking lot is east of Industrial Boulevard.





Recent street and safety improvements in this area have been completed, consisting of landscaped medians, enhanced paving at the intersection of Palomar Street and Industrial Boulevard, and sidewalks and tree-lined parkways, including bike lanes along Palomar and Industrial Boulevard. Traffic calming facilities such as a “roundabout” was also installed further south along Industrial Boulevard and Ada Street. These improvements were part of the \$2.1 million SANDAG Palomar Gateway Enhancement project Smart Growth Improvement Program (SGIP). These improvements contribute to

the development of an inviting Gateway and transit amenities for the District and the City, as well as provide a foundation/catalyst for future development within the district.

### Ada Street

This east-west street is fully improved with sidewalks, curbs and gutters. Properties on both sides of the street contain several new developments consisting of a mix of multi- and single-family units. There are also vacant and underutilized parcels, which have potential for additional development. There has been significant new development along Ada Street in the form of small (10 – 14 units) projects. Two of those developments (Trolley Terrace Townhomes – 18 units and Trolley Trestle Apartments – 11 units) are located on Ada Street and Industrial Boulevard and were developed by South Bay Community Services. Other Townhome projects built by private developers are located along this street. Single-Family Residential units are being replaced by Multi-Family Residential development and group dwellings.



### Dorothy Street

This east-west street is fully improved with sidewalks, curbs, and gutters. There is a significant number of large, deep lots that have potential for Single-Family Residential or Multi-Family Residential development. The only church in this area (Templo Ebenezer) is located on this street. Also, a San Diego County Housing Authority residential complex (Dorothy Street Manor – 22 units) is located on this street.

### Anita Street

This east-west street serves as interface between residential uses on the north and commercial/industrial uses on the south side of the street. The north side is predominantly residential, except for industrial development on the most westerly lot, adjacent to I-5. There are no sidewalks, curbs, gutters on the north side of the street. The eastern part of Anita Street is



fully built to capacity. The mid-area contains large lots (0.5 to 0.95 acres) that are mostly underdeveloped.

The south side of Anita Street consists of primarily industrial parks. The easterly two-thirds is in fair/good building conditions with full street improvements. The westerly one-third (last parcel) is in poor building condition with no street improvements.

### Industrial Boulevard

This north-south street bounds the Palomar Gateway District on the east side. The segment of Industrial Boulevard located to the south of Ada Street has no street improvements (sidewalks, curbs, gutters) on either side, which presents unsafe pedestrian conditions. On the west side of the street are predominantly residential properties with a small store between Anita and Belvia Street. The distance from Anita Street and the Trolley Station is approximately 1,500 feet. There are no traffic controls between Palomar and Anita Street, except for the recently built roundabout at Industrial and Ada Street. Industrial Boulevard provides direct access for pedestrians to the Trolley Station, and limited access to vehicle traffic.



### Frontage Road






This north-south street constitutes an extension of Anita Street at the southerly end, as it extends along the western edge of the district parallel to I-5, and connects to Palomar Street at the northerly-end. It is a narrow street without street improvements; an asphalt curb serves as edge between the street and private property. There is no physical separation between the street and the downward slope toward the freeway. Frontage Road provides access to the industrial uses at the corner of Anita Street, and residential properties that front it. The street constitutes a loop road and connects Palomar Street, Industrial Boulevard and Anita Street. At approximately Ada Street, Frontage Road gently curves east away from the freeway and separates the existing trailer park (Georgeanna Trailer Park) in two parts. There have been

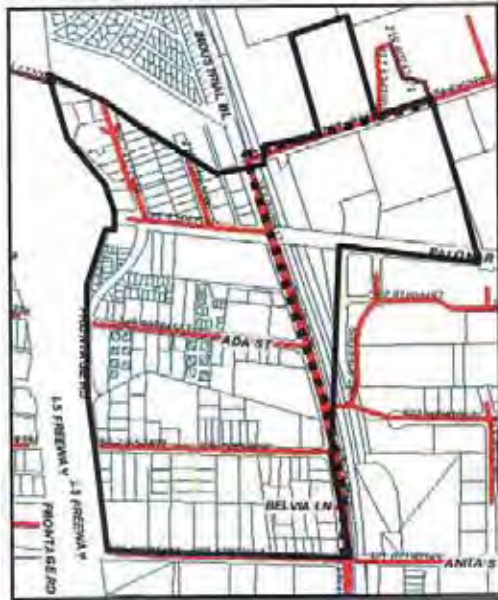
recent residential projects constructed within the Palomar Gateway District mainly located along Ada and Dorothy Streets.

## 2.6 Existing Infrastructure

**Sewer:** The Palomar Gateway District is provided with a system of sewer lines of various capacities, as shown on the maps below. The existing sewer infrastructure consists of a 15-inch sewer line located along Oxford Street and Industrial Boulevard. Eight-inch sewer lines are located along Walnut and Trenton Avenues (north-south), Palomar, Ada, Dorothy, and Anita Streets (east-west).

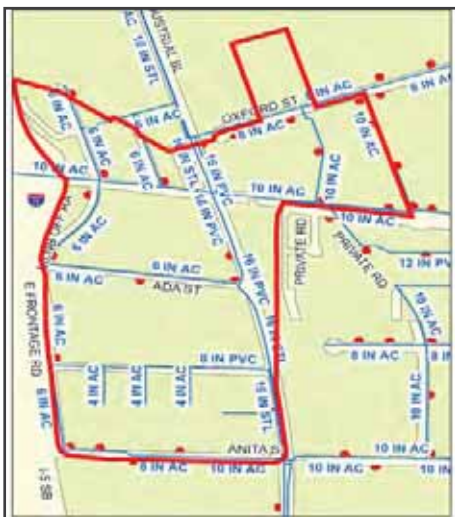






-  15" diam. Waste Water Line
-  8" diam. Waste Water Line
-  Project Boundary



**Palomar Gateway District  
Existing Sewer Infrastructure**

**Water:** The Palomar Gateway District is also provided with a system of water distribution. The existing water infrastructure consists of 6-inch water lines located along Frontage Road, Walnut and Trenton Avenues and Ada Street; 8-inch water lines located along Dorothy Street and the westerly portion of Anita Street; a 10-inch water line located along the easterly portion of Anita Street and Palomar Street; and a 16-inch water line located along Industrial Boulevard.



-  Fire Hydrants
-  Water Mains
-  Right-of-way
-  Roads

**Palomar Gateway District  
Existing Water Infrastructure**



## Other Public Infrastructure: (streets and sidewalks)

Pedestrian and traffic improvements on Palomar Street and Industrial Boulevard were completed in the fall of 2009. These improvements include construction of missing sidewalks, curbs, and gutters, traffic circle at the intersection of Industrial Boulevard and Ada Street, safety improvements at the intersection of Palomar Street and Industrial Boulevard, and landscape improvements along Palomar Street and Industrial Boulevard.



## 2.7 General Plan Vision

The Chula Vista 2005 General Plan designates the Palomar Gateway District as one of five “areas of change,” which are those areas where more intensive development, revitalization and/or redevelopment are proposed to occur. The General Plan vision for Palomar Gateway District includes a Mixed-Use Transit Focus Area (TFA) directly west and north of the Palomar Trolley Station, higher residential intensity, a neighborhood park and retail to the south of the TFA. The goal is to provide for additional housing and mixed-uses (residential and commercial) that take advantage of a major transit station within walking distance. Future development of the Palomar Gateway District must be consistent with the goals and policies of the 2005 General Plan. Shown below are tables listing the objectives and policies for the Southwest Area and Palomar Gateway District.



## Southwest Area

### Land Use and Transportation Element Objectives and Policies

|   |
|---|
| <p><b>OBJECTIVE LUT 5</b><br/>Designate opportunities for mixed use areas with higher density housing that is near shopping, jobs, and transit in appropriate locations throughout the City.</p>  |
| <p><b><u>Policies</u></b></p>   |
| <p>LUT 5.4 Develop the following areas as mixed use centers: Urban Core, Palomar Trolley Station, Eastern Urban Center, and Otay Ranch Village Cores and Town Centers.</p>  |
| <p><b>OBJECTIVE LUT 17</b><br/>Plan and coordinate development to be compatible and supportive of planned transit.</p>  |
| <p><b><u>Policies</u></b></p>   |
| <p>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 Bus Rapid Transit (BRT).</p>   |
| <p><b>OBJECTIVE LUT 19</b><br/>Coordinate with the regional transportation planning agency, SANDAG, and transit service providers such as the Metropolitan Transit System (MTS), to develop a state-of-the-art transit system that provides excellent service to residents, workers, students and the disabled, both within the City, and with inter-regional destinations.</p> |
| <p><b><u>Policies</u></b></p>   |
| <p>LUT 19.5 Plan for and promote improved access between the Palomar Street, E Street and H Street light rail stations and land uses east of those stations and to the Bayfront. This may involve the construction of separate bridges or ramps connecting Chula Vista streets to transit facilities and/or a deck over Interstate 5 to the Bayfront.</p>                       |

### Land Use and Economic Development Objectives and Policies

|  |
|--|
| <p><b>OBJECTIVE ED 9</b><br/>Develop community serving and neighborhood uses to serve residents and visitors alike.</p>  |
| <p><b><u>Policies</u></b></p>  |
| <p><b>ED 9.1</b><br/>Provide for community and neighborhood commercial centers in areas convenient to residents. These centers should complement and meet the needs of the surrounding neighborhood through their location, size, scale and design. The neighborhood concept of providing pedestrian, bicycle and other non-motorized access should be encouraged.</p>   |
| <p><b>ED 9.4</b><br/>Develop specific plans for areas of the City, including but not necessarily limited to the West Main Street, Broadway, South Third Avenue, North Fourth Avenue/Third Avenue "gateway", E Street, West H Street, and Palomar Street areas (More than one area may be addressed in a single plan, such as the Urban Core Specific Plan.) Include an economic component in the specific plans.</p> |
| <p><b>ED 9.5</b><br/>Encourage clustered commercial uses to prevent and discourage strip development. Locate commercial uses at focal points along major arterial streets or expressways and in village core areas.</p>  |
| <p><b>ED 9.6</b><br/>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>   |



## Palomar Gateway District

### ***VISION FOR DISTRICT***

The Palomar Gateway District is the major southern gateway into the City and functions as one of the activity corridors in the City. The District provides housing and support uses near a regional transit route. Higher density residential development within walking distance of the Palomar Trolley Station provides additional affordable housing opportunities. Local retail and services are along Palomar Street, and more retail and services are in mixed use development south of Palomar Street.

In addition to nearby community-serving retail uses on Broadway and Palomar Street, a new five-acre neighborhood park is located in the area north of Oxford Street, within walking distance of new residential housing.

### ***OBJECTIVE 43:***

Establish a Mixed Use Transit Focus Area surrounding the Palomar Trolley Station

### ***POLICIES***

#### **LUT 43.1**

The City shall prepare, or cause to have prepared, a specific plan, master plan, or other regulatory document to guide the coordinated establishment of a **Mixed Use Transit Focus Area** within the Palomar Gateway District on properties north and south of Palomar Street, within walkable distance of the Palomar Trolley Station. The specific plan or other regulatory document shall include guidelines and zoning-level standards for the arrangement of land uses that include plans for adequate pedestrian connections and support services for residents, as well as those using the transit station.

The City will prepare an Implementation Program to assure establishment of the above plan/regulations. The Program will include interim provisions for the consideration of any projects within this areas, prior to completion and adoption of the according plan/regulations.

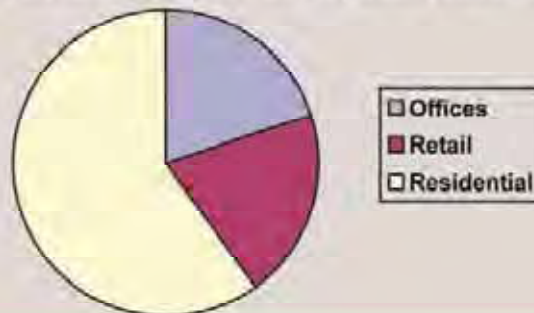
#### **LUT 43.2**

Provide for a five-acre neighborhood park within the Palomar Gateway District.

### ***USES***

#### **LUT 43.3**

Strive for a distribution of uses within the areas designated as Mixed Use Transit Focus Area along Palomar Street to include retail, offices, and residential, as generally shown on the following chart.



#### **LUT 43.4**

Provide a mix of uses with a focus on retail and some office uses along Palomar Street in the Mixed Use Transit Focus Area; with residential uses above and/or behind the retail and offices uses.

**LUT 43.5**

Provide a mix of local-serving retail and office uses near the Palomar Trolley Station and at the Gateways into the Palomar Gateway District.

**INTENSITY/HEIGHT**

**LUT 43.6**

In the Palomar Gateway District, residential densities within the Mixed Use Transit Focus Area designation are intended to have a district-wide gross density of 40 dwelling units per acre.

**LUT 43.7**

In the Palomar Gateway District, the commercial (retail and office) portion of the Mixed Use Transit Focus Area designation is intended to have a focus area-wide aggregate FAR of 1.0. Subsequent specific plans or zoning ordinance regulations will establish parcel-specific FARs that may vary from the district-wide aggregate (refer to Section 4.9.1, Interpreting the Land Use Diagram, for a discussion of district-wide versus parcel-specific FAR).

**LUT 43.8**

Building heights in the Palomar Gateway District Mixed Use Transit Focus Area shall be low-rise, with **some mid-rise buildings**.

**LUT 43.9**

Building heights in the Residential High designated area shall be low-rise buildings.

**LUT 43.10**

In the Palomar Gateway District, permit a maximum floor area ratio of 0.5 and low-rise buildings in the Retail Commercial designated area on Industrial Boulevard adjacent to the area designated as Residential High.

**DESIGN**

**LUT 43.11**

The specific plan or other regulatory document for the Palomar Gateway District shall establish design and landscape guidelines for the improvement of Palomar Street as a gateway to the City.

**LUT 43.12**

Provide for safe, effective, and aesthetic pedestrian crossings and improvements to Palomar Street and Industrial Boulevard.

**AMENITIES**

**LUT 43.13**

Community amenities to be considered for the Palomar Gateway District as part of any incentive program should include, but not be limited to those listed in Policy LUT 27.1.

**LUT 43.14**

Provide for the development of one Neighborhood Park within or near the Palomar Gateway District.

**LUT 43.15**

Establish a community/cultural center near Palomar Street and Third Avenue.



The potential for the Palomar Gateway District to evolve from a low-density auto-focused interchange into a higher density transit oriented community has been recognized both by SANDAG's Vision 2020 Plan, which designated the Palomar Gateway District as a "Community Center" and by Chula Vista's 2005 General Plan, which calls for the district to be developed as a Transit Focus Area. Progress towards this vision is already underway, with the \$2.1 million pedestrian/traffic improvements on Palomar Street and Industrial Boulevard provided by the 2005 Transnet SGIP grant, which were completed in the fall of 2009. In order to fully realize the transformation of the district, however, it will be necessary to engage in a Specific Planning process to update the outdated zoning code to reflect the smart growth vision prescribed by the General Plan. An Environmental Impact Report will also be prepared in order to evaluate the potential impact of the proposed Specific Plan.

## 2.8 General Plan Designations

There are four General Plan land use designations within the Palomar Gateway District, which are described in Table I. The General Plan describes these land use designations as follows:

**Table 1<sup>1</sup>**

**General Plan Land Use Designations and Buildout**

|                          | General Plan Designations | District Acreage   | Maximum DU/Ac | Max Potential Units (acres X du/ac) | Existing Units         |            | Net Increase (potential units minus existing units) |
|--------------------------|---------------------------|--------------------|---------------|-------------------------------------|------------------------|------------|---|
|                          |                           | Acres <sup>2</sup> |               |                                     | Res Units <sup>2</sup> | DU/Ac      |   |
| Palomar Gateway District | Residential High          | 35                 | 27            | 949                                 | 189                    | 5          | 760   |
|                          | Transit Focus Area        | 37                 | 40            | 1,460                               | 211                    | 6          | 1,249   |
|                          | Commercial Retail         | 1                  |               |                                     | 5                      | 3          | -5  |
|                          | Park                      | 5                  |               |                                     | 0                      |            |   |
|                          | <b>Total:</b>             | <b>78</b>          |               |                                     | <b>2,400</b>           | <b>400</b> | <b>5</b>  |

<sup>1</sup> All numbers are approximate and have been rounded off.

<sup>2</sup> Approximately 20 additional acres of land within the District are designated as Transportation Corridors and Right of Way.

<sup>3</sup> The total residential units include 67 rooms corresponding to the two motels located in the District.

**High Residential:** The High Residential designation is intended for multi-family units, such as apartment and condominium-type dwellings in multiple-story buildings, with densities ranging from 18 to 27 dwelling units per gross acre. At an average of 2.5 persons per unit, population density in this designation would range from 45 to 67 persons per acre.

**Mixed Use Transit Focus Area:** The Mixed Use Transit Focus Area (TFA) designation is intended within approximately ¼ mile of the existing Palomar Trolley Station, and is intended for the highest intensity mixed use residential environment. This designation allows a mix of residential, office, and retail uses in an area that is pedestrian-friendly and has a strong linkage to provision of mass transit. District-wide gross residential density within this designation is an average of 40 dwelling units per acre. The commercial (retail and office) portion of the TFA designation is intended to have an area-wide Floor Area Ratio (FAR) of 1.0.

**Retail Commercial:** The Retail Commercial designation (a small area located along Industrial Boulevard at Anita Street) is intended to allow a range of neighborhood and community retail

shopping and services. This category may include limited thoroughfare retail and automobile-oriented services. The FAR for this category ranges from 0.25 to 0.75.

**Parks and Recreation:** The Parks and Recreation designation is intended for parks; sports fields; playgrounds; golf courses; and other passive and active recreation uses. The designation may also include community centers and urban parks.

Based on these adopted land use designations, projected build-out within the district could realize up to 2,400 dwelling units. Existing residential units total approximately 400 dwelling units within the district. Therefore, a net increase of up to 2,000 dwelling units and several acres of commercial (retail and/or office) could be developed over the next 15-20 years. As indicated above, the General Plan proposes to implement a Smart Growth vision for a higher density residential, pedestrian and transit-oriented development with a mix of retail shops and offices near the transit station.

## 2.9 Zoning Classifications:

Table 2 shows the numerous existing zoning classifications within the Palomar Gateway District, which include single and multi-family residential, commercial, industrial and open space. These zoning classifications have created a condition characterized by a lack of community cohesion, which makes the area vulnerable to economic and physical deterioration. The existing zoning designations will need to be updated to align with the General Plan Land Use designations. The preparation of the Specific Plan for the Palomar Gateway District is intended to implement the General Plan's Smart Growth vision for Transit-Oriented mixed-use development in proximity to a major regional transit center. The Specific Plan will provide design guidance and a regulatory framework that maximize the full potential of multi-modal transit integration within the community and will be implemented as individual projects are constructed in the Palomar Gateway District over the next 15 to 20 years. Over time, the Palomar Gateway District will be transformed from its underutilized/lower-density setting into a vibrant and cohesive higher-density, pedestrian and transit-oriented community.

**TABLE 2:<sup>1</sup>  
Existing Zoning Designations**

|                          | Zoning District | Zoning Description                               | Existing Residential Units |                        |          |
|--------------------------|-----------------|--|----------------------------|------------------------|----------|
|                          |                 |  | Acres <sup>2</sup>         | Res Units <sup>3</sup> | DU/Ac    |
| Palomar Gateway District | R2              | One and Two-Family Residence Zone                | 37                         | 236                    | 6        |
|                          | R3              | Multi-Family                                     | 7                          | 78                     | 11       |
|                          | C36             | County Zone: General Commercial                  | 1                          | 5                      | 3        |
|                          | CT              | Thoroughfare Commercial                          | 6                          | 49                     | 8        |
|                          | CC              | Central Commercial                               | 6                          | 0                      |          |
|                          | CO              | Commercial Office                                | 5                          | 0                      |          |
|                          | IL              | Light Industrial                                 | 17                         | 37                     | 2        |
|                          | S94             | County Zone: Transportation and Utility Corridor | 5                          | 0                      |          |
|                          | <b>Total:</b>   |  | <b>84</b>                  | <b>400</b>             | <b>5</b> |

<sup>1</sup> All numbers are approximate and have been rounded off.

<sup>2</sup> Approx. 15 additional acres of land within the District are Transportation Corridors and Right of Way.

<sup>3</sup> The total residential units include 67 rooms corresponding to the two motels located in the District.

## 2.10 Completed or Programmed Improvements/Infrastructure

The City's Capital Improvement Program contains a variety of planning and construction projects that have recently been completed, are currently in progress or are planned to be implemented in the next few years within the Palomar Gateway District. Table 3 provides a list of these projects.

| <b>TABLE 3</b>   |   |   |
|--|---|---|
| <b>Completed Or Programmed Improvements/Infrastructure Studies</b> |   |   |
| <b>Construction Improvements Recently Completed</b>                |   |   |
|  | <i>PROJECT NAME</i>   | <i>FUNDING SOURCE</i>   |
|  | Palomar Gateway Median and Landscape Improvements (2009)  | \$3.075 M: \$2.1M SANDAG Grant + \$1.075 CV Gas Tax, RDA, TPF, and Transnet |
|  | Pedestrian Master Plan (Summer 2010)  | \$256k: \$150k TDA Grant and \$106k Transnet CV                             |
| <b>Programmed Improvements/Infrastructure Studies Underway</b>     |   |   |
|  | <i>PROJECT NAME</i>   |   |
|  | Bayshore Bikeway bike path from H Street to Palomar Street.   | \$1.2M: \$1.195MI TDA Grant and \$50k CV                                    |
|  | Bikeway Master Plan Update  | \$200k: \$150k TDA Grant and \$50k CV                                       |
|  | Harborside Neighborhood Pedestrian Improvements   | \$536k: \$451k TCSP Grant and \$85k Transnet CV                             |
|  | Highway Safety Improvement Program (HSIP) signal upgrades at Palomar Street and Industrial Blvd & at Palomar Street and Broadway. | \$75k: \$67,500k Grant and \$7.5k CV  |
|  | Industrial Blvd bike lanes and east side pedestrian improvements from Naples Street to Palomar Street. (\$428k):                  | \$283k Smart Growth Grant and \$145k Transnet CV                            |
|  | Interstate-5 Multi-modal Corridor Study from SR-54 to Main Street.  | \$1.56M: \$1.3M Safety-LU Grant and \$260k Transnet CV                      |
|  | Light Rail Improvement Study through Chula Vista.   | \$300k: \$240k TCSP Grant and \$60k Transnet CV                             |
|  | Light Rail Trolley Grade Separation Study for E Street, H Street & Palomar Street.  | \$10k Transnet CV   |

## 2.11 Constraints and Opportunities

The following is a summary of Constraints and Opportunities that have been identified for the Palomar Gateway District:

### a. Constraints

- Pedestrian Safety: inadequate pedestrian lighting; high traffic along Palomar with no landscaping or buffer from automobiles; poles and utilities blocking sidewalk; no sidewalks along Frontage Road, Anita Street, Industrial Boulevard;
- Adjacency to I-5 might pose constraint due to air quality issues.
- Traffic is very heavy and conflictive along Palomar Street between Bay Boulevard and traffic signal east of Industrial Boulevard.





- Traffic conditions make it very difficult for traffic to get in/out of Walnut Avenue and Trenton Avenue.
- Pedestrian connection between east and west of I-5 is difficult and dangerous.
- Palomar bridge over I-5 is narrow and lacks features of “Complete Streets.”
- Wide curb radius that allows cars to turn quickly, creates conflicts with pedestrians crossing street.
- Heavy traffic along Palomar Street.
- Need for neighborhood park.
- Chain link along Industrial Boulevard is not aesthetically appealing.
- Existing freeway noise along Frontage Road, and north of Palomar Street.
- Overcrowding of schools (Harborside Elementary School).



#### b. Opportunities

- Area along Frontage Road and Interstate 5 provides opportunity for view of San Diego Bay.
- Block between I-5 and Walnut Avenue poses opportunity for high density residential mixed use development because of its proximity to the Palomar Trolley Station, Harborside Park and Elementary school, and nearby commercial. centers and industrial uses.
- Five-acre vacant site on Palomar between Industrial Boulevard and Frontage Road represents opportunity for mixed use, high density development next to Trolley Station.
- Undeveloped and underdeveloped lots along Ada Street offer opportunities for additional development.
- Underdeveloped lots along north side of Anita offer opportunities for additional development.
- Trolley Station offers great opportunities for the development of the surrounding area into a Transit Oriented showcase.
- Arroyo/creek traversing residential area between Industrial Boulevard and Frontage Road provides potential opportunities for development of some form of open space/park that links to the bay.
- SDGE right of way on east side of Industrial Boulevard offers opportunities for a park/active recreation area that could potentially connect to the Arroyo on the west side of Industrial Boulevard.
- Maintaining mixed-use along Palomar Trolley transit corridor.
- Develop a “Village concept”: Residential, commercial, retail, office, etc.;





- Promote clean “Green” industry, utilize “Green” technology and LEED ideas whenever possible.
- Artist colony, public art, art walk, murals on utility boxes. Identify and develop community mosaic, artwork and signage for the district.
- Install “bulb-outs” at busy street corners to provide safety for pedestrians.
- Entry Gateway design and nice directional signage for the district.
- Incorporate water features and sound makers that could buffer freeway and trolley noise.
- Utilize native plants, plant more Tipuana Tipu trees – they have a nice canopy.
- Median breaks along Industrial to allow access to Trolley station.



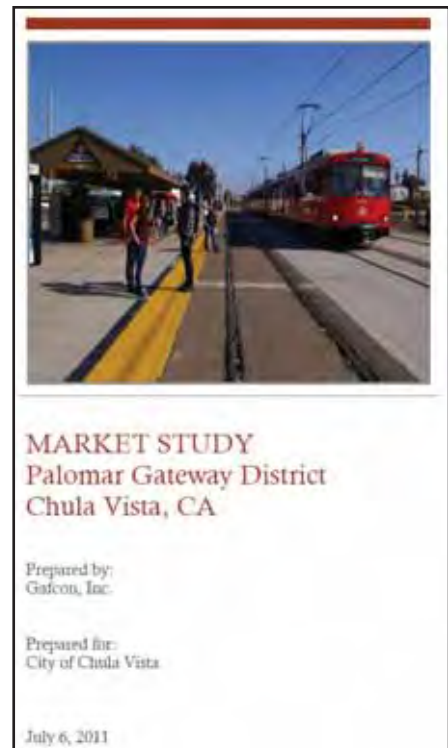
## 2.12 Market Study

A Market Study was prepared for the Palomar Gateway Specific Plan by Gafcon, Inc., dated July 2011. The purpose of the Market Study was to determine whether the General Plan vision for the Palomar Gateway District is compatible with the area’s current and future market demands in terms of housing, retail, and office development. The study also looked at strategies to promote market investment into Transit-Oriented projects in the District. The Consultant conducted the market analysis at the regional level, city level, and local (district and surrounding area) level. The study included an analysis of the demand for residential, retail and office development.

As part of the study the Consultant met with City staff, reviewed existing studies, and conducted a site reconnaissance. Existing market conditions were analyzed to identify feasible market opportunities. Area stakeholders were interviewed to identify opportunities and constraints. The consultant forecasted near and long-term demand potential for key land uses, and evaluated existing policy and identified strategies to promote the development of key land uses. The conclusions of the study are:

Residential Development: The General Plan vision is very optimistic; in the future the district is likely to generate a demand of up to 1,300 additional multiple-family residential units in the next 20 years, compared to the 2,000 projected by the General Plan vision.

Retail Development: The study looked at the demand generated by three different factors: the primary market within 1.5 miles of the transit station; the secondary market located between 1.5 miles to 5 miles of the station; area workers; and the cross border trade. In total these categories generate a demand for approximately 100,000 additional square feet of retail space in the next 20 years. This represents a figure that is well below the expectation of the General Plan vision.



Office Development: Based on regional employment and office market trends, the Palomar Gateway District has capacity to capture approximately 50,000 square feet of additional office space by 2030. This equates to about 2,000 sq. ft. of annual demand. Palomar Gateway District is not expected to become a notable center of office activity, as other areas such as the Urban Core and Eastlake are expected to be the office hub. However, the Palomar Gateway District may capture office demand to provide office services to the surrounding community. Overall the General Plan land use designations generate far more capacity than the potential demand identified by the study.

Other Study Recommendations:

- The Specific Plan should promote flexible zoning and zoning incentives in terms of development standards
- Preparation of the Specific Plan should include a public outreach process to facilitate public participation and project review
- City should enter into public/private partnerships to collaborate early-on in the process
- Provide missing area infrastructure
- Provide public amenities, such as open spaces and streetscapes
- Expedite project review and approval

**2.13 Projected Development**

The results of the Market Study helped to refine the overall projected development buildout for the Palomar Gateway District as follows:

**TABLE 4  
Palomar Gateway District  
Existing and Projected<sup>(1,2)</sup> Development  
20 -Year Horizon**

|                                       | Existing Development | Projected Additional Development | Total Estimated Buildout | Estimated Buildout by Sub-District |                    |                   |                   |
|---------------------------------------|----------------------|----------------------------------|--------------------------|------------------------------------|--------------------|-------------------|-------------------|
|                                       |                      |                                  |                          | MU-1<br>(3.5 ac.)                  | MU-2<br>(31.5 ac.) | PRV<br>(43.5 ac.) | PNRC<br>(1.5 ac.) |
| <b>Residential (Units)</b>            | 400                  | 1,300                            | 1,700                    | 150 <sup>(3)</sup>                 | 450 <sup>(4)</sup> | 700               |                   |
| <b>Retail (Sq. Ft.)<sup>(5)</sup></b> | 200,000              | 100,000                          | 300,000                  | 10,000                             | 85,000             |                   | 5,000             |
| <b>Office (Sq. Ft.)<sup>(5)</sup></b> |                      | 50,000                           | 50,000                   | 5,000                              | 40,000             |                   | 5,000             |
| <b>Industrial (Sq. Ft.)</b>           | 30,000               |                                  |                          |                                    |                    |                   |                   |

<sup>1</sup> Numbers are approximations.

<sup>2</sup> Projected residential units and commercial square footages are based on 2011 Market Study (GAFCON, Inc.)

<sup>3</sup> Projected residential units for MU-1 Sub-District are based on the designated FAR with the proportional commercial development indicated on note 5 below.

<sup>4</sup> Sub-Districts MU-2 and PRV residential units were estimated proportional to the Sub-District land area.

<sup>5</sup> Retail/Office square footages are assumed 10%/90% split of projected buildout between the MU-1/ MU-2 Sub-Districts, which is roughly proportional to the Sub-Districts land area.

It should be noted that that the exact extent, timing and sequence of infill development that may occur over the 20 year planning horizon is difficult to ascertain due to a number of factors unique to urban revitalization. These include, but are not limited to:

- viability associated with newer construction which will likely not recycle over the life of the Specific Plan;
- longevity of other existing commercial uses and existing housing stock;
- project specific economics that result in less than maximum buildout on a parcel;
- increased development costs associated with acquisition, demolition and cleanup of urbanized land.

The Specific Plan is not a static document and as such will be evaluated on an on-going basis to evaluate progress towards buildout projections, priority rankings of important public improvements and other issues that may arise. A series of checks and balances will be part of that process and include, but may not be limited to, review under the City's Growth Management Ordinance, the bi-annual budgetary and CIP cycle, and five-year assessment of the Specific Plan. Additional planning and environmental review would be required if the buildout projections are approached and achieved prior to the planning horizon of 2030.

## **3.0 LAND USE AND DEVELOPMENT REGULATIONS**

### **3.1 Purpose**

The purpose of this chapter is to establish the appropriate distribution, mix, intensity, physical form, and functional relationships of land uses within the Palomar Gateway District. These regulations are intended to encourage and facilitate infill development, mixed uses, pedestrian scale, urban amenities, transit use, creative design, and the general revitalization of the Palomar Gateway District. The Specific Plan includes several land use categories within the District. For the mixed use designations, the Specific Plan's Land Use and Development Regulations and associated design guidelines utilize more of a "form based" approach. This approach places primary emphasis on the physical form of the built environment and focuses on where and how the buildings are placed rather than the use occupying the building. This is especially important to allow flexibility in uses in order to be responsive to market demands while still ensuring a clear vision of what the built environment should look like. For areas designated for multi-family residential development, the Specific Plan utilizes the City's existing R-3 zoning regulations, and for the small neighborhood serving commercial area located in the southeast corner of the District, the Specific Plan uses the City's existing C-N zoning regulations.

### **3.2 Applicability**

Proposed land uses and development regulations within the Palomar Gateway District shall comply with the applicable provisions of this chapter. This chapter replaces provisions of the Chula Vista Municipal Code Sections 19.26; 19.30; 19.36; 19.40; and 19.44 and the provisions of the San Diego County Zoning Ordinance Land Use Regulations C36 and S94. Where in conflict with other sections of the Municipal Code, this chapter shall apply, and where this chapter is silent, the Municipal Code shall apply. The definitions found in the Chula Vista Municipal Code, section 19.04 apply to the Specific Plan, except where specific definitions are provided within this Specific Plan.

### **3.3 Subdistrict Map, Land Use Matrix, and Development Regulations**

#### **3.3.1 Subdistrict Map**

The Palomar Gateway District Specific Plan area has been grouped into the following four Sub-districts based on similar building and use types:

1. Palomar Transit Plaza (MU-1);
2. Palomar Mixed Use Corridor (MU-2);
3. Palomar Residential Village (PRV); and
4. Palomar Neighborhood Retail Cluster (PNRC)

These four Sub-districts have their own character for buildings and public spaces and specified uses. The Specific Plan Sub-districts are shown in Figure 1, which identifies the Sub-district boundaries.





Figure 1

Development projects, including but not limited to buildings, drives, parking areas, landscaping, streets, alleys, greenways, and pedestrian/bicycle ways within the Palomar Gateway District, shall be developed in accordance with the following provisions:

- a. All projects for which discretionary or ministerial approval(s) have been granted prior to the effective date of the Specific Plan shall not be subject to the standards of the Specific Plan. However, if an action (i.e., appeal, modification of conditions, site plan amendment) alters a previously approved site plan, the revised development proposal shall be designed in compliance with Specific Plan standards.
- b. All projects for which final discretionary approval(s) has not been obtained prior to the effective date of the Specific Plan shall be subject to compliance with the Specific Plan standards.

### 3.3.2 Land Use Matrix

The following Land Use Matrix specifies permitted uses, conditionally permitted uses, and prohibited uses for each of the Specific Plan Sub-districts. Permitted uses indicate that the use is allowed in the specified Sub-district. Conditionally permitted uses require the granting of a Conditional Use Permit as provided in Municipal Code Section 2.55, 19.14, and/or 19.58. Uses marked as prohibited (--) are not permitted in the specified Sub-district. Accessory uses means a use or structure subordinate to the principal use of a building on the same lot, and serving a purpose customarily incidental to the use of the principal building.

Uses not specifically listed in the Land Use Matrix may be considered by Zoning Administrator if determined to be of the same general character of those uses listed in the matrix for the specific Sub-district. This flexibility in use determination is especially important in this time of rapid changes in technology, commodities, and goods and services as they relate to the art of doing business.

| PALOMAR GATEWAY DISTRICT<br>Land Use Matrix   |   |                          |                                   |   |
|---|---|--------------------------|-----------------------------------|---|
| P = Permitted<br>CUP = Requires Conditional Use Permit<br>--- = Prohibited                                | SUBDISTRICTS                            |                          |                                   |   |
|   | Palomar<br>Transit Plaza<br>- Mixed Use | Mixed<br>Use<br>Corridor | Palomar<br>Residential<br>Village | Palomar<br>Neighborhood<br>Retail Cluster |
|   | MU-1                                    | MU-2                     | PRV                               | PNRC                                      |
| <b>Residential</b>  |   |                          |                                   |   |
| Dwellings - Garden Apartments   | ---                                     | P                        | P                                 | ---                                       |
| Dwellings - Townhomes   | P                                       | P                        | P                                 | ---                                       |
| Dwellings - Apartment Complexes   | P                                       | P                        | P                                 | ---                                       |
| Live/work units   | P                                       | P                        | ---                               | ---                                       |
| Mixed Residential/Commercial Projects   | P                                       | P                        | ---                               | ---                                       |
| Senior Housing Development  | CUP                                     | CUP                      | CUP                               | ---                                       |
| Shopkeeper Unit   | P                                       | P                        | ---                               | ---                                       |
| Nursing Homes   | CUP                                     | CUP                      | CUP                               | ---                                       |
| Residential Care Facilities   | CUP                                     | CUP                      | CUP                               | ---                                       |
|   |   |                          |                                   |   |
| <b>Public/Quasi-Public and Institutional</b>  |   |                          |                                   |   |
| Ambulance services  | CUP                                     | CUP                      | ---                               | CUP                                       |
| Civic facilities  | P                                       | P                        | ---                               | ---                                       |
| Community service facilities  | P                                       | P                        | ---                               | ---                                       |
| Court facilities  | P                                       | P                        | ---                               | ---                                       |
| Court-supported facilities  | P                                       | P                        | ---                               | ---                                       |
| Educational Facilities - Schools, professional, business and technical (not requiring outdoor facilities) | CUP                                     | CUP                      | ---                               | ---                                       |
| Fire stations   | P                                       | P                        | ---                               | ---                                       |
| Health care facilities (including 24 hour facilities)   | CUP                                     | CUP                      | ---                               | ---                                       |
| Libraries   | P                                       | P                        | ---                               | ---                                       |
| Museums   | P                                       | P                        | ---                               | ---                                       |
| Non-commercial recreation centers (indoor)  | P                                       | P                        | ---                               | ---                                       |
| Non-commercial recreation centers (outdoor)   | CUP                                     | CUP                      | ---                               | ---                                       |
| Parks (public and private), including urban parks and plazas  | P                                       | P                        | P                                 | P   |
| Police stations   | P                                       | P                        | ---                               | ---                                       |
| Post office   | P                                       | P                        | ---                               | ---                                       |
| Public utility uses and structures  | CUP                                     | CUP                      | CUP                               | CUP                                       |
| Religious facilities  | CUP                                     | CUP                      | CUP                               | CUP                                       |
| Social and fraternal organization facilities  | P                                       | P                        | ---                               | ---                                       |
| Telecommunications facilities   | CUP                                     | CUP                      | CUP                               | CUP                                       |
| Radio and television broadcasting   | CUP                                     | CUP                      | ---                               | CUP                                       |
| Youth center  | P                                       | P                        | ---                               | ---                                       |



|  | MU-1 | MU-2 | PRV | PNRC |
|--|------|------|-----|------|
| <b>Commercial Office</b>   |      |      |     |      |
| Administrative/Executive Offices   | P    | P    | --- | P    |
| Financial Offices  | P    | P    | --- | P    |
| Medical and Dental Offices/Clinics   | P    | P    | --- | P    |
| Medical/Dental Laboratory  | CUP  | CUP  | --- | CUP  |
| Professional Offices (e.g. architectural, engineering, law)  | P    | P    | --- | P    |
| Real Estate Offices  | P    | P    | --- | P    |
| Research and Development Offices   | P    | P    | --- | P    |
| Veterinary Clinics/Animal Hospitals  | CUP  | CUP  | --- | CUP  |
| Any other commercial - office use which the Zoning Administrator finds to be similar and of the same general character as the uses listed above. Such uses may be permitted as "P" or "CUP" as determined by the Zoning Administrator. |      |      |     |      |

| <b>Commercial - Service Oriented</b>  |     |     |     |     |
|---|-----|-----|-----|-----|
| Stores, shops and offices performing services for residents of the City as a whole or the surrounding community, including but not limited to the following uses: |     |     |     |     |
| Athletic/health clubs   | P   | P   | --- | --- |
| Auto Service Station  | --- | CUP | --- | CUP |
| Bank  | P   | P   | --- | P   |
| Barbershop and beauty shop  | P   | P   | --- | P   |
| Bicycle repair  | P   | P   | --- | P   |
| Body art/tattoo/piercing salon  | CUP | CUP | --- | --- |
| Carpentry shops   | CUP | CUP | --- | CUP |
| Catering halls (with full-time, full-service restaurants, operating after hours)  | CUP | CUP | --- | --- |
| Catering Services   | CUP | CUP | --- | --- |
| Check cashing establishments  | --- | --- | --- | --- |
| Cobbler (shoe repair)   | P   | P   | --- | P   |
| Coin-operated laundry   | P   | P   | --- | P   |
| Day nursery (child care facility)   | CUP | CUP | --- | CUP |
| Day spa   | P   | P   | --- | P   |
| Drycleaners   | CUP | CUP | --- | --- |
| Financial services  | P   | P   | --- | P   |
| Jewelry and watch repair  | P   | P   | --- | P   |
| Locksmiths  | P   | P   | --- | P   |
| Manicure and pedicure shops   | P   | P   | --- | P   |
| Massage parlor  | --- | --- | --- | --- |
| Pawn Shops  | --- | --- | --- | --- |
| Pet grooming  | P   | P   | --- | P   |
| Photocopying and blueprinting services  | P   | P   | --- | --- |
| Photography studios   | P   | P   | --- | P   |
| Postal stores   | P   | P   | --- | P   |
| Printing and publishing services  | P   | P   | --- | --- |
| Service and Repair Shops, Minor (e.g. appliance, plumbing, electrical, heating and cooling, except auto-related)  | P   | P   | --- | --- |



|   |   |   |     |     |
|---|---|---|-----|-----|
| Tailor shops  | P | P | --- | P   |
| Ticket/Travel agencies  | P | P | --- | --- |
| Any other commercial - service use which the Zoning Administrator finds to be similar and of the same general character as the uses listed above. Such uses may be permitted as "P" or "CUP" as determined by the Zoning Administrator. |   |   |     |     |

|  | MU-1 | MU-2 | PRV | PNRC |
|--|------|------|-----|------|
| <b>Commercial - Retail</b>   |      |      |     |      |
| Stores, shops and offices providing commodities or hospitality for residents of the City as a whole or the surrounding community, including but not limited to the following uses: |      |      |     |      |
| Adult-oriented entertainment   | ---  | ---  | --- | ---  |
| Amusement facilities   | CUP  | CUP  | --- | CUP  |
| Bait and tackle shops  | P    | P    | --- | P    |
| Bakery   | P    | P    | --- | P    |
| Bed and breakfast  | P    | P    | --- | ---  |
| Bona fide antique shops, but not including secondhand or junk stores   | P    | P    | --- | P    |
| Bookstore  | P    | P    | --- | P    |
| Cocktail lounge (subject to the provisions of CVMC 19.58.075)  | CUP  | CUP  | --- | ---  |
| Coffeehouse/café   | P    | P    | --- | P    |
| Commercial recreation facilities (indoor) e.g. bowling alleys, skating rinks, laser tag  | P    | P    | --- | ---  |
| Commercial recreation facilities (outdoor) e.g. miniature golf   | CUP  | CUP  | --- | ---  |
| Convenience stores   | P    | P    | --- | P    |
| Delicatessen/sandwich shop   | P    | P    | --- | P    |
| Department stores  | P    | P    | --- | ---  |
| Farmer's market  | CUP  | CUP  | --- | CUP  |
| Florist  | P    | P    | --- | P    |
| Galleries (photography, art)   | P    | P    | --- | P    |
| Grocery, fruit, or vegetable sales   | P    | P    | --- | P    |
| Hardware stores (up to 5,000 sq. ft.)  | P    | P    | --- | P    |
| Hardware stores (over 5,000 sq. ft.)   | P    | P    | --- | ---  |
| Home furnishing stores   | P    | P    | --- | ---  |
| Handicraft shops   | P    | P    | --- | P    |
| Ice cream/yogurt shop  | P    | P    | --- | P    |
| Liquor stores (subject to the provisions of CVMC 19.58.430)  | CUP  | CUP  | --- | ---  |
| Live entertainment (excluding adult-oriented entertainment)  | CUP  | CUP  | --- | ---  |
| Meat sales   | P    | P    | --- | P    |
| Newstands  | P    | P    | --- | P    |
| Pawn shops   | ---  | ---  | --- | ---  |
| Pet shops  | P    | P    | --- | P    |
| Pool and spa supplies (no outdoor storage)   | P    | P    | --- | ---  |
| Prescription pharmacy  | P    | P    | --- | P    |
| Produce stands   | P    | P    | --- | P    |
| Restaurants, fast food   | P    | P    | --- | ---  |
| Restaurants, full-service  | P    | P    | --- | ---  |
| Taverns (subject to the provisions of CVMC 19.58.075)  | CUP  | CUP  | --- | ---  |

|  |     |     |     |     |
|--|-----|-----|-----|-----|
| Theaters, live or movie (no adult theaters)  | CUP | CUP | --- | --- |
| Any other commercial - retail use which the Zoning Administrator finds to be similar and of the same general character as the uses listed above. Such uses may be permitted as "P" or "CUP" as determined by the Zoning Administrator. |     |     |     |     |

| <b>Accessory uses</b>  | MU-1 | MU-2 | PRV | PNRC |
|--|------|------|-----|------|
| Accessory uses or buildings customarily appurtenant to permitted or conditional uses subject to the requirements of CVMC 19.58.020 | P    | P    | P   | P    |
| Home occupations subject to the provisions of CVMC 19.14.490   | ---  | P    | P   | ---  |
| Recycling Collection Centers pursuant to CVMC 19.58.345(A) and (B)   |      |      |     |      |

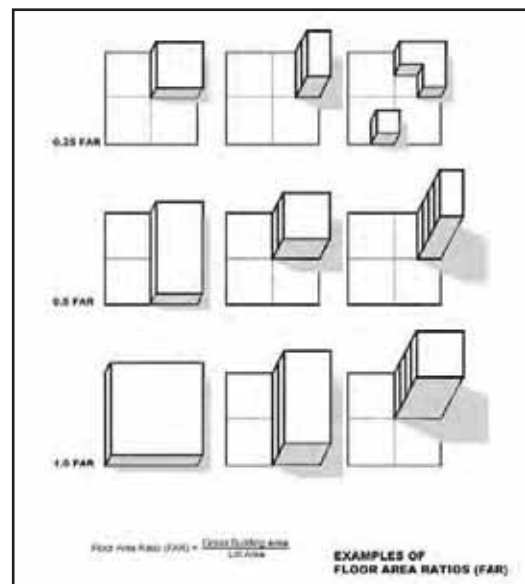
### 3.3.3 Development Regulations

Zoning regulations for each Sub-district are presented on the following individual Zoning Sheets specific to that Sub-district. The Zoning Sheets contain the location of the Sub-districts, their purpose and the specific development regulations. The purpose of the subdistrict zoning sheets is to provide an easy to read reference of the land use and development standards for each subdistrict. Proposed development in the Specific Plan area shall comply with the development standards of the applicable zoning sheets.

In the event that the underlying City of Chula Vista Municipal Code is inconsistent with these development standards or any other provisions herein, the standards of the Specific Plan shall apply. Where the Specific Plan is silent, the Municipal Code shall apply. The definitions found in the Municipal Code, Section 19.04 apply to the Specific Plan, except where specific definitions are provided herein. The following are definitions for the development standards.

#### *Floor Area Ratio*

Floor Area Ratio (FAR) is a measure of the bulk of buildings on a lot or site. FAR is calculated by dividing the gross floor area of all buildings on a lot or site by the lot or site area. Gross floor area includes the total enclosed area of all floors of a building measured from the exterior walls including halls, stairways, elevator shafts at each floor level, service and mechanical equipment rooms, balconies, recreation rooms, and attics having a height of more than seven feet but excluding area used exclusively for vehicle parking or loading. For example, a two-story building occupying one-half of a site has an FAR of 1.0. Any floor area below finish grade does not count towards FAR. If floors are partially above and partially below grade, then only the proportion of the floor above grade is counted towards FAR. For example, if 5 feet of a 10-foot high floor is below grade, then only 50% of the floor area will count towards FAR.

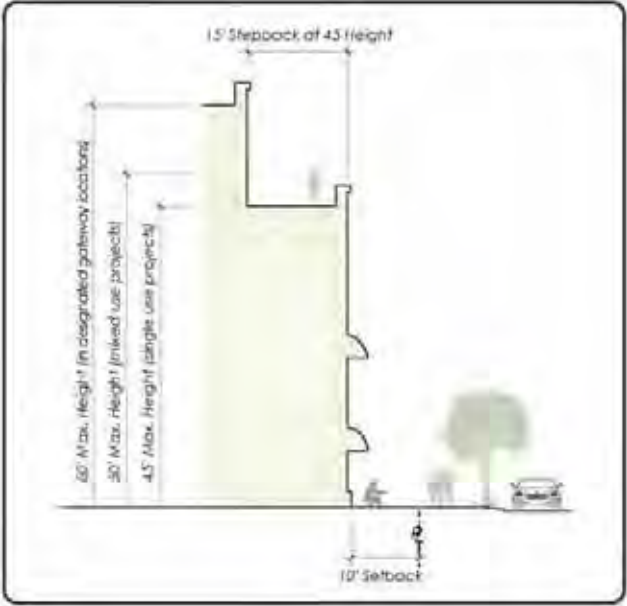


*Building Height*

Building heights are measured from finish grade to top of roof, not including parapets or other architectural features. Minimum building heights in some subdistricts ensure that the desired building heights are achieved.

*Building Stepback*

In some districts, the upper portion of a building must step back from the lower portion of the building when located adjacent to major streets. The stepback is a minimum horizontal distance, as measured from the street property line, and must occur below the maximum building height, to provide vertical relief of taller structures. At primary gateways, as identified in this Specific Plan, stepback requirements may be modified to allow significant architecture or design statements at these corner locations.



*Street Wall Frontage*

Street wall frontage is the percentage of street front that must be built to, with the ground floor building facade at the minimum setback.

*Setback (Build-To Line)*

Setback is the distance between the property line and the building. Setback is measured horizontally and perpendicular to the property line. Minimum setbacks in some Sub-districts ensure appropriate distances between land uses and ensure that the desired building line is maintained, e.g. along certain streets.

Build-to line is the given distance from a property line where the facade of the building within that property must be located.

*Open Space Requirement*

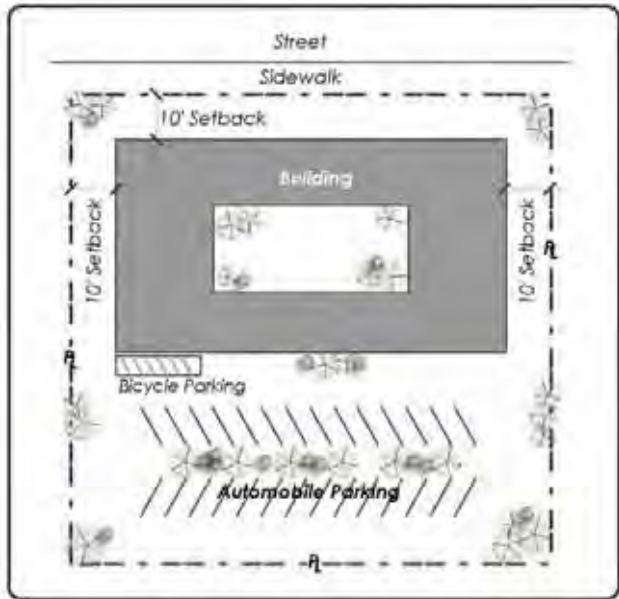
For the purposes of the open space requirement, the term “open space” refers to any areas with minimum dimensions of 60 square feet (6’x10’) and devoted to the following common, private, or public uses: patio, porch, balcony, deck, garden, playground, plaza, swimming pool, sports court/field, recreation room, gym, spa, community room, cultural arts, lawn/turf, pond, fountain, atrium, sunroom, theater, amphitheater, band shell, gazebo, picnic area, shelter, roof, for similar passive or active recreational/leisure use or facility that is not used for enclosed dwelling unit floor area or commercial use space.

*Parking Regulations*

Development proposals within the Specific Plan area shall comply with the type, location, and number of parking spaces established for residential and non-residential land uses as specified herein. Bicycle parking is also required for commercial uses pursuant to CVMC 15.12, as may



be amended from time to time. For mixed use projects, a shared parking agreement may be requested and approved pursuant to CVMC 19.62.040, as may be amended from time to time.



## Palomar Transit Plaza – MU-1

### Location

The Palomar Transit Plaza Sub-district is located at the southeast corner of Palomar Street and Industrial Boulevard (Figure 2). It occupies an area of approximately 3.3 acres and is located next to the retail center that contains a supermarket, Office Depot, and a variety of retail and food establishments. This Sub-district is connected at its south-end to the San Diego Gas & Electric Right of Way.



**Figure 2**

### Purpose

The purpose of the Palomar Transit Plaza Sub-district is to enhance and improve the functions of the Transit Station and the land uses of the Palomar Gateway District. This Sub-district is intended to serve as a focus area and create a cohesive and strong multi-use Palomar Gateway District. The Sub-district land uses are intended to create a multi-use Transit Plaza that will serve transit users, residents, as well as shoppers. In addition to the Transit Center the Sub-district will contain a public open space in the form of a Plaza, Piazza or Courtyard that will connect with an active/passive open space/park at the SDG&E Right of Way.

Architectural Emphasis at Gateways – The Specific Plan identifies two gateways to the Palomar Gateway District, which are located at the intersections of Palomar and Walnut Street/Frontage Road and at Palomar and Industrial Boulevard (Figure 3).



**Figure 3**

These locations may qualify for increased height of up to 15 feet in order to achieve enhanced architectural statements and iconic design. The additional height may be permitted as a development exception to the height regulations identified in section 3 of the development regulations below.

## Development Regulations

### 1. Permitted Land Uses:

- Transit Center (Trolley/Bus Station)
- Public Open Spaces (Plaza/Piazza/Courtyard)
- Residential
- Retail
- Office
- Civic

### 2. Floor Area Ratio: 2.0

### 3. Building Height:

- a) 45 ft. Max. for Single Use Projects;
- b) 50 ft. Max. for Vertical Mixed Use Projects;
- c) Up to 60 ft. for Projects in specially designated Gateway locations

### 4. Building Setback: 10 ft. along property lines

### 5. Building Stepback: 15 ft. for buildings higher than 50 ft.

### 6. Open Space Requirements: 200 sq. ft per dwelling unit

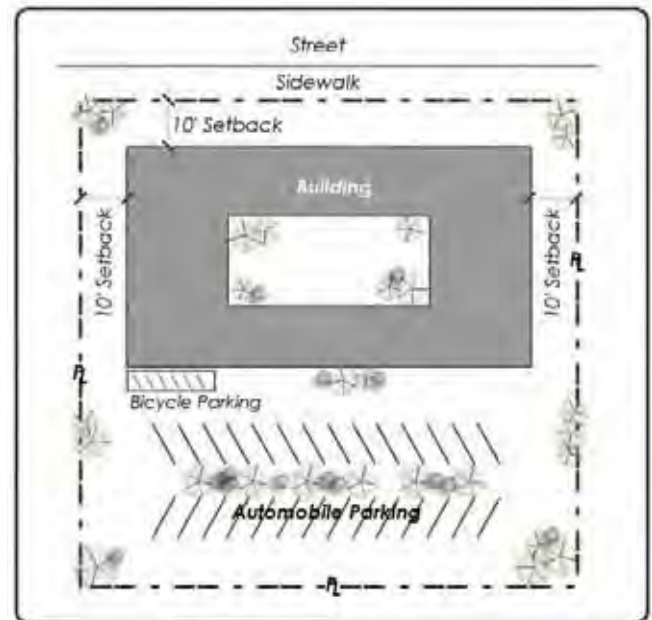
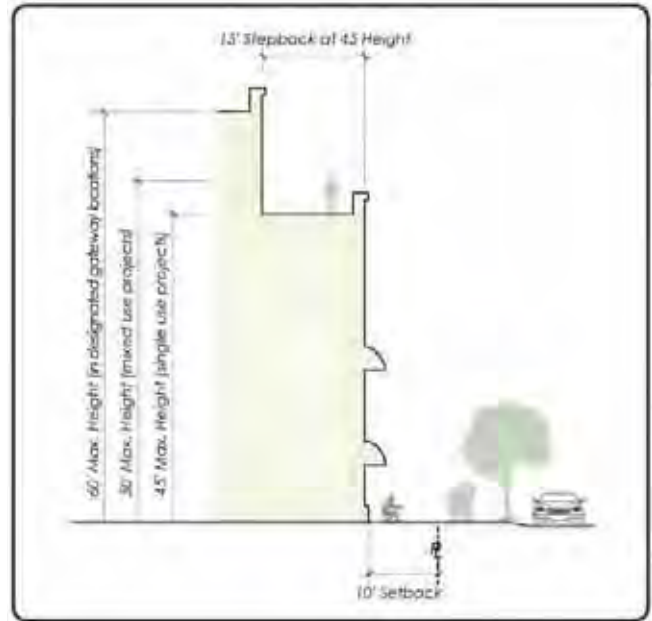
### 7. Parking Regulations

Parking Locations: Any, except fronting the street or buildings

Residential Parking: 1 space per unit

Non-residential Parking: Min. 2 spaces per 1,000 sq. ft. of commercial space

Bicycle parking per CVMC 15.12 (Green Building Standards), as may be amended from time to time.





## Mixed Use Corridor – MU-2

### Location

The Mixed Use Corridor includes the properties generally along Palomar Street and extends from I-5 to a point mid-block between Industrial Boulevard and Broadway (Figure 4). The corridor also includes properties located on the west side of Walnut Street and Frontage Road; due to their location along and highly visible from I-5, these properties are more suitable to be developed with commercial uses (retail/office).



Figure 4

### Purpose

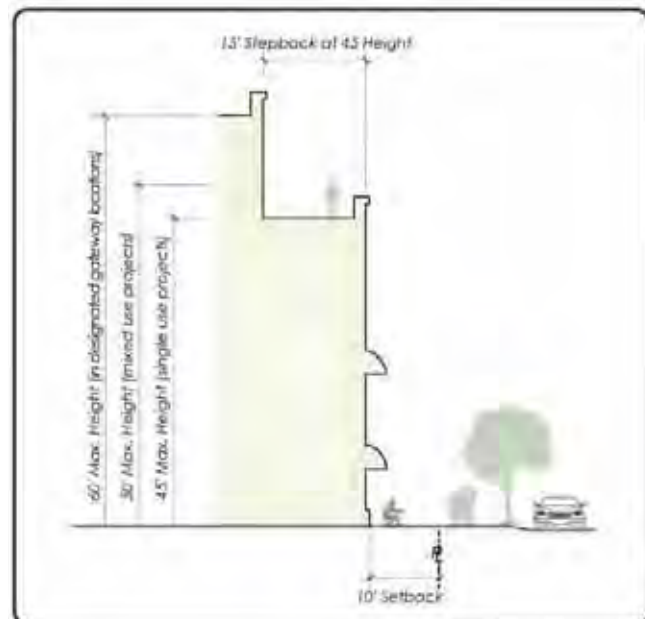
The purpose of the Mixed Use Corridor is to encourage the development of the residential and commercial (retail or office) elements, and the mixture of both, to create, in conjunction with the Palomar Transit Plaza, the Transit-Oriented, Multi-Use District envisioned by the City's General Plan. The Sub-district regulations will afford the flexibility to allow the development of residential and commercial projects in the combinations as the determined by market conditions.

While the market and property ownership decisions ultimately drive development and redevelopment of individual parcels in this subdistrict, consideration should be given to develop the vacant parcel south of Palomar Street, formerly known as the "Pumpkin Patch" site, with educational office uses such as an educational annex of a local college or university, or other private educational facilities, as allowed pursuant to the land use matrix (Section 3.3.2).

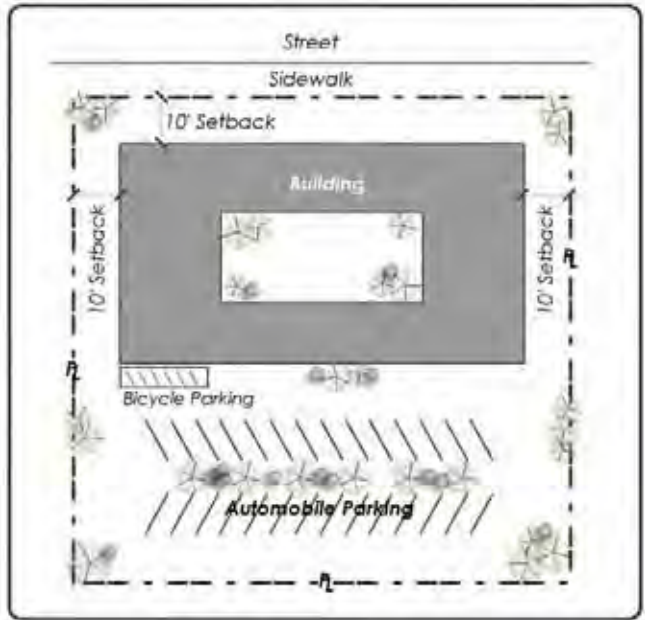
Architectural Emphasis at Gateways – The Specific Plan identifies two gateways (See Figure 3) to the Palomar Gateway District, which are located at the intersections of Palomar and Walnut Street/Frontage Road and at Palomar and Industrial Boulevard. These locations may qualify for increased height of up to 15 feet in order to achieve enhanced architectural statements and iconic design. The additional height may be permitted as a development exception to the height regulations identified in section 3 of the development regulations below.

### Development Regulations

1. Permitted Land Uses:
  - Residential/Commercial Mixed-Use (vertical or horizontal)
  - Commercial Retail
  - Commercial Office



2. Floor Area Ratio: 1.5
3. Building Height:
  - a) 45 ft. Max. for Single Use Projects;
  - b) 50 ft. Max. for Vertical Mixed Use Projects;
  - c) Up to 60 ft. for Projects in specially designated Gateway locations
4. Building Setback: 10 ft. along property lines
5. Building Stepback: 15 ft. for buildings higher than 50 ft.
6. Street Wall Frontage: 50% Min.
7. Open Space Requirements: 200 sq. ft. per dwelling unit
8. Parking Regulations



Parking Locations: Any, except fronting on the street or in front of building

Residential Parking: As required per CVMC 19.62, as may be amended from time to time.

- a) 1.5 spaces per unit for studios and one bedroom units
- b) 2 spaces per unit for units with two or more bedrooms

Non-residential Parking: Min. 2 spaces per 1,000 sq. ft.

Bicycle parking per CVMC 15.12 (Green Building Standards), as may be amended from time to time.



## Palomar Residential Village – PRV

### Location

The Residential Village Sub-district occupies all of the properties bounded by Ada Street (north and south side), Industrial Boulevard, Frontage Road, and Anita Street (Figure 5), except the properties located at the northwest corner of Industrial Boulevard and Anita street which are designated as commercial. The Residential Village Sub-district is currently developed with residential uses only, and is intended to continue to be developed with residential uses only at a higher density consistent with the General Plan.

### Purpose

The purpose of the Residential Village Sub-district is to enhance the residential characteristics of the Palomar Gateway District and allow the intensification of the area in order to provide additional housing opportunities, support regional transit and support the commercial uses in the vicinity. The district regulations are designed to promote and encourage an intensively developed residential environment, with appropriate environmental amenities such as open areas, landscaping and off-street parking.

Zoning for the Residential Village is pursuant to CVMC 19.28 R-3; Apartment Residential Zone, as may be amended from time to time. This Multi-family zone implements the Residential-High (RH) designation of the General Plan. The following is a brief general summary of the R-3 zone which includes provisions for permitted and conditional uses, and development standards for height, lot width, setbacks; landscaping, parking, trash storage, and wall requirements. Please see CVMC 19.28 for detailed zoning provisions, as may be amended from time to time.

### Development Regulations

1. Permitted Land Uses:
  - Apartment Complexes
  - Townhome Complexes
  - Garden Apartment Complexes
2. Building Height: 45 ft. maximum
3. Building Setback: Front and Rear 15 ft.; Side yard 10 ft. (with both interior); Corner lots 10 ft exterior yard and 5 ft interior yard
4. Open Space Requirements: 400 sq. ft. min. per dwelling unit



**Figure 5**



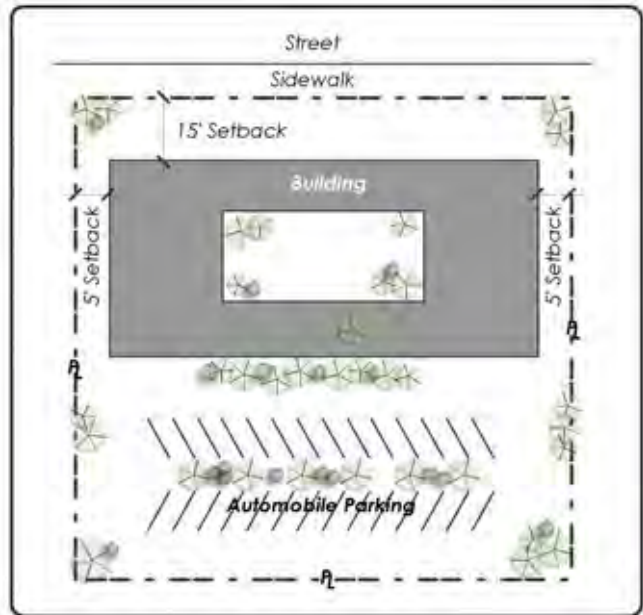


## 5. Parking Regulations

Parking Locations: Any, except fronting on the street or building front

Residential Parking: As required per CVMC 19.62, as may be amended from time to time.

- 1.5 spaces per unit for studios and one bedroom units
- 2 spaces per unit for units with two or more bedrooms



## Palomar Neighborhood Retail Cluster – PNRC

### Location

The Neighborhood Retail Cluster includes the properties located along the west side of Industrial Boulevard between a point north of Belvia Lane and Anita Street (Figure 6). These properties comprise an area of about 1.5 acres of land.

### Purpose

The purpose of this Sub-district is to provide a commercial retail center for convenience shopping for the residential neighborhood. Zoning for the Neighborhood Retail Cluster is pursuant to CVMC 19.34 Neighborhood Commercial (CN) Zone, as may be amended from time to time. The CN zone implements the Commercial Retail (CR) designation of the General Plan. It is the intent of the regulations to ensure that the character of the Neighborhood Retail Cluster will be compatible with and will complement the surrounding residential area.

The following is a brief general summary of the CN zone which includes provisions for permitted and conditional uses, and development standards for height, lot width, setbacks; landscaping, parking, trash storage, and wall requirements. Please see CVMC 19.34, as may be amended from time to time, for detailed zoning provisions.

### Development Regulations

1. Permitted Land Uses:
  - Commercial retail
  - Commercial office
2. Building Height: 35 ft. maximum
3. Building Setback: 15 ft.
4. Parking Regulations

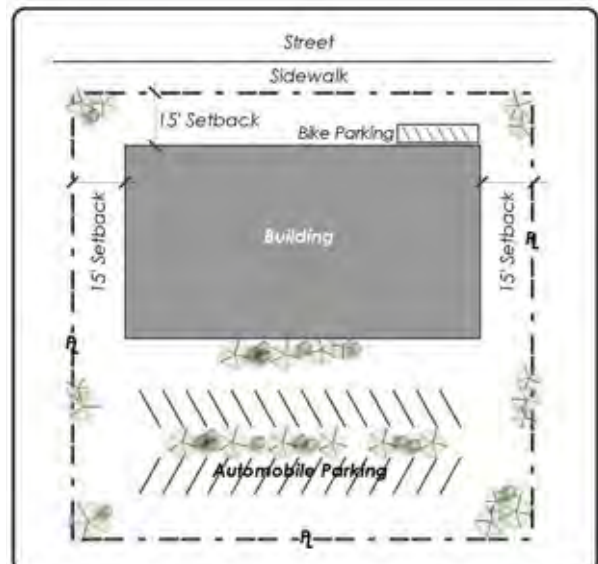
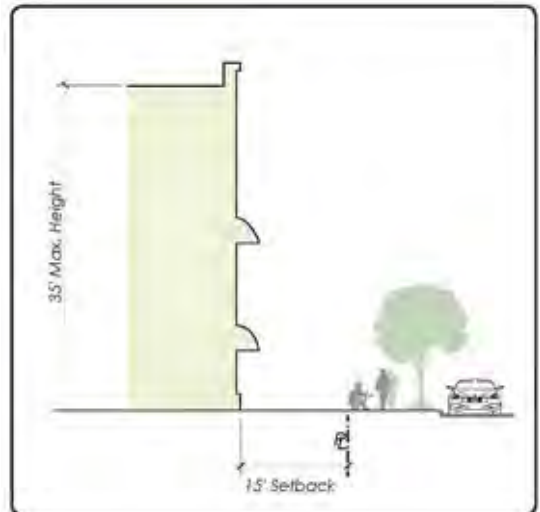
Parking Locations: Any, except fronting on street and in front of building.

- Retail: Generally, 1 space per 200 sq. ft.
- Office: Generally, 1 space 300 sq. ft.

For other specific uses, see CVMC 19.62.050, as



Figure 6



may be amended from time to time.

Bicycle parking per CVMC 15.12 (Green Building Standards), as may be amended from time to time.





### 3.4 Other Land Use Regulations

#### 3.4.1 Large-Scale Commercial

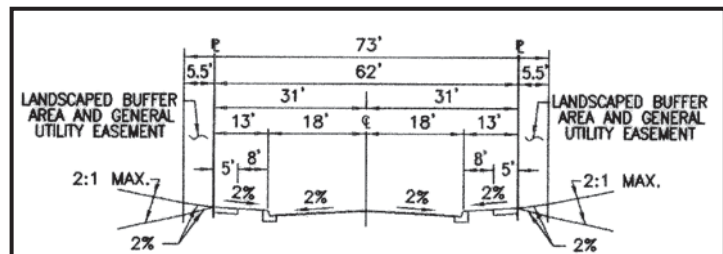
Parking lots shall not dominate street frontages. Large-scale commercial development, in excess of 50,000 square feet, shall be lined with pedestrian-scale/pedestrian-oriented retail frontages along Palomar Street or Industrial Boulevard. "Liner" buildings shall comply with setback and build-to regulations, in accordance with the applicable zoning for the subdistrict. Liner buildings shall have a minimum depth of 30 feet.

Any portion of the building fronting onto a transit station, a transit street or a major pedestrian access way (pass-through, sidewalks, plazas, etc.) shall follow building design guidelines as set out in the City's Design Manual and Chapter 4 of this Specific Plan.

#### 3.4.2 Street and Sidewalk Regulations

##### Minimum Widths

Sidewalks within the Specific Plan shall have a minimum of 8 feet width with a minimum of 4 feet of unobstructed width clear of any obstruction (light poles, parking meters, other street furniture, landscaping or fences) for circulation, with the exception of local residential streets where the width may be reduced to 6 feet.



##### Private Use of Sidewalks

Exterior storage on sidewalks is prohibited. Outdoor seating for eating and drinking establishments and pedestrian-oriented accessory uses (e.g. sales/display for flowers, small shops, food, or drink stands) are exempt from this requirement subject to obtaining an encroachment permit where within the public right-of-way. Outdoor service of alcoholic beverages shall be clearly demarcated from public spaces. In all cases, a minimum 5-foot unobstructed pedestrian circulation path shall be maintained along the sidewalk.



#### 3.4.3 Sign Regulations

New signage within the Specific Plan shall conform to the standards stated herein and CVMC 19.60, as may be amended from time to time, except for signs painted or directly mounted to the building surface.

Signs painted on the building surface or letters mounted directly to the building surface shall comply with the following:

1. Sign area: One (1) square foot (maximum) signage per lineal foot of building frontage not to exceed a maximum of one hundred (100) square feet for each business.

2. Sign copy size: Sign copy shall not exceed twelve (12) inches in height for building fronts thirty (30) feet in height or less; and eighteen (18) inches in height for building fronts thirty (30) feet to sixty (60) feet in height.
3. Sign placement: No closer than one-half (1/2) the vertical height of the letters (sign copy) employed to a building corner (vertical edge) or to a roofline.
4. Signage shall not reduce unobstructed sidewalk width to less than 8 feet. Opaque signage shall not reduce visual permeability of street fronting windows.

### 3.4.4 Parking and Loading Regulations

#### *Automobile Parking Requirements per Floor Area or Unit Size and Land Use Type*

New development within the MU-2, PRV, and PNRC subdistricts shall be subject to compliance with CVMC 19.62.050, as may be amended from time to time. Parking reductions may be considered on a case by case basis for residential projects within ¼ mile of the Palomar Transit station. Projects requesting a parking reduction must demonstrate clear path of travel for residents to the transit station. For mixed use projects, a reduction in parking may be permitted through a shared parking agreement pursuant to CVMC 19.62.40, as may be amended from time to time.

New development in the MU-1 subdistrict shall be as noted on the zoning sheet. The maximum number of spaces allowed shall not exceed 125 percent of the city requirement.

#### Tandem Parking

Tandem or stacked parking is only permitted to satisfy parking requirements for residential uses when the tandem spaces serve the same unit.

#### Bicycle Parking

Convenient bicycle facilities should also be provided within the Specific Plan. Bicycle parking shall be provided pursuant to CVMC 15.12, as may be amended from time to time.

#### Off-Street Parking Location for Non-Residential and Multi-family Development

Off-street parking location for new development within the Specific Plan shall conform to the following requirements:

1. Off-street parking shall be located to the rear and/or interior of a lot such that its visibility from a street shall be minimized. At-grade, above-, or below-ground parking structures shall be permitted.
2. Surface parking lots shall be placed between the structure and a side or rear lot line. Where a lot fronts onto two or more streets, parking shall be located as follows:
  - along the street with the least amount of commercial activity



- along the street with the least amount of pedestrian activity if the lot is located along two or more commercial streets with equal amounts of commercial activity
3. A maximum 6-foot high wall or fence shall separate parking lots from abutting residential uses with a minimum 5-foot landscaped buffer.
  4. At least fifty (50) percent of all parking structures' street frontage, excluding entrances and exits which abut a transit station, a transit street, or a major pedestrian accessway, shall have non-parking use at ground level and shall comply with building frontage, facade, and building entry design requirements. Wherever possible, the narrow side of the parking structure shall abut the transit station, transit street, or major pedestrian accessway.

### 3.4.5 Vehicular Access

Vehicle access from pedestrian-oriented streets shall be prohibited unless no other reasonable access is available. Where improved alleys are present, loading and service areas shall be accessed from the alley. Lots with more than one street frontage and no alley shall locate vehicular access along the street with the least amount of pedestrian activity unless it is a local street. All loading and service drives shall be of a depth that prevents loading and service vehicles from obstructing the sidewalk and roadway.

Entrances to loading and service areas shall be screened from view in accordance with CVMC 19.62.080, as may be amended from time to time.

### 3.4.6 Loading, Service, and Refuse Area Screening

Loading, service, and refuse areas shall not be located along street frontages. They shall be screened from view with walls, trellises, planting, mounds or by integrating them into the design of the building. Screen walls shall not exceed 6 feet in height. Solid walls shall be landscaped to soften their appearance and shall be made of finished materials to match the primary building. Decorative elements, variation in materials, and articulation shall be used. Refuse areas shall be designed consistent with the City's Recycling and Solid Waste Planning Manual.



Loading areas shall be physically separated from public parking via curbs, bollards, low or high walls, raised planters, landscaping, distance, and/or elevation changes. When using walls to separate loading areas from pedestrian areas, landscape elements (e.g. planting, trellises, arbors, etc.) shall be used to soften their appearance.

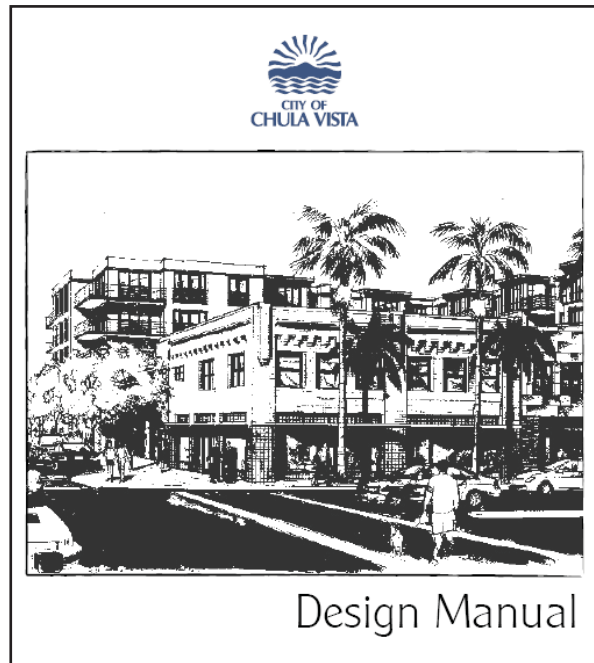
## 4. Design Guidelines

### 4.1 Purpose

The purpose of this section is to present design guidelines for new development and the rehabilitation of older structures in the Palomar Gateway District, as well as for the improvement of the streetscape. The Palomar Gateway District has excellent transportation access and vacant and underutilized properties, but physical barriers and the need for better traffic flow along Palomar Street make establishing a pedestrian-friendly neighborhood center with high-traffic retail uses a bit of a challenge. The guidelines will encourage a district that is economically stronger, more recognizable, and rich in sense of place and identity.

The Specific Plan envisions locating the majority of mixed-use projects, which would include residences, offices, and local-serving retail business, along Palomar Street in the Palomar Transit Plaza and Palomar Mixed Use Corridor Subdistricts. There are two basic types of mixed-use projects. The first type is vertical mixed use, which is typified by residential use over commercial uses in the same building. The second, called horizontal mixed use, combines residential and commercial uses on the same site, but in separate buildings. The primary design issue related to mixed use projects is the need to successfully balance the requirements of residential uses, such as the need for privacy and security, with the needs of commercial uses for access, visibility, parking, loading, and possibly extended hours of operation.

The City's Design Manual provides design guidelines for mixed use and single use projects that may be developed in the Palomar Gateway District. The Design Manual includes guidance on the following elements of project design:



#### **Neighborhood Context**

- Compatibility
- Access/Linkage
- Public Views

#### **Site Design/Siting & Orientation**

- Orientation to the Street
- Setbacks
- Site Access
- Vehicle Access
- Pedestrian & Bicycle Access
- Links to Transit
- Building Mass
- Corner Sites
- Plazas and Open Space

#### Commercial Open Space

- Residential Open Space
- Outdoor Seating
- Walls and Fences
- Refuse, Storage, and Equipment Area
- Loading and Delivery
- Outdoor Storage

#### **Building Design**

- Building Rhythm
- Multiple-Tenant Spaces
- Mass and Proportion
- Building Entries
- Building Facades
- Residential Facades
- Windows

#### Colors & Materials

- Lighting

#### **Parking**

- Surface Parking
- Parking Garages
- Shared Parking

#### **Conservation**

- Energy Conservation and Landscaping
- Environmental Influences
- Landscape Design
- Heat Island Effect
- Resource Conservation
- Adaptive Reuse
- Water Conservation



Urban designers, architects, and reviewers of projects should refer to the City's Design Manual in particular the Mixed Use; Commercial; Multi-Family Residential; and Conservation Guidelines for general design guidance.

The following are specific design guidelines that need to be considered for gateway corners, major arterials, and residential neighborhoods:

#### 4.2 Northwest Corner of Palomar and Industrial

- a. Primary vehicular access should be from Industrial Boulevard.
- b. Projects should provide a strong connection with the transit center for office workers and residents.
- c. As a main entry point into the Palomar Gateway District, buildings lining Palomar Street should maintain strong architectural design standards, use high-quality building materials, and emphasize corner building design elements.
- d. Buildings that front Palomar Street and/or Industrial Boulevard should orient windows and their business to these streets. Residential entrances should be setback with stoops and porches, yet maintain "eyes on the street".
- e. Urban design amenities should strive to activate the streetscape with outdoor dining areas and plazas or other open spaces.
- f. Buildings at the corner of Palomar Street and Industrial Boulevard may be considered for additional height up to a maximum of 60 feet to provide strong architectural elements at this gateway corner.



#### 4.3 Northeast Corner of Palomar and Industrial

- a. Primary vehicular access should be from Palomar Street or Oxford Street.
- b. Projects should provide a strong connection with the transit center and Harborside Park.
- c. Buildings should orient windows and their businesses to Palomar Street. Residential entrances should be set back with stoops and porches, yet maintain "eyes on the street".
- d. New development should take advantage of the larger lot sizes in this area of the subdistrict, and should incorporate active plazas or other open space elements to be enjoyed by both customers and employees of commercial uses and new residents.



- e. As a main entry point into the Palomar Gateway District, buildings lining Palomar Street should maintain strong architectural design standards, use high-quality building materials, and emphasize corner building design elements.
- f. Buildings at the corner of Palomar Street and Industrial Boulevard may be considered for additional height up to a maximum of 60 feet to provide strong architectural elements at this gateway corner.

**4.4 Southeast Corner of Palomar and Industrial**

- a. As a main entry point into the Palomar Gateway District and the center of transit, emphasize iconic corner building design elements. Buildings lining Palomar Street should maintain strong architectural design standards and use high-quality building materials.
- b. A public plaza or piazza should be designed as a focal point and gathering place for redevelopment in this subdistrict.



- c. Projects should provide a strong connection with the transit center, new commercial uses, and public spaces and parks.

- d. Buildings should orient windows and their business to Palomar Street. Residential entrances should be setback with stoops and porches, yet maintain “eyes on the street”.



- e. Primary vehicular access should be from Palomar Street only.
- f. Buildings at the corner of Palomar Street and Industrial Boulevard may be considered for additional height up to a maximum of 60 feet to provide strong architectural elements at this gateway corner.

**4.5 Southwest Corner of Palomar and Industrial**

- a. Primary vehicular access should be from Industrial Boulevard (right-in/right out circulation only).
- b. If feasible, projects should incorporate a paseo connecting Palomar Street to the residential neighborhood to the south, preferably at an approximate midway point. Site design should also allow for connections with existing streets.



- c. Principal access roads into new development areas should harmonize with the scale and

pedestrian amenities of streets in adjacent residential neighborhoods.

- d. As a main entry point into the Palomar Gateway District, buildings lining Palomar Street should maintain strong architectural design standards, use high-quality building materials, and emphasize corner building design elements.
- e. Retail building(s) should orient storefronts and entrances to Palomar Street and Industrial Boulevard. Any residential uses along Palomar Street should set back entrances with stoops and porches, yet maintain “eyes on the street”.
- f. Plazas, outdoor dining, kiosks, benches, and other street furniture are encouraged, particularly near the transit center, to enhance street activity and interest.
- g. Buildings at the corner of Palomar Street and Industrial Boulevard may be considered for additional height up to a maximum of 60 feet to provide strong architectural elements at this gateway corner.



#### **4.6 Southwest and Southeast Corner of Palomar and Frontage**

- a. Primary vehicular access should be from Frontage Road.
- b. Site design should also allow for vehicular and pedestrian connections with existing streets.
- c. Principal access roads into new development areas off Frontage Road should harmonize with the scale and pedestrian amenities of streets in adjacent residential neighborhoods.
- d. As a main entry point into the Palomar Gateway District, buildings lining Palomar Street should maintain strong architectural design standards, use high-quality building materials, and emphasize corner building design elements.
- e. Retail building(s) should orient storefronts and entrances to Palomar Street and Frontage Road. Any residential uses along Palomar Street should set back entrances with stoops and porches, yet maintain “eyes on the street”.
- f. Buildings at the corner of Palomar Street and Frontage Road may be considered for additional height up to a maximum of 60 feet to provide strong architectural elements at these gateway corners.



#### **4.7 Northwest and Northeast Corner of Palomar and Walnut Avenue**

- a. Primary vehicular access should be from Walnut Avenue.



b. Site design should allow for connections with existing streets, and where possible improve the street layout to provide a better circulation between Walnut and Trenton Avenue.



c. Principal access roads into new development areas off Walnut Avenue should harmonize with the scale and pedestrian amenities of streets in adjacent residential neighborhoods.

d. As a main entry point into the Palomar Gateway District, buildings lining Palomar Street should maintain strong architectural design standards, use high-quality building materials, and emphasize corner building design elements.

e. Retail building(s) should orient storefronts and entrances to Palomar Street and Walnut Avenue. Any residential uses along Palomar Street should set back entrances with stoops and porches to maintain “eyes on the street”.

f. Buildings at the corner of Palomar Street and Walnut Avenue may be considered for additional height up to a maximum of 60 feet to provide strong architectural elements at these gateway corners.

#### 4.8 Palomar Residential Village

a. New multi-family residential uses should provide a strong connection to the Palomar Transit Plaza and other commercial uses along Palomar Street.



b. Principal access roads into new development areas off Ada Street, Dorothy Street and Anita Street should harmonize with the scale and pedestrian amenities of adjacent residential neighborhoods.

c. Orient new residential uses to the street with landscaped set backs. Entrances should incorporate stoops and porches, to maintain “eyes on the street”.

d. Place parking in the rear.

e. New development should use strong architectural design standards and high-quality building materials, and provide varied interest in building design elements.

f. Site design for new development between Ada and Dorothy Streets adjacent to the existing drainage should preserve and enhance the drainage area as a passive open space element, to the extent feasible.



g. Where new multi-story development is adjacent to existing



single family residential uses, consideration should be given to maintain privacy through the use of design measure such as stepbacks, landscaping and window orientation.

#### 4.9 Northwest Corner of Anita Street and Industrial Boulevard

- a. Neighborhood-serving uses are strongly encouraged.
- b. Primary businesses should be oriented to corner of Industrial Boulevard and Anita Street.
- c. Neighborhood transition elements, such as landscaping, wall treatments, setbacks and shielded lighting should be incorporated into project design to minimize spillover onto the adjacent residential village.



#### 4.10 Site Design Considerations Adjacent to Interstate 5

The smart growth principles of the Specific Plan have focused a majority of potential new housing and mixed-use areas within a ¼ mile of the Palomar trolley station. While this location provides significant benefits by reducing long commute trips to other residential areas of the City, it also results in housing adjacent to Interstate 5, a heavily traveled freeway. Significant mobile source emission reductions mandated by the federal and state government are expected to occur over the next 5 to 15 years. However, due to the concern over health impacts to residents from highly traveled roads, the California Air Resources Board (CARB) issued the Air Quality and Land Use Handbook (2005) which provides guidance to land use decision-making bodies relative to siting new uses near various air pollution sources, such as freeways.

The Handbook recommends a 500 foot separation between freeways and “sensitive receptors” such as homes and schools. This recommendation is based on scientific studies, which found that the highest emissions were in the area within approximately 350 feet of a freeway and that the emissions had dispersed to background level by about 1000 feet. However, the Handbook also acknowledges that land use authorities need to balance this recommendation with a myriad of other issues such as provision of housing, transportation needs, economic development priorities, and other quality of life issues.

The following site design measures must be considered in conjunction with the advisory recommendations in the Handbook and implemented where possible.

- Siting of new or expansion of existing schools or day care centers within 500 feet is not allowed in accordance with existing State law.
- Siting of new residential uses within 350 feet of the centerline of the freeway should be avoided to the extent possible.
- In mixed-use areas, where possible “non-sensitive uses” (e.g., commercial, retail, and office) should be sited closest to Interstate 5. Residential uses should be located on the upper stories and tiered back from Interstate 5 and should preferably be outside the area within 350 feet of the centerline of the freeway.

- For proposed residential uses in the area between 350 feet and 500 feet from the centerline of the freeway, every effort should be made to consolidate parcels to create more flexibility in site design with a goal of minimizing residential uses within this area.
- In the event that such design cannot be achieved or parcel size does not allow flexibility in site design (e.g. biophilic design), mechanical and structural measures, such as air conditioning with special filters, etc., should be incorporated into building design and construction techniques.

#### **4.11 Streetscape Improvements**

The Design Guidelines for Streetscape Improvement for the Palomar Gateway District focus on improvements to public rights-of-way, sidewalks, public open space, and key intersections. The intent of the following Guidelines is to provide guidance in creating a unified and visually attractive environment that supports the specific plan goals for beautification of the Palomar Gateway District. As the District adds new residents and businesses, the provision of amenities is needed to achieve the vision for a well-balanced urban environment. Improving the Streetscape with “urban amenities” is designed to create a sense of place, encouraging people to gather and stay awhile. The condition of the Streetscape is important for creating the desired image and identity of the District and to provide a unified backdrop for the design of various building styles and types. Streetscape improvements serve to improve an area’s visual quality and act as an investment catalyst, encouraging private property upgrades and new development. The improvements will be implemented over the term of the Specific Plan and may occur as comprehensive street improvements or may be improved in phases as part of private redevelopment. Where no immediate private development is likely to occur, the city may undertake improvements and seek reimbursement from future development.

##### **4.11.1 Urban Design Treatment**

The urban design treatment applied within the Palomar Gateway District area is an important factor in reinforcing the desired future urban environment as expressed in the plan’s vision. The urban design treatment is intended to strengthen the District’s role as the southern entrance into the City. The District’s Streetscape conceptual design represents the international, culturally diverse composition of the area and the significance of the District as an entry point into the City.

##### **4.11.2 Streetscape Palette**

The goal of the streetscape palette is to provide a distinct, “international” image for the Palomar Gateway District. The Streetscape Palette identifies and coordinates streetscape design elements such as street trees, street furniture, and lighting. Proposed improvements are shown in the exhibits presented in the following pages of this section of the Specific Plan.

The following photos in this section provide an outline of proposed streetscape improvements that have either been implemented as part of the Palomar Gateway Enhancement Project completed in 2009, or are recommended to further enhance the surrounding streetscape. Existing and proposed improvements along Palomar Street include the following: A Gateway signage at the southeast corner of Palomar and Frontage Road would provide an identification/gateway monument for the district, six-foot bikeways, pedestrian lighting, parkways between the sidewalk and travel lanes, and landscaped medians ranging from six to fourteen feet in width.

Existing and proposed improvements for Industrial Boulevard include landscaped median, sidewalk, parkway, and bike lane improvements. Other elements include: a new drop-off lane for transit riders; bike locker storage, landscaping, and lighting at the transit station; pedestrian-friendly plazas at the southwest and southeast corners of Palomar and Industrial; and a roundabout at the intersection of Industrial and Ada Street, with another roundabout proposed to be built along Industrial Boulevard at a future intersection with Oxford Street. The roundabouts are intended to calm traffic and increase safety for vehicles and pedestrians.



### 4.11.3 Street Trees

Street trees are a key element to create unified street scenes and soften otherwise discordant arterials. Street trees help improve air quality and add scale, texture, foliage color and a pleasant environment contributing to the Palomar Gateway District's unique identity. Following are general guidelines for street tree planting and placement:

- For each block on a street, no more than three species are recommended. Mixed species result in better long-term management because they are less prone to diseases and insects than use of a single species; not all the trees will be lost if a catastrophic disease or infestation should occur. Contrarily, too many species create a lack of visual unity along the street.



- Landscaped medians and parkways along Palomar Street consist of flowering trees, such as, Crape Myrtle Hybrid (*Lagerstroemia 'Tuscarora'*), Palms such as, Mexican Fan Palm (*Washingtonia robusta*), and Italian Cypress (*Cupressus sempervirens*). Landscaped medians and parkways along Industrial Boulevard consist of flowering trees, such as, Crape Myrtle Hybrid (*Lagerstroemia 'Tuscarora'*) and Jacaranda (*Jacaranda mimosifolia*), and evergreen trees, such as, Brisbane Box (*Tristania conferta*). The roundabouts have flowering trees, such as, Tipu Tree (*Tipuana tipu*). This tree palette would be consistent with the existing street theme established through the improvements provided by the SANDAG Grant.



- Wherever feasible, structural soil systems in planting areas and under pavement should be used to direct new root growth downward below hardscape areas. This helps to postpone root damage caused to the surrounding hardscape and structures. Where use of structural soil is not possible, root barriers should be used as appropriate.



- Tree grates with a minimum width of six feet are required within sidewalks and plaza spaces as the grates allow for improved accessibility, increased sidewalk usability area, and are consistent with the desired urban character. The ultimate size of the tree trunk should be considered when choosing grates; the grate opening should be appropriately sized to accommodate a mature tree.

- Street tree placement should be carefully considered to avoid conflicts with functions of adjacent businesses. Based on mature growth of each species, avoid conflicting with overhead power lines, utility lines, and structures. The trees should align with property lines and not block views of storefronts business or signs to the greatest extent possible. Street trees should be spaced approximately 30 feet to 50 feet on center depending on the specific requirements of each individual species.

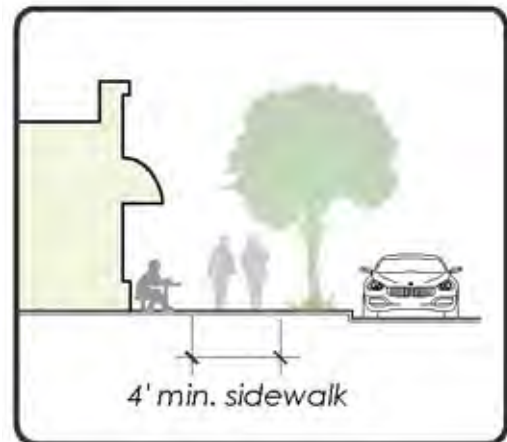
- Landscape Improvements should comply with the City Landscape Manual and the Water Conservation Ordinance.



#### 4.11.4 Sidewalks Design

Sidewalks are the key component of the Palomar Gateway District's pedestrian circulation network. Sidewalks should be continuous to provide pedestrian access to virtually every activity, and provide critical connections between other modes of travel, including the automobile, public transit, and bicycles. The pedestrian experience plays a very important part in the functionality and the economic health of an urban environment. Wide sidewalks, street trees and landscaping, and consistent street furnishings all contribute to a desirable pedestrian street scene. Following are general guidelines for sidewalk and pedestrian treatments:

- Design features, such as, enhanced paving on walkways, trellises or other decorative structures, landscaping, and low level decorative lighting should be used to distinguish the pedestrian route from the vehicular route.
- On-street parallel or diagonal parking, raised planters, and landscaped parkways should be used to define the sidewalk edge and provide a buffer between pedestrians and moving vehicles.
- Newspaper racks should be clustered in groups of dispensers to minimize a cluttered sidewalk appearance. Permanent decorative newspaper enclosures to house these racks will also help minimize a cluttered appearance.
- Sidewalks should have a “through pedestrian zone” that is kept clear of any fixtures and/or obstructions. A minimum of four feet, although preferably eight feet, should be reserved to allow for two people to walk comfortably side by side in accordance with the American Disabilities Act (ADA) requirements.
- Sidewalk surface should be stable, firm, smooth, and slip-resistant.
- Planting areas, bike racks, street lighting, transit furnishings, newspaper racks, and other street furniture should be contained in the furnishings zone located between the sidewalks and street to keep the “through pedestrian zone” free for walking.
- Where appropriate, seating and outdoor dining opportunities can be accommodated in street setback areas in the area between the through pedestrian zone and the face of adjacent retail buildings, i.e. browsing zone.

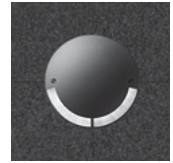


#### 4.11.5 Lighting Design

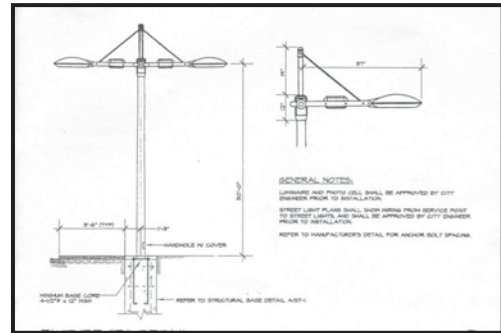
Good quality and placement of lighting can enhance an environment, as well as increase comfort and safety. Lighting within the Palomar Gateway District shall be an integral part of the planning and design of a project and shall be designed as part of an overall lighting plan rather than a single stand-alone element. The following guidelines shall be followed when designing a lighting plan:



- Lighting shall be designed to satisfy both functional and decorative needs.
- Lighting shall be designed for specific tasks, such as illuminate common areas, streets, paths, entryways, landscaping, parking, public art and architectural elements.
- Fixtures and posts shall be consistent throughout the project



- Lighting shall be mounted on architecturally designed posts, as shown in this illustration as examples of fixtures currently existing on Palomar Street and Industrial Blvd.



- Fixtures shall incorporate cutoffs to screen the view of light sources from residences.
- In commercial areas with nighttime pedestrian activity, streetlights and pedestrian-level lights should be combined to enhance the ambiance of the area as well as provide safety for pedestrians.
- Continuous streetlights should be spaced to provide a relatively uniform level of lighting, and should be placed along both sides of the street.

#### 4.11.6 Public Art

Display of public art is an important way of expressing the personality and character of a community. An arts program to engage local artists in representing various aspects of the City greatly personalizes community. The public arts program should provide various methods to incorporate art either as stand alone individual pieces or incorporated into the design of other urban improvements, such as, gateways and entry monuments, paving, benches, and street lights. Incorporation of public art is an intriguing way to enhance the pedestrian environment of sidewalks, plazas, paseos, or other pedestrian spaces.

Public art, such as the examples listed below, can be incorporated in a variety of locations/

- Interpretive sculptures and functional art.
- Interactive media, such as, video projections or climbing structures.
- Way-finding feature to attract pedestrians to key locations like a plaza or paseo or developed as murals representing the areas unique history and culture.
- Decorative tiles integrated into paving, on benches, walls, stairs, and entries.
- Seating areas and signs are also opportunities for public art.
- Fountains or water elements, including randomly timed water features.

## 4.12 Parks, Plazas, and Open Spaces

Perhaps one of the most important improvements that can be made to the Palomar Gateway District is the addition of urban “green” spaces in the form of parks, plazas, paseos and informal pedestrian spaces. As the District adds new residents and businesses, opportunity for convenient urban recreation in various forms must be provided. These public gathering spaces should serve to establish a sense of place and identity and provide space for outdoor dining, events, and street side entertainment. Figure 7 shows potential locations that may be improved with Parks, Plazas, and Open Spaces. These potential features are briefly described below.

### 4.12.1 Neighborhood Park and Urban Park

The 4.5-acre site located within the SDG&E Right-O-Way south of the Palomar Trolley Station provide an opportunity for the construction of a Neighborhood Park similar to the future park next to the South Chula Vista Library. The park at this location would serve to fulfill the General Plan vision for a park in the vicinity of the Palomar Gateway District. The potential park may contain elements that provide passive and active recreation areas for relaxation, picnics, field space, and areas for family gatherings with ample low trees and landscaping. The design of a neighborhood park at this location would be subject to the criteria for such parks as established in the updated Parks & Recreation Master Plan.

Another site that is suitable for an Urban Park is the Metropolitan Transit System (MTS) site located between Palomar Street and Oxford Street, just east of the railroad tracks. This 1.3-acre site currently serves as a drainage detention basin for the Family Resource Center Facility on Oxford Street. The east side of the site contains a sidewalk and a private driveway that provides access between Palomar Street and Oxford Street for pedestrian and vehicular traffic. The MTS site could be improved as an urban open space that incorporates features of an urban park to serve the users of the surrounding commercial and institutional uses, as well as, the nearby residential community, while continuing to provide access for pedestrian and vehicular traffic. Design of this open space would be based on the guidelines for urban parks contained in the Parks & Recreation Master Plan.

### 4.12.2 Plazas

The Palomar Gateway District provides opportunities to provide plazas within private properties. Plazas of a variety of sizes should be incorporated to accommodate different types of activities. These public gathering spaces should serve to establish a sense of place and identity and provide space for outdoor dining, events, and street side entertainment. Some of the sites that offer opportunities for plazas are the Palomar Trolley Station and the site formerly known as the “Pumpkin Patch”, as well as, the large private parcels located between Palomar Street and Oxford Street, east of Industrial Boulevard.



Figure 7

Plazas within these properties should be developed at the time of and in conjunction with a private development project for said sites. Plaza spaces should be designed with flexibility for physical use and be designed to accommodate a range of desired activities, such as, outdoor seating, entertainment (bandstands), and festivals. These spaces should contribute to real and perceived public safety. The plaza spaces should be a minimum of 5,000 square feet in size and may be as large as one acre in size. Plaza space within these sites should be designed with the following features in mind: Appropriate lighting, building edges, trees, comfort of space for users, open access for pedestrians, pedestrian amenities, art features, landscaping, hardscaping, and other architectural features.

#### **4.12.3. Private Greenway**

One of the visually outstanding physical features of the Palomar Gateway District is an existing drainage, that runs east-west from Industrial Boulevard to Frontage Road along the rear of private properties located south of Ada Street and north of Dorothy Street. The drainage extends for approximately 1,430 linear feet, and has a width that ranges from approximately 30 feet to 100 feet at different points through its longitude. The drainage represents a potentially valuable “greenway” that should be preserved and enhanced for the enjoyment of the contiguous property owners. As properties located along the drainage propose to redevelop, the development of each of the sites will be required to consider the following elements:

- A biological study must be conducted to determine the extent and type of biological resources in that part of the property;
- Projects will be required to incorporate recommendations for preservation and/or enhancement of any identified significant biological resources; and
- Portions of the drainage that are not considered sensitive shall be enhanced and maintained. Both of these areas may be considered as part of the development project’s open space requirement.



## **5 INFRASTRUCTURE AND PUBLIC FACILITIES**

### **5.1 Introduction**

The purpose of this chapter is to describe the infrastructure and public facilities applicable to the Specific Plan, including water supply, sewer, drainage, solid waste disposal, law enforcement and emergency services, schools, parks and recreation facilities, energy and telecommunications, and other public improvements such as streets, sidewalks, and street furnishings. As part of its overall facilities planning and maintenance activities, the infrastructure related to the Specific Plan area has been studied during the City's General Plan effort. Since the Specific Plan implements the General Plan, these studies provide the basis of utilities and services needed for the Palomar Gateway District. Information from these studies and the corresponding city-wide implementation strategies are relied upon in large part for this chapter and have been brought forward into the Specific Plan for reference.

The Public Facilities and Services Element of the City's General Plan establishes a comprehensive strategy to provide and maintain infrastructure and public services for future growth without diminishing services to existing development. Public facilities collectively refer to utilities such as water, sewer, drainage, power and telecommunications services. Public services collectively refer to schools, library, law enforcement and fire protection. The City of Chula Vista includes public facilities and services in the General Plan that support and enrich the community including parks and recreation centers, art and cultural facilities and programs, childcare opportunities and health and human services. This chapter of the Specific Plan focuses on the General Plan proposals and criteria that have particular relevance to the Palomar Gateway District.

### **5.2 Growth Forecasts**

Based on the City of Chula Vista's General Plan, the City's population is projected to reach approximately 300,000 by the year 2030. Based on the 2010 Census, the current population for Chula Vista is 243,916 people. The General Plan (2005) includes intensification of retail, office and residential uses with relatively lower emphasis on industrial uses in western Chula Vista, as compared to the previous version. The General Plan also proposes the replacement of a significant amount of existing lower density commercial and residential development in western Chula Vista with mixed use and higher density residential types.

Within the Specific Plan area, the implementation of the General Plan will result in a net increase of approximately 2,000 dwelling units, an increase of approximately 100,00 square feet of additional commercial retail development, and an increase of commercial office development of 25,000 square feet. The net increase in dwelling units would result in a population increase for the plan area of 6,420 (using a factor of 3.21 persons per household based on the 2010 Census information). This assessment is based on the land use designations and densities established in the 2005 General Plan Update. However, a recent market study of the area determined that the Palomar Gateway District may capture between 650 to 1,300 dwelling units within the next 20 years (see Market Study for the Palomar Gateway District attached as Appendix C). Based on the Market Study, the net increase in the maximum number of dwelling units would result in a population increase of approximately 3,354 people (using a factor of 2.58 persons per household based on the General Plan's Multi-Family residential land uses permitted by the Specific Plan).

The foregoing calculation of population relies largely on historic family size information. The changing form of western Chula Vista may alter these forecasts significantly. The population

projection will be affected by any change in national and regional demographics brought about by rates of immigration, aging in the population and alterations in birth rates. Moreover, the kind and intensity of development proposed for the focus areas of the Specific Plan and the pace of development within the Specific Plan area may result in changes to the historically observed family size and makeup.

Historically, smaller attached dwellings in multi-family developments have had lower family sizes than single family housing. Recent infill and urban neighborhood developments in the San Diego region reflect even lower household populations and fewer minors per dwelling, with many developments predominantly occupied by childless couples of all ages. Calculating and tracking trends in the occupancy of the planned multi-family dwellings of the Palomar Gateway District will be critically important to correctly plan and program for facilities such as parks and schools.

### **5.3 Water, Sewer, Drainage and Solid Waste**

#### *5.3.1 Water Demand and Supply*

Chula Vista has historically received the majority of its water supply from the San Diego County Water Authority (CWA). The CWA generally imports from 75 to 95 percent of this water from the Metropolitan Water District (MWD) of Southern California. The Sweetwater Authority provides water service to western Chula Vista, including the Specific Plan area.

As part of the preparation of the PGD Specific Plan, the City of Chula Vista requested, pursuant to SB 610, that the Sweetwater Authority prepare a Water Supply Assessment to determine whether Sweetwater's total projected water supplies, available during normal, single dry, and multiple dry water years during a 20-year projection, would meet the projected water demand associated with the PGDSP's new growth for the next 20 years. The city also requested the Authority to confirm if the existing water delivery facilities are adequate to serve the future water needs of the area and the required fire flow of 4,000 gallons per minute (gpm). Sweetwater Authority prepared and submitted a Water Assessment for the Palomar Gateway District Specific Plan. Said study was adopted by the Sweetwater Authority Governing board on February 22, 2012 and is included as part of this Specific Plan as Appendix C. Below is a summary of the study's conclusions.

In accordance with Water Code Section 10912(c), Sweetwater Authority (Sweetwater) is the "public water system" for the area in which the City's PGDSP is proposed. Sweetwater's water system provides water service to approximately 177,288 consumers within the City of Chula Vista, a portion of the city of San Diego, and the South Bay Irrigation District, which consists of a portion of the city of Chula Vista and the unincorporated portion of the County of San Diego, known as Bonita. The Sweetwater service area covers 32 square miles and contains approximately 32,567 service connections.

#### **Water Demand**

Population and housing growth data for Sweetwater was obtained from the SANDAG 2050 Regional Growth Forecast for years 2010 through 2050. These estimates, however, do not include the increase in population due to the growth projected for the PGDSP through 2035. The City of Chula Vista, at the time of request of the Water Supply Assessment, provided Sweetwater with the number of residential units and commercial square footage projected to be developed within the PGDSP area within the next 20 years. The projected number of residential units is approximately 1,300, with a resulting population growth of 3,354 persons (1,300 x 2.58

population coefficient), while the number of commercial acres to be developed is 3.44. Based on these figures, the Water Supply Assessment determined that additional water demand resulting from the projected additional growth in the PGDSP is approximately 0.29 Million Gallons per Day, which is equal to approximately 319 acre feet per year.

## Water Supply

Water used in Sweetwater's service area comes from various sources. These sources include local groundwater, a brackish groundwater desalination facility, surface water, and imported water from the Colorado River and the State Water Project. The imported water is delivered by CWA, either purchased from, or wheeled by Metropolitan, and is then purchased by Sweetwater. Since 1955, local sources have met 45 percent of the water needs within Sweetwater's service area, while the 55 percent balance has been met with imported water. The percentage of local to imported water varies greatly with time due to local rainfall amounts.

Sweetwater is committed to developing local resources within and outside its service area to offset the region's need for imported water from CWA. Within its service area, Sweetwater is in the process of expanding its Reynolds Desalination Facility, which reclaims brackish groundwater from the underlying San Diego Formation. Sweetwater supports the development of ocean desalination by supporting the Poseidon Resources Desalination Project in Carlsbad. Sweetwater has studied the development of recycled water in its service area, and concluded that it is prohibitively expensive at this time. However, Sweetwater continues to support other agencies that are developing this very important local resource.

Sweetwater, as with other agencies in the region, continues to rely on imported water from CWA and Metropolitan to bridge the gap between its available local supply and current and future demands within its service area. Metropolitan's 2010 Regional UWMP utilized SANDAG's most recent 2050 Regional Growth Forecast in calculating regional water demands for CWA's service area. Their 2010 Regional UWMP also identifies implementation plans to develop a reliable resource mix that enables the region to meet its water supply needs.



**Figure 8**

The total demands associated with the PGDSP have not been included in any of Sweetwater's 2010 UWMP. In addition, the PGDSP demand has not been included in CWA's 2010 UWMP. In its recently adopted 2010 Regional UWMP, Metropolitan utilized SANDAG's 2050 Regional Growth Forecast, and are therefore now included in Metropolitan's long range demand and supply forecast. It is intended that the additional demand associated with the PGDSP be met through purchase of imported water from Metropolitan.

## Water Supply Assessment Conclusions

Sweetwater's Water Supply Assessment concludes that the forecasted water demands is equal to its projected supplies within Sweetwater's service area. This demonstrates that with implementation of the projects and strategies discussed in MWD and CWA's planning documents and implementation of new strategies being developed, there will be adequate water supplies to serve the proposed Project along with existing and future uses.

This WSA Report demonstrates and verifies that with development of the resources identified, there will be sufficient water supplies, over a 20-year planning horizon, to meet the projected demands of the proposed Project, and the existing and planned development projects within Sweetwater's service area.

Finally, the Water Supply Assessment indicates that the future water demands of the PGDSP can be met by the Authority's existing water delivery system (Figure 8) with a pressure in excess of 70 pounds per square inch.

### 5.3.2. Sewer

Sewer services are essential for public health, safety and welfare. The City maintains and operates sewer facilities in the form of wastewater/sewer pipelines (Figure 9). These facilities feed into the larger regional system for treatment and disposal. The City is already engaged in planning and upgrading improvement projects and will continue to do so in a phased manner under an adopted wastewater master plan. Capacity fees and maintenance/transportation fees are the primary funding source for capital improvement costs.

The City of Chula Vista purchases wastewater treatment capacity from the City of San Diego's Metropolitan Wastewater System (METRO). This allows the City to treat and dispose of wastewater flows at METRO facilities. The City's future wastewater flows will exceed the current treatment capacity necessitating the need to purchase additional capacity (in a phased manner). The City of Chula Vista has purchased 19.8 million gallons per day (MGD) of capacity rights in the METRO Sewage System. Based on existing conditions in 2010, the City discharges approximately 16.5 MGD into the METRO Interceptor. Based on flow analyses, it is estimated that by the year 2030, the City will generate approximately 6.3 MGD of additional sewage. The General Plan (2005) projects an additional treatment capacity need of 1.57 MGD at buildout in western Chula Vista, which includes the projected demand of approximately 0.27 MGD for the Specific Plan area. If sewage system improvements are needed, they will be phased in as required by each development project.



**Figure 9**

It is important to note that these are broad and preliminary estimates and are based largely on the wastewater generation rates stated in the Wastewater Master Plan, which will be subject to



periodic update and review throughout the life of the Specific Plan. The City currently operates and maintains approximately 500 miles of sewer pipelines, ranging in size from 6 inches to 48 inches in diameter, as well as an extensive network of manholes, metering stations, pump lifts and lift stations.

The system is the subject of ongoing review and wastewater master plans which are updated about every 5 years. An update is currently underway and is expected to be completed by 2013. In addition to maintaining the existing systems and replacing outdated components, the City must also address system upgrades and expansions to accommodate new sewer connections, especially in the eastern portion of the City. The costs of system upgrades, capacity and infrastructure management and planning is reflected in connection fees and sewer rates.

### *5.3.3. Drainage Infrastructure*

Drainage facilities are public improvements to control storm water runoff so that peak runoff does not threaten public health or safety in the form of flooding and erosion. The City maintains strict requirements for sediment and pollution control from water runoff and water quality, which are reviewed and applied to new development on a project-by-project basis. These requirements are found in various programs and policies, including the City of Chula Vista Grading Ordinance, Subdivision Manual, Development Storm Water Manual, and Best Management Practices (BMP's) for construction sites.

The condition of the overall drainage system is the subject of a Drainage Report, which is undertaken and continually monitored for any major deficiencies or problems. (See Figure 8.) Within already urbanized areas such as the Palomar Gateway District, most needed drainage facilities are already in place, and since runoff is largely not changed by the redevelopment of one land use into another, the system of facilities for storm water runoff is equally largely in place. With the monitoring and review of construction and water quality practices conducted for each development project, the City, working through its Drainage Master Plan, has a program in place to control runoff and meet applicable water quality standards.

Chula Vista is part of the San Diego watershed area. The San Diego watershed area's National Pollutant Discharge Elimination System (NPDES) permit requires that all runoff be treated so that pollutant levels at the storm water outfalls are minimized to the maximum extent practicable. Drainage infrastructure will need to be constructed or modified to insure that "first flush" pollutants are captured through the Chula Vista Storm Water Management Unit. Typically, NPDES on-site detention/desiltation facilities will be required on development projects. The City will maintain its ability to enforce adequate maintenance of these facilities. The Environmental Element of the General Plan (2005) also addresses drainage issues throughout the City as they relate to water quality.

### *5.3.4. Solid Waste Infrastructure and Operations*

The City of Chula Vista has established an exclusive franchise collection agreement with Allied Waste Services for the removal, conveyance, and disposal of any non-recyclable waste. The agreement is in effect through June 2028 with extension clauses for both City and Pacific Waste Services. The agreement includes a number of programs and incentives for the franchise and the public to maximize recycling and other forms of landfill diversion. Allied owns and operates both the Otay Landfill in eastern Chula Vista and the Sycamore Canyon Landfill located further north in San Diego County. Most of the solid waste generated in the City is disposed at the Otay Landfill. The Otay Landfill is estimated to reach capacity in the year 2028. In south San Diego County, an area in East Otay Mesa was previously identified by the County as a tentative site.

However, the County is no longer pursuing landfill siting at this location and there are no private siting efforts currently proposed. Once the Otay Landfill is closed, it is anticipated that a portion of the site could be used for a trash transfer facility and/or a Material Recovery Facility (MRF) where recyclables are prepared for secondary markets. The City has also acquired rights to approximately 30 acres of space at the Otay Landfill for a composting facility when the landfill closes. Therefore, continued efforts to expand recycling and to accommodate compostable materials will reduce future waste transfer costs

The City has the ability to control waste production within its general plan area, including the Palomar Gateway District. Current solid waste management strategies include source reduction, recycling and composting to decrease the waste stream impacting landfills.

#### *5.3.5. Objectives and Policies*

Objectives and policies directing water, sewer and drainage facilities are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan policies. Supporting objectives and policies follow the discussion.

##### *a. General Plan Discussion: Keeping Pace with Growth and Maintenance Needs (Water, Sewer, Drainage) (PFS 1)*

The City and its servicing districts strive to maintain existing water, sewer and drainage facilities to meet current and future demand and to comply with federal, state, and local requirements. The challenge posed by density increases in older parts of the City system is to repair existing deficiencies and maintain and possibly upsize older infrastructure. Over time, as the City continues to expand and additional water, sewer and drainage facilities are added, the demand for maintenance, along with associated fiscal impacts, will also grow.

Recent assessments have been completed to address water supply, wastewater and drainage facilities. The Water Supply Assessment prepared by the Sweetwater Authority and approved by the Governing Board on February 22, 2012 evaluates existing water demand and supply conditions within Sweetwater's general service area. Based on the projected growth (residential and commercial) estimates provided by the City, Sweetwater estimated the future water needs for the Specific Plan. The Assessment determined that average water demand for the Specific Plan area is approximately 0.29 million gallons per day or 319 acre-feet per year at 2035 buildout. The Sweetwater Authority, Metropolitan Water District of Southern California and San Diego County Water Authority are implementing plans that include projects and programs to help ensure that the existing and planned water users within Sweetwater Authority's service area have an adequate supply. By using a variety of water supply sources, including importation, the Sweetwater Reservoir, National City Wells, and Reynolds Desalination, and by implementing conservation programs, sufficient water supply will be available for anticipated development under the Specific Plan.

The Wastewater Master Plan, prepared by PBS&J for the City of Chula Vista and dated May 2005, provides a comprehensive review and evaluation of the City's wastewater collection, conveyance, and treatment capacity requirements under existing and ultimate buildout conditions. Specific recommendations are made for the repair, upgrading, and buildout of wastewater collection and pumping facilities. The City currently has capacity rights in the METRO system (comprised of conveyance, treatment, and disposal facilities) equal to 20.864 MGD. At General Plan buildout, the City will require approximately 26 MGD. The gap between the current flow and buildout will be met through a combination of conservation methods and

acquiring additional capacity in such a way as to keep ahead of development. There is currently no wastewater facility improvements recommended for the Specific Plan area.

The Wastewater Master Plan also provides sewer system design standards and capital improvements program recommendations, as well as a capacity fee update and facilities financing plan for both METRO facilities and Chula Vista pipelines, to ensure adequate wastewater facilities are provided for the Specific Plan area.

The 2004 Drainage Report prepared by PBS&J for the City of Chula Vista consists of a city-wide hydrologic analysis and an updated version of the City's storm water conveyance system GIS database. The hydraulic analyses were prepared for the 50-year and, where required, 100-year storm events for existing and projected conditions.

#### General Plan Policies Related to the Palomar Gateway District.

1) "For new development, require on-site detention of storm water flows such that, where practical, existing downstream structures will not be overloaded. Slow runoff and maximize on-site infiltration of runoff." (PFS 1.4)

Development within the Palomar Gateway District will be reviewed within the context of the Drainage Report and water quality rules applicable to the development, on a project-by-project basis.

2) "To avoid recently improved streets from being torn up repeatedly, maintain a comprehensive facility phasing and capital improvement program. The program should be based on anticipated land development and be conducted in coordination with all utilities." (PFS 1.6)

The City has a comprehensive facility phasing and capital improvement program for sewer and drainage to minimize disruption of public streets.

3) "Identify ways to obtain timely funding for public facility and service needs. Upon request by community representatives, facilitate the possible formation of assessment districts to finance public infrastructure, upgrades and maintenance." (PFS 1.7)

The criteria for formation of an assessment district are largely applicable to eastern territories, where master planned communities can facilitate the implementation of such districts. The above-described Water Supply Assessment, Wastewater Master Plan and Drainage Master Plan analyze the existing and future facilities needs for Chula Vista, including the Specific Plan area. With implementation of recommended improvements and programs, adequate facilities will be provided to serve the Palomar Gateway District as it relates to water, wastewater and storm water drainage.

#### b. General Plan Discussion: Meeting Demand Through Alternative Technologies (PFS 2)

Growth will generate increased demand for water delivery and for sewer and drainage systems throughout the City. Water will continue to be a limited resource in semi-arid southern California. The ability to treat wastewater will be affected by the limitations of the San Diego Metro system. Drainage facilities will need to handle increased storm water runoff and potential pollutants in the face of increased growth and diminishing supplies of land. Building more infrastructure and acquiring more capacity can and should be offset by using alternative technologies and/or conservation methods to handle demand both in the older established parts of the City and in

the newly developing areas. The following objective and policies address meeting resource and service demands through use of alternative technologies.

#### General Plan Policies Related to the Palomar Gateway District

1) "As part of project construction and design, assure that drainage facilities in new development incorporate storm water runoff and sediment control, including state-of-the-art technologies where appropriate." (PFS 2.2)

The City conducts and maintains a Storm Water Master Plan. It also reviews new development in a manner consistent with the applicable water quality standards.

#### c. General Plan Discussion: Long-Term Water Supplies (PFS 3)

The California Water Code requires all urban water suppliers within the state to prepare urban water management plan(s) and update them every five years, in years ending in five or zero. The plans are to identify supply and demand, infrastructure and funding. In accordance with the Act, the Sweetwater Authority adopted an Urban Water Management Plan in 2010. The 2010 Plan, however, did not include the projected growth resulting from PGDSP. Thus, a Water Supply Assessment was prepared by the Sweetwater Authority and adopted by the Governing Board on February 22, 2012. The 2012 Water Supply Assessment forecasts total projected water demand for the entire area served by the Sweetwater Authority, including the PGDSP area, as 27,237 acre-feet of water in the year 2035. This figure includes residential, commercial, municipal, industrial and agricultural demand and is adjusted for conservation savings. The report estimates total projected local water supplies in the year 2035 as 27,237 acre-feet. This supply of water will come from both imported water and local sources. Local water supplies include surface water, groundwater and seawater desalination. Through a shortage contingency analysis, the report also concludes that the CWA and its member agencies, through Emergency Response Plans (ERP) and Emergency Storage Projects (ESP), are taking actions to prepare for and appropriately handle a catastrophic interruption of water supplies.

The Authority also adheres to development of additional local resources such as groundwater pumping and groundwater desalination but also continually pursues water conservation as a way to reduce demand. As the City grows, the need to identify the long-term supply of water continues. Sweetwater Authority recognizes water conservation and demand management as a priority in its water use planning. The long-term goal of Sweetwater Authority's water conservation program is to achieve and maintain water use efficiency goals for various use categories that are reasonable for that category. Specific objectives of Sweetwater Authority's conservation program are to:

- Eliminate wasteful practices in water use;
- Continue to develop information on both current and potential water conservation practices;
- Ongoing, timely implementation of conservation practices; and
- Public information and education activities to spread knowledge of efficient water use techniques and devices.



The Sweetwater Authority, Metropolitan Water District of Southern California and San Diego County Water Authority are implementing plans that include projects and programs to help ensure that the existing and planned water users within Sweetwater Authority's service area have an adequate supply. By using a variety of water supply sources, including importation, the Sweetwater Reservoir, National City Wells, and Reynolds Desalination, and by implementing conservation programs, sufficient water supply will be available for anticipated development under the Specific Plan.

General Plan Policies Related to the Palomar Gateway District.

- 1) Assist the water agencies (Sweetwater Authority) in preparing and maintaining Urban Water Management Plans that identify water demand anticipated by existing and new development. (PFS 3.1)

This activity will largely occur through city-wide development monitoring and reporting.

d. General Plan Discussion: Long-Term Sewer Capacities (PFS 4)

The City maintains and regularly updates a Wastewater Management Plan to evaluate the adequacy of the existing wastewater collection system to sustain the long-term growth of the City. The Wastewater Management Plan helps the City budget for Capital Improvement Projects (CIP), allocate resources for the acquisition of additional sewage capacity, and determine the short- and long-term sewer capacity needs of the City. On an annual basis, the City prepares a wastewater report to the Growth Management Oversight Committee (GMOC), which is approved by the GMOC, Planning Commission and City Council.

General Plan Policies Related to the Palomar Gateway District.

- 1) "Continually monitor wastewater flows and anticipate future wastewater increases that may result from changes in adopted land use patterns." (PFS 4.1)

As cited above, the City's Wastewater Master Plan is undertaken to identify needed expansions, which are paid for by connection and service fees.

e. General Plan Discussion: Providing for Solid Waste Disposal (PFS 24)

The following objective and policies address the efficient handling of solid waste throughout the City. The important and related topics of reducing overall solid waste and of handling hazardous wastes are addressed in the Environment Element, Chapter 9 of the City of Chula Vista's General Plan. The Otay Landfill is estimated to reach capacity within the next 17 years, requiring closure of the facility. Meeting future needs of the planning area may require the creation of a regional transfer station, where solid waste collected from individual collection routes is transferred into large trucks for disposal. The transportation of solid waste to an alternate site must occur in an efficient manner that restricts adverse circulation, visual, and noise impacts.

General Plan Policies Related to the Palomar Gateway District.

- 1) "Plan for adequate systems and facilities to manage the City's solid waste generation, treatment and disposal." (PFS 24.1)

Solid waste programs and recycling are addressed through city-wide programs. Design Guidelines are provided in the Specific Plan for future development which reflects the ability to service for trash and recycling collection.

## 5.4 Law Enforcement, Fire Protection and Emergency Services

### 5.4.1 Facilities and Services



In the City of Chula Vista, fire protection and emergency medical services are provided by the Chula Vista Fire Department. Law enforcement services are provided by the Chula Vista Police Department. Fire stations are dispersed throughout the City, while police facilities are centered in headquarters located in downtown Chula Vista. The current Fire Station Master Plan calls for nine fire stations, eight of which have been constructed. The Master Plan is being updated to reflect changes to General Plan and to respond to a revised set of performance criteria as proposed in the Fire Department Strategic Plan. Therefore,

the number and location of future fire stations, along with how the stations are equipped, is subject to change.

To maintain the high level of dependable, competent fire protection and emergency medical services the City enjoys, several strategies will continue to be employed. The City will continue to use a growth-related service standard, through its Growth Management Ordinance and program, to help determine if public safety is adequately protected. Fire Department staffing and equipment will continue to be expanded as needed to meet the service standard and to minimize hazards to the firefighters and public, in conformance with changes to the updated Fire Department Master Plan. The Fire Department will continue to enhance its capabilities and staffing through mutual aid agreements with fire departments in the surrounding communities.



Similar strategies also facilitate the provision of law enforcement services that meet the City's needs. The Department will continue to monitor calls for service, analyze crime statistics and resident survey data, and make changes in staffing and patrols to reflect the growing community's needs.



Effective fire protection, emergency medical, and law enforcement services require two-way relationships with the community. The unique needs and conditions in the community must be understood and the community must lend support to the various programs and efforts of the Police Department and Fire Department. The City encourages active participation by the Fire and Police Departments in all facets of community life, including involvement in area business, senior, and youth activities.

#### *5.4.2 Disaster and Emergency Response Program*

State regulations establish the Standardized Emergency Management System, or SEMS. The system includes requirements for incident command systems, multi-agency coordination systems, mutual aid agreements and the “operational area” concept. As an agency (municipality) with emergency response capability within the state, Chula Vista is required to use the SEMS system.

Chula Vista provides for the preparation and carrying out of plans for the protection of persons and property within the City in the event of an emergency (Municipal Code, Chapter 2.1.4 Emergency Organization Department). The Code requires coordination of the emergency functions of the City with other public agencies, corporations, and organizations.

There may be occasions when a limited scale evacuation is the appropriate response to an emergency situation. Under these circumstances, people should be evacuated to neighborhood and community schools, hospitals and public facilities, where they could receive adequate care and treatment. In the event of a major disaster, where a large part of the City may require evacuation, the circulation routes serving the Specific Plan area are:

- Interstate 5
- Palomar Street
- Industrial Boulevard
- Broadway
- Main Street

The Disaster Management Act of 2000 requires that, in order to remain eligible for post-disaster Federal Emergency Management Agency (FEMA) funding after November 2004, every jurisdiction in the United States must have an approved Hazard Mitigation Plan (HAZMIT Plan) to address the management of and response to emergency situations. In addition, to be eligible for pre-disaster FEMA funding for use in hazard mitigation, each jurisdiction’s approved HAZMIT Plan must include the planned uses of these funds. The City of Chula Vista adopted a HAZMIT Plan in May 2004 to help mitigate impact to the City in the event of a natural or man-made disaster. The City’s HAZMIT Plan was included in the San Diego County Multi-Jurisdictional HAZMIT Plan submitted to FEMA for approval in compliance with Federal Law.

#### *5.4.3 Objectives and Policies*

Objectives and policies directing law enforcement, fire protection and emergency responses are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

- a. General Plan Discussion: Keeping Pace with Growth (Police, Fire Protection & Emergency Medical Service) (PFS 5)

The City of Chula Vista has experienced significant residential growth over the last decade. The majority of new growth has occurred in the east, where continued growth is expected in the coming years, along with density increases in the west. Fire protection, emergency medical service and police services will need to expand to match the demand brought on by this anticipated growth. While fire stations are located throughout the City, the Police Department had centralized and maintained one police headquarters, located in the western portion of the City. However, a new satellite office was opened in July 2011 in eastern Chula Vista in the Otay Ranch Mall. The police headquarters is sufficient to accommodate the growth projected in the Specific Plan.

#### General Plan Policies Related to the Palomar Gateway District.

- 1) "Continue to adequately equip and staff the Fire Department to ensure that established service standards for emergency calls are met." (PFS 5.1)
- 2) "Upgrade fire and emergency medical equipment as required to protect the public from hazards and to ensure the safety of the fire fighters." (PFS 5.2)

#### b. General Plan Discussion: Emergency Response and Development (PFS 6)

General Plan policies and Growth Management standards tie new development and redevelopment to the provision of adequate public facilities and services, including police and fire protection. Some design characteristics, such as narrow street widths, aim to create walkable communities, serve to establish an overall neighborly atmosphere, and tend to reduce traffic speeds. In mixed use neighborhoods, density increases may result in taller buildings. The evolving urban form and the cumulative increase in development will affect emergency service response times as well as the equipment, facilities and personnel needed for fire and police services.

"Crime Prevention Through Environmental Design" (CPTED) is a method of incorporating design techniques into projects to help reduce the potential for crime. CPTED is used in the development of parks, residential and commercial projects, schools, transit stations and parking lots to reduce the number of calls for service. The reduced call volume may favorably impact response times.

CPTED includes the use of four primary strategies:

- Providing natural access control into areas,
- Improving natural surveillance (i.e., increasing "eyes on the street"),
- Maintaining and managing a property to reduce crime and disorder,
- Using territorial reinforcement to distinguish private space from public space.

#### General Plan Policies Related to the Palomar Gateway District.

- 1) "Continue to require new development and redevelopment projects to demonstrate adequate access for fire and police vehicles." (PFS 6.1)
- 2) "Require new development and redevelopment projects to demonstrate adequate water pressure to new buildings." (PFS 6.2)
- 3) "Encourage Crime Prevention Through Environmental Design (CPTED) techniques in new development and redevelopment projects." (PFS 6.3)



Project review within the Specific Plan shall include the above listed criteria. Design guidelines found in Chapter 4 - Design Guidelines and the City's Design Manual will result in projects that incorporate CPTED principles.

c. General Plan Discussion: Emergency Response Program (PFS 7)

A city-wide emergency response program provides the framework for responding to any type of emergency or disaster that might occur in Chula Vista. Accomplishing efficient emergency response involves coordination with other agencies regarding disaster preparedness, preparation and regular update of the emergency response plan, education of residents and businesses about the plan and about evacuation routes, and periodic training of City staff and other emergency response staff to effectively implement the plan.

General Plan Policies Related to the Palomar Gateway District.

All General Plan policies within this criterion are implemented city-wide.

d. General Plan Discussion: Post Emergency Response (PFS 8)

In the event of disasters and emergencies, a swift and efficient response minimizes injuries, casualties and property damage. Planning post-disaster operations ensures the safety, health and welfare of our residents by allowing critical operations to continue as expeditiously and efficiently as possible following a catastrophic event. Post-disaster analysis will help the City improve safety plans and responses.

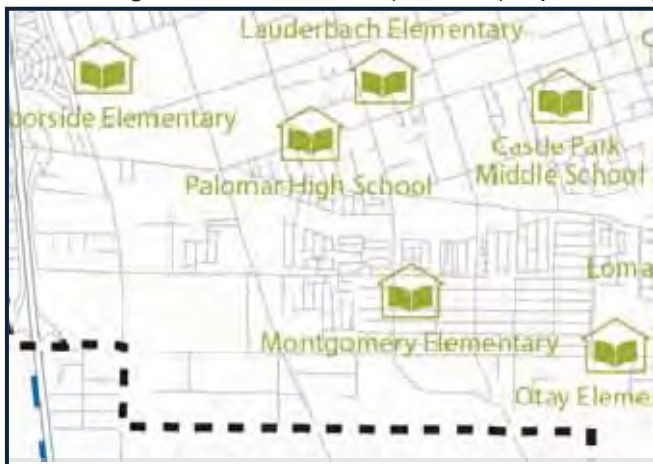
General Plan Policies Related to the Palomar Gateway District.

All General Plan policies within this criterion are implemented city-wide.

## 5.5 Schools

### 5.5.1 School Facilities

Excellent schools are assets to any community. Two school districts serve the City. Chula Vista Elementary School District (CVESD) operates kindergarten through sixth grade; Sweetwater Union High School District (SUHSD) operates junior and senior high schools and ancillary programs. Higher education is available through Southwestern Community College.



As of 2004, the CVESD operates 42 schools and the SUHSD operates 26 schools, both within and outside the boundaries of the City of Chula Vista. Both districts actively plan for modernization and expansion of campuses to accommodate anticipated increases in enrollments. The districts have completed improvements through modernization programs and bond issues or prepared modernization plans in preparation for construction.

### 5.5.2 Objectives and Policies

Objectives and policies impacting schools are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

#### a. General Plan Discussion: Keeping Pace with Growth and Technology (School Facilities) (PFS 9)

Population growth in western Chula Vista may impact existing, older school facilities. Modernization of school campuses is expected to continue as the school districts plan for facility improvements. Technology continues to change the work place and the social and cultural environments of our community. The school system, which helps shape our children and our future, must keep pace with development. While siting of schools falls under the jurisdiction of the local school districts, not the City, it is the City's intent to facilitate the district's efforts to provide school services.

General Plan Policies Related to the Palomar Gateway District.

- 1) Continue coordinating with local school districts during review of land use issues requiring discretionary approval to provide adequate school facilities, to meet needs generated by development, and to avoid overcrowding in accordance with guidelines of Government Code 65996(b). (PFS 9.1)
- 2) Encourage the consideration of new approaches to accommodate student enrollments, including alternative campus locations and education programs. (PFS 9.2)
- 3) Assist school districts in identifying and acquiring school sites for new construction in needed time frames. (PFS 9.3)
- 4) Assist school districts in identifying sources of funding for the expansion of facilities in western Chula Vista as needed based on growth. (PFS 9.4)
- 5) Work closely with the school districts to identify needs for public education facilities and programs, including developing and expanding extracurricular recreation and educational programs for primary, secondary, and adult education, and providing state-of-the-art information services. (PFS 9.5)

The foregoing policies reflect the need to plan and implement schools over the relatively long period of development implementing the Specific Plan. Cooperation in projecting growth and monitoring new development and the resulting demographics will assure that existing schools are expanded or new schools are built at the time of need.

#### b. General Plan Discussion: Site Location and Design (School Facilities) (PFS 10)

School districts control site selection and school design. In all instances, safe pickup and drop-off of students is a primary concern. Schools are generally designed with the intent of adding modular units to accommodate temporary spikes in student enrollment. While both Chula Vista school districts use this strategy, drawbacks include the fact that the units displace parking, open space and recreation areas. Some schools in western Chula Vista are already running out

of limited buildable space and have no room to expand the campuses horizontally in the current land locked locations.

## General Plan Policies Related to the Palomar Gateway District

1) “Continue to coordinate and make recommendations to the school districts and property owners and developers on the location, size and design of school facilities relative to the location in the community. Encourage school districts to consider joint use and alternative structural design such as multi-story buildings where appropriate.” (PFS 10.1)

Alternative structural designs will be especially important within the Palomar Gateway District due to land availability.

2) “Encourage the central location of new schools within the neighborhoods or areas they serve so as to further community development and enhance the quality of life.” (PFS 10.4)

3) “Coordinate with the school districts on the design of school grounds and fields to provide for use of these facilities by the City’s Youth Sports Council leagues.” (PFS 10.5)

Joint use of facilities by the City and the School District can maximize the public use of school and park sites.

## 5.6 Parks and Recreation

### 5.6.1 Facilities and Programs



Parks and recreation facilities and programming are essential to the health and welfare of the individuals living and working in the City of Chula Vista. Parks can provide a relief from the stress of daily life and can contribute to neighborhood engagement, economic development and community revitalization. The different types of parks and recreation facilities found in Chula Vista are described below.

Community parks, designed to serve more than one neighborhood, are ideally 30 or more acres and provide a wide variety of facilities, including swimming pools, playing fields, recreation centers, cultural centers and picnic areas. Neighborhood parks are intended to serve local residents; range in size from 5 to 15 acres; and include open play space, playing fields, play equipment and picnic areas. Mini parks consist of both public and private facilities, are typically less than four acres in size, serve a small number of homes, and contain very limited facilities such as a tot lot or play structure and some grass play area. Public mini parks are typically located in the older western portion of the City. Urban parks are generally located in urban downtown areas and may contain facilities such as public plazas, tot lots, play structures, public art features, sports courts (such as basketball or tennis), walking/jogging trails, dog walk areas, picnic or seating areas, some grass play area,



and trees. Urban parks, which will occur where infill and redevelopment activity is likely to occur, may be considered for public park credit as a necessary component of an overall park service solution where available and affordable land is scarce. Similar to mini parks, urban parks may serve a smaller number of homes than neighborhood parks, depending on the ultimate housing density within the service areas. Urban parks will typically be less than four acres in size. Recreation facilities are generally located within community parks and include community centers, gymnasiums, swimming pools, youth centers, and senior centers.

Several related documents address the development of parks and recreation facilities in the City. The Chula Vista Parks and Recreation Master Plan (2011) contains an inventory of existing and future parks and recreations facilities, a needs assessment, and policies to implement the General Plan. The Master Plan envisions the City's park and recreation facilities as an integrated system of amenities, programs and services interwoven throughout over 960 acres of parkland to meet the expressed needs of the community.

The Greenbelt Master Plan identifies segments of an overall backbone system of 28 linear miles of open space and parks that encircle the City. It discusses unique opportunities for a continuous trail system to link City parks and other resources outside of the City boundary.

### *5.6.2 Objectives and Policies*

Objectives and policies directing parks and recreation facilities and programs are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

#### *a. General Plan Discussion: Keeping Pace with Growth (Parks and Recreation) (PFS 14)*

The City strives to maintain existing parks and recreation facilities, to offer recreational programs to meet current demand, and to plan and construct new parks and facilities and develop new programs to meet future demand due to growth. The majority of residential growth in the last decade has occurred in eastern Chula Vista; however, it is anticipated that significant growth will occur in both the east and the west in the future.

The Parks and Recreation Master Plan provides direction on the size and location of parks and recreation facilities, based on population. The Public Facilities Development Impact Fee program and the Parkland Acquisition and Development Fee Program provide necessary funding for the delivery of recreation and park facilities. Timely development and the provision of facilities, staffing, and equipment that is responsive to growth and community demands and expectations are important.

#### *General Plan Policies Related to the Palomar Gateway District*

- 1) "Maximize the use of existing parks and recreation facilities through upgrades and additions/changes to programs to meet the needs of the community (Figure 10)." (PFS 14.1)
- 2) "Construct new parks and recreation facilities that reflect the interests and needs of the community." (PFS 14.2)
- 3) "Continue to maintain and update the Chula Vista Parks and Recreation Master Plan, the Greenbelt Master Plan, the Park Dedication Ordinance and the recreation component of the Public Facilities Development Impact Fee, as needed." (PFS 14.3)



4) “Use park dedication, location, site design and acceptance standards as provided in the Chula Vista Parks and Recreation Master Plan, the Park Dedication Ordinance and the Recreation DIF, as may be amended from time to time.” (PFS 14.4)

5) “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.” (PFS 14.5)

6) “Design recreation programs to reflect the interests and recreation needs of the children, teens, adults, and seniors living in our ethnically diverse city.” (PFS 14.6)

7) “Explore opportunities for collaborations and partnerships with local organizations, expand use of volunteers, and develop commercial recreational facilities that meet public demand and need.” (PFS 14.7)



**Figure 10**

8) “Continue to provide adequate park maintenance, park ranger service recreation services, staffing, and equipment to ensure safe, well maintained facilities.” (PFS 14.8)

The foregoing policies will apply to recreation and park facilities within the Palomar Gateway District. The Parks and Recreation Master Plan and development impact fee programs will be monitored during the life of the Specific Plan and updated to meet service and demographic needs of the community.

**b. General Plan Discussion: Meeting Park Demand (PFS 15)**

Historic park development in western Chula Vista has been impacted by several factors: pre-existing park development standards that differ from current City standards, the Quimby Act - state legislation limiting park dedication requirements for new development, and Proposition 13 - state legislation limiting property tax revenues. Increased residential densities and intensity of development will create a corresponding increase in demand for recreation facilities and programs. The current city-wide standard for new development provides for either the dedication or development of 3 acres of parkland for every 1,000 residents or the payment of in-lieu fees.

The City’s Recreation Development Impact Fee provides a funding mechanism for development of new recreation facility requirements. City-wide parkland and recreation development policies to guide future ordinances and master planning are identified below. Scarce land tends to make parkland acquisition costs (in terms of cost of land and displacement) in western Chula Vista significantly higher compared to the City’s eastern territories. While future growth will result in the need and requirement for additional parklands and recreational facilities, there will be increased difficulty in securing appropriate park and recreation sites in western Chula Vista where land is largely built out. Lack of vacant and underutilized land, and/or competing demands and uses for land in the west provide challenges to increasing the park and recreation facility inventory. Maximizing the utility of existing parks and recreation facilities through

renovation and expansion and consideration of non-active recreational uses within existing recreation needs is important in the western portion of the City; while this strategy will not provide additional park acreage, it will partially meet the needs of future residents. Implementation of General Plan defined future park sites along with integration of urban parks in infill areas of west Chula Vista will provide for future park and recreation demands resulting from new residential development.

In addition to parkland acquisition efforts, potential solutions for new park sites include coordinating with SDG&E to utilize energy transmission corridors to create park and open space areas, and the joint-use of school classrooms, playing fields and sports courts by the public via joint-use agreements. The provision of a community center within urban development areas should be considered, possibly within a new mixed-use environment.

An overall combination of park and recreation facilities that will serve all Chula Vista residents is planned. While a majority of the future demand for facilities may be met within planned public park sites, there will continue to be a need to rely on quasi-public park sites and joint-use facilities to increase the recreation facility inventory in the City. Details and strategies for meeting park demand have been addressed through the comprehensive update to the Parks and Recreation Master Plan (Draft 2011).

#### General Plan Policies Related to the Palomar Gateway District.

- 1) Continue to pursue a city-wide standard for the provision of developed parkland for new development projects on a basis equivalent to three acres per estimated one thousand new residents. (PFS 15.1)
- 2) Consider a combination of land dedication, improvements, and/or in lieu fees for park development improvements in the Northwest and Southwest Planning Areas to better serve the public park and recreation needs of future residents. (PFS 15.2)
- 3) Consider a broad mix of park types and facilities toward meeting park requirements in the Northwest and Southwest planning areas in response to existing development conditions and lack of land availability. Such facilities could include urban parks, plazas, neighborhood parks and community parks to meet the parkland dedication requirements of new development in the west. (PFS 15.3)
- 4) Promote the inclusion of park and recreation facilities in or near redevelopment areas to both serve the new development and to contribute to meeting existing park and recreation needs. (PFS 15.4)
- 5) Use park dedication, location and site design and acceptance of dedication standards as provided in the Chula Vista Parks and Recreation Master Plan, the Park Dedication Ordinance and the Recreation Development Impact Fee (DIF) program, as may be amended from time to time. (PFS 15.5)
- 6) Amend the Parks and Recreation Master Plan to add a new “urban park” definition for parks that may be developed within western Chula Vista, subject to specific siting, design and park dedication and credit criteria. (PFS 15.8)
- 7) Consider the design of non-traditional, uniquely themed parks such as the Otay River Valley Park and the Bayfront that are “stand-alone” attractions or destinations, having unique character and features. (PFS 15.11)

The foregoing polices will guide implementation of parks and facilities within the Palomar Gateway District. The Specific Plan area is expected to have a system of public parks, plazas, and open spaces that will contribute to the parks and recreation facilities that currently exist in the City. The following parks and open spaces exist or are expected to be constructed in and adjacent to the Specific Plan area.

Existing:

- National Wildlife Refuge – Salt Ponds (Lower Bayfront)
- Otay Valley Regional Park – Chula Vista Greenbelt
- Harborside Park

Proposed:

- Future Neighborhood Park adjacent to South Branch Library Park
- Future Neighborhood Park (Palomar Gateway District)
- Future Urban Park/Plaza MU-1
- Future Urban Park/Plaza MU-2
- Future Private Greenway – enhanced drainage through Palomar Residential Village

c. General Plan Discussion: Joint Use of Park and School Facilities (PFS 18)

Increased intensity of development in western Chula Vista and lack of vacant and underutilized land for park facilities will result in an increased demand on parks and schools for recreational facilities. Joint use of facilities provides an opportunity for the school children and the general public to mutually benefit. Public demand for field space for youth leagues exceeds the City's supply of sports fields in City parks, due to competing demands with adult athletic leagues and the sheer number of youth sports teams to accommodate. The City currently relies on individual elementary, middle, and high schools to allow use of the schools' fields by Youth Sports Council leagues.

General Plan Policies Related to the Palomar Gateway District.

- 1) Promote the City Council and the Boards of the two School Districts entering into long-term master agreements to allow allocation of school fields to the City's Youth Sports Council leagues via a process administered by the City, and to allow after-school use of classrooms at different schools for recreation classes. (PFS 18.1)
- 2) Coordinate with the School Districts on the design of school grounds and fields to provide for use of these facilities by the City's Youth Sports council leagues. (PFS 18.2)
- 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. (PFS 18.3)

The foregoing polices will guide the City in discussions with the School Districts on possible joint use of facilities within the Palomar Gateway District.

## **5.7 Energy and Telecommunications**

### *5.7.1 Energy*

San Diego Gas and Electric (SDG&E) owns, operates and maintains the pipes, wires and appurtenances needed to transport natural gas and transmit and distribute electricity to Chula Vista residential, commercial, industrial and institutional facilities. These two forms of energy are essential to everyday life in Chula Vista. SDG&E estimates that additional infrastructure may be needed to deliver energy, serve a growing population, maintain local and regional reliability, and move energy through the western regional U.S. system. SDG&E projects that infrastructure may include new electricity distribution substations in the western part of the City. The following objective and policies relate to the provision of energy to the City. A discussion and related policies addressing energy conservation are contained in the Environmental Element, Chapter 9 of the City of Chula Vista's General Plan.

### *5.7.2 Telecommunications*

Telecommunications services in Chula Vista include telephone, cable and wireless communication services and are provided by several companies. Future communication technologies may expand into other fields. Infrastructure upgrades are being made by private providers to facilitate high-speed data transmission and interactive video capabilities. The City encourages constructing new office and industrial buildings with state-of-the-art telecommunication circuits to utilize these upgrades.

### *5.7.3 Objectives and Policies*

Objectives and policies directing the generation and delivery of energy are arranged around specific topics or issues. The following describes an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

#### *a. General Plan Discussion: Powering Chula Vista (PFS 22)*

Population growth in Chula Vista will increase local demand for energy. In response to these energy needs, the City has embarked on a mission to reduce community-wide energy use and to transition to renewable energy sources. This "sustainable energy" mission was first identified in the Chula Vista Energy Strategy & Action Plan (Energy Strategy) adopted by the City Council in 2001. The Energy Strategy researched and analyzed a suite of City energy management options including district and distributed generation, municipal and community energy conservation projects, and seasonal energy saving policies for municipal facilities. Additional sustainable energy initiatives were identified and incorporated into the City's Climate Action Plan, which was first adopted in 2001 and revised in 2008 and 2011. The Climate Action Plan, which was developed to reduce greenhouse gas emissions and to lower future risks from climate change impacts, identifies specific energy-related measures including a citywide green building standard, a home energy retrofit program, and energy evaluations as part of the business licensing process.

#### *General Plan Policies Related to the Palomar Gateway District.*

All policies regarding energy and telecommunications are implemented on a city-wide basis. The Specific Plan does provide for the review of buildings and infrastructure for enhanced energy efficiency, renewable energy integration, and broader sustainability standards in Chapter 4 of the Specific Plan, the City's Design Manual (Conservation Guidelines), and the Green Building Standards of the City's Building Code.

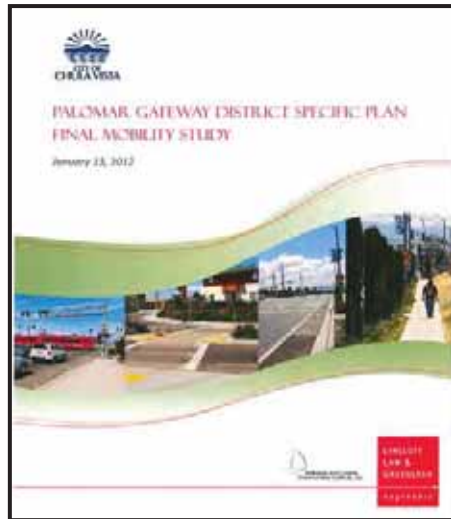
## **5.8 Mobility Improvements**



## Palomar Gateway District Mobility Study

The Mobility Study was developed to analyze mobility conditions (motorized and non-motorized) to accommodate expected growth and the City's vision of a vibrant, multi-use PGD. The Mobility Study reviews the current and future transportation system across all modes of travel (i.e. pedestrians, bikes, autos and transit) and user abilities (children, elderly and disabled). The study departs from the traditional traffic impact studies and address mobility with a focus on moving people, not just cars.

The Mobility study's objective is to analyze existing and future mobility conditions in PGD and provide recommendations to revitalize the District through mixed-use density, Smart Growth design, and Transit Oriented Development (TOD). The intent of the study is to present a Mobility Plan containing strategies, regulations and design parameters, to be implemented as individual projects are constructed in the District. Over time, the District will be transformed from its underutilized/lower-density setting into a vibrant and cohesive higher-density, multi-modal transit-oriented community.



The review of mobility across all modes of transportation can be challenging due to existing constraints, competing interests of travel modes, and the complexity of planning for a 80-acre site. To achieve the above objectives, the following key principles were developed:

- Principle A: Balance all modes of transportation giving equal importance to motorized (autos) travel and non-motorized travel (pedestrians, bicycles and transit). Promote Complete Streets concepts in accordance with the Assembly Bill (AB) 1358.
- Principle B: Explore efficient, flexible, creative and context sensitive solutions.
- Principle C: Ensure safety for all users without compromise.
- Principle D: Recognize that the best overall mobility solution may decrease operations for a particular mode of travel.
- Principle E: Prioritize transportation recommendations for both motorized and non-motorized travel based on a tiered system.

Based on these principles, the Mobility Study addresses Non-Motorized Travel Conditions (Bicycles, pedestrians and Transit) and Motorized Travel Conditions (automobiles). The study details the existing conditions and the challenges faced by pedestrian, bicycle and transit users, and it provides a description of planned and

projected improvements for the area that are contained in the City's Pedestrian and Bicycle Master Plans to address each of the mobility modes. The study also addresses existing conditions and planned improvements for local transit service administered by the Metropolitan Transit Service and the Trolley Blue Line. Recommendations are described in Table 11 and Figure 10 of the Study, which are also included below.

In the Motorized section, the study describes the roadway system within the Palomar Gateway District, which includes roadway classification, physical characteristics and adjacent land uses. The study analyzes traffic volumes and trip generation within the district under current conditions, Year 2020 and Year 2030 scenarios. Additionally, the study also looks at a scenario that includes the existing conditions plus the build-out conditions in year 2020 and Year 2030.

The Motorized section of the study discusses the recommended transportation improvements that met the study objectives and guiding principles of the project, which can be succinctly expressed as improving overall mobility. Improvements prove especially challenging balancing both motorized and non-motorized travel. Analysis of the study area motorized facilities under baseline and future conditions revealed transportation deficiencies resulting in facilities operating at Level of Service (LOS) E or F. The recommendations presented improve deficient facilities to achieve an acceptable LOS (LOS D or better) wherever possible. The recommended improvements include street improvements at various street intersection and segments. The most important improvement recommended by the study is the grade-separation of the Trolley Line as well as the opening of additional local streets within the district, particularly in the area north of Palomar Street.

### **Multi-Modal Recommendations**

The Mobility Plan reviews the constraints and opportunities of each travel mode. Recommendations are prioritized based on a defined tiered system, as described below.

#### **TIER I:**

- Addresses high-volume high-accident locations.
- Improves Mobility substantially for all modes. Moves people, not cars.
- Essential component of activating the community, applying Smart Growth principles and achieving the objectives of the PGD vision.

#### **TIER II:**

- Improves Mobility and has little to no impact on other travel modes.
- Creates a better balance between motorized and non-motorized travel.
- Enhances mobility by introducing missing links and ensures continuation of capacity.
- Ease of implementation from a constructability, political and financial standpoint.
- Promotes ADA compliance.

### **TIER III:**

- Creates places of human scale that promotes active lifestyles and enhances the user's experience.
- Involves the beautification of the District.
- Improves mobility to lesser extent and may impact other modes of travel.
- Feasibility unclear with potential concerns of constructability, political and financial support.

Table 5 and Figure 11 present the Palomar Gateway District Concept Mobility Plan.

It is important to note that the improvements suggested in the following Mobility Plan are conceptual and provide a long-range vision for the community and the Palomar Gateway District. These recommended improvements were developed to achieve the PGD's spirit and intent to develop a Smart Growth Transit Oriented Development integrated with the Palomar Transit Center. The proposed improvements are intended to foster multi-modal choices for the residents of Chula Vista while maintaining appropriate levels of service. The motorized improvements outlined in the Mobility Plan below are CEQA mitigations to achieve an acceptable LOS and non-motorized improvements are considered project features to improve overall mobility. A detailed engineering study is recommended to identify the feasibility, constructability and funding of these improvements when appropriate.

**TABLE 5  
PALOMAR GATEWAY DISTRICT MOBILITY PLAN**

| Mobility Element   | Concerns  | Opportunities   |   |   |
|--|---|---|---|---|
|  |   | Tier 1 (High Priority)  | Tier 2 (Medium Priority)  | Tier 3 (Low Priority)   |
|  Pedestrian   | <ul style="list-style-type: none"> <li>At-grade walkway crossing compresses pedestrian safety and transit connectivity</li> <li>Mixing sidewalk links hinders mobility</li> <li>Lack of ADA compliance at various locations</li> <li>No buffer on Palomar Street creates a dangerous and unpleasant experience</li> <li>"Mega-blocks" lack human scale and hinder walkability</li> <li>Abundance of driveways along Palomar Street creates pedestrian safety</li> </ul>   | <ul style="list-style-type: none"> <li>Grade-separate walkway line per 2050 RTP (recessed walkway under Palomar Street) to avoid blocking the community and avoid visual impact?</li> <li>Introduce new sidewalks that introduce human scale and encourage walkability</li> <li>Add crosswalks closer to existing walkway signals</li> <li>Signage up the at-1-3 SB ramps of Palomar Street to avoid the high-speed right-turns</li> </ul>  | <ul style="list-style-type: none"> <li>Close nearby driveways on Palomar Street</li> <li>Provide non-competitive sidewalks on Palomar Street</li> <li>Provide sidewalks on existing links</li> <li>Provide ADA compliant curb ramps</li> <li>Provide high visibility crosswalks</li> <li>Provide adequately sized islands for pedestrian refuge on Palomar Street</li> <li>Provide two pedestrian curb ramps per intersection corner</li> </ul> | <ul style="list-style-type: none"> <li>Provide a multi-use path in the SDCU easement</li> <li>Provide a multi-use bridge over I-5 at Ada Street extension</li> </ul>                                      |
|  Bicycle      | <ul style="list-style-type: none"> <li>At-grade walkway crossing compresses bicycle safety</li> <li>Mixing bicycle links hinders mobility</li> <li>Poor accessibility to Santa Barbara Bikeway</li> <li>"Mega-blocks" lack any human scale and does not promote bicycle activity</li> </ul>   | <ul style="list-style-type: none"> <li>Grade-separate walkway line per 2050 RTP (recessed walkway under Palomar Street) to avoid blocking the community and avoid visual impact?</li> <li>Class II bike lanes on Palomar Street and Industrial Boulevard to integrate with the Santa Barbara Bikeway</li> <li>Provide bicycle facilities on existing links</li> <li>Provide bicycle buffers at the Palomar Transit Station</li> </ul>   | <ul style="list-style-type: none"> <li>Use colored or elevated bike lanes to enhance bicycle safety and create driver awareness at key bicycle conflict points?</li> <li>Develop a subside of transit station</li> </ul>  | <ul style="list-style-type: none"> <li>Provide a multi-use path in the SDCU easement</li> <li>Provide a multi-use bridge over I-5 at Ada Street extension</li> </ul>                                      |
|  Transit      | <ul style="list-style-type: none"> <li>At-grade walkway crossing lowers transit capacity</li> <li>Increased demand on Blue Line adds congestion and delay to buses on Palomar Street</li> <li>Increasing congestion on Palomar Street reduces reliability of bus service</li> <li>Only one driveway with limited maneuverability serves both buses and vehicles</li> <li>On-board bus collection increases dwell and hinders transit times?</li> </ul>  | <ul style="list-style-type: none"> <li>Grade-separate walkway line per 2050 RTP (recessed walkway under Palomar Street) to avoid blocking the community and avoid visual impact?</li> <li>Shade structures at bus stop such as Broadway and Palomar Street</li> </ul>   | <ul style="list-style-type: none"> <li>Passive transit signal priority along Palomar Street?</li> <li>Active level boarding by providing low-floor buses</li> <li>Provide amenities such as: climate-controlled bus shelters, system maps and schedules, wayfinding systems and ways that encourage that can be on which standing</li> <li>Display real time arrival information at Palomar Transit Center</li> </ul>                           | <ul style="list-style-type: none"> <li>Off-board bus collection system to improve busways</li> <li>Consider public art and signage design for bus shelters, benches and other street furniture</li> </ul> |
|  Light Rail | <ul style="list-style-type: none"> <li>At-grade walkway crossing impedes sidewalk, pedestrian and bicycle mobility</li> <li>Increasing demand on Blue Line adds congestion and delay to Palomar Street</li> <li>High-floor walkway curb hinders disabled and bicycle loading leading to increased gate closing times and creates obstacles to vehicles</li> <li>Frequency of walkway bus needs to increase to serve highest ridership walkway line bus demand</li> <li>Walkway vehicle length needs to increase to serve highest ridership walkway line bus demand</li> </ul> | <ul style="list-style-type: none"> <li>Grade-separate walkway line per 2050 RTP (recessed walkway under Palomar Street) to avoid blocking the community and avoid visual impact?</li> <li>Consider low-floor walkway cars to reduce passenger loading and unloading times (currently under construction)</li> </ul>   | <ul style="list-style-type: none"> <li>Grade-separate walkway line at Ada Street</li> <li>Increase walkway car length and reduce busways to serve Blue Line demand</li> </ul>   | <ul style="list-style-type: none"> <li>None</li> </ul>  |
|  Vehicular  | <ul style="list-style-type: none"> <li>At-grade walkway crossing at Industrial Boulevard Palomar Street intersection causes excessive vehicle delay and poor LOS during peak hours</li> <li>Loading and unloading maneuver on high-flow walkway can cause excessive queuing and disrupts transit progression on Palomar Street</li> <li>Absence of parallel access, limited truck to network and multiple driveways affect traffic throughput</li> </ul>  | <ul style="list-style-type: none"> <li>Grade-separate walkway line per 2050 RTP (recessed walkway under Palomar Street) to avoid blocking the community and avoid visual impact?</li> <li>Revised Walnut Avenue access to Blue Palomar Street to allow right-of-way cut only?</li> <li>Introduce new access to Oxford Street from Industrial Boulevard to reduce traffic congestion on Palomar Street</li> <li>Change left-turn phasing from protected-protected to protected?</li> </ul> | <ul style="list-style-type: none"> <li>Realign Transit Center Plaza driveway to avoid intersection conflict</li> <li>Eliminate segment capacity on Palomar Street by modifying curbs along driveway access where feasible?</li> <li>Increase curb-side on Ada Street to allow truck turning within Industrial Boulevard</li> </ul>  | <ul style="list-style-type: none"> <li>Provide landscaping along the median on Palomar Street to add visual character</li> </ul>  |
|  ADA        | <ul style="list-style-type: none"> <li>Disregarded urban sidewalks and compresses bicycle mobility for disabled and senior users</li> <li>Wide curb cuts on driveways create high turning speeds of traffic compressing vision</li> </ul>   | <ul style="list-style-type: none"> <li>Repair all 48 non-compliant sidewalks and provide sidewalks on existing links</li> <li>Rebuild all intersections within the PUD to ADA-compliant (curbside and curb-cuts)</li> <li>Remove or reduce street furniture on sidewalks that hinder mobility</li> <li>Classify all driveways on Palomar Street to reduce expansion</li> </ul>  | <ul style="list-style-type: none"> <li>Introduce technologies such as audible cross-street pedestrian signals, visualized driver/ADA path to enhance mobility</li> <li>Provide dedicated ADA parking at the Transit Station</li> </ul>  | <ul style="list-style-type: none"> <li>None</li> </ul>  |
|  Parking    | <ul style="list-style-type: none"> <li>Current parking layout prevents transit use</li> <li>Free parking does not provide a revenue source</li> <li>Lack of parking efficiency with over-supply and non-shared facilities</li> </ul>  | <ul style="list-style-type: none"> <li>Promote mixed-use, compact development with shared parking</li> <li>Provide parking located in the development and not along roadway to add visual character and promote other travel modes</li> </ul>   | <ul style="list-style-type: none"> <li>Use dynamic parking pricing to promote non-motorized transit and create a revenue stream</li> <li>Consider on-street parking as supply for development</li> </ul>  | <ul style="list-style-type: none"> <li>None</li> </ul>  |





**Figure 11**  
**Conceptual Mobility Plan**  
 PALOMAR GATEWAY MOBILITY STUDY

## **5.9 Infrastructure Financing Mechanisms and Funding Sources**

The following is a list of commonly used mechanisms to fund public facilities. The City of Chula Vista may currently be utilizing some of these mechanisms, but there may be opportunities for better leveraging of funding or for pursuing new funding sources.

*5.9.1 Development Impact Fees* - Property tax limitations imposed by Proposition 13, resulting in the decline in property taxes available for public projects, has led local governments to adopt alternative revenue sources to accommodate public facility and infrastructure demands resulting from growth. Development Impact Fees is one of those sources. AB 1600 (Cortese), which became effective on January 1, 1989, regulates the way that impact fees are imposed on development projects. Impact fees are one-time charges applied to offset the additional public facility provision costs from new development. This may include provision of additional services, such as water and sewer systems, roads, schools, libraries, and parks and recreation facilities. Impact fees cannot be used for operation, maintenance, alteration, or replacement of existing capital facilities and cannot be channeled to the local government's discretionary general funds. Impact fees cannot be an arbitrary amount and must be explicitly linked to the added cost of providing the facility towards which it is collected.

The City of Chula Vista already has a range of impact fees that are updated periodically (See City of Chula Vista Master Fee Schedule Bulletin 16-100). It is important, however, to realize that there are two primary aspects of capital costs (based on which impacts fees are collected) – land costs and building costs. Though the latter can be estimated at a citywide level and adjusted periodically using appropriate inflation factors, land cost estimation is more complicated, especially when one considers significant variations in land values within the city and the necessity to provide land intensive public facilities, such as parks. As a result the land acquisition component of a standardized impact fee may not be consistent with the true costs involved.

*5.9.2 Community Development Block Grants (CDBG)* - CDBG are a Federal grant program administered by the U.S. Department of Housing and Urban Development. CDBG are administered on a formula basis to entitled cities, urban counties and states to develop viable urban communities by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for low- and moderate income individuals. The Palomar Gateway District includes areas within the required low and moderate census tracts. Eligible activities that may be proposed for funding include, but are not limited to, housing, economic development, and public facilities and improvements.

*5.9.3 Business Improvement Districts (BID) or Property and Business Improvement Districts (PBID)* – BIDs/PBIDs mechanisms for assessing and collecting fees that can be used to fund various improvements and programs within the district. There are several legal forms of BIDs authorized by California law. The most common types are districts formed under the Parking and Business Improvement Act of 1989. Business Improvement Areas (BIAs) formed under the 1989 law imposes a fee on the business licenses of the businesses operating in the area, rather than the property owners. The

collected funds are used to pay for the improvements and activities specified in the formation documents.

A similar assessment procedure was authorized by the Property and Business Improvement District (PBID) Law of 1994. The distinction is that the PBID makes the assessment on the real property and not on the business. A PBID is currently in operation in the Third Avenue Village area of the City of Chula Vista. The range of activities that can potentially be funded through BIDs and PBIDs is broad, and includes parking improvements, sidewalk cleaning, streetscape maintenance, streetscape improvements (i.e., furniture, lighting, planting, etc.), promotional events, marketing and advertising, security patrols, public art, trash collection, landscaping and other functions. Generally speaking, the BID format works well for marketing and other programmatic activities that serve to directly benefit area businesses (i.e., tenants), whereas a PBID may be more appropriate for permanent physical improvements that stand to improve property values in the area.

*5.9.4 TransNet* - In 1987, voters approved the TransNet program – a half-cent sales tax to fund a variety of important transportation projects throughout the San Diego region. This 20-year, \$3.3 billion transportation improvement program was due to expire in 2008. In November 2004, 67 percent of the region’s voters supported Proposition A, which extends TransNet to 2048, thereby generating an additional \$14 billion to be distributed among highway, transit, and local road projects in approximately equal thirds. In addition, it will support a robust public transportation system, including new Bus Rapid Transit services, light rail trolley system and station improvements, and carpool/managed lanes along many of the major freeways. Two percent of the available funds will be earmarked annually for bicycle paths and facilities, pedestrian improvements, and neighborhood safety projects. The San Diego Association of Governments (SANDAG) sets the priorities and allocates TransNet funds.

*5.9.5 Grant Funding* - A variety of funding options are available through Federal, state and local grant programs. Many of the grant programs target urban revitalization efforts, smart growth enhancements, and transportation planning and are provided on a competitive basis. Current grant programs, such as the Smart Growth Incentive Program administered through SANDAG, can provide significant funding towards projects that result in furthering smart growth approaches, such as the gateway elements constructed along Palomar Street and Industrial Boulevard in 2009.

*5.9.6 General Fund* - The City receives revenue from a variety of sources, such as property taxes, sales taxes, fees for recreation classes and plan checking. Revenue can be generally classified into three broad categories: program revenue, general revenue and restricted revenue. Depending on the revenue source, the General Fund may be used for a variety of purposes, such as capital improvement projects or streets, sewers, stormdrains and other infrastructure maintenance improvements.

*5.9.7 Other Funding Sources* - Examples of other funding sources that may be considered to assist in the implementation of the community benefits outlined in this chapter include Ad Valorem Property Taxes, the Sales and Use Tax, the Business License Tax and the Transient Occupancy Tax.

## **6. PLAN IMPLEMENTATION AND ADMINISTRATION**

### **6.1 Introduction**

This chapter describes the authority of a Specific Plan, the process which will be used to consider development applications and the administrative procedures required for amendments and/or modifications to the Plan. A Specific Plan is a regulatory tool that local governments use to implement their General Plan and to guide development in a localized area. While the general plan is the primary guide for growth and development throughout a community, a Specific Plan is able to focus on the unique characteristics of a specialized area by customizing the vision, land uses and development standards for that area. This specific plan has been prepared and adopted pursuant to Section 65450 et seq of the California Government Code.

### **6.2 Specific Plan Adoption**

This Specific Plan has been adopted by City Council Ordinance. Upon adoption, the Specific Plan implements the adopted General Plan by establishing the land uses, development standards and design guidelines for the Specific Plan Subdistricts.

### **6.3 Specific Plan Administration**

Development projects within the Specific Plan Subdistricts will be subject to a design review process to ensure consistency with the Specific Plan, except as provided below. The Design Review Process is outlined on the Development Services Department's website at:

[http://www.chulavistaca.gov/City\\_Services/Development\\_Services/Planning\\_Building/Development\\_Services\\_Center/Process\\_Guides/Design\\_Review.asp](http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/Development_Services_Center/Process_Guides/Design_Review.asp)

All developments within the Specific Plan Subdistricts require submittal and approval of a Design Review Permit. To be approved, a development project must:

- Comply with the permitted uses and development criteria contained in Chapter 3 - Land Use and Development Regulations of this Specific Plan, and other applicable regulations contained in the CVMC; and,
- Be found to be consistent with the design requirements and recommendations contained in Chapter 4 - Design Guidelines of this Specific Plan;
- For projects in designated gateways that propose increased building height, the building design must reflect a unique, signature architecture and creates a positive Chula Vista landmark.

The design review permit will include all conditions of approval ranging from design, environmental mitigation measures, public improvements, and others as may be determined upon review of the specific development project. The design review process



will ensure an enhanced level of review for major projects, while minimizing processing for minor projects, as defined by CVMC Section 19.14.582(g), as may be amended from time to time.

In addition, proposed developments would also be required to adhere to existing CVMC regulations and processes for other discretionary review, such as those for conditional use permits, variances, and subdivisions, as may be applicable. (See 2.55, 19.14, and 19.54, as may be amended from time to time). The provisions of the Zoning Ordinance relative to other discretionary permits or actions (e.g. Tentative Map, Conditional Use Permits) shall be applied as required based on individual development projects.

Permitted land uses within the Specific Plan Focus Areas are identified in the Land Use Matrix in Chapter 3. The Development Services Director or his/her designee may determine in writing that a proposed use is similar and compatible to a listed use and may be allowed upon making one or more of the following findings:

- The characteristics of and activities associated with the proposed use is similar to one or more of the allowed uses and will not involve substantially greater intensity than the uses listed for that Subdistrict;
- The proposed use will be consistent with the purpose and vision of the applicable Subdistrict;
- The proposed use will be otherwise consistent with the intent of the Specific Plan;
- The proposed use will be compatible with the other uses listed for the applicable Subdistrict. The Development Services Director or his/her designee may refer the question of whether a proposed use is allowable directly to the Planning Commission for a determination at a public hearing. A determination of the Development Services Director or his/her designee, or Planning Commission may be appealed in compliance with the procedure set forth in the CVMC.

#### **6.4 Previously Conforming Uses**

Existing uses that are not listed in the allowable land uses table or determined to be permitted pursuant to the findings and procedure above are declared previously conforming uses. Refer to CVMC Chapter 19.64 – Previously Conforming Uses, as may be amended from time to time, for definitions and policies managing previously conforming uses:

- Continuances (continuing operation of previously conforming uses)
- Changing uses
- Terminations of previously conforming uses

A one time extension of up to six months, according to the provisions of CVMC Chapter 19.64.070A, as may be amended from time to time, may be granted by the Development Services Director, as applicable, where undue economic hardship is

demonstrated. Standards contained within the Specific Plan are mandatory requirements that must be satisfied for all new projects and building renovations except where CVMC previously conforming regulations (Chapter 19.64, as may be amended from time to time) provide exemptions or allowances.

## **6.5 Exemptions**

Exemptions to Specific Plan requirements include minor modifications to existing structures such as painting, maintenance or repair, re-roof, modifications that increase the total building area by 200 square feet or less (within a 2-year period) as well as other exceptions and modifications described in CVMC 19.16, as may be amended from time to time.

## **6.6 Site Specific Variance**

Standards contained within the Specific Plan are mandatory requirements that must be satisfied for all new projects and building renovations except where the CVMC Variance regulations (Chapter 19.14.140 -- 19.14.270, as may be amended from time to time) provide for a variation from the strict application of the regulations of a particular subdistrict.

## **6.7 Development Exceptions**

The land use and development regulations encourage the siting of a variety of land uses in an urban environment that is both pedestrian and environmentally sensitive. To further achieve this goal and promote innovative design, it may be necessary to be flexible in the application of certain development standards. As such, development exceptions may be authorized by the decision making body for the project if all of the following findings are made:

1. The proposed development will not adversely affect the goals and objectives of the Specific Plan and General Plan.
2. The proposed development will comply with all other regulations of the Specific Plan.
3. The exception or exceptions are appropriate for this location and will result in a better design or greater public benefit than could be achieved through strict conformance with the Specific Plan development regulations.

Consideration of a development standard exception shall be concurrent with the review of the Design Review or other permit, as may be required pursuant to Section 6.3 of this Chapter.

## **6.8 Specific Plan Amendment**

Over time, various sections of the Specific Plan may need to be revised, as economic conditions or City needs dictate. The policies presented in the Specific Plan contain

some degree of flexibility, but any Specific Plan amendments must be judged by relatively fixed criteria. The California Government Code (§ 65453) clearly states that a Specific Plan “may be amended as often as deemed necessary by the legislative body.” Amendments to this Plan may be initiated by a developer, any individual property owner, or by the City, in accordance with any terms and conditions imposed during the original approval or in accordance with any terms and conditions pertaining to Chula Vista Municipal Code.

The Development Services Director or his/her designee is responsible for making the determination of whether an amendment to the Specific Plan text or maps is needed. Amendment procedures are described below.

- Proposals to amend the Specific Plan must be accompanied by detailed information to document the change required. This information should include revised Specific Plan text (or excerpt thereof) and revised land use diagram or map amendment, where relevant, depicting the amendment requested.
- The City has conducted a comprehensive analysis and invested a significant amount of time and money in the preparation of the Specific Plan; therefore, any proposals to amend the Specific Plan must document the need for such changes. The City and/or applicant should indicate the economic, social, or technical issues that generate the need to amend the Specific Plan. Costs incurred for the amendments shall be the responsibility of the party requesting the amendment.
- The City and/or applicant must provide an analysis of the amendment’s impacts relative to the adopted Environmental Impact Report. Depending on the nature of the amendment, supplemental environmental analysis may be necessary. The need for such additional analysis shall be determined by the City of Chula Vista in accordance with the California Environmental Quality Act (CEQA Guidelines § 15162).

*Major and Minor Amendments* - The Development Services Director or his /her designee shall within 10 days of any submittal of a request to amend this Plan, determine whether the amendment is “minor” (administrative) or “major”. Major amendments (described below) require an advisory recommendation by the Planning Commission and approval by the City Council. If the amendment is determined to be minor, the Development Services Director, or his/her designee, may approve or deny the application. Minor amendments must be determined by the Development Services Director to be in substantial conformance with the provisions of the Specific Plan and do not include any changes described below for major amendments. Any decision of the Development Services Director, or his/her designee, may be appealed to the City Council, provided said appeal is initiated within 10 working days of receipt by the applicant of written notice of the decision of the Development Services Director, or his/her designee. Examples of “major” amendments include:

- The introduction of a new land use designation not contemplated in the Specific Plan, as may be amended from time to time.

- Changes in the designation of land uses affecting two acres or more from that shown in the Specific Plan, as may be amended from time to time.
- Changes to the circulation system or other community facility which would materially affect a planning concept detailed in the Specific Plan, as may be amended from time to time.
- Changes or additions to the design guidelines which materially alter the stated intent of the Specific Plan, as may be amended from time to time.
- Any change which would result in new significant, direct adverse environmental impacts not previously considered in the EIR.

*Necessary Findings* - The Development Services Director, or his/her designee will review the request for Specific Plan Amendment and all submitted supporting material and develop a recommendation on the Specific Plan Amendment for consideration by the Planning Commission and City Council. The Development Services Director or his/her designee may also request further clarification and submittal of additional supporting information, if necessary. The consideration of any proposed amendment to the Specific Plan shall require that the following findings be made:

- Changes have occurred in the community since the approval of the original Specific Plan which warrants approving the proposed amendment; and
- The proposed amendment is consistent with the General Plan for the City of Chula Vista; and
- The proposed amendment will result in a benefit to the area within the Specific Plan; and
- The proposed amendment will not result in significant unmitigated impacts to adjacent properties; and
- The proposed amendment will enable the delivery of services and public facilities to the population within the Specific Plan area.

## **6.9 Five Year Review**

Conducting periodic reviews of the Specific Plan is important to ensure proper functioning and implementation over time. A five-year review will offer an opportunity to make sure the Specific Plan is on track, check in on the implementation process to ensure that the goals and objectives are being achieved and make changes in case they are not. Over the life of the Specific Plan, the changing landscape of the area may impact the effectiveness of implementing actions. Thus, a five-year review cycle allows for adjustments to the plan to be made as necessary. Items of particular importance to consider are:

- Review the total amount of development against the thresholds established in



this Specific Plan.

- Evaluate the need for planned improvements based on development patterns and programs in the CIP.

A Five-Year Progress Report will be prepared and may be included as part of Budget Cycle or Strategic Plan Updates.

## **GLOSSARY - definition of terms**

These definitions shall apply to the Palomar Gateway District:

**accessway** - a formalized path, walkway, or other physical connection that allows pedestrians to directly reach destinations.

**allee** - a row of vertical elements, such as flags, trees or architectural elements, that creates a visual corridor.

**arcade** - a covered walkway attached to a building and supported on the sides but not attached to the building by columns.

**articulation** - the visible expression of architectural or landscape elements through form, structure, or materials that “break up” the scale of buildings and spaces to achieve a “human scale.”

**awning** - a fixed cover, typically comprised of cloth over a metal frame that is placed over windows or building openings as protection from the sun and rain.

**awning sign** - a sign painted on, printed on, or attached flat against the surface of an awning.

**balcony** - an exterior platform that projects from or into the facade of a building and is surrounded by a railing, handrail, or parapet.

**bay window** - a large window or grouping of windows projecting from the outer facade of a building and forming an alcove in the interior of the building.

**bulk retail use or bulk sales** - a retail or wholesale facility that serves the general public, selling primarily institutional sized or multi-pack products in bulk quantities.

**clear window** - the amount of glass surface of a window that allows 100% visual permeability.

**commercial parking facility** - a parking structure or a surface parking lot operated for profit that has parking spaces that are not accessory to a primary use.

**compact development** - the planning concept of using site design and urban design techniques to decrease the amount of land needed to develop a specific land use.

**courtyard** - a yard wholly or partly surrounded by walls or buildings.

**density** - the number of dwelling units divided by the net site area.

**drive-through facility** - facilities only allowing transactions for goods or services without leaving a motor vehicle. This type of facility does not provide for any walk-in service.

**externally illuminated sign** - a sign whose light source is located outside of the sign.

**facade** - the exterior face of a building, which is the architectural front, sometimes distinguished from other faces by elaboration of architectural or ornamental details.

**fast food establishment** - a food service business that offers relatively immediate service of semi-prepared or prepared foods for take-out or in-house consumption in disposable containers and serving walk-in and/or drive-through customers.

**finished floor** - the ultimate grade at which a structural floor will be constructed including added decorative and finished surfaces.

**freestanding monument sign** - a permanent sign where the entire bottom of the sign is affixed to the ground, not to a building.

**frontage** - the linear edge of a property adjacent to the property line abutting a street, or public right-of-way.

**gateway** - the entry, focal, point into a specific area, city or region.

**greenway** - one or a series of vegetative, linear corridors, natural or man-made, that may contain active or passive recreational uses or may prohibit human activity altogether to preserve sensitive areas. These corridors are usually associated with riparian systems, but may also include transportation corridors.

**infill** - a newly constructed building within a developed area.

**internally illuminated sign** - a sign whose light source is located in the interior of the sign so that rays shine through the face of the sign, or a light source that is attached to the face of the sign and is perceived as a design element of the sign.

**landscaping** - an area devoted to or developed and maintained with native or exotic planting, lawn, ground cover, gardens, trees, shrubs, and other plant materials, decorative outdoor landscape elements, pools, fountains, water feature, paved or decorated surfaces of rock, stone, brick, block, or similar material (excluding driveways, parking, loading, or storage areas), and sculpture elements. Plants on rooftops, porches or in boxes attached to buildings are not considered landscaping.

**large-scale retail commercial** - commercial development with primary buildings greater than 50,000 square feet gross business area in a single freestanding use or in conjunction with other uses on a lot(s) or parcel(s).

**light rail transit (LRT)** - a fixed guideway transit system.

**liner retail** - a retail building adjacent to a street and serving pedestrian traffic. Located at the front of a larger retail site that may also contain large format or large-scale retail uses.

**live-work** - a residential unit that is also used for commercial purposes for a time, with minimum of 25% of the total building area given to the commercial use within the same structure as the residential component.

**loggia** - a roofed, but open arcade along the front or side of a building on an upper story.

**loop road** - a vehicular and pedestrian accessway with a common starting point and terminus; or a roadway that connects two points along the length of a street or arterial; or a roadway that links two roadways in proximity to their intersection.

**masonry** - wall construction of such material as stone, brick and adobe.

**mass** - a description of three-dimensional forms, the simplest of which are cubes, boxes (or “rectangular solids”), cylinders, pyramids and cones. Buildings are rarely one of these simple forms, but generally are composites of varying types of assets. This composition is generally described as the “massing” of forms in a building.

**mixed-use** - development contained within a single-parcel (horizontally or vertically) or adjacent parcels that contains different uses that are complementary to each other and provide activity throughout the day.

**overhang** - the architectural elements of a building that extend horizontally beyond the wall.

**parking structure** - a parking garage located above ground or underground consisting of one or more levels.

**park & ride lot** - a parking structure or surface parking lot intended primarily for use by persons riding transit or carpooling, owned or operated either by a transit agency or by another entity with the concurrence of the transit agency.

**parking, off-street** - marked or unmarked parking located within a parcel and outside a private or public right-of-way.

**parking, on-street** - marked or unmarked parking located within a private or public right-of-way and outside of a parcel.

**pedestrian-oriented design** - the design of communities, neighborhoods, streetscapes, sites, and buildings that emphasizes pedestrian access, comfort, and visual interest. Transit-oriented design is a particular type of pedestrian-oriented design that includes design and intensity of land use to support transit in addition to pedestrians.

**pedestrian-oriented street** - a street lined with uses, designed to generate and encourage foot traffic.



**pedestrian scale** - the size and proportion of a physical element that closely relates to the human body e.g., a 16-foot lamp post vs. a 30-foot lamp post, a facade with vertically oriented framed windows vs. a facade with a continuous and unarticulated window wall.

**pedestrian way** - a linear space or an area where the primary users are pedestrians and that may also accommodate bicyclists.

**pergola** - an arbor or passageway with a roof or trelliswork on which climbing plants can be trained to grow.

**permanent sign** - a sign constructed of durable materials and intended to exist for the duration of time that the use or occupant is located on the premises.

**portico** - a porch or walkway with a roof supported by columns, often leading to the entrance of a building.

**porch** - an open building used solely for ingress and egress and not occupancy, at least two sides of which shall be at least 50% open.

**primary front facade** - the facade of a building fronting onto a public or private street or pedestrian accessway.

**project** - any proposal for new or changed use, or for new construction, alteration, or enlargement of any structure.

**projecting sign** - a sign that protrudes.

**public right-of-way** - a strip of land that has been established by reservation, dedication, prescription, condemnation, or other means and that is occupied by a road, walkway, railroad, utility distribution or transmission facility, or other similar use.

**roundabout** – a traffic circle.

**San Diego Trolley** - the first new light rail line in the United States has lines extending from downtown San Diego to Mission Valley, Santee, Chula Vista, and San Ysidro/International Border.

**screening** - a method of visually shielding or obscuring a structure, or portion of, by a fence, wall, berm, or similar structure.

**shared parking** - parking that is utilized by two or more uses taking into account the variable peak demand times of each use; the uses can be located on more than one parcel.

**siding** - the finish covering on the exterior of a frame building (with the exception of masonry). The term cladding is often used to describe any exterior wall covering, including masonry.

**sign** - an object, device display or structure, or part thereof, situated outdoors or indoors, which is used to identify, display, or direct or attract attention to an object, person, institution, organization, business, product, service, event, or location by any means, including words, letters, figures, design symbols, fixtures, colors, illumination, or projected image.

**street-facing facade** - the building facade that is adjacent to a public or private right-of-way.

**stucco** - an exterior finish, usually textured, composed of portland cement, lime and sand, which are mixed with water.

**temporary sign** - any sign intended to be displayed for a limited period of time and capable of being viewed from any public right-of-way, parking area, or neighboring property.

**texture** - variations in the exterior facade and may be described in terms of roughness of the surface material, the patterns inherent in the material or the patterns in which the material is placed. Texture and lack of texture influence the mass, scale, and rhythm of a building. Texture also can add intimate scale to large buildings by the use of small detailed patterns, such as brick masonry.

**tower** - any floor above the defined street wall height used for framing the street.

**transit-oriented development (TOD)** - a development pattern characterized by a mix of uses surrounding a transit platform where streets have a high level of connectivity, blocks are small, and streetscape, buildings, and uses cater to the pedestrian.

**transit platform** - a designated transit loading and waiting area as assigned by the public transit agency.

**transit station** - the area including the platform which supports transit usage and that is owned by the transit authority.

**transit street** - a street that contains a transit line.

**trellis** - a lattice on which vines are often trained.

**visual permeability** - the ability of vertical surfaces to allow viewers to see through to the other side e.g., windows and open fencing.

**walking radius** - the distance beyond a central point from which a person is willing to walk. This distance varies depending on existing barriers, the walking environment, and the availability of destinations.

**wall sign** - a sign that is attached to or painted on the exterior wall of a structure with the display surface of the sign approximately parallel to the building wall.

**window sign** - a sign posted, painted, placed, or affixed in or on a window exposed to public view. An interior sign that faces a window exposed to public view that is located within three feet of the window is considered a window sign for the purpose of calculating the total area of all window signs.

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## APPENDIX A

### URBAN DESIGN WORKSHOP SUMMARY BOOKLET

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# PALOMAR GATEWAY & WEST FAIRFIELD DISTRICTS

Urban Design Workshop

## SUMMARY



July 11, 2009



## Acknowledgements

One of the most important elements of any planning process is public participation. The Southwest Urban Design Workshops were conducted to obtain early public input related to the conditions of the five planning districts located in the Southwest area of the city, and the opportunities for their improvement. Over eighteen members of the public participated in the Palomar Gateway and West Fairfield Workshops, and represent a good cross section of the population of the city, such as residents, business owners, property owners, community organizations and other stakeholder of the area. The City of Chula Vista thanks them all for taking the time to participate in the workshop and provide valuable input for the improvement of our community.

*“American democracy is rooted in the concept of representation. Actively encouraging citizens to participate in decision making assures their views will be heard. Thus participation is important for a healthy representative democracy.”*

Quoted from Partnerships and Participation in Planning in: [www.uap.vt.edu/cdrom](http://www.uap.vt.edu/cdrom)

### Workshop Participants

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*“The contemporary practice of Urban Design focuses on making the most of urban areas to create pleasant places in which to linger, to partake of public life, and to help build strong, tolerant, progressive civil society.”*

Quoted from What Is Urban Design? in: [www.mcgill.ca/urbandesign/what](http://www.mcgill.ca/urbandesign/what)



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## 1.0 Introduction

### 1.1 Purpose of Urban Design Workshop

On July 11, 2009 the Development Services Department sponsored an urban design workshop held at the San Diego County Health and Human Services Building to gather early public input related to the specific planning process and issues related to future land uses, transportation, and urban design for the Palomar Gateway District (PGD) and West Fairfield District of southwest Chula Vista. The preparation of specific plans or other implementing zoning and development regulations is mandated by the 2005 General Plan for each of the five Southwest planning districts in order to provide the tools necessary to implement the objectives and policies of the 2005 General Plan.

Over eighteen members of the community attended the Saturday session which was the first of three workshops held over the summer. The Urban Design Workshop was intended to foster and bring forth the community's diverse viewpoints, as an initial step in the planning process. The intent of the workshop was to quickly develop rough Concepts Diagrams with local residents and property owners, and community organizations who are both familiar with the conditions of the district and have an interest in the ultimate recommendations of the Plan. This booklet portrays the results of the workshop. It identifies challenges and opportunities facing long term viability of the area and ideas suggested by Workshop participants.

### 1.2 Districts Location and Description

#### Palomar Gateway District - Existing Conditions

The PGD is located in southwestern Chula Vista. Located at the interchange of Palomar Street and the Interstate 5 freeway, the PGD is the major southern gateway to the City of Chula Vista for visitors entering both from the freeway and from the blue line San Diego Trolley. The bulk of the district lies between Interstate 5, Palomar Street, Industrial Boulevard, and Anita Street. The district also includes areas north of Palomar Street between Interstate 5 and Industrial Boulevard, the northeast corner of Palomar Street and Industrial Boulevard, and the Palomar Street Trolley Station.

The district is fully urbanized and radiates from the Palomar Transit Station at the intersection of Palomar Street and Industrial Boulevard, and contains a mix of light industrial, commercial and multi-family housing extending north and south of Palomar Street. Residential densities in the area are currently fairly low, approximately 4.1 dwelling units per acre. Across Industrial Boulevard to the east is the major commercial nucleus of Southwest Chula Vista - an area which attracts shoppers and employees from points north and south. The potential for the PGD to evolve from a low-density auto-focused interchange into a higher density transit oriented community has been recognized both by SANDAG's Vision 2020 Plan, which designated the PGD as a Planned/Existing Smart Growth Community Center, and the City's 2005 General Plan, which calls for the district to be developed as a Transit Focus Area.



Palomar Gateway District

Progress towards this vision is already underway, with pedestrian/transit improvements on Palomar Street and Industrial Boulevard provided by the 2005 Transnet SGIP grant expected to be completed in the fall of 2009. In order to fully realize the transformation of the district, however, it will be necessary to engage in a Specific Planning process to update the City's zoning code to reflect the smart growth vision prescribed by the General Plan.

**West Fairfield District - Existing Conditions**

The West Fairfield District, originally part of the Fairfield neighborhood that was divided by the construction of Interstate 5, is located on the west side of Interstate 5, between Palomar Street and Main Street, and is flanked by San Diego Bay on the west. The West Fairfield District occupies approximately 68 acres of land and has a mix of light industrial and office uses interspersed with older, single-family homes and vacant lots. This mix of uses developed without the benefit of city planning policies and/or zoning regulations. West Fairfield is somewhat isolated from the rest of Chula Vista, due to Interstate 5 forming its eastern edge. Pedestrian routes across the freeway are limited and heavily traveled by cars and trucks. Freeway on-and off-ramps at Palomar Street provide convenient freeway access into the District for vehicles.



West Fairfield District

**1.3 Context - General Plan**

The Chula Vista 2005 General Plan designates the Palomar Gateway and West Fairfield districts as two of the five "focused areas of change" which are those areas where more intensive development, revitalization and/or redevelopment are proposed to occur. The General Plan vision for Palomar Gateway includes a Mixed-Use Transit Focus Area (TFA) directly west of the Palomar Trolley Station, higher residential intensity, a neighborhood park and retail to the south of the TFA. The goal is to provide for additional housing and mixed-uses that take advantage of a major transit station within walking distance.

The General Plan vision for the West Fairfield district includes a major employment center, with regional retail and other employment uses. The higher intensity residential and employment uses between the Palomar Gateway and West Fairfield districts located east and west of Interstate 5, respectively, are synergistic uses that exemplify "Smart Growth" principles (i.e. jobs, housing, and neighborhood-serving commercial services within walking distance of transit).

Future development of the Palomar Gateway and West Fairfield districts must be consistent with the goals and policies of the 2005 General Plan. Exhibits A, B and C identify objectives and policies, from the Land Use and Transportation Element, the Economic Development Element, as well as the Southwest Area Plan of the General Plan, which apply to the Palomar Gateway and West Fairfield districts.

**Summary**

## 2.0 Summary of Workshop



Flyer distributed throughout the community and e-mail

Star News Display Ad

The workshop was a one-day activity, intended to provide opportunities for the public to engage in a “hands on” planning exercise. The process was an inclusive public participation outreach to gain input from residents, business and property owners, and community organizations regarding their perspective and vision for the area. The outreach for the workshop included distribution of meeting flyers to many individuals and organizations involved in previous Southwest community planning efforts, posting flyers at local businesses and public buildings, highlighting the workshops on the City’s website, press releases to local newspapers, e-mail blasts through Nixile messaging, and coordination with various community groups to encourage the community’s participation.



Participants discuss their impressions of the area after the walking tour.

The all day workshop included a morning presentation by city staff regarding the general plan and specific plans, and a healthy dialogue with the participants; a two hour walking tour of the district;

followed by afternoon brainstorming sessions by small groups in response to opportunities and challenges observed on the walking tour. The small groups depicted their written comments on an aerial map and concluded the day by presenting their findings to the entire group.



Mr. Gary Halbert, Director of the Development Services Department, provides opening remarks at the workshop



### 2.1 Walking Tour

The Workshop’s afternoon session included a walking tour of the district area. The Urban Design Workshop covered in this booklet was for the Palomar Gateway District and the West Fairfield District. However, due to time limitations and the large territory that could not be walked in one session, the walking tour included only the Palomar Gateway District. Aerial views of the West Fairfield district were provided, and insights were shared from one of the major property owners who attended the workshop. The purpose of the walking tour of Palomar Gateway was to explore the district on foot and see and experience the territory first hand. The tour was used to identify and point out problems/issues that need to be addressed as part of the specific planning process. The tour also served to identify opportunities and constraints and categorize problems/issues related to land use, infrastructure, and urban design.



The group of stakeholders that participated in the walking tour was divided into 3 groups. Each group was kept small in order to facilitate the observation of the area and the discussion. Each group was led by one or two city staff members. While each group went in a different direction, all groups covered the same territory and saw the same area.



*Participants mark their comments on a Conceptual Map*

### 2.2 Group Breakout Sessions



At the completion of the tour, all groups went back to the meeting place to debrief on their observations. Each group was asked to discuss what they saw and develop a list of problems/issues, opportunities/constraints, and suggest ways to improve the area. Exhibits D, E, F, G and H are a compilation of the input provided by the walking tour participants.



*Participants provide comments about the area and prepare Conceptual Map.*

### 2.3 Group Presentations

The participants were also given large (2' x 3') aerial maps of the area and were asked to put their comments/suggestions on the maps and develop a conceptual map of the district.

Exhibits I and J show the images of the maps prepared by the groups. The last exercise of the afternoon



was for each group to report out and present their conceptual map to the entire group.



*Each of the groups presents its Conceptual Map to the rest of the participants*

## 3.0 Next Steps

The Urban Design Workshop for the Palomar Gateway and West Fairfield districts was the first step in the specific planning process for the southwest area of Chula Vista. As indicated previously, the southwest area contains five districts that have been designated by the 2005 General Plan Update as areas for further study and preparation of a specific plan or other regulatory plans/documents. The Palomar Gateway and West Fairfield districts will both be the subject of a specific plan preparation. Because the West Fairfield area is within the coastal zone, the specific plan for this area will be part of a Local Coastal Plan that would potentially be prepared in conjunction with the development of a large portion of the area under the ownership of the Charles Company.



## Urban Design Workshop

### PALOMAR GATEWAY & WEST FAIRFIELD DISTRICTS

In July 2009, the San Diego Association of Governments (SANDAG) awarded a grant to the City of Chula Vista to fund the preparation of the specific plan for the Palomar Gateway District. Following the administrative procedures for the award and acceptance of the grant, City staff estimates that the specific planning tasks will commence in November 2009. The Urban Design Workshop and the resulting lists of comments and Conceptual Maps will be utilized in various ways throughout the specific planning process.

The participation of the residents, property/business owners and other stakeholders will be an important element of this process. It is anticipated that a Working Group of stakeholders will be formed, and members of the public will be invited to participate in community meetings to provide input throughout the process.



Conceptual Maps prepared by participants groups



An art rendering from one of the groups.

## Summary



**2005 General Plan Update  
Land Use and Transportation and Economic Development Elements  
Objectives and Policies**

**Land Use and Transportation**

|   |
|---|
| <p><b>OBJECTIVE LUT 5</b><br/>Designate opportunities for mixed use areas with higher density housing that is near shopping, jobs, and transit in appropriate locations throughout the City.</p>  |
| <p><b><u>Policies</u></b></p>   |
| <p>LUT 5.4 Develop the following areas as mixed use centers: Urban Core, Palomar Trolley Station, Eastern Urban Center, and Otay Ranch Village Cores and Town Centers.</p>  |
| <p><b>OBJECTIVE LUT 17</b><br/>Plan and coordinate development to be compatible and supportive of planned transit.</p>  |
| <p><b><u>Policies</u></b></p>   |
| <p>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 Bus Rapid Transit (BRT).</p>   |
| <p><b>OBJECTIVE LUT 19</b><br/>Coordinate with the regional transportation planning agency, SANDAG, and transit service providers such as the Metropolitan Transit System (MTS), to develop a state-of-the-art transit system that provides excellent service to residents, workers, students and the disabled, both within the City, and with inter-regional destinations.</p> |
| <p><b><u>Policies</u></b></p>   |
| <p>LUT 19.5 Plan for and promote improved access between the Palomar Street, E Street and H Street light rail stations and land uses east of those stations and to the Bayfront. This may involve the construction of separate bridges or ramps connecting Chula Vista streets to transit facilities and/or a deck over Interstate 5 to the Bayfront..</p>                      |

**Economic Development**

|  |
|--|
| <p><b>OBJECTIVE ED 9</b><br/>Develop community serving and neighborhood uses to serve residents and visitors alike.</p>  |
| <p><b><u>Policies</u></b></p>  |
| <p><b>ED 9.1</b><br/>Provide for community and neighborhood commercial centers in areas convenient to residents. These centers should complement and meet the needs of the surrounding neighborhood through their location, size, scale and design. The neighborhood concept of providing pedestrian, bicycle and other non-motorized access should be encouraged.</p>   |
| <p><b>ED 9.4</b><br/>Develop specific plans for areas of the City, including but not necessarily limited to the West Main Street, Broadway, South Third Avenue, North Fourth Avenue/Third Avenue "gateway", E Street, West H Street, and Palomar Street areas (More than one area may be addressed in a single plan, such as the Urban Core Specific Plan.) Include an economic component in the specific plans.</p> |
| <p><b>ED 9.5</b><br/>Encourage clustered commercial uses to prevent and discourage strip development. Locate commercial uses at focal points along major arterial streets or expressways and in village core areas.</p>  |
| <p><b>ED 9.6</b><br/>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>  |

2005 General Plan Update

SOUTHWEST AREA

8.4.2 Palomar Gateway District

**VISION FOR DISTRICT**

The Palomar Gateway District is the major southern gateway into the City and functions as one of the activity corridors in the City. The District provides housing and support uses near a regional transit route. Higher density residential development within walking distance of the Palomar Trolley Station provides additional affordable housing opportunities. Local retail and services are along Palomar Street, and more retail and services are in mixed use development south of Palomar Street.

In addition to nearby community-serving retail uses on Broadway and Palomar Street, a new five-acre neighborhood park is located in the area north of Oxford Street, within walking distance of new residential housing.

**OBJECTIVE 43:**

Establish a Mixed Use Transit Focus Area surrounding the Palomar Trolley Station

**POLICIES**

**LUT 43.1**

The City shall prepare, or cause to have prepared, a specific plan, master plan, or other regulatory document to guide the coordinated establishment of a **Mixed Use Transit Focus Area** within the Palomar Gateway District on properties north and south of Palomar Street, within walkable distance of the Palomar Trolley Station. The specific plan or other regulatory document shall include guidelines and zoning-level standards for the arrangement of land uses that include plans for adequate pedestrian connections and support services for residents, as well as those using the transit station.

The City will prepare an Implementation Program to assure establishment of the above plan/regulations. The Program will include interim provisions for the consideration of any projects within this areas, prior to completion and adoption of the according plan/regulations.

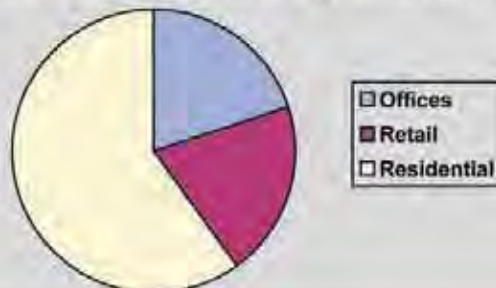
**LUT 43.2**

Provide for a five-acre neighborhood park within the Palomar Gateway District.

**USES**

**LUT 43.3**

Strive for a distribution of uses within the areas designated as Mixed Use Transit Focus Area along Palomar Street to include retail, offices, and residential, as generally shown on the following chart:



**LUT 43.4**

Provide a mix of uses with a focus on retail and some office uses along Palomar Street in the Mixed Use Transit Focus Area, with residential uses above and/or behind the retail and offices uses.



|   |
|---|
| <p><b>LUT 43.5</b></p> <p>Provide a mix of local-serving retail and office uses near the Palomar Trolley Station and at the Gateways into the Palomar Gateway District.</p>   |
| <p><b><u>INTENSITY/HEIGHT</u></b></p>   |
| <p><b>LUT 43.6</b></p> <p>In the Palomar Gateway District, residential densities within the Mixed Use Transit Focus Area designation are intended to have a district-wide gross density of 40 dwelling units per acre.</p>  |
| <p><b>LUT 43.7</b></p> <p>In the Palomar Gateway District, the commercial (retail and office) portion of the Mixed Use Transit Focus Area designation is intended to have a focus area-wide aggregate FAR of 1.0. Subsequent specific plans or zoning ordinance regulations will establish parcel-specific FARs that may vary from the district-wide aggregate (refer to Section 4.9.1, Interpreting the Land Use Diagram, for a discussion of district-wide versus parcel-specific FAR).</p> |
| <p><b>LUT 43.8</b></p> <p>Building heights in the Palomar Gateway District Mixed Use Transit Focus Area shall be low-rise, with <b>some mid-rise buildings</b>.</p>   |
| <p><b>LUT 43.9</b></p> <p>Building heights in the Residential High designated area shall be low-rise buildings.</p>   |
| <p><b>LUT 43.10</b></p> <p>In the Palomar Gateway District, permit a maximum floor area ratio of 0.5 and low-rise buildings in the Retail Commercial designated area on Industrial Boulevard adjacent to the area designated as Residential High.</p>   |
| <p><b><u>DESIGN</u></b></p>   |
| <p><b>LUT 43.11</b></p> <p>The specific plan or other regulatory document for the Palomar Gateway District shall establish design and landscape guidelines for the improvement of Palomar Street as a <u>gateway</u> to the City.</p>   |
| <p><b>LUT 43.12</b></p> <p>Provide for safe, effective, and aesthetic pedestrian crossings and improvements to Palomar Street and Industrial Boulevard.</p>   |
| <p><b><u>AMENITIES</u></b></p>  |
| <p><b>LUT 43.13</b></p> <p>Community amenities to be considered for the Palomar Gateway District as part of any incentive program should include, but not be limited to those listed in Policy LUT 27.1.</p>  |
| <p><b>LUT 43.14</b></p> <p>Provide for the development of one Neighborhood Park within or near the Palomar Gateway District.</p>  |
| <p><b>LUT 43.15</b></p> <p>Establish a community/cultural center near Palomar Street and Third Avenue.</p>  |

## 2005 General Plan Update

## SOUTHWEST AREA

## 8.4.4 West Fairfield District

**Vision for District**

The West Fairfield District has been redeveloped through a well-planned and coordinated master plan. There are very few land use conflicts, and land uses have been expanded by reclaiming an old San Diego settlement pond to the southwest. The West Fairfield District has good freeway access at Palomar and Main Streets, and it is an employment center, with regional retail and other employment uses. An educational facility is also located in the West Fairfield District.

**Objective LUT 44:**

Redevelop the West Fairfield District to become an employment center.

**Policies****LUT 44.1**

The City shall prepare, or cause to have prepared, a specific plan, master plan or other regulatory document to coordinate and guide the comprehensive redevelopment of the West Fairfield District. The City will prepare an Implementation Program to assure establishment of the above plan/regulations. The Program will also include interim provisions for the consideration of any projects within the West Fairfield District area prior to completion and adoption of the applicable plan/regulations.

**LUT 44.2**

Coordinate with the City of San Diego on the annexation/de-annexation of property that would expand the development area and increase the viability for redevelopment of the West Fairfield District.

**LUT 44.3**

Support efforts by the City of San Diego and the United States Fish and Wildlife Service for potential restoration of the historical Western Salt Works building located west of the West Fairfield District.

**LUT 44.4**

Provide for the extension of the Bayshore Bikeway along the westerly edge of the West Fairfield District through coordination with SANDAG and the City of San Diego.

**LUT 44.5**

Coordinate with CALTRANS on the provision of appropriate pedestrian connections, linking the West Fairfield District with the Palomar Trolley Station over Interstate 5, with any reconstruction of bridges along Palomar Street and Main Street.



**USES****LUT 44.6**

Consider locating an educational facility within the West Fairfield District that would serve the residents of the South Bay and that would take advantage of transit facilities at the Palomar Trolley Station.

**LUT 44.7**

Permit a mix of retail commercial, professional office, research and limited manufacturing in the area designated as Mixed Use Commercial west of Interstate 5.

**INTENSITY/HEIGHT****LUT 44.8**

In the West Fairfield District, development within the Mixed Use Commercial designation is intended to have a district-wide aggregate FAR of 0.5. Subsequent specific plans or zoning ordinance regulations will establish parcel-specific FARs that may vary from the district-wide aggregate (refer to Section 4.9.1, Interpreting the Land Use Diagram, for a discussion of district-wide versus parcel-specific FAR).

**LUT 44.9**

Building heights shall be low-rise in the Mixed Use Commercial designated area.

**DESIGN****LUT 44.10**

Provide for implementation of the Bayshore Bikeway in the design for West Fairfield, including complementary landscaping and strategic points of access to the bikeway.

**LUT 44.11**

Locate retail commercial services near Palomar Street.

**LUT 44.12**

Consider integration of the historical Western Salt Works Building design and heritage into the design and amenities for the West Fairfield District redevelopment.

**LUT 44.13**

Community amenities to be considered for the West Fairfield District as part of any bonus program should include, but not be limited to, those listed in Policy LUT 27.1.

## Summary

## Workshop Participants Comments - July 11, 2009

**GROUP #1** (Focused on West Fairfield District)**Features that we liked in the area:**

- That we allowed new construction in area which increased the value of properties and creates/demands more necessities
- There is a bay view
- Bike path, restaurants

**Challenges:**

- Abandoned lots
- Having industrial mixed in here and there with residential
- Providing services for a larger area that is growing in population
- City needs to be conscious of keeping the right balance between property owners/developers rights and the provision of public services (Library/education)
- Lack of INFRASTRUCTURE!
- Lack of Sidewalks, sewer lines
- How to preserve habitat while urbanizing area - Environment and urbanization of area

**Opportunities:**

- Depths of lots
- Designated nature area
- Mixed use along transit corridor
- Multi-family development
- Views, transportation hub
- Access on Palomar and Main Street
- Area owned by one company, which can get things going

**What we would like to see:**

- Green Spaces
- Entertainment centers
- Village Concept: residential, commercial, retail, office, etc
- All government agencies working together
- Mixed use commercial/residential in area with entertainment facilities
- Property owners approached/be more inclusive
- Rehabilitation/aesthetics program
- Educational facility (maybe art) to connect with environment, don't lose Natural beauty
- LEED ideas whenever possible
- Promoting "clean" green industry



## Workshop Participants Comments - July 11, 2009

**GROUP #2** (Focused on Palomar Gateway District)**Challenges:**

- No pedestrian zone on some sidewalks - obstructions in different places - there are poles and utilities blocking sidewalk
- Inadequate pedestrian lighting
- Make sure new development pays for infrastructure
- Wide curb ratios encourage cars to turn right very fast, creates conflicts with pedestrians while crossing intersections
- Big arterials (Palomar and Industrial) sidewalk is next to street, pedestrians exposed to traffic
- Ugly chain link fence: Fence next to sidewalk on Industrial south of Palomar does not look nice. Replacement should be aesthetically pleasing fence
- Need safer pedestrian crossings
- Need for park - potentially accross multiple owners/and current new owner
- Noncontiguous sidewalk (like in eastern corner) - Solution: new and retrofit corners should not have big ratios, install bulbouts
- Entering adequate public facilities with new growth (Harborside Elementary @ capacity)

**Opportunities:**

- Good from grant funding perspective
- Multiple story residential Frontage. Fabulous view of the bay

**What we would like to see:**

- Place a planting strip to create protection buffer for pedestrian and create a nicer place to walk (the only Nice place to walk is Palomar St, west of industrial)
- Make sure new development pays for infrastructure
- Trenton Ave- provide public access to industrial
- Create safer crosswalks. Industrial will need safe crosswalks close to trolley station
- Remove objects on sidewalk to allow people on wheel-chair or people with strollers to continue walking. Continue sidewalks from PG projects
- I-5/Palomar Study represents opportunity to address needs
- Loop road through Walnut and Trenton
- Put pedestrian activated signals

- Coordinate signals along Palomar
- Look for opportunities within TFA + RH for parks (alongside Ada and creek area)
- Balboa Park
- Ped/Bike bridge to connect and bring community back together
- Bayshore bikeway
- Construct greenway linking SDG&E green space east of Industrial west to bayfront

**What we would like to see:**

1. Improve access in the surrounding blocks of Walnut and Trenton streets
2. Remove unused infrastructure on the Northwest corner of Palomar and Industrial
3. Complete street improvements on Industrial Boulevard
4. Construct greenway linking I-5 to the "floating" park; we would like to see a bayfront in the West Fairfield District
5. Palomar Street's signals to be synched by October 2009 (per Frank)
6. Higher rise views along Frontage Rd.
7. Maintain secondary access path to trolley that runs between Food 4 Less shopping center and the station

## Workshop Participants Comments - July 11, 2009

### GROUP #3

#### Information needed for future planning:

- Density maps
- Traffic Studies
- Job/ housing ratios
- Deadline/Timeline for process so that we know something will get done

#### What we would like to see:

- Creekside park
- Move trees
- Sound wall for I-5
- Signage along Dorothy Street
- Artist theme (refer to drawings)
- Street vendors near trolley for convenient access to food, beverage, flowers
- Community Bulletin board near trolley
- Public art/music
- Public art such as: sound makers, reminder of agricultural past, kinetic sculpture
- Art Walk
- Water features
- Native plants
- Entry gateway
- Push carts to encourage walking
- Pushcart paddock
- Coffee shops, education center, liquor stores, mini plazas
- Bike lockers
- Children's museum
- Interaction with NWR throughout district

#### Constrains:

- No sidewalk
- Parking on street
- Too much red tape
- West Fairfield: " does anyone use this name?"
- Trucks parked along Industrial are unsightly and are a traffic hazard

#### Suggestions (on sticky-notes) on map:

1. Wildlife refuge focus
2. Preserve historic building: (reuse as) Children's Museum/ Nature Center
3. Continue park to bay
4. Maintain lower density housing adjacent to Industrial
5. Water features to buffer noise from freeway and trolley
6. Shade trees/No palms!
7. No high density close to freeway
8. Reconsider high density rightly, (because of) noise from freight train operation, overcrowding at schools!

9. Artists' colony
10. Shopping cart collection areas-paddocks
11. Art walk, colorful buildings, unique architecture
12. Lofts for artists, to establish business
13. Plaza paseo gas station and Car wash at Industrial and Palomar, restaurants, schools
14. Get people out of cars
15. Identify and develop community mosaic, artwork, signage
16. Solar lights, maximize solar
17. Directional and monument signage for trolley, pedestrian signs, etc
18. Plant more Tipuana Tipu trees- they have a nice canopy
19. Art on utility boxes
20. Install directional signage for the District
21. Develop pedestrian plan with connection to West Palomar
22. Median breaks along Industrial allow pedestrian access to trolley
23. Park should incorporate creek- potential skate park; Tony Hawk Foundation
24. Criss-cross pedestrian crossing on Palomar and Industrial
25. Drainage area adjacent to trolley tracks should be planted or landscaped- Riparian
28. Below or above/ grade, crossing
29. Street Vendors-mini plaza @ trolley, farmers market, community activity



## Palomar Gateway Districts &amp; West Fairfield Districts

**General Notes - July 11, 2009****Community Questions/Comments:**

1. When did area become known as Palomar Gateway?
2. Why is the East side of Industrial not included in the "Gateway?"
3. There is a 3.5-acre lot for sale on the corner of Ada, why isn't the City putting in an offer?
4. What is the existing density? It seems like everything is being done in a vacuum. Need data before, not after, or else there will be problems in the area, such as traffic.
5. There doesn't seem to be a focus on residential aspect. There currently is a 0.6 imbalance between residential and jobs available. The Southwest was balanced until the City came in and destroyed it.
6. From the time of the Montgomery annexation, we (community) were told it was in our best interest to annex to the City because the County of San Diego was not taking care of us, however, zero has been done since.
7. Previous issues were to be corrected, but they were left on the backburner. Or just waiting for people to die out.
8. There are existing infrastructure deficits today, we need to deal with those issues.
9. Convince us with action.
10. How are our concerns going to be addressed in report?
11. Concern and frustration needs to be articulated/documentated in order to move forward.
12. Let community know that we have gotten back to them in implementation of plan.
13. The way to go forward is to deal with the past.
14. This (graphic with LUTs) is only an excerpt of the General Plan. I know there is a section related to commitment in this document. Specific deficits are identified. I think an addendum should be added to this so it's not so narrow.

## Palomar Gateway &amp; West Fairfield Districts

July 11, 2009

**Comments made by residents who had to leave early, but left their sheets****Things we like:**

1. Convenient major regional transportation facilities (eg. Freeway, trolley) make area a high potential area for any and all higher future uses, be they residential, commercial, or industrial.
2. Historic rail line offers intriguing possibilities.
3. Area has high scenic and historic natural features such as the bay, even ocean views, historic salt works and nature conservation potential both now and even more in the future.
4. Proximity of potential improved/increased residential to mass transit (trolley).
5. Work/home balance potential from placing employing usages close to transportation facilities.

**Challenges:**

1. Municipal boundary bisects the area (Chula Vista/San Diego).
2. Lack of coherence between existing uses and existing zoning and future plans.
3. Noise from freeway.
4. Proximity of existing, possibly incompatible uses (eg. Residential/industrial).
5. Traffic congestion exacerbated by trolley line without "grade separation."

**Improve:**

1. A major property owner/developer present at the workshop appeared to be actively seeking input on how to develop the area in manner more acceptable and compatible with community.
2. Why should CV bayfront development be focused solely on the NW CV bayfront? Consider the SW CV bayfront also.
3. Identify potential signature uses that will capture the imagination to spur positive development, identify significant potential constraints and develop plans to overcome them.
4. Begin long-term exploration/planning for possible trolley spur West of I-5 stretching from NWCV bayfront along SWCV bayfront extending over to Imperial Beach.
5. Explore LAFCO or other potential avenues of concentrating municipal governance to single most closely related jurisdiction (eg. CV) in order to facilitate optimization and success of future development efforts.

**Other Comments:**

1. Re: 3A: who knows if something like Gaylord or stadium project will ever occur, but power plant will come down someday, some kind of projects will occur and trolley spur could provide a significant fill up to development and revitalization of all areas such as NW CV bay, SW CV bay, IB, etc.
2. Historic level-grade rail right of way is truly unparalleled asset. A bikeway may be along it but could be readily moved slightly and/or relocated in order to reactivate rail for potential trolley usage. Since its ownership is still relatively "in the public domain" it could be reactivated at relatively low cost, much as the original trolley South Line was when the San Diego trolley system first started and to this Day has relatively low capital and operational cost.

Exhibit I - Conceptual Map from Group #2

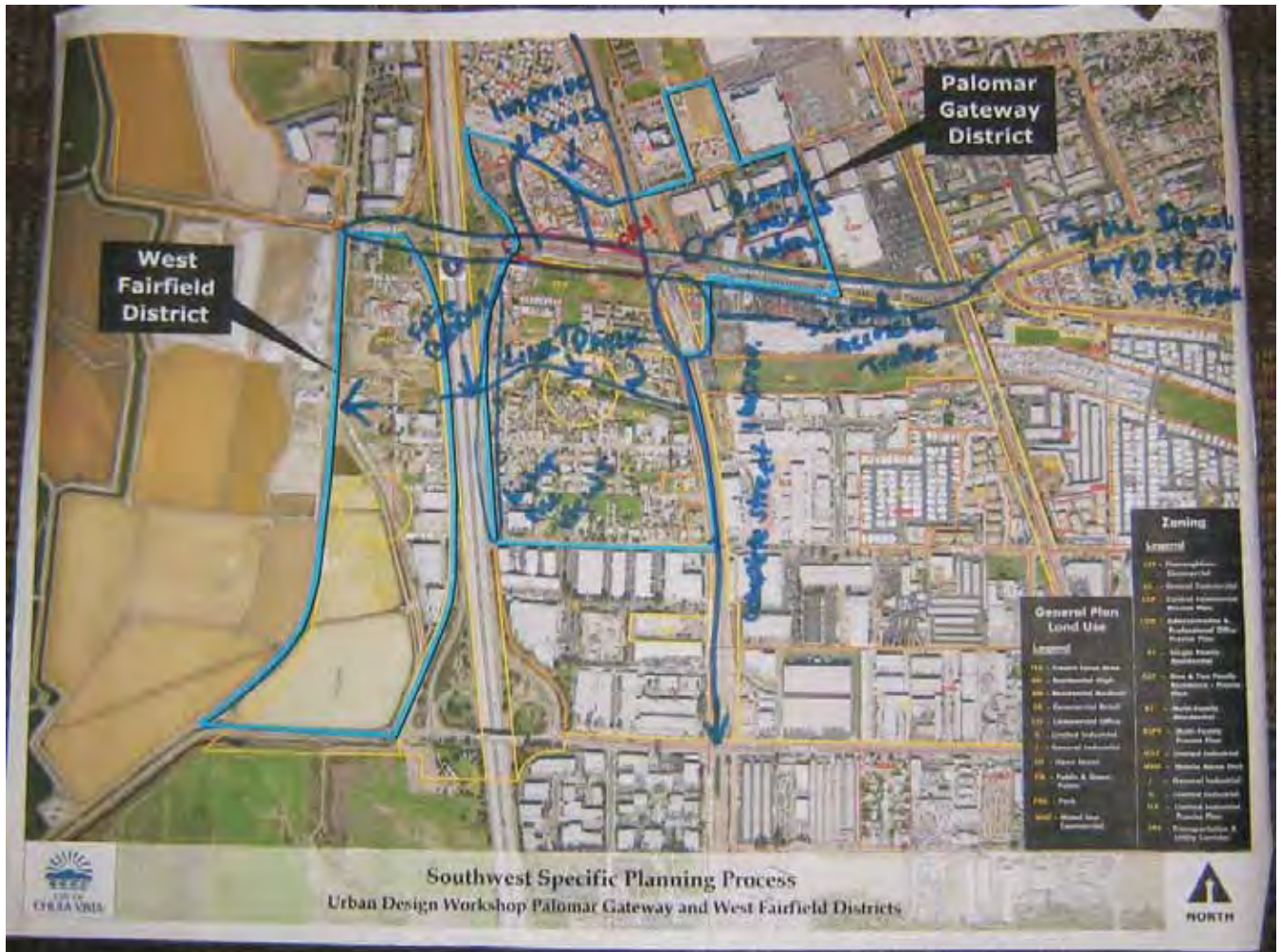




Exhibit J - Conceptual Map from Group #3





APPENDIX B  
MARKET STUDY

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# MARKET STUDY

## Palomar Gateway District

### Chula Vista, CA

Prepared by:  
Gafcon, Inc.

Prepared for:  
City of Chula Vista

September 9, 2011

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## I. INTRODUCTION

Gafcon, Inc. (Gafcon) was selected by the City of Chula Vista to prepare a Market Study that will assist in the preparation and adoption of a Specific Plan for the area in Southwest Chula Vista known as the Palomar Gateway District. The primary goal of the Palomar Gateway District Specific Plan is to implement the General Plan Smart Growth vision for a higher-density residential, pedestrian and transit-oriented development with a mix of shops and office near a transit station. The Specific Plan is intended to enable development to occur in a cohesive manner with appropriate scale, density, urban design, infrastructure, and reflect the community's vision as a unique place. The potential for the Palomar Gateway District to evolve from a relatively low-density auto-focused interchange into a higher density (20 – 40 dwelling units per acre) transit oriented community has been recognized both by SANDAG's Smart Growth Concept Map, which designated the Palomar Gateway District as a "Community Center", and by Chula Vista's 2005 General Plan, which calls for the district to be developed as a Transit Focus Area.

The purpose of this study is to determine whether the vision to be adopted in the Specific Plan is compatible with the area's current and future market demands. This study also identifies strategies to promote market investment into transit-oriented land uses within the Palomar Gateway District. To evaluate these opportunities, the following approach was taken as part of this study:

- Meet with City staff, review existing studies, and conduct site reconnaissance.
- Analyze existing market conditions to identify feasible market opportunities.
- Interview area stakeholders to identify area's opportunities and constraints.
- Forecast near and long-term demand potential for key land uses.
- Evaluate existing policy and identify strategies to promote the development of key land uses.



## II. STAKEHOLDER INTERVIEWS

As part of this study, Gafcon conducted interviews with San Diego and local area real estate professionals to help provide a deepened understanding of the Palomar Gateway District's opportunities and strengths. Industry experts interviewed included: Area Brokers; Developers/Property Owners; Investors; Real Estate Debt Placement Professionals; and Planners/Designers.

Qualitative interviews were conducted based on an informal conversational interview approach and were conducted by phone and in person. Interviewees were generally asked questions related to the feasibility of implementing the vision of the Palomar Gateway District as a Transit Focus Area. In order to help illicit honest responses, interviewees were informed prior to the interview that their responses would be kept confidential and were intended to only help provide depth to the analysis conducted as part of this study.

Interviews conducted as part of this study were limited and informal and are not intended to generate measurable data and findings generally provided in a comprehensive market survey with a deep survey population.

The following list summarizes general thoughts shared by interviewees as part of the study's interviews:

- Streets in District area provide high traffic counts for retail.
- Chula Vista's office market is struggling.
- Mixed-use around Trolley Station ties in with rail line access and growing TOD trends.
- Chula Vista Bayfront represents an exciting opportunity for the City. Bayfront represents a more attractive area for office and residential.
- Some mixed-use projects in the City have struggled from a retail perspective.
- Sufficient parking must be provided as part of any mixed-use retail. Parking allowances probably shouldn't be provided because of TOD/mixed-use land use. Most retail business will be driven from auto trips.
- Most major retailers have parking requirements that mandate traditional parking ratios.
- District will remain auto focused due to area's big box retailers and traffic.
- The City is difficult to work with for developers.
- Retail/office space as part of mixed-use development shouldn't be required.
- Negative/low price perception of District from residential market perspective.
- Development costs for mixed-use project/parking may be too high for area pricing.
- Second floor office space above retail as part of a mixed-use project doesn't work.
- TOD improvements should not inhibit access to existing retailers.

### III. OVERVIEW OF PALOMAR GATEWAY DISTRICT

The Palomar Gateway District is located at the interchange of Palomar Street and the Interstate 5 freeway. The Palomar Gateway District consists of an area of approximately 100-acres that is considered the major southern gateway to the City of Chula Vista for visitors entering both from the freeway and from the blue line trolley. The district radiates from the Palomar Transit Station at the intersection of Palomar Street and Industrial Boulevard, with a mix of light industrial, retail and single/multi-family housing extending north and south of Palomar St. and Industrial Blvd.

Existing residential development in the area generally contains densities ranging from about 5 to 20 dwelling units per acre with the residential area largely concentrated south of Palomar St. Several residential lots in this area are large, roughly 1.0-acre, with varying intensities of development. Several lots have been redeveloped over time to provide multiple single-family homes or multi-family projects. This area south of Palomar St. also contains a small amount of commercial and industrial use at the south end of the District.



The northwest corner of the District, north of Palomar St., contains a mix of residential, industrial, commercial, and a Motel. The northeast corner of Industrial Blvd. and Palomar St. contains a commercial property that contains several warehouse buildings that provide commercial and light industrial uses. The District also contains a recently completed park at the north end of the District, north of Oxford St.

Directly adjacent to the Palomar Gateway District to the east is a major concentration of retailers that provide a significant draw to the Palomar Gateway District area. The retailers are primarily concentrated in the Palomar St./Broadway intersection area. Major big box retailers in this area include: Costco; Target; and Wal-Mart.

## IV. EXISTING MARKET CONDITIONS

### U.S. Market

After enduring a severe recession and financial crisis in 2008 and early 2009, the U.S. economy appears to be showing signs of regained strength. 2010 should mark the year where frozen credit markets began to thaw, consumers shopped again, job losses slowed, and the overall economy, as measured by Gross Domestic Product (GDP) transitioned to positive growth.

Although signs of improvement have emerged, one can still easily point to clouds of concern that hang over our economy. One of the biggest areas of concern is anemic job growth. Damaged by a deep recession in 2008 and early 2009, the U.S. economy lost about 8.4 million jobs through the end of 2009, leaving one in ten workers unemployed and looking for new work. Although it appears job losses peaked in 2009 and reversed the trend in 2010, unemployment levels are still currently close to 10 percent and we have still not seen broad based hiring on a significant level. Nonetheless, employers are expected to take on more employees as the economy continues a mild recovery in 2011.

Today's housing sector represents both a threat and opportunity for our economy. To add some perspective on how quickly and dramatically the housing landscape changed, we can look to housing starts. In 2005, new housing starts peaked in the U.S. at 2.1 million units, the highest level since 1972. However, with the recent housing crash came a decline in housing starts to 554,000 units in 2009, the lowest level seen since 1959, when this recorded data began. In part due to low interest rates and homebuyers incentives, housing starts have reversed the recent trend of decline toward a trend of moderate growth. This trend is expected to continue in tandem with a slowly improving U.S. economy; however, mortgage defaults, available credit, reduced homebuyer incentives, and limited job growth will continue to be weights for a housing sector pushing up from its bottom.

With an improved job front, pent up consumer demand, and a robust stock market, Consumer spending should increase about 3.0 percent in 2011. Similarly, housing prices should also improve in 2011. Overall, the U.S. economy is expected to grow about 3.0 percent in 2011.



## California Market

In line with the U.S. economy, California's economy is also slowly beginning to recover from 2009 lows. Although a modest recovery emerged in 2010, the damage caused by the significant recession has left deep wounds that will take a number of years to heal. Fortunately for California, the process of healing appears under way.

Peaking in July 2007, California's payroll employment peak of 15.2 million jobs rapidly eroded in 2008 and 2009. By December 2009, California payroll employment bottomed out at 13.8 million jobs. Based on this measure, the California state recession lasted 29 months with 1.4 million job losses, or a decrease of 9.2 percent.

While California's economy appears to be pulling out of recessionary lows, the state's economy faces unique challenges. To begin, the state's budget deficit will need to be addressed immediately in a meaningful way. Fortunately 2010 brought improved fiscal revenues, however, the state continues to incur a deficit that will need to be filled with increased tax revenues and or reductions in expenses. Both tactics for dealing with the deficit will be challenging and may have an adverse impact on the state's job picture. Although the employment picture is expected to improve in 2011, unemployment will likely still remain around 10 percent.

Although new home construction recently showed improved signs of life, activity has subsided as federal tax credits have expired. At the moment, the housing market sits in an uncertain position where on one hand, job growth has improved and interest rates remain low, while on the other hand, a potential flood of foreclosures hangs over the market. The expected pickup in jobs and personal income along with continued low interest rates is expected to offset existing negative conditions and create a 2011 market where the median price increases modestly up around 2 to 3 percent.

## San Diego Market

Similar to California's economy, San Diego County's construction, real estate, manufacturing, and retail trade sectors all suffered significant employment declines. San Diego is expected to report a net loss in jobs for 2010. Nonfarm employment in San Diego County is likely to fall by 8,700 jobs (-0.7 percent) in 2010 following a 5.3 percent drop in 2009. In 2011, the employment picture is expected to moderately improve with a 1.4 percent increase in nonfarm employment. The County's unemployment rate should average 10.7 percent in 2010 compared with a 9.7 percent average in 2009. For 2011, the unemployment rate is expected to decline to 10.2 percent.

San Diego's housing market is expected to show moderate improvements in 2011. To provide some perspective on recent market shifts, we can look back to 2003 when permitted housing units peaked at 18,314 units. This in large part was driven by the downtown condo development surge. As a comparison, 2009 recorded just 2,989 residential permits while 2010 recorded 3,342 residential permits. 2010's increase above the prior year's permit totals marked an 11.8% year-over-year increase.

Out of the 40 California apartment submarkets evaluated in the 2010 USC Lusk Center Southern California Multifamily Report, only four submarkets showed average rent increases. Of those four positive markets, three were located in San Diego County. Through 2011, the Lusk Center has forecasted stable-to-increasing rents for the rents in Inland Empire and San Diego County.

Nonresidential construction declined in 2010, dropping 9.2 percent from 2009 (after falling 45 percent in 2009). Office vacancy continues to burden the office sector, with vacancies reaching 20.4 percent in the first quarter of 2010 and ended 2010 at 19.4%. The industrial office sector has fared better with a reported 12.5% vacancy rate in the first quarter of 2010.

### Chula Vista Market

The first half of the past decade marked a period of tremendous growth for Chula Vista. Average annual growth in housing units from 2000 to 2005 was about 2,590 per year, or a simple average annual growth rate of about 4.5%. In contrast, growth in the second half of the decade declined significantly, as growth in housing during this period was about 1,140 units per year, with considerably less recorded in 2009 and 2010. Annual average growth over this period averaged 1.6%. In terms of sales, sales of existing single-family homes in Chula Vista declined 21% in 2010 from 2009 levels. On a positive note, median home pricing across all Chula Vista submarkets increased in 2010, increasing from 1.3% to 8.3%.

Chula Vista's apartment market is concentrated in the City's western sector. As part of this study, 61 apartment properties with more than 25 units were identified in Chula Vista. Of this total, vacancy rates were found to be 4.4% as compared to countywide average of 5.1%. Rental rates in Chula Vista average about \$1,169 per unit/month as compared to countywide average of \$1,335.

Chula Vista's office market can be divided into an East and West market. Chula Vista's Eastern market provides about 981,068 square feet of office space while the Western market is comprised of about 792,767 square feet. The Eastern market currently suffers from high vacancy rates as compared to the Western market. At the end of 2010, the Eastern market had a total vacancy rate of 40.1% as compared to the Western market average of 14.7%.

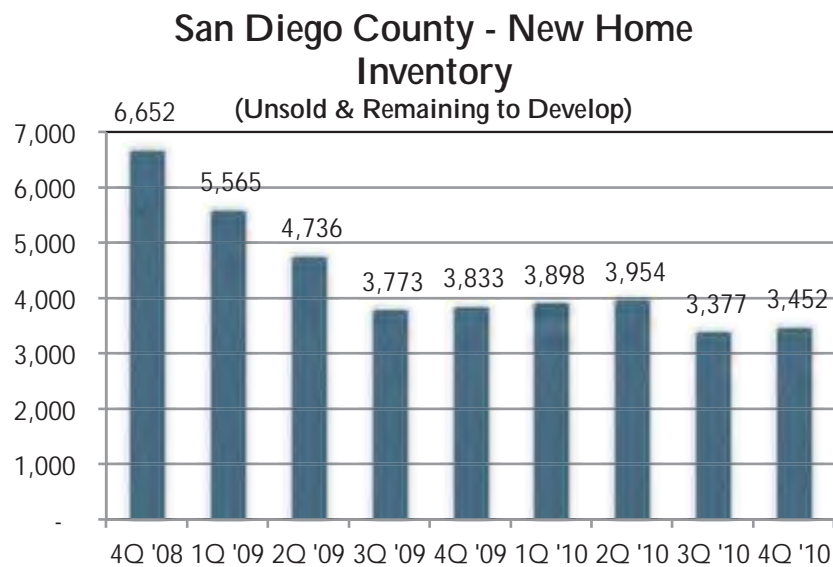
## V. RESIDENTIAL MARKET ASSESSMENT

### New Home Market

San Diego County's new home market ended 2010 at an all-time low. According to MarketPointe Realty Advisors, there were only 421 net sales countywide in the 2010's fourth quarter. This represents a 12 percent drop from the previous quarter and is the lowest quarterly level on record. From an annual perspective, 2010's sales output was 17 percent below 2009 levels and is more than 85 percent less than the peak in 2004.

Despite reaching new lows, some positive signs are beginning to become visible. New home pricing is showing signs of stabilizing. Pricing for attached homes declined less than 1 percent in the fourth quarter of 2010.

However, if Downtown projects are excluded from this analysis, countywide pricing for attached housing nearly increased 7 percent for the fourth quarter. Pricing for detached housing remained largely unchanged on a price per square foot basis, increasing only 1 percent in the fourth quarter.



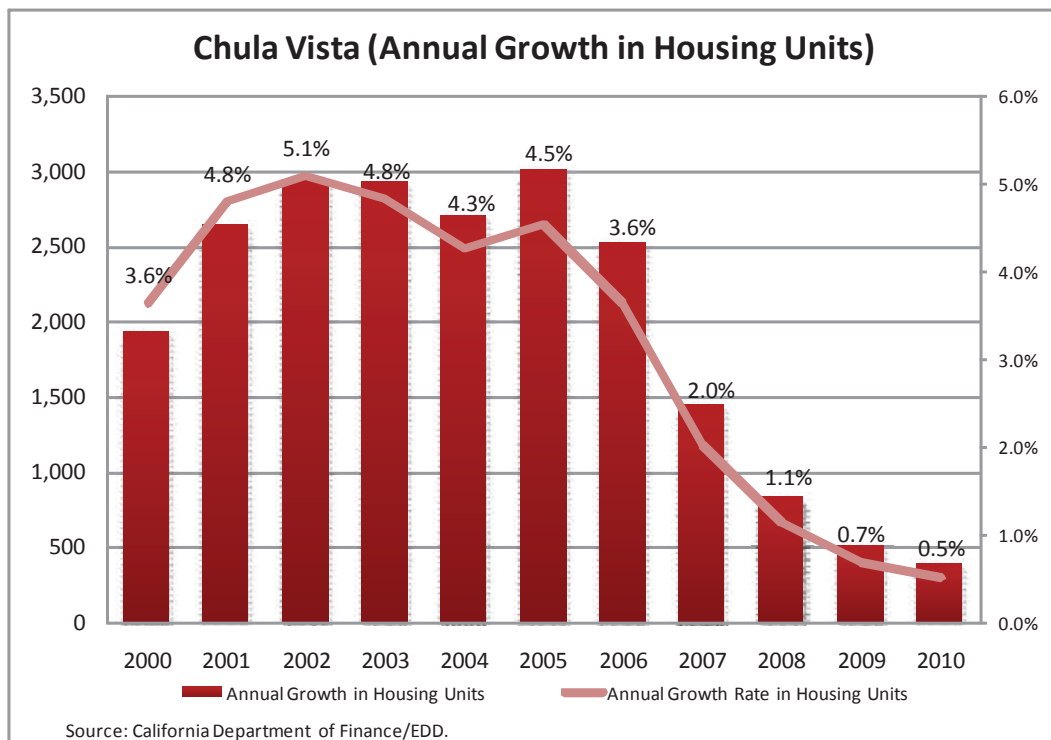
Source: MarketPointe Realty Advisors

In the fourth quarter of 2010, San Diego's inventory of new homes stood at 3,452 units. In comparison, inventory levels at the end of 2009 were 3,833 units. 2010's year-end inventory levels represents a 10 percent drop from 2009 levels. Based on current sales rates, offered and unsold attached inventory represents about a five month supply of housing with unreleased inventory adding an additional 15 months. In the detached sector there exists about a three-month supply of available and unsold units with about a twelve-month supply of unreleased inventory.

The South County new home market is primarily comprised of Chula Vista, National City, and Imperial Beach. In terms of total units provided by new home projects throughout the county, South County represents about 29% of the county's market. Total sales in South County during the fourth quarter of 2010 represented about 15 percent of countywide sales.

At the end of 2010, there were seven attached new home projects with 54 unsold units and 379 units remaining for development. In terms of detached projects, the South County market includes 16 new projects with 93 unsold units and 385 units available for development. Fourth quarter pricing for South County sales was well below countywide averages. For attached units, the average sales price per unit was \$318,505 as compared to a countywide average of \$560,509. Pricing for detached units was similarly lagging the countywide average with a South County average sales price of \$532,666 per unit versus \$626,132 countywide.

As shown in the table below, the first half of the past decade marked a period of tremendous growth for Chula Vista. Average annual growth in units from 2000 to 2005 was about 2,590 per year, or a simple average annual growth rate of about 4.5%. In contrast, the second half of the decade captured a precipitous decline in growth, as the average annual growth in housing during this period was about 1,140 units per year, with considerably less recorded in 2009 and 2010. Annual growth over this period averaged about 1.6%.





In terms of issued residential permits, 2010 marked a year of notable improvement for Chula Vista. According to the Construction Industry Research Board, 266 residential permits were recorded in Chula Vista in 2009. In 2010, 518 permits were recorded, marking a 94.7% increase. Behind the city of San Diego, Chula Vista was the second most active city in San Diego County in terms of permit activity.

Table V.I below compares sales and pricing data for single-family and condominium resales for the month of April in San Diego’s South County market. The Palomar Gateway District lies within Chula Vista’s designated South market that largely covers the southwest portion of Chula Vista. The South County Market overall experienced a 29.8% year-over-year drop in April sales for single-family homes. Pricing however remained fairly stable with only a 1.2% decline in median pricing. Similarly, condominium sales volume dropped 24.7%, however, year-over-year median pricing improved 5.9%.

As shown in the table, sales volume in Chula Vista was impaired equally across all submarkets for single-family housing with mixed results in pricing. Median pricing for single-family housing across Chula Vista’s submarkets ranged from \$271,500 in the South market up to \$472,000 in Chula Vista’s Northeast market. South County’s overall median price for single-family resales through April 2011 is \$321,500.

South County condominium resale volume dipped in concert with single-family sales, dropping 24.7% from April 2010 levels. Pricing however improved 5.9% over the prior April bringing the April 2011 median price to \$170,500. In terms of the Chula Vista markets, median condominium pricing ranged from \$135,000 in the South market to \$230,000 in the Southeast market.

Overall, Chula Vista’s South Market outperformed South County averaged for sales and pricing for both single-family and condominium resales.

**Table V.I**  
**Home Sales & Median Prices - April 2011**  
 San Diego - South County Market (Year-over-Year Comparison)

| Place                              | Zip Code | Resale          |            |               |                  |                  |              |                 |            |               |                  |                  |             |
|------------------------------------|----------|-----------------|------------|---------------|------------------|------------------|--------------|-----------------|------------|---------------|------------------|------------------|-------------|
|                                    |          | Single-Family   |            |               |                  |                  |              | Condominiums    |            |               |                  |                  |             |
|                                    |          | # of Units Sold |            |               | Median Price     |                  |              | # of Units Sold |            |               | Median Price     |                  |             |
| 2010                               | 2011     | % Change        | 2010       | 2011          | % Change         | 2010             | 2011         | % Change        | 2010       | 2011          | % Change         |                  |             |
| Chula Vista N                      | 91910    | 48              | 40         | -16.7%        | \$322,500        | \$316,000        | -2.0%        | 15              | 17         | 13.3%         | \$150,000        | \$155,500        | 3.7%        |
| Chula Vista S                      | 91911    | 55              | 47         | -14.5%        | \$264,500        | \$271,500        | 2.6%         | 21              | 21         | 0.0%          | \$126,000        | \$135,000        | 7.1%        |
| Chula Vista - E. Lake - Otay Ranch | 91913    | 58              | 44         | -24.1%        | \$378,000        | \$345,000        | -8.7%        | 23              | 25         | 8.7%          | \$229,000        | \$182,500        | -20.3%      |
| Chula Vista NE                     | 91914    | 15              | 11         | -26.7%        | \$458,000        | \$472,000        | 3.1%         | 8               | 10         | 25.0%         | \$228,000        | \$215,000        | -5.7%       |
| Chula Vista SE                     | 91915    | 40              | 25         | -37.5%        | \$415,000        | \$386,500        | -6.9%        | 19              | 15         | -21.1%        | \$230,000        | \$250,000        | 8.7%        |
| Bonita                             | 91902    | 14              | 13         | -7.1%         | \$412,500        | \$430,000        | 4.2%         | 1               | 4          | 300.0%        | \$125,000        | \$116,000        | -7.2%       |
| Imperial Beach                     | 91932    | 9               | 7          | -22.2%        | \$295,000        | \$256,500        | -13.1%       | 18              | 10         | -44.4%        | \$95,250         | \$226,500        | 137.8%      |
| National City                      | 91950    | 27              | 14         | -48.1%        | \$205,000        | \$184,000        | -10.2%       | 17              | 4          | -76.5%        | \$77,000         | \$133,500        | 73.4%       |
| Nestor                             | 92154    | 63              | 30         | -52.4%        | \$290,000        | \$271,000        | -6.6%        | 27              | 5          | -81.5%        | \$150,000        | \$120,000        | -20.0%      |
| San Ysidro                         | 92173    | 7               | 5          | -28.6%        | \$235,000        | \$225,000        | -4.3%        | 9               | 8          | -11.1%        | \$105,000        | \$110,000        | 4.8%        |
| <b>Total - South County:</b>       |          | <b>336</b>      | <b>236</b> | <b>-29.8%</b> | <b>\$325,500</b> | <b>\$321,500</b> | <b>-1.2%</b> | <b>158</b>      | <b>119</b> | <b>-24.7%</b> | <b>\$161,000</b> | <b>\$170,500</b> | <b>5.9%</b> |

Source: DataQuick Information Systems

Table V.II below takes a longer view of the South County market in comparing 2009 total sales to 2010 total sales. South County single-family resales sales volume in 2010 declined 21.4% from 2009 sales with sales dropping from 4,006 to 3,149 in 2010. In line with South County's annual drop, Chula Vista single-family sales also declined 21%. The biggest sales decline in Chula Vista occurred in the City's South Market, where 2010 sales volume dropped 35% from 2009 levels. Of the 3,149 recorded single-family sales in South County in 2010, 2,041 or 65% occurred in Chula Vista.

Median pricing across all Chula Vista and South County markets improved. For the South County market as a whole, median pricing for single-family homes increased 6.8%. Increases across Chula Vista's submarkets ranged from 1.3% to 8.3%. South County's median resale price for a single-family home was \$334,000 in 2010. Chula Vista's Northeast market posted the highest median price at \$500,000 while the lowest median price was recorded in the City's South market at \$270,000.

Condominium sales in South County showed some positive signs, declining only 3.1% in 2010 from 2009. Median pricing in the condominium sector remained stable, increasing 1.1% from 2009 levels. For Chula Vista's Condominium market, 2009 saw 1,040 sales compared to 998 sales in 2010, representing a 4.0% year-over-year decline. Median pricing for condominiums increased in all Chula Vista submarkets with the exception of the (East Chula Vista/East Lake/Otay Ranch) submarket. The East submarket posted a 2.3% year-over-year decline in median prices for condominiums. The South County's median price for condominiums in 2010 was \$180,000, increasing \$2,000 over the 2009 median price. Once again, Chula Vista's South market recorded the lowest median price at \$135,000 while the Southeast market posted the highest median price in 2010 at \$217,000.

**Table V.II**

**Annual Home Sales (2010 vs. 2009)**

San Diego County - South County Market

| Place                              | Zip Code | Resale          |              |               |                  |                  |             |                 |             |              |                  |                  |             |
|------------------------------------|----------|-----------------|--------------|---------------|------------------|------------------|-------------|-----------------|-------------|--------------|------------------|------------------|-------------|
|                                    |          | Single-Family   |              |               |                  |                  |             | Condominiums    |             |              |                  |                  |             |
|                                    |          | # of Units Sold |              |               | Median Price     |                  |             | # of Units Sold |             |              | Median Price     |                  |             |
| 2009                               | 2010     | % Change        | 2009         | 2010          | change           | 2009             | 2010        | % Change        | 2009        | 2010         | % Change         |                  |             |
| Chula Vista N                      | 91910    | 519             | 455          | -12.3%        | \$305,000        | \$325,000        | 6.6%        | 211             | 188         | -10.9%       | \$151,250        | \$165,000        | 9.1%        |
| Chula Vista S                      | 91911    | 726             | 470          | -35.3%        | \$250,000        | \$270,000        | 8.0%        | 195             | 189         | -3.1%        | \$130,000        | \$135,000        | 3.8%        |
| Chula Vista - E. Lake - Otay Ranch | 91913    | 589             | 507          | -13.9%        | \$375,000        | \$380,000        | 1.3%        | 291             | 289         | -0.7%        | \$215,000        | \$210,000        | -2.3%       |
| Chula Vista NE                     | 91914    | 288             | 228          | -20.8%        | \$482,500        | \$500,000        | 3.6%        | 106             | 123         | 16.0%        | \$215,500        | \$217,000        | 0.7%        |
| Chula Vista SE                     | 91915    | 462             | 381          | -17.5%        | \$360,000        | \$390,000        | 8.3%        | 237             | 209         | -11.8%       | \$235,000        | \$235,000        | 0.0%        |
| Bonita                             | 91902    | 157             | 141          | -10.2%        | \$425,000        | \$460,000        | 8.2%        | 41              | 27          | -34.1%       | \$170,000        | \$157,500        | -7.4%       |
| Imperial Beach                     | 91932    | 109             | 102          | -6.4%         | \$267,500        | \$295,000        | 10.3%       | 84              | 97          | 15.5%        | \$182,500        | \$115,000        | -37.0%      |
| National City                      | 91950    | 310             | 234          | -24.5%        | \$180,000        | \$210,000        | 16.7%       | 106             | 105         | -0.9%        | \$104,000        | \$138,500        | 33.2%       |
| Nestor                             | 92154    | 694             | 540          | -22.2%        | \$279,000        | \$285,000        | 2.2%        | 262             | 242         | -7.6%        | \$150,000        | \$155,000        | 3.3%        |
| San Ysidro                         | 92173    | 152             | 91           | -40.1%        | \$240,000        | \$270,000        | 12.5%       | 114             | 127         | 11.4%        | \$94,250         | \$99,000         | 5.0%        |
| <b>Total - South County:</b>       |          | <b>4,006</b>    | <b>3,149</b> | <b>-21.4%</b> | <b>\$312,750</b> | <b>\$334,000</b> | <b>6.8%</b> | <b>1647</b>     | <b>1596</b> | <b>-3.1%</b> | <b>\$178,000</b> | <b>\$180,000</b> | <b>1.1%</b> |

Source: MDA DataQuick

New home sales in April 2011 remained unchanged from April 2010. As shown in Table V.III, April sales for new homes recorded at 35 sales for both 2009 and 2010. Median pricing for the South County Market increased about 5.3%, although this increase was only generated from a small base of sales that could be influenced by product mix. Similar to the home resale market, Chula Vista dominated the South County market activity posting 28 of the 35 new home sales in April 2009 and 29 of the 35 home sales in April 2010. Median

**Table V.III**  
**Home Sales & Median Prices - April 2011**  
 San Diego - South County Market (Year-over-Year Comparison)

| Place                              | New                        |           |             |                  |                  |             |
|------------------------------------|----------------------------|-----------|-------------|------------------|------------------|-------------|
|                                    | Single-Family/Condominiums |           |             |                  |                  |             |
|                                    | # of Units Sold            |           |             | Median Price     |                  |             |
|                                    | 2010                       | 2011      | % Change    | 2010             | 2011             | % Change    |
| Chula Vista N                      | 1                          | 2         | 100%        | \$485,000        | \$252,000        | -48.0%      |
| Chula Vista S                      | 2                          | 0         | -100.0%     | \$257,500        | n/a              | n/a         |
| Chula Vista - E. Lake - Otay Ranch | 11                         | 8         | -27.3%      | \$412,000        | \$380,000        | -7.8%       |
| Chula Vista NE                     | 2                          | 10        | 400.0%      | \$670,000        | \$620,750        | -7.4%       |
| Chula Vista SE                     | 12                         | 9         | -25.0%      | \$377,250        | \$339,500        | -10.0%      |
| Bonita                             | 0                          | 0         | n/a         | n/a              | n/a              | n/a         |
| Imperial Beach                     | 1                          | 1         | 0.0%        | \$177,500        | \$339,000        | 91.0%       |
| National City                      | 3                          | 3         | 0.0%        | \$206,500        | \$155,000        | -24.9%      |
| Nestor                             | 2                          | 2         | 0.0%        | \$258,000        | \$260,000        | 0.8%        |
| San Ysidro                         | 1                          | 0         | -100.0%     | \$290,000        | n/a              | n/a         |
| <b>Total - South County:</b>       | <b>35</b>                  | <b>35</b> | <b>0.0%</b> | <b>\$375,000</b> | <b>\$395,000</b> | <b>5.3%</b> |

Source: DataQuick Information Systems  
 pricing for Chula Vista’s new sales declined significantly over the prior year’s April.

As shown in Table V.IV below, South County’s new home market in 2010 remained largely unchanged from 2009. 2010 sales for new single-family and condominiums recorded at 545, a decline of 17 units or 3.0% from the 2009 level of 562. Chula Vista experienced a 5.1% drop in year-over-year sales, dropping from 470 new homes sales in 2009 to 446 in 2010. Three of Chula Vista’s five submarkets posted strong year-over-year gains, however, Chula Vista’s East Lake/Otay Ranch and Southeast submarkets pulled down annual gains. Median pricing for the South County market declined 2.8% over 2009, dropping from \$360,000 in 2009 to \$350,000 in 2010.

**Table V.IV**  
**Annual Home Sales (2010 vs. 2009)**  
 San Diego County - South County Market

| Place                           | Zip Code | New                        |            |              |                  |                  |              |
|---------------------------------|----------|----------------------------|------------|--------------|------------------|------------------|--------------|
|                                 |          | Single-Family/Condominiums |            |              |                  |                  |              |
|                                 |          | # of Units Sold            |            |              | Median Price     |                  |              |
|                                 |          | 2009                       | 2010       | % Change     | 2009             | 2010             | % Change     |
| Chula Vista N                   | 91910    | 13                         | 25         | 92.3%        | \$283,500        | \$305,000        | 7.6%         |
| Chula Vista S                   | 91911    | 14                         | 32         | 128.6%       | \$240,000        | \$257,500        | 7.3%         |
| Chula Vista - E. Lake - Otay R: | 91913    | 213                        | 151        | -29.1%       | \$336,000        | \$360,000        | 7.1%         |
| Chula Vista NE                  | 91914    | 66                         | 100        | 51.5%        | \$693,000        | \$598,000        | -13.7%       |
| Chula Vista SE                  | 91915    | 164                        | 138        | -15.9%       | \$379,500        | \$350,000        | -7.8%        |
| Bonita                          | 91902    | 7                          | 5          | -28.6%       | \$220,000        | \$505,000        | 129.5%       |
| Imperial Beach                  | 91932    | 1                          | 8          | 700.0%       | \$251,500        | \$177,500        | -29.4%       |
| National City                   | 91950    | 38                         | 56         | 47.4%        | \$338,500        | \$225,000        | -33.5%       |
| Nestor                          | 92154    | 39                         | 21         | -46.2%       | \$404,500        | \$261,500        | -35.4%       |
| San Ysidro                      | 92173    | 7                          | 9          | 28.6%        | \$255,000        | \$161,000        | -36.9%       |
| <b>Total - South County:</b>    |          | <b>562</b>                 | <b>545</b> | <b>-3.0%</b> | <b>\$360,000</b> | <b>\$350,000</b> | <b>-2.8%</b> |

Source: MDA DataQuick

South County's actively selling new home communities were evaluated as part of this study. Table V.V on the following page summarizes actively selling communities in the South County. All 26 of the communities audited as part of the South County market are located in the Chula Vista market. On average, 2011 first quarter sales at each community averaged about 0.47 sales per week. Out of the 2,697 total units, 1,659 units were sold to date through the end of March 2011. Of the 1,038 unsold units, 899 are remaining to be developed and 139 are developed and unsold. All new communities are located in Chula Vista's eastern sector with a large share of communities in Otay Ranch.



**Table V.V**  
**San Diego's South County Q1, 2011**  
**Development Summary Table By Community**

| Development/Developer  | Community/<br>MasterPlan                 | Sales/Week   |              | Ranges    |       |          | Sales Start<br>Map/Page # | LotSize/<br>Concept | Total<br>Units | Total<br>Sold | CurQtr<br>Sold | Unsold     | Remain<br>ForDev |
|--|--|--------------|--------------|-----------|-------|----------|---------------------------|---------------------|----------------|---------------|----------------|------------|------------------|
|  |  | CurQtr       | Cum          | Price     | Sqft  | \$/Sqft  |                           |                     |                |               |                |            |                  |
| ANDORRA @ EASTLAKE SUMMIT<br>CORNERSTONE COMMUNITIES             | CHULA VISTA<br>EASTLAKE SUMMIT           | 0.33         | 0.34         | \$319,990 | 1,445 | \$174.88 | 7-May-05                  | 0                   | 135            | 107           | 4              | 4          | 24               |
| JACARANDA II @ LOMAS VERDES<br>MCMILLIN COMPANIES                | CHULA VISTA<br>LOMAS VERDES              | 0.25         | 0.39         | \$410,261 | 1,935 | \$183.89 | 15-May-10                 | 4000                | 109            | 18            | 3              | 9          | 82               |
| MOSAIC @ LOMAS VERDES<br>SHEA HOMES                              | CHULA VISTA<br>LOMAS VERDES              | 0.00         | 0.37         | \$237,900 | 1,175 | \$181.35 | 16-Jun-07                 | 0                   | 218            | 74            | 0              | 7          | 137              |
| TAPESTRY @ LOMAS VERDES<br>SHEA HOMES                            | CHULA VISTA<br>LOMAS VERDES              | 0.00         | 0.22         | \$343,900 | 1,822 | \$167.28 | 28-Jul-07                 | 2000                | 98             | 44            | 0              | 5          | 49               |
| TERRACOTTA @ LOMAS VERDES<br>MCMILLIN COMPANIES                  | CHULA VISTA<br>LOMAS VERDES              | 0.83         | 0.38         | \$329,990 | 1,577 | \$194.49 | 26-Aug-06                 | 3075                | 132            | 93            | 10             | 5          | 34               |
| ANACAPA @ OTAY RANCH<br>KANE DEVELOPMENT                         | CHULA VISTA<br>OTAY RANCH                | 1.00         | 1.00         | \$369,900 | 2,221 | \$166.54 | 1-Mar-11                  | 3000                | 49             | 5             | 5              | 2          | 42               |
| CASITAS DE AVILA @ OTAY RANCH<br>HERITAGE BUILDING & DEVELOPMENT | CHULA VISTA<br>OTAY RANCH                | 0.08         | 0.21         | \$309,900 | 1,648 | \$157.82 | 18-Sep-10                 | 2000                | 61             | 6             | 1              | 3          | 52               |
| MONTEREY @ OTAY RANCH<br>KB HOME                                 | CHULA VISTA<br>OTAY RANCH                | 3.66         | 3.66         | \$340,990 | 1,917 | \$167.81 | 19-Feb-11                 | 2890                | 95             | 22            | 22             | 13         | 60               |
| PRESIDIO @ OTAY RANCH<br>KANE DEVELOPMENT                        | CHULA VISTA<br>OTAY RANCH                | 0.40         | 0.40         | \$419,900 | 2,571 | \$163.13 | 1-Mar-11                  | 3000                | 40             | 2             | 2              | 5          | 33               |
| SANTA RITA @ OTAY RANCH<br>HERITAGE BUILDING & DEVELOPMENT       | CHULA VISTA<br>OTAY RANCH                | 0.25         | 0.17         | \$427,900 | 2,439 | \$172.73 | 18-Sep-10                 | 4500                | 23             | 5             | 3              | 2          | 16               |
| VILLAS DE AVILA @ OTAY RANCH<br>PACIFIC COAST COMMUNITIES        | CHULA VISTA<br>OTAY RANCH                | 0.00         | 0.10         | \$288,900 | 1,342 | \$177.79 | 18-Sep-10                 | 0                   | 76             | 3             | 0              | 6          | 67               |
| MONET @ OTAY RANCH-HILLSBOROUGH<br>PACIFIC COAST COMMUNITIES     | CHULA VISTA<br>OTAY RANCH-HILLSBOROUGH   | 0.32         | 0.77         | \$222,900 | 1,000 | \$187.88 | 23-Apr-05                 | 0                   | 255            | 242           | 4              | 13         | 0                |
| CYPRESS LANE @ MONTECITO RIDGE<br>KANE DEVELOPMENT               | CHULA VISTA<br>OTAY RANCH-MONTECITORIDGE | 0.75         | 0.36         | \$359,900 | 1,511 | \$209.04 | 17-Jun-06                 | 2700                | 89             | 89            | 3              | 0          | 0                |
| MONTE SERENO @ MONTECITO RIDGE<br>OAKWOOD DEVELOPMENT            | CHULA VISTA<br>OTAY RANCH-MONTECITORIDGE | 0.08         | 0.24         | \$499,900 | 2,978 | \$167.07 | 28-Jun-06                 | 4250                | 95             | 60            | 1              | 7          | 28               |
| SANTA BARBARA @ MONTECITO RIDGE<br>PACIFIC COAST COMMUNITIES     | CHULA VISTA<br>OTAY RANCH-MONTECITORIDGE | 0.16         | 0.20         | \$488,900 | 2,825 | \$158.69 | 7-Nov-06                  | 4250                | 96             | 48            | 2              | 4          | 44               |
| TERRAZA @ MONTECITO RIDGE<br>SUNRISE COMPANY                     | CHULA VISTA<br>OTAY RANCH-MONTECITORIDGE | 1.33         | 0.28         | \$390,000 | 2,508 | \$141.18 | 8-Jul-07                  | 2600                | 85             | 55            | 16             | 4          | 26               |
| PALMA @ ROLLING HILLS RANCH<br>CORNERSTONE COMMUNITIES           | CHULA VISTA<br>ROLLING HILLS RANCH       | 0.25         | 0.56         | \$554,990 | 2,555 | \$195.12 | 15-Jan-10                 | 2000                | 54             | 36            | 3              | 5          | 13               |
| ESTRELLA @ SAN MIGUEL RANCH<br>SHEA HOMES                        | CHULA VISTA<br>SAN MIGUEL RANCH          | 0.66         | 0.26         | \$536,100 | 3,244 | \$149.27 | 26-Jun-06                 | 4000                | 69             | 67            | 8              | 2          | 0                |
| MARAVILLA @ SAN MIGUEL RANCH<br>SHEA HOMES                       | CHULA VISTA<br>SAN MIGUEL RANCH          | 0.16         | 0.24         | \$727,200 | 3,814 | \$161.34 | 19-Jun-06                 | 10200               | 74             | 60            | 2              | 4          | 10               |
| PATRIA @ SAN MIGUEL RANCH<br>TRI POINTE HOMES                    | CHULA VISTA<br>SAN MIGUEL RANCH          | 0.66         | 0.87         | \$517,500 | 2,687 | \$171.56 | 27-Feb-10                 | 2000                | 52             | 50            | 8              | 2          | 0                |
| AGAVE @ WINDINGWALK<br>SHEA HOMES                                | CHULA VISTA<br>WINDINGWALK               | 0.25         | 0.62         | \$302,900 | 1,464 | \$206.89 | 18-Jan-06                 | 0                   | 175            | 170           | 3              | 5          | 0                |
| AMBER @ WINDINGWALK<br>SHEA HOMES                                | CHULA VISTA<br>WINDINGWALK               | 0.16         | 0.41         | \$440,900 | 2,342 | \$181.06 | 17-Jun-06                 | 4600                | 119            | 104           | 2              | 1          | 14               |
| CLOVER @ WINDINGWALK<br>SHEA HOMES                               | CHULA VISTA<br>WINDINGWALK               | 0.00         | 0.31         | \$288,900 | 1,579 | \$171.23 | 23-Jun-07                 | 0                   | 112            | 63            | 0              | 9          | 40               |
| CORDOVA @ WINDINGWALK<br>BROOKFIELD HOMES                        | CHULA VISTA<br>WINDINGWALK               | 0.00         | 0.36         | \$295,900 | 1,638 | \$172.74 | 14-Jul-07                 | 0                   | 180            | 70            | 0              | 12         | 98               |
| SAPPHIRE @ WINDINGWALK<br>SHEA HOMES                             | CHULA VISTA<br>WINDINGWALK               | 0.08         | 0.28         | \$486,900 | 2,589 | \$168.38 | 17-Jun-06                 | 4600                | 80             | 72            | 1              | 4          | 4                |
| TRELLIS @ WINDINGWALK<br>BROOKFIELD HOMES                        | CHULA VISTA<br>WINDINGWALK               | 0.50         | 0.38         | \$430,900 | 2,361 | \$177.82 | 29-Jul-06                 | 3800                | 126            | 94            | 6              | 6          | 26               |
| <b>26 Total Projects</b>   |  | <b>12.16</b> | <b>13.38</b> |           |       |          |                           |                     | <b>2,697</b>   | <b>1,659</b>  | <b>109</b>     | <b>139</b> | <b>899</b>       |
| <b>Average Per Development</b>                                   |  | <b>0.47</b>  | <b>0.51</b>  |           |       |          |                           |                     |                |               |                |            |                  |

Source: MarketPointe Realty Advisors

**Rental Market**

San Diego’s rental housing market performed relatively well throughout the recent downturn. As shown in Table V.VI, the average monthly rental rate in San Diego in March 2011 was \$1,335. This represents a 1.47 percent increase over March 2010’s average and only 0.7 percent below the all time high recorded in September 2008. The overall countywide vacancy rate increased to 5.06 percent, however, this measure is slightly skewed with the release of 435 units from Downtown’s Vantage Pointe project. Excluding this project, and its 331 vacancies from the vacancy analysis, would result in a countywide vacancy rate of 4.8 percent.

San Diego’s South County rental market primarily includes Chula Vista, National City, and Imperial Beach. With 17,615 rental units, South County represents 15 percent of the countywide market, as measured by MarketPointe’s audit of apartment properties with at least 25 units. Of South County’s 17,615 total units, about 53% or 9,390 are located in Chula Vista.

In comparison to countywide averages, the South County market enjoys a lower vacancy rate of 4.19 percent vs. the countywide average of 5.06 percent. Of the audited units in Chula Vista, a vacancy rate of 4.4% was identified. South County’s average monthly rental rate of \$1,188 is about 11% lower than the countywide average of \$1,335. The following table provides an overview of San Diego County’s rental market:

**Table V.VI  
San Diego Rental Housing Market**

| Market                 | Total Projects | Total Units    | Total Rented   | Total Vacant | Vacancy Factor | Weighted Average |            |               |
|------------------------|----------------|----------------|----------------|--------------|----------------|------------------|------------|---------------|
|                        |                |                |                |              |                | Rent             | Sq. Ft.    | \$/Sq. Ft.    |
| East County            | 156            | 16,868         | 16,022         | 846          | 5.02%          | \$1,119          | 846        | \$1.32        |
| Highway 78 Corridor    | 182            | 24,966         | 23,701         | 1,265        | 5.07%          | \$1,187          | 862        | \$1.38        |
| Interstate 15 Corridor | 71             | 11,627         | 11,037         | 590          | 5.07%          | \$1,403          | 879        | \$1.60        |
| North County Coastal   | 98             | 19,422         | 18,584         | 838          | 4.31%          | \$1,657          | 948        | \$1.75        |
| San Diego Central      | 166            | 27,543         | 25,845         | 1,698        | 6.16%          | \$1,437          | 837        | \$1.72        |
| South County           | 132            | 17,615         | 16,877         | 738          | 4.19%          | \$1,188          | 851        | \$1.40        |
| <b>TOTAL</b>           | <b>805</b>     | <b>118,041</b> | <b>112,066</b> | <b>5,975</b> | <b>5.06%</b>   | <b>\$1,335</b>   | <b>868</b> | <b>\$1.54</b> |

Source: MarketPoint Realty Advisors

In terms of future rental housing, a total of 9,127 units included in 48 projects have been identified countywide as part of MarketPointe’s 2011 Q1 Rental Trends Report. The future housing includes units under construction, approved, and in the planning stages. Of this total, 10 projects and 1,707 units were identified in the South County market.

As shown in Table V.VII on the following page, 61 apartment projects were identified in Chula Vista. The projects identified in the table were included as part of MarketPointe Realty Advisors 2011 Q1 Rental Trends Update. Apartment complexes larger than 25 units were included in the analysis. Chula Vista apartment communities average about 154 units per property with units averaging about 872 square feet. Chula Vista monthly rental rates averaged \$1,169 compared to a South County average of \$1,188 and a countywide average of \$1,335. Chula Vista's apartment market is largely comprised of older apartment communities with the average age of construction in 1978. Of Chula Vista's 61 audited apartment communities, only five were constructed after the year 2000. In the Chula Vista/Imperial Beach market area, Garden Communities is completing a 644-unit project, Greenfield Village.

**Table V.VII**  
**Summary of Chula Vista Apartment Properties**  
**Mar-11**

| Development/Owner                      | Zip        | Weighted Average |            |               | Lease Start   | Units        | Leased       | Vacant     | Vacancy Rate |
|--|------------|------------------|------------|---------------|---------------|--------------|--------------|------------|--------------|
|  |            | Rent             | Sqft       | \$/sqft       |               |              |              |            |              |
| A POINT OF VIEW APARTMENTS/VIEW POINTE | 91910      | \$1,212          | 816        | \$1.49        | Aug-90        | 37           | 33           | 4          | 10.8%        |
| BAY BREEZE                             | 91910      | \$785            | 460        | \$1.71        | Jan-58        | 58           | 58           | 0          | 0.0%         |
| BAY POINTE APARTMENTS                  | 91910      | \$1,224          | 906        | \$1.35        | Jan-85        | 33           | 31           | 2          | 6.1%         |
| BEACON COVE                            | 91910      | \$1,341          | 860        | \$1.56        | Mar-86        | 176          | 166          | 10         | 5.7%         |
| BONITA HILLS APARTMENTS                | 91910      | \$1,429          | 942        | \$1.52        | Jan-78        | 94           | 91           | 3          | 3.2%         |
| CANYON VILLA                           | 91910      | \$1,484          | 978        | \$1.52        | Jan-81        | 183          | 170          | 13         | 7.1%         |
| CASA VICTORIA                          | 91910      | \$928            | 697        | \$1.33        | Jan-73        | 136          | 133          | 3          | 2.2%         |
| CENTRE TOWER APARTMENTS                | 91910      | \$1,061          | 934        | \$1.14        | Jan-68        | 92           | 92           | 0          | 0.0%         |
| EUCALYPTUS GROVE                       | 91910      | \$1,255          | 701        | \$1.79        | Dec-86        | 376          | 357          | 19         | 5.1%         |
| EUCALYPTUS PARK VIEW                   | 91910      | \$1,149          | 818        | \$1.40        | Dec-88        | 53           | 52           | 1          | 1.9%         |
| ONE PARK                               | 91910      | \$1,227          | 847        | \$1.45        | Jul-87        | 94           | 94           | 0          | 0.0%         |
| PARK REGENCY APARTMENTS                | 91910      | \$695            | 390        | \$1.78        | Jan-57        | 125          | 121          | 4          | 3.2%         |
| ROYAL APARTMENTS - CHULA VISTA         | 91910      | \$775            | 450        | \$1.72        | Jan-64        | 128          | 125          | 3          | 2.3%         |
| SOMERSET APARTMENTS - CHULA VISTA      | 91910      | \$975            | 800        | \$1.22        | Jan-59        | 96           | 95           | 1          | 1.0%         |
| SOUTH BAY TOWERS APARTMENTS            | 91910      | \$879            | 860        | \$1.02        | Jan-69        | 132          | 125          | 7          | 5.3%         |
| ST. THOMAS APARTMENTS                  | 91910      | \$1,233          | 892        | \$1.38        | Sep-89        | 77           | 75           | 2          | 2.6%         |
| TELEGRAPH CANYON APARTMENTS            | 91910      | \$948            | 691        | \$1.37        | Jan-69        | 94           | 88           | 6          | 6.4%         |
| TERRA NOVA VILLAS                      | 91910      | \$1,332          | 800        | \$1.66        | Jan-85        | 232          | 216          | 16         | 6.9%         |
| THE GEORGIAN                           | 91910      | \$1,067          | 993        | \$1.07        | Jan-69        | 35           | 35           | 0          | 0.0%         |
| TOSCANA AT RANCHO DEL REY              | 91910      | \$1,675          | 1,074      | \$1.56        | Jul-90        | 500          | 460          | 40         | 8.0%         |
| VILLAGES AT BONITA GLEN                | 91910      | \$1,087          | 983        | \$1.11        | Jan-74        | 295          | 263          | 32         | 10.8%        |
| VISTAN APARTMENTS                      | 91910      | \$990            | 768        | \$1.29        | Jan-64        | 352          | 352          | 0          | 0.0%         |
| WINDSONG                               | 91910      | \$1,158          | 813        | \$1.42        | Jun-90        | 104          | 101          | 3          | 2.9%         |
| WOODLAND HILLS APARTMENTS              | 91910      | \$1,355          | 1,133      | \$1.20        | Jan-72        | 60           | 59           | 1          | 1.7%         |
| WOODLAWN COLONIAL                      | 91910      | \$908            | 806        | \$1.13        | Jan-72        | 160          | 150          | 10         | 6.3%         |
| WOODLAWN GARDENS                       | 91910      | \$1,066          | 831        | \$1.28        | Jan-69        | 150          | 135          | 15         | 10.0%        |
| WOODLAWN WEST APARTMENTS               | 91910      | \$895            | 650        | \$1.38        | Jan-66        | 117          | 113          | 4          | 3.4%         |
| ALVA GARDENS                           | 91911      | \$1,262          | 887        | \$1.42        | Oct-87        | 65           | 64           | 1          | 1.5%         |
| ANGELINA TERRACE                       | 91911      | \$1,365          | 1,064      | \$1.28        | Jan-75        | 75           | 73           | 2          | 2.7%         |
| BRANDYWINE                             | 91911      | \$1,091          | 781        | \$1.40        | Jan-86        | 48           | 45           | 3          | 6.3%         |
| CASA DE PALOMAR                        | 91911      | \$1,202          | 913        | \$1.32        | Jan-81        | 80           | 78           | 2          | 2.5%         |
| CASTLE ARMS                            | 91911      | \$808            | 679        | \$1.19        | Jan-77        | 120          | 116          | 4          | 3.3%         |
| COUNTRY APARTMENTS                     | 91911      | \$938            | 800        | \$1.17        | Jan-72        | 144          | 140          | 4          | 2.8%         |
| COUNTRY CLUB VILLAGE                   | 91911      | \$1,143          | 1,008      | \$1.13        | Jan-68        | 107          | 106          | 1          | 0.9%         |
| EAST ORANGE VILLAGE                    | 91911      | \$1,261          | 1,060      | \$1.19        | Jan-77        | 128          | 124          | 4          | 3.1%         |
| GREENBRIAR                             | 91911      | \$1,122          | 713        | \$1.57        | Jan-85        | 100          | 97           | 3          | 3.0%         |
| JAMES PLACE                            | 91911      | \$1,006          | 1,066      | \$0.94        | Jan-85        | 32           | 32           | 0          | 0.0%         |
| MALIBU SOUTH APARTMENTS                | 91911      | \$1,169          | 849        | \$1.38        | Jan-75        | 140          | 132          | 8          | 5.7%         |
| ORANGE GLEN APARTMENTS                 | 91911      | \$1,046          | 720        | \$1.45        | Jan-85        | 124          | 119          | 5          | 4.0%         |
| PALM VILLAS                            | 91911      | \$1,196          | 951        | \$1.26        | Apr-90        | 42           | 41           | 1          | 2.4%         |
| PARK PALOMAR APARTMENTS                | 91911      | \$793            | 522        | \$1.52        | Jan-64        | 476          | 476          | 0          | 0.0%         |
| PARK VIEW - CHULA VISTA                | 91911      | \$1,093          | 824        | \$1.33        | Jan-76        | 37           | 37           | 0          | 0.0%         |
| SEAWIND APARTMENTS                     | 91911      | \$1,091          | 740        | \$1.47        | Jan-70        | 200          | 184          | 16         | 8.0%         |
| SEVILLA APARTMENTS/ALEXAN SEVILLA      | 91911      | \$1,714          | 1,101      | \$1.56        | Mar-01        | 156          | 140          | 16         | 10.3%        |
| SIERRA PARK APARTMENTS                 | 91911      | \$1,212          | 1,213      | \$1.00        | Jan-66        | 120          | 118          | 2          | 1.7%         |
| SOUTH BAY APTS./NAPLES COURT/ALDERWOOD | 91911      | \$1,116          | 652        | \$1.71        | Jan-72        | 167          | 164          | 3          | 1.8%         |
| SUNSET VILLA APARTMENTS                | 91911      | \$985            | 830        | \$1.19        | Jan-67        | 155          | 151          | 4          | 2.6%         |
| THE MISSIONS AT SUNBOW                 | 91911      | \$1,591          | 1,002      | \$1.59        | Aug-02        | 336          | 299          | 37         | 11.0%        |
| VILLA GRANADA                          | 91911      | \$1,175          | 1,023      | \$1.15        | Jan-69        | 203          | 199          | 4          | 2.0%         |
| VILLA K                                | 91911      | \$940            | 800        | \$1.18        | Jan-70        | 75           | 68           | 7          | 9.3%         |
| VILLA MARINA                           | 91911      | \$1,160          | 778        | \$1.49        | May-86        | 175          | 172          | 3          | 1.7%         |
| VILLA NAPOLI                           | 91911      | \$1,078          | 836        | \$1.29        | Jan-82        | 146          | 140          | 6          | 4.1%         |
| VILLA SEVILLE                          | 91911      | \$1,271          | 1,064      | \$1.19        | Jan-68        | 123          | 122          | 1          | 0.8%         |
| VISTA DEL CORONADO                     | 91911      | \$1,075          | 923        | \$1.16        | Jan-69        | 224          | 213          | 11         | 4.9%         |
| VISTA KNOLLS                           | 91911      | \$943            | 892        | \$1.06        | Jan-74        | 74           | 74           | 0          | 0.0%         |
| VISTA LANE                             | 91911      | \$846            | 656        | \$1.29        | Jan-73        | 150          | 149          | 1          | 0.7%         |
| VISTA PACIFIC VILLAS                   | 91911      | \$1,224          | 950        | \$1.29        | Jan-81        | 55           | 54           | 1          | 1.8%         |
| CAMDEN SIERRA @ OTAY RANCH             | 91913      | \$1,656          | 1,018      | \$1.63        | Jun-02        | 422          | 384          | 38         | 9.0%         |
| MARQUIS VILLAS AT OTAY RANCH           | 91913      | \$2,457          | 1,964      | \$1.25        | Jul-08        | 98           | 97           | 1          | 1.0%         |
| PINNACLE AT OTAY RANCH                 | 91913      | \$1,589          | 1,055      | \$1.51        | Aug-01        | 364          | 353          | 11         | 3.0%         |
| TERESINA AT LOMAS VERDES               | 91913      | \$1,576          | 976        | \$1.61        | Dec-99        | 440          | 427          | 13         | 3.0%         |
| <b>Total:</b>                          | <b>61</b>  | <b>---</b>       | <b>---</b> | <b>---</b>    | <b>---</b>    | <b>9,390</b> | <b>8,978</b> | <b>412</b> | <b>4.4%</b>  |
| <b>Average:</b>                        | <b>---</b> | <b>\$1,169</b>   | <b>872</b> | <b>\$1.34</b> | <b>Jul-78</b> | <b>154</b>   | <b>147</b>   | <b>7</b>   | <b>4.4%</b>  |

Source: MarketPointe Realty Advisors & Gafcon.  
 \* Rental rates and SF averages are simple averages based on community weighted averages.



As shown in Table V.VIII below, about 93% of Chula Vista’s apartment properties are generally located in the City’s western sector. Roughly 44% of Chula Vista’s apartment properties are located in the City’s North market (Zip 91910), with 49% located in the South market (Zip 91911) and the remaining properties are located in East Lake/Otay Ranch area (Zip 91913). In terms of the distribution of apartment units, about 42% are located in the North market; 43% in the South market; and 14% are located in the East Lake/Otay Ranch area.

**Table V.VIII**  
**Chula Vista Apartment Market Overview**  
**Mar-11**

| Place                              | ZIP   | # of Properties | # of Properties (% of Total) | Total Units  | Units (% of Total) | Total Units Leased | Total Units Vacant | Vacancy Rate |
|------------------------------------|-------|-----------------|------------------------------|--------------|--------------------|--------------------|--------------------|--------------|
| Chula Vista N                      | 91910 | 27              | 44%                          | 3,989        | 42%                | 3,790              | 199                | 5.0%         |
| Chula Vista S                      | 91911 | 30              | 49%                          | 4,077        | 43%                | 3,927              | 150                | 3.7%         |
| Chula Vista - E. Lake - Otay Ranch | 91913 | 4               | 7%                           | 1,324        | 14%                | 1,261              | 63                 | 4.8%         |
| Chula Vista NE                     | 91914 | ---             | ---                          | ---          | ---                | ---                | ---                | ---          |
| Chula Vista SE                     | 91915 | ---             | ---                          | ---          | ---                | ---                | ---                | ---          |
| <b>Total:</b>                      |       | <b>61</b>       | <b>100%</b>                  | <b>9,390</b> | <b>100%</b>        | <b>8,978</b>       | <b>412</b>         | <b>4.4%</b>  |

Source: MarketPointe Realty Advisors & Gafcon.

As shown in the following chart V.IX, monthly rental rates for the North and South markets are roughly equal at \$1,116 and \$1,131 respectively. On a per square foot basis however, the North market enjoys slightly higher rates of \$1.38 per square foot as compared to the South market average of \$1.29. The East Lake/Otay on the other hand, receives the highest rents for Chula Vista with average monthly rents of \$1,819 or \$1.45 per square foot. The stronger rents recorded in the East Lake/Otay Ranch are largely attributed to premiums associated with newer properties, larger floor plans, and preferred locations.

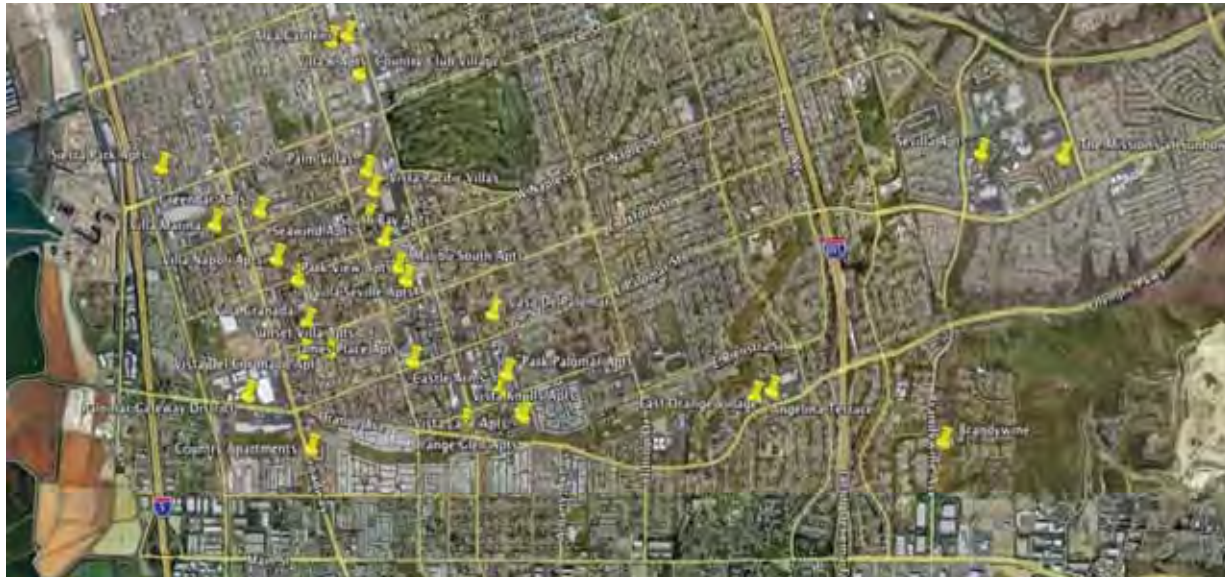
**Table V.IX**  
**Chula Vista Apartment Market Overview (Market Averages)**  
**Mar-11**

| Place                              | ZIP   | # of Properties | Avg. # of Units | Avg. Date of Lease Start | Avg. Monthly Rent per Unit | Avg. SF per Unit | Avg. Monthly Rent per SF |
|------------------------------------|-------|-----------------|-----------------|--------------------------|----------------------------|------------------|--------------------------|
| Chula Vista N                      | 91910 | 27              | 148             | Aug-75                   | \$1,116                    | 811              | \$1.38                   |
| Chula Vista S                      | 91911 | 30              | 136             | Nov-77                   | \$1,131                    | 877              | \$1.29                   |
| Chula Vista - E. Lake - Otay Ranch | 91913 | 4               | 331             | Feb-11                   | \$1,819                    | 1,253            | \$1.45                   |
| Chula Vista NE                     | 91914 | ---             | ---             | ---                      | ---                        | ---              | ---                      |
| Chula Vista SE                     | 91915 | ---             | ---             | ---                      | ---                        | ---              | ---                      |
| <b>Total Average:</b>              |       | <b>---</b>      | <b>154</b>      | <b>Jul-78</b>            | <b>\$1,169</b>             | <b>872</b>       | <b>\$1.34</b>            |

Source: MarketPointe Realty Advisors & Gafcon.

\* Rental rates and SF averages are simple averages based on community weighted averages.

There are currently no major market-rate apartment properties located directly within the Palomar Gateway District. The following map provides the locations of the 30 apartment properties identified in Chula Vista's South market. As shown in the following image of Chula Vista's South Market, the majority of Chula Vista's South Apartment market properties can be found running along Broadway and 4<sup>th</sup> Avenue.



The five closest apartment communities to the Palomar District are summarized in Table V.X below. The adjacent projects listed are generally located within 0.5 miles of the Trolley Station and are older properties, constructed between 1968 and 1972. Vacancy rates are well below the countywide average of 5.06% and range from 0.8% to 4.9%. Average monthly rents from these communities are below the countywide average of \$1,335.

**Table V.X**

**Summary of Select Apartment Communities Adjacent to Palomar Gateway District**

| Development             | Distance<br>Trolley Station | Weighted Average |       |         | Ranges  |       |         | Lease  |       |        |        | Vacancy<br>Rate |
|-------------------------|-----------------------------|------------------|-------|---------|---------|-------|---------|--------|-------|--------|--------|-----------------|
|                         |                             | Rent             | Sqft  | \$/sqft | Rent    | Sqft  | \$/Sqft | Start  | Units | Leased | Vacant |                 |
| COUNTRY APARTMENTS      | 0.4 miles                   | \$938            | 800   | \$1.17  | \$825   | 700   | \$1.17  | Jan-72 | 144   | 140    | 4      | 2.8%            |
|                         |                             |                  |       |         | \$995   | 850   | \$1.18  |        |       |        |        |                 |
| SUNSET VILLA APARTMENTS | 0.4 miles                   | \$985            | 830   | \$1.19  | \$850   | 680   | \$1.14  | Jan-67 | 155   | 151    | 4      | 2.6%            |
|                         |                             |                  |       |         | \$1,150 | 1,012 | \$1.25  |        |       |        |        |                 |
| VILLA GRANADA           | 0.5 miles                   | \$1,175          | 1,023 | \$1.15  | \$875   | 700   | \$1.10  | Jan-69 | 203   | 199    | 4      | 2.0%            |
|                         |                             |                  |       |         | \$1,475 | 1,256 | \$1.25  |        |       |        |        |                 |
| VISTA DEL CORONADO      | 0.5 miles                   | \$1,075          | 923   | \$1.16  | \$890   | 756   | \$1.13  | Jan-69 | 224   | 213    | 11     | 4.9%            |
|                         |                             |                  |       |         | \$1,250 | 1,110 | \$1.18  |        |       |        |        |                 |
| VILLA SEVILLE           | 0.6 miles                   | \$1,271          | 1,064 | \$1.19  | \$875   | 700   | \$1.17  | Jan-68 | 123   | 122    | 1      | 0.8%            |
|                         |                             |                  |       |         | \$1,475 | 1,256 | \$1.25  |        |       |        |        |                 |

Source: MarketPointe Realty Advisors and Gafcon

## Housing Demand

Housing demand projections for the Palomar Gateway District were developed as part of this study. These projections are intended to measure potential market demand for multi-family housing over a 20-year horizon. Because of the uncertainty inherent with a long-term forecast, as well as, the lack of a specifically defined development project, the forecast provided in this study is intended to provide general projections for general land use planning purposes.

As part of Gafcon's development of demand projections for the Palomar Gateway District, the San Diego Association of Government's (SANDAG) 2050 Regional Growth Forecast was utilized as a basis for future market trends. SANDAG's forecast for San Diego County projects housing to grow from 1,140,654 units in 2008 to 1,262,488 units in 2020. This increase of 121,834 housing units represents an overall percentage increase of 10.7% over the twelve-year period, or a simple annual average of 0.89% housing unit growth per year.

For Chula Vista, SANDAG projects that Chula Vista's rate of housing growth will outpace the rate of growth expected for the San Diego Region. From 2008 to 2020, Chula Vista's housing is expected to increase from 77,484 to 88,185 units. This housing increase of 10,701 represents a 13.8% increase during the forecast period or a simple annual average of 1.15%. Chula Vista's housing growth is expected to outpace the region in part due to comparatively higher job growth rates coupled with available land, land use plans and policy, and anticipated areas of growth, primarily in the city's eastern sector.

SANDAG's housing projections for San Diego's South Suburban Market, as shown in Table V.XI on the following page, indicate total housing units will grow from about 112,391 housing units in 2010 to about 143,027 housing units in 2030. In total, 30,636 units are expected to be added by 2030, or about 1,532 units per year over the twenty-year forecast horizon. This represents a simple average annual growth rate in housing units of about 1.4%. Housing growth during this period is expected to occur disproportionately in the multi-family sector, as 73% to 78% of housing units added through 2030 are anticipated to be multi-family units.

**Table V.XI**  
**HOUSING DEMAND - SAN DIEGO'S SOUTH SUBURBAN MARKET**

|  | 2010           | 2012           | 2015           | 2020           | 2030           |
|--|----------------|----------------|----------------|----------------|----------------|
| <b>San Diego - South Suburban Market</b> |                |                |                |                |                |
| Population                               | 386,303        | 398,604        | 417,055        | 448,240        | 489,096        |
| Cummulative Growth                       |                | 12,301         | 30,752         | 61,937         | 102,793        |
| Avg. Annual Growth                       |                | 6,150          | 6,150          | 6,194          | 5,140          |
| Avg. Annual Growth (%)                   |                | 1.6%           | 1.6%           | 1.6%           | 1.3%           |
| <b>Housing</b>                           |                |                |                |                |                |
| Single Family Housing                    | 71,231         | 71,879         | 73,030         | 76,043         | 77,921         |
| Cummulative Growth                       |                | 648            | 1,799          | 4,812          | 6,690          |
| Avg. Annual Growth                       |                | 324            | 360            | 481            | 335            |
| Avg. Annual Growth (%)                   |                | 0.5%           | 0.5%           | 0.7%           | 0.5%           |
| Share of Cummulative Growth              |                | 24%            | 24%            | 26%            | 22%            |
| Multi-Family Housing                     | 41,160         | 43,193         | 46,806         | 54,829         | 65,106         |
| Cummulative Growth                       |                | 2,033          | 5,646          | 13,669         | 23,946         |
| Avg. Annual Growth                       |                | 1,016          | 1,129          | 1,367          | 1,197          |
| Avg. Annual Growth (%)                   |                | 2.5%           | 2.7%           | 3.3%           | 2.9%           |
| Share of Cummulative Growth              |                | 76%            | 76%            | 74%            | 78%            |
| <b>Total</b>                             | <b>112,391</b> | <b>115,071</b> | <b>119,836</b> | <b>130,872</b> | <b>143,027</b> |
| Cummulative Growth                       |                | 2,680          | 7,445          | 18,481         | 30,636         |
| Avg. Annual Growth                       |                | 1,340          | 1,489          | 1,848          | 1,532          |
| Avg. Annual Growth (%)                   |                | 1.2%           | 1.3%           | 1.7%           | 1.4%           |

Source: SANDAG and Gafcon

SANDAG’s housing projections for Chula Vista, as shown in Table V.XII below, indicate total housing units will grow from about 74,489 housing units in 2010 to about 91,306 housing units in 2030. In total, about 16,817 units are expected to be added by 2030, or about 841 units per year over the twenty-year forecast horizon. This represents a simple average annual growth rate in housing units of about 1.1%. As the forecast horizon moves out into 2030, Chula Vista’s rate of growth decreases as its base of housing grows and the supply of developable land declines.

In 2010, Chula Vista was estimated to have 74,489 single-family and multi-family units. Of this total, 47,923 units, or 64% of total housing units, were estimated to be single family units. Multi-family units were estimated to total 26,656 units, or 36% of total housing units. Looking to the future, multi-family units are anticipated to comprise a larger share of Chula Vista’s housing supply. Throughout the forecast horizon, single-family units are estimated to grow at an average annual growth rate ranging from 0.4% to 0.7%. Conversely, multi-family units are forecasted by SANDAG to grow at an average annual rate of 1.0% to 2.6%.



Similar to South County's projected growth, housing growth is expected to occur disproportionately in the multi-family sector, as 69% to 77% of housing units added through 2030 are anticipated to be multi-family units. Through 2012, 1,244 units of the 1,795 total projected housing units are anticipated by SANDAG to be multi-family housing units. By 2030, multi-family units are projected to represent 43% of the city's housing supply as compared to 36% as estimated in 2010.

**Table V.XII**  
**HOUSING DEMAND - CHULA VISTA**

|                             | 2010    | 2012    | 2015    | 2020    | 2030    |
|-----------------------------|---------|---------|---------|---------|---------|
| <b>Chula Vista</b>          |         |         |         |         |         |
| Population                  | 237,595 | 241,561 | 247,509 | 267,427 | 289,044 |
| Cummulative Growth          |         | 3,966   | 9,914   | 29,832  | 58,647  |
| Avg. Annual Growth          |         | 1,983   | 1,983   | 2,983   | 2,932   |
| Avg. Annual Growth (%)      |         | 0.8%    | 0.8%    | 1.3%    | 1.2%    |
| Single Family Housing       | 47,923  | 48,413  | 49,593  | 50,898  | 51,762  |
| Cummulative Growth          |         | 490     | 1,670   | 2,975   | 3,839   |
| Avg. Annual Growth          |         | 245     | 334     | 298     | 192     |
| Avg. Annual Growth (%)      |         | 0.5%    | 0.7%    | 0.6%    | 0.4%    |
| Share of Cummulative Growth |         | 49%     | 46%     | 30%     | 23%     |
| Multi-Family Housing        | 26,566  | 27,086  | 28,500  | 33,600  | 39,544  |
| Cummulative Growth          |         | 520     | 1,934   | 7,034   | 12,978  |
| Avg. Annual Growth          |         | 260     | 387     | 703     | 649     |
| Avg. Annual Growth (%)      |         | 1.0%    | 1.5%    | 2.6%    | 2.4%    |
| Share of Cummulative Growth |         | 51%     | 54%     | 70%     | 77%     |
| Total                       | 74,489  | 75,499  | 78,093  | 84,498  | 91,306  |
| Cummulative Growth          |         | 1,010   | 3,604   | 10,009  | 16,817  |
| Avg. Annual Growth          |         | 505     | 721     | 1,001   | 841     |
| Avg. Annual Growth (%)      |         | 0.7%    | 1.0%    | 1.3%    | 1.1%    |

Source: SANDAG and Gafcon

As part of this study, Gafcon forecasted multi-family housing demand for the Palomar Gateway District. Utilizing, Chula Vista's multi-family housing projections generated by SANDAG, Gafcon applied feasible market capture rates to the City's forecasted multi-family housing growth through 2030. The capture rates applied to SANDAG's growth forecast are based on the assumption that potential future multi-family projects in the Palomar Gateway District will provide attractive design features, amenities, finishes, and servicing consistent with competitively offered new multi-family programs. The applied capture rates also consider the strength of the Palomar District's location relative to other major existing and planned projects in Chula Vista (Ex. Downtown/Urban Core, Bayfront development, & East Lake/Otay Ranch). For this study, Gafcon projected the multi-family housing projects located in the Palomar Gateway District could capture 5% - 10% of future market demand in Chula Vista for multi-family housing. This study anticipates that future growth throughout the City will continued to be largely captured in the City's East Lake/Otay Ranch submarket. In the longer term, the study anticipates that western project areas (Downtown/Urban Core & Bayfront) will establish themselves as market draws.

A range of capture rates was provided to reflect the likely varying range of competitive product releases and their relative strength to future District projects. The lower range of the capture rate scenario represents the anticipated scenario for the District while the upper range of 10% reflects a more aggressive capture rate scenario. These capture rate scenarios are applied to anticipated multi-family growth for both for sale and for rent housing units.

Even with many uncertainties at the time of this study, Gafcon believes the Palomar Gateway District currently possesses attributes that position the area to be competitive in the current and future multi-family marketplace. Future housing growth is anticipated to be focused in the City's eastern side, and as such, was projected to capture the majority of future demand as part of this study. The Western half of the City has the potential to create new demand for multi-family housing based on the potential progress of the Urban Core and Bayfront project areas. This study assumes plans for the Urban Core and Bayfront become realized over the back end of the forecast horizon and therefore capture a majority of demand in the City's western sphere during that period. Factors that could influence the distribution of future capture rates throughout the city include: Number of competitive projects active in the marketplace; Progress of the District as a Transit Focus Area; Market Value of District projects; Progress of City's other project areas; and Market Value of other projects.

As shown in Table V.XIII below, applying a capture rate of 5% to Chula Vista's projected multi-family housing growth through 2030 results in a theoretical demand for 649 multi-

family housing units in the Palomar Gateway District. In applying a 10% capture rate to forecasted citywide multi-family housing growth, a theoretical demand of 1,298 multi-family housing units for the Palomar Gateway District was projected. It's important to note that units projected in this study represent a theoretical demand and not an expected delivery of units to the Palomar Gateway District. With the exception of the 5-acre lot on southwest corner of Industrial Blvd. and Palomar St., the Palomar Gateway District is largely built out. Redeveloping existing developed lots is typically challenging, both in terms of time and cost. Furthermore, the District is comprised of a large number of residential lots. In order to accommodate larger scale multi-family developments, lots may need to be assembled. Assembling lots for larger scale development may inhibit the District's ability to accommodate future demand.

**Table V.XIII**  
**HOUSING DEMAND - PALOMAR GATEWAY DISTRICT**

|   | 2010 | 2012  | 2015  | 2020   | 2030   |
|---|------|-------|-------|--------|--------|
| <b>Chula Vista - Housing Forecast</b>                               |      |       |       |        |        |
| Single Family Housing Units   |      |       |       |        |        |
| Cummulative Growth  |      | 490   | 1,670 | 2,975  | 3,839  |
| Avg. Annual Growth  |      | 245   | 334   | 298    | 192    |
| Multi-Family Housing Units  |      |       |       |        |        |
| Cummulative Growth  |      | 520   | 1,934 | 7,034  | 12,978 |
| Avg. Annual Growth  |      | 260   | 387   | 703    | 649    |
| Total   |      |       |       |        |        |
| Cummulative Growth  |      | 1,010 | 3,604 | 10,009 | 16,817 |
| Avg. Annual Growth  |      | 505   | 721   | 1,001  | 841    |
| <b>Palomar Gateway District - Multi-Family Demand (Upper Range)</b> |      |       |       |        |        |
| Capture Rate (% of Citywide MF Demand)                              |      | 10.0% | 10.0% | 10.0%  | 10.0%  |
| Demand for Multi-Family Units (Cummulative)                         |      | 52    | 193   | 703    | 1,298  |
| Demand for Multi-Family Units (Annual Avg.)                         |      | 26    | 39    | 70     | 65     |
| <b>Palomar Gateway District - Multi-Family Demand (Lower Range)</b> |      |       |       |        |        |
| Capture Rate (% of Citywide MF Demand)                              |      | 5.0%  | 5.0%  | 5.0%   | 5.0%   |
| Demand for Multi-Family Units (Cummulative)                         |      | 26    | 97    | 352    | 649    |
| Demand for Multi-Family Units (Annual Avg.)                         |      | 13    | 19    | 35     | 32     |

Source: SANDAG and Gafcon

## Housing Conclusions

Situated within walking distance of shopping, restaurants, and trolley access, the Palomar Gateway District provides an attractive opportunity for multi-family housing development. In particular, a vacant site located adjacent to the Palomar Trolley Station on the southwest corner of Palomar and Industrial represents an attractive multi-family site as a five-acre undeveloped site with frontage along Palomar St. and adjacent to the Palomar Trolley Station.

In the near term, development of for-sale multi-family housing will continue to be a challenge. The required investment returns for investors to develop multi-family projects will continue to be inhibited by compressed market pricing, high shadow inventory levels, strict lending standards, and sagging investor/consumer sentiment. This study assumes demand for new housing will begin the return to historically normal levels beginning in 2012.

The development of higher density multi-family for-sale programs in lower priced communities may lag behind higher priced areas, as the high development costs associated with high-density development will be less likely to be absorbed in lower priced communities. Pricing in Chula Vista's South Market is below average when compared to Chula Vista, South County, and the San Diego region as a whole.

Conversely, demand for rental housing in the near term appears strong in the San Diego region and Chula Vista. Chula Vista's South Market contains 30 of Chula Vista's 61 major apartment complexes. Chula Vista's South Market has a vacancy rate of 3.7% compared to a citywide average of 4.4%. San Diego County as a whole has a vacancy rate of 5.06% and South County has a vacancy rate of 4.19%. Low vacancy rates and an aging inventory of apartment complexes in Chula Vista's South Market coupled with the District's proximity to shopping and transit, provides compelling conditions for rental housing development in the Palomar Gateway District.

Near and long-term market supply/demand conditions are anticipated to be favorable for rental housing within the Palomar Gateway District. Below average rental rates in Chula Vista's South Market, however, present a potential inhibitor to future investment. Through March 2011, Chula Vista's South Market average rental rate was recorded at \$1.29 per square foot as compared to San Diego South County's average of \$1.40 and a San Diego countywide average of \$1.54 per square foot. Part of South Chula Vista's rental rate gap can be attributed to an aging rental-housing inventory.



Another challenge in expanding the Palomar Gateway District's supply of housing is the limited amount of undeveloped sites within the District. With the possible exception of the five-acre lot along Palomar St., assembling multiple lots in order to accommodate larger scale multi-family projects will be challenging for potential investors. There are, however, more available opportunities for smaller scale redevelopments involving underutilized lots around 1.0-acre.

From a planning perspective, the General Plan land use designations applied to the Palomar Gateway District provide the appropriate densities at the appropriate locations in order to accommodate transit-oriented multi-family projects.

Demand for multi-family housing in the Palomar Gateway District was forecast over a 20-year horizon. Demand was forecasted to range from 649 to 1,298 multi-family units through 2030. The lower range of this study's forecast is considered a more realistic scenario for the District, as it assumes the District will capture 5.0% of Chula Vista's future multi-family housing demand. This capture rate assumes the East Lake/Otay Ranch market will continue to capture the majority of Chula Vista's housing growth. It also, assumes future redevelopment projects areas such as the Downtown/Urban Core and Bayfront will capture the largest share of West Chula Vista's growth in the future, as these areas grow closer to realizing their visions. The area around the Bayfront E St. Trolley Station was also considered to be a competitive location to capture a small share of future housing demand. An upper range to the forecast was included to provide scale for an optimistic scenario.

The District's limited supply of undeveloped sites will likely limit future growth and prevent the District from achieving the total demand forecasted in this study. There are currently about 400 dwelling units in the District. Utilizing the General Plan land use designations can result in a maximum of 2,400 dwelling units, resulting in a net increase capacity for 2,000 additional units. Based on this study's forecasted housing demand, as well as, the limited supply of undeveloped sites, the build out capacity for the District will not be achieved.

In order to help stimulate new rental housing development in the Palomar Gateway District, conditions of approval should provide flexibility in recognition of the District's challenges, as well as, the investment thresholds required to initiate development. Potential planning targets to integrate commercial uses into a residential development should be promoted through incentives as opposed to requirements for approval.

The following list summarizes major opportunities and challenges the Palomar Gateway District provides as an area for residential development:

Opportunities:

- + Within walking distance of trolley station
- + Within walking distance of restaurant/retail opportunities
- + Proximity to freeway on/off-ramp
- + Location between San Diego and Mexico
- + Underutilized trolley site represents a strong potential opportunity for mixed-use residential development
- + Large and underutilized residential lots south of Palomar St.
- + Recent public infrastructure improvements
- + Proximity to Chula Vista Bayfront Plan Area
- + Vacant five-acre lot on Palomar St./Industrial Blvd.
- + Aging apartment properties
- + Affordability to other residential markets and TOD project areas
- + Development of previously underutilized large lots (Approximately 1.0-acre) with multiple housing units indicates some market and investor interest in the area

Challenges:

- Auto oriented focus
- Restricted pedestrian connectivity (Retail, park, bike paths, etc.)
- Pedestrian barriers (Freeway, trolley crossing, and Industrial Blvd.)
- Low Income
- Traffic congestion, particularly related to trolley use and freeway related congestion
- Minimal sense of community/place
- Mixed market perception
- Secondary commercial users (Ex. North east corner of Industrial Blvd./Palomar St.)
- Land assembly
- Low rents and pricing
- Limited supply of undeveloped land
- High cost of mixed-use/high-density development relative to surrounding pricing and incomes
- Existing District park is isolated from residential center of the District, south of Palomar St.

## VI. RETAIL MARKET ASSESSMENT

### Retail Market

San Diego's retail market ended 2010 with some reason for optimism. For three consecutive quarters, retail demand posted positive net absorption. According to Colliers International, countywide net absorption for 2010 totaled 241,818 square feet. With only 249,000 square feet of new countywide retail space delivered in 2010, total direct vacancy remained unchanged at 5.5%. In the first quarter of 2008, retail rental rates peaked at a historical high of \$2.14 per square foot. Since that peak, rental rates have declined almost 15%, reaching \$1.84 per square foot in the fourth quarter of 2010.

San Diego's countywide retail market, as measured by Colliers International, totals 121,831,264 square feet. The Chula Vista/Bonita market sits within the South County sub-market. The South County market totals 15,835,035 square feet or about 13 percent of the countywide total. In terms of proposed future retail projects, of the San Diego County's 1,915,879 square feet of proposed future retail projects, almost 30 percent is being proposed in South County's market, including 350,823 square feet in the Chula Vista/Bonita market. Furthermore, of South County's proposed projects, about 59 percent is being proposed in the Chula Vista/Bonita area. In terms of vacancy rates, the Chula Vista/Bonita market ended 2010 at 5.1 percent as compared to a South County rate of around 4.9 percent and a countywide average of 5.5 percent. Lease rates for the Chula Vista/Bonita averaged \$1.81 per square foot, exceeding the South County average of \$1.71 per square foot and almost equaling the countywide average of \$1.84 per square foot.

Table VI.I below summarizes San Diego County's retail market:

**Table VI.I**

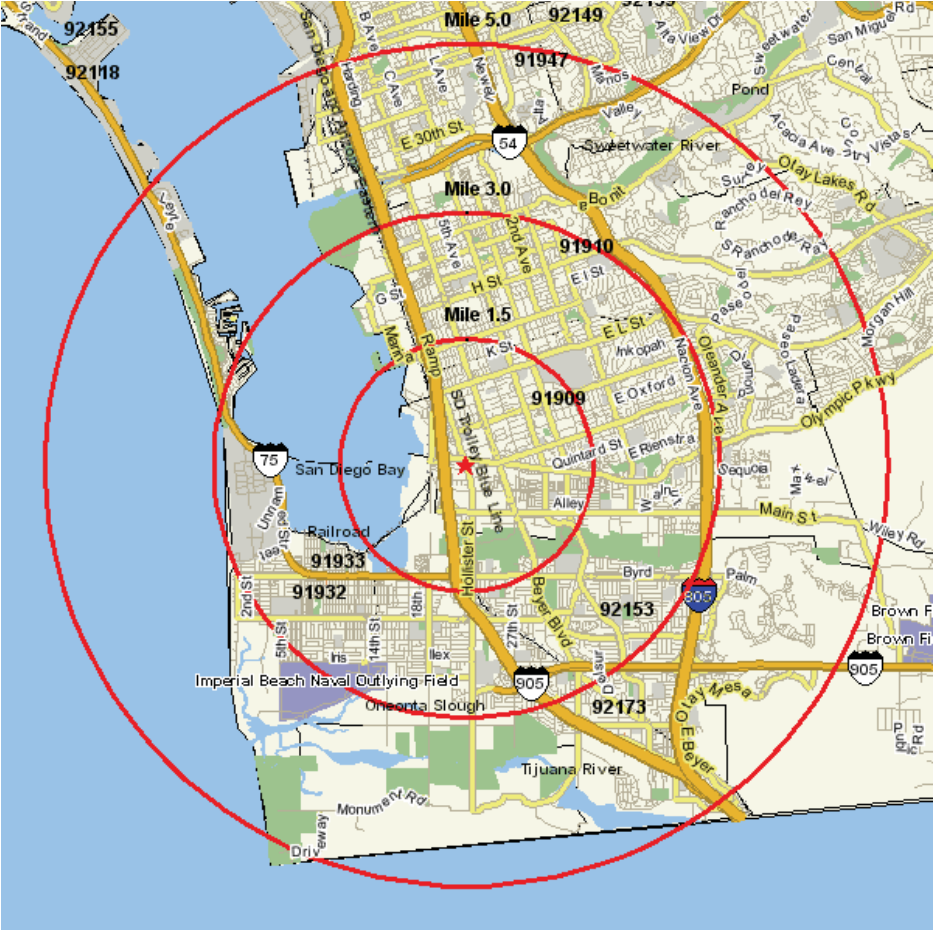
**SD Retail Market  
2010 Q4**

| Submarket                     | # of Bldgs   | Total Inventory    | Direct Vacancy Rate | YTD Net Absorption | Under Construction | Proposed SF      | Avg Rental Rate |
|-------------------------------|--------------|--------------------|---------------------|--------------------|--------------------|------------------|-----------------|
| Central San Diego             | 2,948        | 35,216,339         | 5.0%                | 233,544            | 20,000             | 415,337          | \$ 2.01         |
| East County                   | 1,473        | 18,074,608         | 5.5%                | (104,632)          | 3,729              | 39,984           | \$ 1.44         |
| I-15 Corridor                 | 434          | 7,142,983          | 3.0%                | 53,862             | 18,030             | 36,465           | \$ 2.38         |
| North County                  | 2,520        | 37,889,188         | 6.6%                | 10,987             | 23,819             | 831,295          | \$ 1.80         |
| North San Diego               | 474          | 7,673,111          | 5.1%                | 31,779             | -                  | -                | \$ 2.36         |
| <b>South County</b>           |              |                    |                     |                    |                    |                  |                 |
| Chula Vista/Bonita            | 540          | 8,477,453          | 5.1%                | 46,204             | -                  | 350,823          | \$ 1.81         |
| National City                 | 243          | 3,302,402          | 7.0%                | (47,799)           | 12,958             | 25,557           | \$ 1.58         |
| San Ysidro/Imperial Beach     | 295          | 4,055,180          | 2.8%                | 17,873             | -                  | 216,418          | \$ 1.61         |
| <b>South County Total</b>     | <b>1,078</b> | <b>15,835,035</b>  | <b>4.9%</b>         | <b>16,278</b>      | <b>12,958</b>      | <b>592,798</b>   | <b>\$ 1.71</b>  |
| <b>San Diego County Total</b> | <b>8,927</b> | <b>121,831,264</b> | <b>5.5%</b>         | <b>241,818</b>     | <b>78,536</b>      | <b>1,915,879</b> | <b>\$ 1.84</b>  |

Source: Colliers International

Demographic Overview

As part of this study, Gafcon analyzed demographic, household expenditure, and retail sales data provided by The Nielsen Company/Claritas for 1.5-mile, 3.0-mile, and 5.0-mile trade areas surrounding the Palomar Gateway District. The map below represents the trade area rings evaluated in this study:



The Palomar Trolley Station was designated as a center point for the Palomar Gateway District’s trade area. A 1.5-mile radius surrounding the Trolley Station was evaluated and recognized as the primary trade area for supporting community level retail. The study assumes that households within this trade area will provide the primary support for potential neighborhood retail uses in the District. As shown in Table VI.II, population within the primary trade area is relatively low at 41,587 people. Attributing to this population level is the fact that a significant portion of this trade area crosses into the San Diego Bay. Additionally, a large portion of this trade area is occupied by commercial land uses.



Household income within this trade area is relatively low with a median household income of \$40,240. As the trade area extends to 3.0-miles, median household income increases to \$47,620. Extending the trade-area further out to 5-miles generates a median household income of \$51,973.

The Palomar Gateway District and the surrounding area are primarily comprised of Hispanic or Latino households. Within the District's primary trade area (0 – 1.5 miles), people of Hispanic or Latin origin represent 73.7% of the population. For the City of Chula Vista, about 58.0% of the population is of Hispanic or Latino origin.

Workers within the District's trade areas have an average work commute of about 27 minutes. The primary trade area, however, has fewer cars per household than the secondary trade areas. For the 1.5-mile trade area, residents average about 1.64 cars per household. Extending out to three miles generates an average of about 1.84 vehicles per household. Vehicles per household average about 1.87 within the 5-mile trade area. With fewer cars per household, public transportation is utilized more in the primary trade area. Within the primary trade area, 7.3% of workers utilize public transportation to work as compared to 6.5% for residents within the secondary (3.0-mile) trade area. Similarly, more people walk to work in the primary trade area (3.1%) as compared to the secondary trade area (1.9%).

**TABLE VI.II**  
**DEMOGRAPHIC SNAPSHOT (Palomar Gateway District Trade Area)**

| <b>Description</b>               | <b>0 - 1.5 Mile Radius</b> | <b>0 - 3.0 Mile Radius</b> | <b>0 - 5.0 Mile Radius</b> | <b>Chula Vista</b> |
|----------------------------------|----------------------------|----------------------------|----------------------------|--------------------|
| Population                       | 41,587                     | 189,839                    | 321,354                    | 243,916            |
| Households                       | 13,639                     | 59,580                     | 97,277                     | 71,697             |
| Persons per Household            | 3.04                       | 3.17                       | 3.21                       | 3.30               |
| Median Household Income          | \$40,240                   | \$47,620                   | \$51,973                   | \$66,955           |
| % Hispanic or Latino Origin      | 73.7%                      | 66.5%                      | 63.7%                      | 58.0%              |
| Median Age                       | 31.3                       | 32.4                       | 32.1                       | 33.4               |
| <b>Language</b>                  |                            |                            |                            |                    |
| Speak Only English at Home       | 31.5%                      | 38.3%                      | 38.4%                      | ---                |
| Speak Spanish at Home            | 62.3%                      | 54.0%                      | 52.9%                      | ---                |
| Other                            | 6.2%                       | 7.8%                       | 8.7%                       | ---                |
| Average Number of Vehicles       | 1.64                       | 1.84                       | 1.87                       | ---                |
| Average Travel Time to Work      | 27.43                      | 27.45                      | 27.02                      | ---                |
| <b>Occupation Classification</b> |                            |                            |                            |                    |
| Blue Collar                      | 26.4%                      | 24.4%                      | 23.1%                      | ---                |
| White Collar                     | 47.1%                      | 51.8%                      | 54.1%                      | ---                |
| Service and Farm                 | 26.5%                      | 23.8%                      | 22.9%                      | ---                |
| <b>Transporation to Work</b>     |                            |                            |                            |                    |
| Drove Alone                      | 68.3%                      | 71.8%                      | 72.1%                      | ---                |
| Car Pooled                       | 16.7%                      | 14.5%                      | 14.1%                      | ---                |
| Public Transportation            | 7.3%                       | 6.5%                       | 5.9%                       | ---                |
| Walked                           | 3.1%                       | 1.9%                       | 2.1%                       | ---                |
| Bicycled                         | 0.3%                       | 0.5%                       | 0.4%                       | ---                |
| Other Means                      | 1.1%                       | 1.0%                       | 1.3%                       | ---                |
| Worked at Home                   | 3.2%                       | 3.8%                       | 4.1%                       | ---                |

Source: The Nielsen Company and SANDAG

## Retail Demand

Retail demand projections for the Palomar Gateway District were developed as part of this study. These projections are intended to measure potential market demand for retail land uses over a 20-year horizon. Because of the uncertainty inherent with a long-term forecast, as well as, the lack of a specifically defined development project, the forecast provided in this study is intended to provide general projections for general land use planning purposes.

The Palomar Gateway District is part of a unique retail market that is comprised of separate markets. As part of this study, each market was evaluated individually and collectively to measure total potential retail demand. For this study, primary and secondary markets were evaluated. Primary markets are defined as existing households within a 1.5-mile radius of the Palomar Trolley Station, as well as, projected future Palomar Gateway District households. Secondary markets were defined as cross borders shoppers, area workers, and households with a 5.0-mile radius of the Palomar Trolley Station.

### Primary Market – Existing Residents

The District's primary retail market for this study is defined as existing households within a 1.5-mile radius of the Palomar Trolley Station. Demographic and expenditure data generated by Claritas was evaluated by Gafcon to measure household expenditure capacity/demand and retail sales/supply within the trade area. Demand within the primary trade area was derived by Claritas from the Consumer Expenditure Survey, which is administered by the U.S. Bureau of Labor Statistics. The survey consists of a Quarterly Interview Survey and a Diary Survey that provide information on buying habits, expenditures, income, and consumer characteristics. Retail sales/supply within the primary trade area was derived by Claritas from the Census of Retail Trade, made available by the U.S. Census. Consumer expenditure data was then compared to retail sales data by retail category. Retail categories that were determined to be compatible land uses with a transit focus area were evaluated. As such, retail categories such as, building material, garden equipment, motor vehicle, and gasoline stores were not evaluated as part of this study.

As shown in Table VI.III on the following page, household expenditures within the 1.5-mile trade area total \$265.4M. This total represents expenditures households within the trade area made in the listed retail categories. Total retail sales were reported at \$567.7M. The total for retail sales represents reported sales by retailers within the designated trade area. In total, the data suggests that the supply of retail in the District far exceeds the expenditure capacity of trade area households. This imbalance is largely driven by the relatively low number of households in the primary trade area and the high concentration of major

retailers within the trade area. With the trade area's strong retail concentration, expenditures are likely being pulled from households outside the primary trade area.

**Table VI.III**  
**Retail Demand - Primary Market Area (0 - 1.5-Mile Trade Area)**  
**Existing Households w/in Primary Trade Area**

| Retail Category                             | 2010 Demand<br>(Consumer Expenditures) | 2010 Supply<br>(Retail Sales) | Sales<br>Opportunity   | Capture<br>Rate | \$ per SF<br>Avg. | Square Footage<br>Opportunity |
|---|--|-------------------------------|------------------------|-----------------|-------------------|-------------------------------|
| Furniture, Home Furnishings, & Electronics  | \$17,375,769                           | \$20,898,252                  | (\$3,522,483)          | 10%             | \$400             | NA                            |
| Food & Beverage Stores                      | \$69,062,382                           | \$142,603,221                 | (\$73,540,839)         | 40%             | \$500             | NA                            |
| Health and Personal Care Stores             | \$25,228,782                           | \$34,319,213                  | (\$9,090,431)          | 30%             | \$700             | NA                            |
| Clothing and Clothing Accessories           | \$21,678,333                           | \$32,236,957                  | (\$10,558,624)         | 20%             | \$300             | NA                            |
| Sporting Goods, Hobby, Book, & Music Stores | \$8,134,352                            | \$24,186,896                  | (\$16,052,544)         | 15%             | \$300             | NA                            |
| General Merchandise Stores                  | \$64,178,017                           | \$218,015,708                 | (\$153,837,691)        | 20%             | \$315             | NA                            |
| Misc. Store Retailers                       | \$9,975,002                            | \$20,053,768                  | (\$10,078,766)         | 10%             | \$350             | NA                            |
| Food Service and Drinking Places            | \$49,768,877                           | \$75,357,164                  | (\$25,588,287)         | 35%             | \$400             | NA                            |
| <b>Total</b>                                | <b>\$265,401,514</b>                   | <b>\$567,671,179</b>          | <b>(\$302,269,665)</b> | <b>---</b>      | <b>---</b>        | <b>NA</b>                     |

Sources: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey; Census of Retail Trade; Claritas; Bizminer; & Gafcon.

Individual retail categories were also evaluated to identify specific retail opportunities. In retail categories where household expenditures exceed trade area supply for related categories, potential retail sales opportunities were identified. Specific retail capture rates based on historical retail market trends were applied to each retail category in order to quantify sales that can reasonably be captured within the designated trade area. Industry standard sales per square foot averages, provided by Bizminer, were applied to the potential sales revenue in order to estimate potential square footage demanded for the retail category in demand.

As shown in Table VI.III, the expenditure capacity of households within the primary trade were found to be considerably lower than the existing level of retail sales/supply in the trade area. As such, new retail opportunities from trade area households were not identified.

### Primary Market – Future Residents

In addition to existing households within the primary trade area, potential retail demand from future Palomar Gateway District households was also measured. Average household expenditure data was evaluated for Chula Vista based on California State Board of Equalization data. Based on this data, average household expenditures by retail categories were calculated. Household expenditure averages were then applied to forecasted Palomar Gateway District households in order to calculate expenditure potential in total and by retail category. Industry standard retail capture rates were then applied the future household expenditure capacity to calculate reasonable expenditures in the project area. With captured sales potential figures, industry sales per square footage averages were applied to each retail category to convert sales demand to square footage demand.



As shown in Table VI.IV below, two separate retail demand scenarios are provided. Each scenario is based on the study's housing demand forecast. The lower range scenario is based on housing projections provided in this study that assume the Palomar Gateway District captures 5.0% of Chula Vista's future multi-family housing demand. The upper range scenario assumes the District captures 10% of Chula Vista's future multi-family housing demand. Under the lower range scenario, a total of 8,172 square feet of retail demand is anticipated to be generated from future District households. The upper range scenario generates a potential demand of 16,344 square feet of retail from future residents.

**TABLE VI.IV**  
**Retail Demand - Primary Market**  
**Future District Households**

|  | Avg. Annual Household Expenditures | Capture Rate | Sales/SF              | 2015         | 2020         | 2030          |
|--|------------------------------------|--------------|-----------------------|--------------|--------------|---------------|
| <b>LOWER RANGE SCENARIO</b>                    |                                    |              |                       |              |              |               |
| Cummulative Multi-Family Demand                | ---                                | ---          | ---                   | 97           | 352          | 649           |
| <b>Cummulative Retail Demand (Square Feet)</b> |                                    |              |                       |              |              |               |
| Furniture, Home Furnishings, & Electronics     | \$2,033                            | 10%          | \$400                 | 49           | 179          | 330           |
| Food and Beverage Stores                       | \$1,634                            | 40%          | \$500                 | 126          | 460          | 848           |
| Clothing and Accessories Stores                | \$1,656                            | 20%          | \$300                 | 107          | 388          | 716           |
| General Merchandise Stores                     | \$8,615                            | 20%          | \$315                 | 529          | 1,924        | 3,549         |
| Food Services and Drinking Places              | \$3,917                            | 35%          | \$400                 | 331          | 1,205        | 2,224         |
| Other Retail Group                             | \$2,720                            | 10%          | \$350                 | 75           | 273          | 504           |
|  |                                    |              | <b>Supportable SF</b> | <b>1,218</b> | <b>4,429</b> | <b>8,172</b>  |
| <b>UPPER RANGE SCENARIO</b>                    |                                    |              |                       |              |              |               |
| Cummulative Multi-Family Demand                | ---                                | ---          | ---                   | 193          | 703          | 1298          |
| <b>Cummulative Retail Demand (Square Feet)</b> |                                    |              |                       |              |              |               |
| Furniture, Home Furnishings, & Electronics     | \$2,033                            | 10%          | \$400                 | 98           | 358          | 660           |
| Food and Beverage Stores                       | \$1,634                            | 40%          | \$500                 | 253          | 919          | 1,696         |
| Clothing and Accessories Stores                | \$1,656                            | 20%          | \$300                 | 214          | 777          | 1,433         |
| General Merchandise Stores                     | \$8,615                            | 20%          | \$315                 | 1,058        | 3,847        | 7,099         |
| Food Services and Drinking Places              | \$3,917                            | 35%          | \$400                 | 663          | 2,411        | 4,448         |
| Other Retail Group                             | \$2,720                            | 10%          | \$350                 | 150          | 547          | 1,009         |
|  |                                    |              | <b>Supportable SF</b> | <b>2,436</b> | <b>8,858</b> | <b>16,344</b> |

Sources: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey, Census of Retail Trade, U.S. Census, Claritas, & Gafcon.

Given the primary trade area’s significant retail base, its current disproportionate relationship of retailers to households, and the relatively minimal retail demand projected from future District residents, it’s anticipated that demand generated directly from District residents will be negligible.

### Secondary Market – 1.5 to 5.0 Mile Trade Area

The clustering of major big box retailers, such as Target, Costco, and Wal-Mart, within the primary trade area market creates a synergy in attracting household shoppers from outside of the primary trade area. Based on this condition, the primary trade area was extended to capture potential expenditures from households outside the primary trade area.

A trade area from 1.5 to 5.0-miles was evaluated to capture a secondary market that is a support base for retailers adjacent to the Palomar District. In order to evaluate this market, data was measured for a 5.0-mile radius trade area and the Palomar Trolley Station. Totals from this trade area were subtracted from the 1.5-mile trade area to capture the market area from 1.5 to 5.0-miles. As shown in Table VI.V below, the following retail categories present potential opportunities: Food and beverage; Health and personal care, Sporting goods/hobbies/music, Miscellaneous stores, and food service and drinking places. Sales opportunities in terms of revenues were applied to capture rates that the primary trade area could reasonably capture from this secondary market.

Capture rates were reduced to reflect diminishing demand that accompanies increased distances and shopping opportunities. As calculated in the primary markets, theoretically captured sales revenue was applied to industry average sales per square foot indices to estimate a potential demand in square footage by retail category. Based on the assumptions noted in Table VI.V, a total of 48,365 square feet of retail space can potentially be captured in the primary trade area from secondary markets households.

**Table VI.V**  
**Retail Demand - Secondary Market Area (1.5 - 5.0-Mile Trade Area)**  
Households within Secondary Market

| Retail Category                             | 2010 Demand<br>(Consumer Expenditures) | 2010 Supply<br>(Retail Sales) | Sales<br>Opportunity | Capture<br>Rate | \$ per SF<br>Avg. | Square<br>Footage<br>Opportunity |
|---|--|-------------------------------|----------------------|-----------------|-------------------|----------------------------------|
| Furniture, Home Furnishings, & Electronics  | 142,173,482                            | 176,346,232                   | (34,172,750)         | 5%              | \$400             | NA                               |
| Food & Beverage Stores                      | 470,520,533                            | 435,257,393                   | 35,263,140           | 20%             | \$500             | 14,105                           |
| Health and Personal Care Stores             | 180,215,096                            | 160,265,973                   | 19,949,123           | 10%             | \$700             | 2,850                            |
| Clothing and Clothing Accessories           | 168,111,608                            | 395,514,410                   | (227,402,802)        | 10%             | \$300             | NA                               |
| Sporting Goods, Hobby, Book, & Music Stores | 65,289,090                             | 40,278,546                    | 25,010,544           | 7%              | \$300             | 5,836                            |
| General Merchandise Stores                  | 465,358,293                            | 889,992,730                   | (424,634,437)        | 10%             | \$315             | NA                               |
| Misc. Store Retailers                       | 75,588,047                             | 74,315,167                    | 1,272,880            | 5%              | \$350             | 182                              |
| Food Service and Drinking Places            | 353,885,332                            | 350,247,381                   | 3,637,951            | 15%             | \$400             | 1,364                            |
| <b>Total</b>                                | <b>1,921,141,481</b>                   | <b>2,522,217,832</b>          | <b>(601,076,351)</b> | --              | --                | <b>24,337</b>                    |

Sources: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey; Census of Retail Trade; Claritas; Bizminer; & Gafcon.

## Secondary Market – Cross Border Shoppers

The Palomar Gateway District is a major southern gateway to the City of Chula Vista. In particular, cross border visitors from Mexico can easily access the Palomar Gateway District area from the freeway and the blue line San Diego Trolley. Site visits at District area retail properties by Gafcon, as well as, analysis of trade area retail sales data, review cross border related studies, and interviews with Stakeholders indicate Cross Border shoppers have a significant impact on Chula Vista and District area retailers.

Table VI.VI on the following page represents Gafcon's estimate of retail expenditures from cross border shoppers. The assumptions that serve as the primary basis for this study's cross border shopper estimates are primarily based on secondary data sources that examine cross border activity. In a study prepared by The Center for Border Economic Studies (The Economic Impact of Mexican Visitors Along the U.S. Mexican Border: A Research Synthesis, 2005), northbound border crossings by Mexicans into San Diego County were found to total 19,101,000 in 2004 with San Diego County expenditures estimated at \$2,731,230,000. A different source, The University of Autonoma de Baja California estimated that Baja residents spend \$1,600,000,000 annually in the San Diego region (Based on a 2001 survey). In another study released by the San Diego Dialogue (Who Crosses the Border: A View of San Diego/Tijuana Metropolitan Region, 1994), it was estimated that 50% of border crossers make Chula Vista their first stop and Border Crossers spend \$1,500,000,000 on taxable items. With a lack of definitive historical data tracking this activity and changing economic conditions since previous surveys, Gafcon estimated cross border expenditures at \$2,000,000,000 for this study.

For this study, Gafcon assumed Chula Vista captures 30% of cross border retailer expenditures, or \$600,000,000 in retail sales annually based on annual expenditures of \$2,000,000,000. In the San Diego Dialogues 1994 study, it was estimated that Chula Vista captured about 50% of San Diego County Cross Border shoppers. With increased shopping opportunities within border communities and a lack of regularly updated data tracking cross border expenditures, this study assumes a more conservative capture rate of 30%.

Based on the Palomar Gateway District's proximity to the Mexican border, direct freeway trolley and freeway access, and high concentration of major retailers in the District area, this study assumes the Palomar Gateway District market area captures about 20% of Chula Vista's cross border shopping expenditures. This capture rate is considered conservative, as comprehensive data to refine area capture rates is not available. With this capture rate, the study estimates that the Palomar Gateway District market area captures about \$120,000,000 in cross border retail sales. The captured total of \$120,000,000 was then adjusted to exclude retail categories considered inconsistent with retail uses found in Transit Focus Areas. Retail categories excluded include: Building Material Stores; Gasoline Stores; and Motor

Vehicles. Excluding these retail categories resulted in \$101,811,611 of sales demand for the Palomar Gateway District trade area. Comparing the estimated cross border sales total to the primary trade area's measured sales of \$574,339,105 indicates that Cross Border Sales are estimated to account for about 18% of the primary trade area's total measured retail sales.

Utilizing market sales per square foot averages by retail category results in total square foot retail demand generated from Cross Border shoppers at about 249,271 square feet. Of this total, the Clothing and Accessories retail category was estimated to have a demand of about 68,155 square feet. The General Merchandise Store category was the retail category with the second highest measured demand.

Overall, retail space supported from Cross Border shoppers in the Palomar Gateway District trade area is estimated to be significant at about 249,271 square feet.

**Table VI.VI**  
**Palomar Gateway District**  
**Cross Border Shopping - Sales Capture Potential**

| <b>Market Assumptions:</b>  |                 |                             |
|---|-----------------|-----------------------------|
| SDCO Border Crossers  | 19,101,000      |                             |
| SDCO Expenditures by Border Crossers                                      | \$2,000,000,000 | <i>est.</i>                 |
| Expenditures per party  | \$105           |                             |
| Chula Vista Capture Rate  | 30%             |                             |
| Chula Vista Captured Sales  | \$600,000,000   |                             |
| Palomar Gateway District Market<br>(Capture Rate, % of Chula Vista Sales) | 20%             |                             |
| Palomar Gateway District Market (Sales Demand)                            | \$120,000,000   | All Retail Categories       |
| Palomar Gateway District Market (Net Sales Demand)                        | \$101,811,611   | (Excludes: Bldg, Auto, Gas) |

| <b>Retail Category</b>                     | <b>Sales</b>         | <b>Sales/SF</b> | <b>Square Footage Opportunity</b> |
|--|----------------------|-----------------|-----------------------------------|
| Furniture, Home Furnishings, & Electronics | \$4,811,219          | \$410           | 11,735                            |
| Food and Beverage Stores                   | \$19,122,851         | \$560           | 34,148                            |
| Health and Personal Care Stores            | \$6,985,659          | \$850           | 8,218                             |
| Clothing and Clothing Accessories          | \$25,898,808         | \$380           | 68,155                            |
| Sporting Goods, Hobby, Book, Music Stores  | \$2,252,341          | \$310           | 7,266                             |
| General Merchandise Stores                 | \$17,770,408         | \$310           | 57,324                            |
| Misc. Store Retailers                      | \$11,189,700         | \$400           | 27,974                            |
| Food Service and Drinking Places           | \$13,780,626         | \$400           | 34,452                            |
| <b>Total (Excludes: Bldg/Auto/Gas):</b>    | <b>\$101,811,611</b> |                 | <b>249,271</b>                    |

|   |               |
|---|---------------|
| 1.5-Mile Trade Area Retail Sales              | \$574,339,105 |
| Cross Border Sales as a % of Trade Area Sales | 18%           |

Sources:

The Economic Impact of Mexican Visitors - Along the Mexican Border, Center for Border Economic Studies (2005); Who Crosses the Border: A View of the San Diego/Tijuana Metropolitan Region, A Report of San Diego Dialogue (1994); Gafcon.

## Secondary Market – Area Workers

Workers within the Palomar Gateway District's primary trade area provide additional retail market support. In order to calculate the number of workers surrounding the Palomar Gateway District, Gafcon utilized the U.S. Census Bureau's Longitudinal Employer-Household Dynamics data mapping tool. Utilizing the LEHD data mapping tool, the Palomar Trolley Station was selected as the center point of a designated 1.5-mile radius. From this data ring, 9,620 jobs were estimated to be located in the Palomar Gateway District's 1.5-mile trade area.

The map below is an LEHD data map that represents job distributions within Palomar Gateway District's primary area.

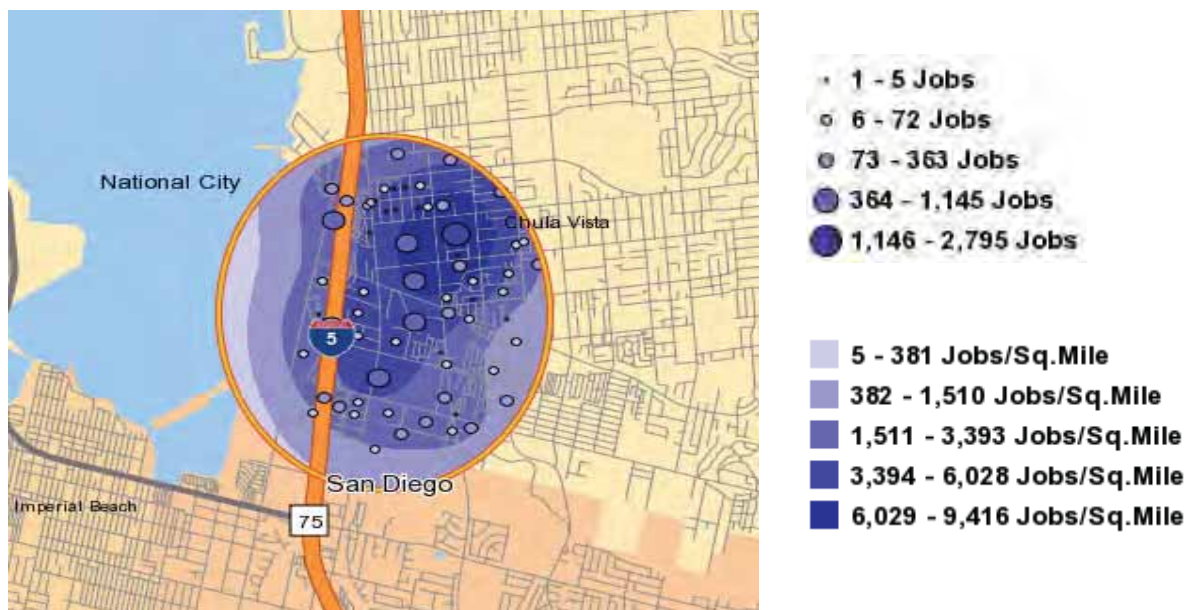


Table VI.VII on the following page provides a detailed breakdown of jobs within the Palomar Gateway District's trade area. Jobs within the trade area are primarily comprised of below average income jobs with 70.1% of the jobs providing monthly earning of \$3,333 or less. The highest share of jobs consists of retail, education, and manufacturing jobs with professional services only accounting for 2.1% of the area total. Educational services, retail/wholesale trade, and manufacturing/Transportation/Warehouse combined account for about 63% of the area's total jobs. Jobs are largely occupied by Hispanic or Latinos, about 59%. In terms of worker education levels, about 18% of area workers have attained a bachelors or advanced degree.



**Table VI.VII**  
**Work Area Profile Report**  
**1.5-Mile Radius around Palomar Trolley Station**

| Job Categories  | 2009      |        |
|---|-----------|--------|
|   | # of Jobs | Share  |
| <b>Total All Jobs</b>   | 9,620     | 100.0% |
| Jobs by Worker Age  |           |        |
| Age 29 or younger   | 2,331     | 24.2%  |
| Age 30 to 54  | 5,542     | 57.6%  |
| Age 55 or older   | 1,747     | 18.2%  |
| Jobs by Earnings  |           |        |
| \$1,250 per month or less   | 2,996     | 31.1%  |
| \$1,251 to \$3,333 per month                                      | 3,747     | 39.0%  |
| More than \$3,333 per month                                       | 2,877     | 29.9%  |
| Jobs by NAICS Industry Sector                                     |           |        |
| Agriculture, Forestry, Fishing and Hunting                        | 38        | 0.4%   |
| Mining, Quarrying, and Oil and Gas Extraction                     | 0         | 0.0%   |
| Utilities   | 15        | 0.2%   |
| Construction  | 345       | 3.6%   |
| Manufacturing   | 961       | 10.0%  |
| Wholesale Trade   | 493       | 5.1%   |
| Retail Trade  | 2,086     | 21.7%  |
| Transportation and Warehousing                                    | 347       | 3.6%   |
| Information   | 63        | 0.7%   |
| Finance and Insurance   | 140       | 1.5%   |
| Real Estate and Rental and Leasing                                | 108       | 1.1%   |
| Professional, Scientific, and Technical Services                  | 200       | 2.1%   |
| Management of Companies and Enterprises                           | 34        | 0.4%   |
| Administration & Support, Waste Management and Remediation        | 257       | 2.7%   |
| Educational Services  | 2,144     | 22.3%  |
| Health Care and Social Assistance                                 | 583       | 6.1%   |
| Arts, Entertainment, and Recreation                               | 87        | 0.9%   |
| Accommodation and Food Services                                   | 612       | 6.4%   |
| Other Services (excluding Public Administration)                  | 788       | 8.2%   |
| Public Administration   | 319       | 3.3%   |
| Jobs by Worker Ethnicity  |           |        |
| Not Hispanic or Latino  | 3,918     | 40.7%  |
| Hispanic or Latino  | 5,702     | 59.3%  |
| Jobs by Worker Educational Attainment                             |           |        |
| Less than high school   | 2,099     | 21.8%  |
| High school or equivalent, no college                             | 1,473     | 15.3%  |
| Some college or Associate degree                                  | 1,969     | 20.5%  |
| Bachelor's degree or advanced degree                              | 1,748     | 18.2%  |
| Educational attainment not available (workers aged 29 or younger) | 2,331     | 24.2%  |

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2009)

In a study conducted by the International Council of Shopping Centers (Office Worker Spending Patterns, 2004), ICSC estimated that office workers in suburban areas within large metropolitan areas spent about \$143 per week at retail stores before arriving home. Based on the relatively low ratio of office jobs within the primary trade area, the area’s job type composition and relatively low worker income levels in the area, Gafcon assumed weekly worker expenditures will average \$85 per week. Based on the high concentration of major retailers within the primary trade area, Gafcon applied a 60% capture rate to worker expenditures.

As shown in the Table VI.VIII below, supportable sales generated from trade area workers are estimated at \$25,531,000. Based on an average sale per square foot rate of \$400, retail space demanded from area workers was estimated at 61,328 square feet.

**Table VI.VIII**  
**Market Area Jobs**  
**Sales Capture Potential**

|  |               |
|--|---------------|
| Market Area Jobs (1.5-Mile Trade Area) | 9,620         |
| Capture Rate                           | 60%           |
| Avg. Weekly Worker Expenditures        | \$85.00       |
| Avg. Annual Work Weeks                 | 50            |
| Supportable Sales                      | \$ 24,531,000 |
| Avg. Sales per Square Foot             | \$400         |
| <b>Supportable Square Feet:</b>        | <b>61,328</b> |

Sources: U.S. Census Bureau, LEHD Origin-Destination Employment Statistics, & Gafcon

**Secondary Market – Trolley Riders**

This study assumes area households, workers, and cross-border shoppers drive the largest share of trolley ridership into the Palomar Trolley station. Since this study includes demand projections for these retail markets, it is assumed that any additional demand outside of these measured consumer markets consumer markets is minimal. The small share of riders who may fall outside of these measured categories are not expected to generate notable retail demand due to the small estimated size of this potential population and the assumption that trolley ridership alone generally does not generate significant retail

demand from riders. In a study prepared by Brion & Associates (Retail Analysis of Dublin Transit Center Specific Plan, 2003), it was determined that BART riders did not generate meaningful retail demand. In this study, Black BART Inc., the largest retail concessionaire within the BART system, reported that Black BART only captured about 3% of riders and the average expenditure was about \$3.50 per transaction. Since this study already captures area residents, workers, and cross-border shoppers, any residual retail demand from riders outside these measured categories is considered to be negligible and as such, is not included in this study.

## Retail Conclusions

The Palomar Gateway District area is a major center of retail activity. Favorable traffic counts, retail clustering, site configurations, freeway/street access, and proximity to the border have made this area around Palomar St. and Broadway an attractive location for a wide range of retailers.

As shown in Table VI.IX below, overall current and future retail demand potential for the Palomar Gateway District was determined to be limited. As part of this analysis, Gafcon developed separate demand projections for primary and secondary markets. Primary markets were considered existing households within a 1.5-mile radius of the Palomar Trolley Station, as well as, future households forecasted as part of this study to potentially be developed in the Palomar Gateway District. Existing trade area households were determined to generate about \$265.4M in retail expenditures while future households were projected to generate \$26.7M in expenditures at build out.

**Table VI.IX**  
**Summary of Total Retail Demand**  
**Palomar Gateway District Primary Market**

| Retail Category                             | Sales Demand - Primary Markets |                   | Sales Demand - Secondary Markets |                       |                   | Forecasted Expenditures | Total Supply (Primary Market) | Total Sales Opportunity | Total Space Opportunity (Square Feet) |
|---|--------------------------------|-------------------|----------------------------------|-----------------------|-------------------|-------------------------|-------------------------------|-------------------------|---------------------------------------|
|   | Existing Households            | Future Households | Households <sup>(1)</sup>        | Cross Border Shoppers | Workers           |                         |                               |                         |                                       |
| Furniture, Home Furnishings, & Electronics  | 17,375,769                     | 1,748,458         | -                                | 4,811,219             | 1,606,038         | 25,541,484              | 20,898,252                    | 4,643,232               | 11,608                                |
| Food & Beverage Stores                      | 69,062,382                     | 6,949,486         | 7,052,628                        | 19,122,851            | 6,383,420         | 108,570,767             | 142,603,221                   | (34,032,454)            | 0                                     |
| Health and Personal Care Stores             | 25,228,782                     | 2,538,677         | 1,994,912                        | 6,985,659             | 2,331,890         | 39,079,921              | 34,319,213                    | 4,760,708               | 6,801                                 |
| Clothing and Clothing Accessories           | 21,678,333                     | 2,181,409         | -                                | 25,898,808            | 2,003,723         | 51,762,273              | 32,236,957                    | 19,525,316              | 65,084                                |
| Sporting Goods, Hobby, Book, & Music Stores | 8,134,352                      | 818,529           | 1,750,738                        | 2,252,341             | 751,856           | 13,707,816              | 24,186,896                    | (10,479,080)            | 0                                     |
| General Merchandise Stores                  | 64,178,017                     | 6,457,991         | -                                | 17,770,408            | 5,931,959         | 94,338,375              | 218,015,708                   | (123,677,333)           | 0                                     |
| Misc. Store Retailers                       | 9,975,002                      | 1,003,747         | 63,644                           | 11,189,700            | 921,987           | 23,154,080              | 20,053,768                    | 3,100,312               | 8,858                                 |
| Food Service and Drinking Places            | 49,768,877                     | 5,008,054         | 363,795                          | 13,780,626            | 4,600,126         | 73,521,478              | 75,357,164                    | (1,835,686)             | 0                                     |
| <b>Total:</b>                               | <b>265,401,514</b>             | <b>26,706,350</b> | <b>11,225,717</b>                | <b>101,811,611</b>    | <b>24,531,000</b> | <b>429,676,192</b>      | <b>567,671,179</b>            | <b>(137,994,986)</b>    | <b>92,352</b>                         |

Notes: (1) Household demand from secondary market based on upper range of forecast.

Secondary markets were also evaluated individually and included: Households within a more distant 1.5 to 5.0-mile radius of the Palomar Trolley Station; Cross border shoppers; and workers within the primary trade area. Due to diminished retail capture rates associated with a retailer’s increased distances from households, households within the secondary trade area (1.5 to 5.0-miles) were estimated to generate retail expenditures of \$11.2M in the primary trade area. With the Palomar Gateway District market area’s proximity to the Mexican border, it’s concentration of major retailers, and its favorable access, expenditures from Cross Border shoppers were estimated at \$101.8M. Workers within the District’s primary trade area were projected to generate \$24.5M in retail expenditures.

Expenditure estimates for primary and secondary markets were combined to result in a total retail expenditure forecast of \$429.7M. This total was compared to actual expenditures within the primary trade area. As part of this analysis, expenditure estimates by retail

category were compared to actual primary trade area expenditures by retail category in order to identify specific retail opportunities by retail type. In total, current retail expenditures in the primary trade area were estimated at \$567.7M, resulting in no sales opportunities in total. However, when evaluating retail supply and demand projections by retail category, a few retail categories were found to provide potential retail demand opportunities.

On a square foot basis, the following retail categories were found to represent potential retail demand opportunities:

1. Furniture & Electronics (11,608 square feet)
2. Health & Personal Care (6,801 square feet)
3. Clothing & Accessories (65,084 square feet)
4. Food Service & Drinking Places (8,858 square feet)

It's important to note that the retail categories found in this study to provide demand potential do not limit potential market opportunities for other retail categories where competitive retailers enter the markets with a competitive advantages that allows these retailers to capture market share from existing retailers. As such, these projections should be viewed as a theoretical demand to provide general parameters for better understanding the area's measurable retail market dynamics.

The District's currently undeveloped 5-acre site on the southwest corner of Palomar St. and Industrial Blvd. provides limited opportunities as a retail only site. Based on the site's size, retail development on the site would likely not be able to accommodate a large anchor retailer. As such, a potential retail development concept would likely be a strip center development. While this type of development is assumed to be feasible from a physical development standpoint, it is Gafcon's opinion that this type of development is already well represented in the Palomar Gateway District market area and development of a strip center development would be an impediment to implementing the vision of the District as a Transit Focus Area.

The area north of Palomar St. is developed with a mix of residential and commercial land uses. Due to the concentration of residential lots on the northwest corner of Palomar St. and Industrial Blvd., relevant retail development is not feasible in this area without the process of assembling individual residential lots. Another area on the northeast corner of Palomar St. and Industrial Blvd. is currently developed as a business park. Although it appears to have been designed for more traditional business park users, the property has evolved to become a center for wholesale retailer type users. In terms of location, size, configuration, and street frontage, this site represents a good site for a traditional



community retail center. Due to the anticipated significant redevelopment costs associated with redeveloping this site, mixed-use development of this site is not anticipated in the near term. Longer-term prospects for the redevelopment of this site may improve with increased residential pricing. Even with the potential for improved residential pricing, the costs associated with acquiring an existing/active commercial property and clearing the site for the development of a mixed-use project creates an extremely challenging financial hurdle for investors to receive a targeted return on investment. Overcoming these financial hurdles is typically more attainable in markets with higher price premiums that help overcome heavy initial investments.

Future retail space in the Palomar Gateway District as part of a mixed-use project should be focused along Palomar St. in order to help maximize shopper visibility and access. Retail categories identified in this study as representing potential demand can be integrated into intelligently designed mixed-use developments. As noted above, other retailers may also have the opportunity to be competitive based their unique competitive strengths.

Retail programs that are integrated into mixed-use developments may have challenges and opportunities unique from traditional retail developments. Some challenges with integrating retail uses into residential projects include: Restricted vehicle access, limited retail clustering/synergies, limited parking, limited retail floor space configurations, restricted uses, and restricted visibility.

The currently undeveloped five-acre site sits between the I-5 Freeway and Industrial Blvd. A potential mixed-use development program that provides ground floor retail fronting Palomar St. may be at risk of restricted pedestrian traffic. The area west of the I-5 Freeway can primarily be characterized by low-density residential and light industrial land uses. This area lacks a high concentration of households or workers that could potentially cross the I-5 Freeway and walk eastward into the District. Furthermore, while pedestrian access is available on the bridge that crosses the I-5 Freeway, freeways can sometimes serve as an impediment to welcoming leisurely pedestrian movement generally associated with pedestrian oriented communities. North/south traffic along Industrial Blvd. and the Blue rail line may potentially inhibit pedestrian movement moving westward across these transportation lines. Pedestrian friendly crossings, bridges, or tunnels could be help mitigate such impediments but would be costly relative to the limited amount of retail that would likely be generated as part of a mixed-use residential project.

In an effort to better facilitate pedestrian traffic, initial retail delivered as part of a mixed-use development project within the District may be initially concentrated on Palomar St. fronting sites east of Industrial Blvd. Focusing retail uses in these areas may help minimize

potential pedestrian barriers and allow more opportunities for shoppers from existing surrounding retail properties to more easily interact with new retail opportunities.

Potential retail that is integrated into a mixed-use project on the five-acre site should be more heavily oriented toward the Palomar St./Industrial Blvd. intersection. Focusing retail in this area within site of the Palomar Trolley Station will help draw trolley users and shoppers from neighboring retail properties. Secondly, the concept of place making as part of the Trolley Station will be more strongly communicated with a visual connection between mixed-use retail and the Trolley Station.

In considering potential development conditions for mixed-use projects in the Palomar Gateway District, flexibility of uses will be critical in allowing developers to respond to marketplace conditions. Based on interviews with area stakeholders, it is recommended that retail uses not be a required element of future developments in the District. Retail uses can be integrated into mixed-use residential projects, but should only be done so to meet compelling market fundamentals.

Limited areas of retail demand have been identified in the project area's market area as part of this study. The current General Plan land use designations that are applied to the Palomar Gateway District generate a potential capacity for retail that is far above potential demand identified in this study. Approximately 37 acres have been designated as Mixed-use Transit Focus. This land use designation allows retail and office uses a FAR of 1.0. Based on the retail demand levels projected as part of this study, the commercial land use capacity provided by the General Plan land use designations far exceeds the projected demand for retail space.

The following list summarizes major opportunities and challenges the Palomar Gateway District provides as an area for retail development:

Opportunities:

- + Within walking distance of transit station
- + High auto traffic counts
- + Synergies related to retail clustering
- + Proximity to freeway on/off-ramp
- + Proximity to Mexican border
- + Community-wide draw from adjacent major retailers (Costco, Wal-Mart, Target)
- + Vacant five-acre lot on Palomar/Industrial (Retail frontage along Palomar St.)

Challenges:

- Traffic congestion, especially created by trolley backup and freeway entrance/exit.
- Unappealing pedestrian connectivity to all retail properties
- Limited pedestrian traffic
- Pedestrian barriers (I-5 Freeway, Industrial Blvd., Trolley Crossing)

## VII. OFFICE MARKET ASSESSMENT

### Office Market

San Diego County's office market appears to be stabilizing and is showing some modest signs of improvement. As shown in Table VII.I below, about 164,000 square feet of space was absorbed countywide in the fourth quarter of 2010. This brought the total net absorption for 2010 to a positive 606,800 square feet. In contrast, San Diego County's office market had a combined negative absorption of about 1.4 million square feet in 2009/2008 combined. San Diego's positive absorption in 2010 helped improve the countywide total vacancy rate to 19.4%. On a net vacancy basis, vacancies that exclude subleased space, countywide office vacancy decreased from 17.4% in 2009 to 16.9% in 2010.

**Table VII.I**

**San Diego Office Market  
2010 Q4**

|                       | Total SF          | % of Subtotal | % of Grand Total | Vacant SF         | Total Vacancy | YTD Absorption   | 2010 Rate of Absorption | Asking Rent    |                |
|-----------------------|-------------------|---------------|------------------|-------------------|---------------|------------------|-------------------------|----------------|----------------|
|                       |                   |               |                  |                   |               |                  |                         | Class A        | Class B        |
| <b>North County</b>   |                   |               |                  |                   |               |                  |                         |                |                |
| Carlsbad              | 4,108,791         | 31.7%         | 5.7%             | 1,335,357         | 32.5%         | 22,333           | 0.5%                    | \$ 2.40        | \$ 2.29        |
| Encinitas             | 726,404           | 5.6%          | 1.0%             | 106,055           | 14.6%         | 39,230           | 5.4%                    | \$ 3.27        | \$ 2.39        |
| Escondido             | 857,643           | 6.6%          | 1.2%             | 225,560           | 26.3%         | (29,526)         | -3.4%                   | \$ 2.57        | \$ 1.80        |
| Oceanside             | 874,395           | 6.7%          | 1.2%             | 218,599           | 25.0%         | 28,498           | 3.3%                    | \$ 2.04        | \$ 1.80        |
| Rancho Bernardo       | 4,023,433         | 31.0%         | 5.6%             | 607,538           | 15.1%         | 616,400          | 15.3%                   | \$ 2.91        | \$ 1.94        |
| San Marcos            | 932,553           | 7.2%          | 1.3%             | 231,273           | 24.8%         | (11,111)         | -1.2%                   | \$ 2.59        | \$ 2.03        |
| Solana Beach          | 754,021           | 5.8%          | 1.0%             | 142,510           | 18.9%         | (8,108)          | -1.1%                   | \$ 2.88        | \$ 2.27        |
| Vista                 | 690,914           | 5.3%          | 1.0%             | 240,438           | 34.8%         | (48,250)         | -7.0%                   | \$ 1.79        | \$ 1.48        |
| <b>Subtotal</b>       | <b>12,968,154</b> | <b>100.0%</b> | <b>17.9%</b>     | <b>3,112,357</b>  | <b>24.0%</b>  | <b>609,466</b>   | <b>4.7%</b>             | <b>\$ 2.46</b> | <b>\$ 2.12</b> |
| <b>Central County</b> |                   |               |                  |                   |               |                  |                         |                |                |
| 56 Corridor           | 470,225           | 1.1%          | 0.6%             | -                 | 0.0%          | -                | 0.0%                    | \$ -           | \$ -           |
| Del Mar               | 4,347,056         | 10.2%         | 6.0%             | 886,799           | 20.4%         | 152,323          | 3.5%                    | \$ 3.12        | \$ 2.74        |
| Eastgate              | 2,094,747         | 4.9%          | 2.9%             | 412,665           | 19.7%         | (125,102)        | -6.0%                   | \$ 2.50        | \$ 2.30        |
| Governor Park         | 898,465           | 2.1%          | 1.2%             | 163,521           | 18.2%         | 165,979          | 18.5%                   | \$ 1.86        | \$ 1.91        |
| Kearny Mesa           | 7,183,916         | 16.9%         | 9.9%             | 890,806           | 12.4%         | 53,124           | 0.7%                    | \$ 2.30        | \$ 1.96        |
| La Jolla              | 1,025,490         | 2.4%          | 1.4%             | 128,186           | 12.5%         | (10,408)         | -1.0%                   | \$ 3.35        | \$ 2.79        |
| Miramar               | 891,689           | 2.1%          | 1.2%             | 143,562           | 16.1%         | 18,541           | 2.1%                    | \$ 1.95        | \$ 1.74        |
| Mission Valley        | 6,631,329         | 15.6%         | 9.2%             | 1,080,907         | 16.3%         | 17,072           | 0.3%                    | \$ 2.45        | \$ 2.04        |
| Poway                 | 1,250,061         | 2.9%          | 1.7%             | 457,522           | 36.6%         | (9,876)          | -0.8%                   | \$ 2.63        | \$ 2.46        |
| Rose Canyon           | 300,134           | 0.7%          | 0.4%             | 60,027            | 20.0%         | (37,566)         | -12.5%                  | \$ 1.50        | \$ 1.32        |
| Scripps               | 1,595,839         | 3.8%          | 2.2%             | 698,977           | 43.8%         | (143,381)        | -9.0%                   | \$ 2.43        | \$ 1.89        |
| Sorrento Mesa         | 5,287,703         | 12.4%         | 7.3%             | 935,923           | 17.7%         | 46,979           | 0.9%                    | \$ 2.45        | \$ 2.10        |
| Sorrento Valley       | 396,865           | 0.9%          | 0.5%             | 57,545            | 14.5%         | 33,257           | 8.4%                    | \$ 1.70        | \$ 1.67        |
| Torrey Pines          | 5,824,427         | 13.7%         | 8.0%             | 850,366           | 14.6%         | (103,845)        | -1.8%                   | \$ 3.44        | \$ 3.17        |
| UTC                   | 4,328,560         | 10.2%         | 6.0%             | 978,255           | 22.6%         | 122,019          | 2.8%                    | \$ 2.58        | \$ 2.17        |
| <b>Subtotal</b>       | <b>42,526,506</b> | <b>100.0%</b> | <b>58.8%</b>     | <b>7,739,824</b>  | <b>18.2%</b>  | <b>179,116</b>   | <b>0.4%</b>             | <b>\$ 2.72</b> | <b>\$ 2.23</b> |
| <b>South County</b>   |                   |               |                  |                   |               |                  |                         |                |                |
| Chula Vista - East    | 981,068           | 5.8%          | 1.4%             | 393,408           | 40.1%         | 15,950           | 1.6%                    | \$ 2.33        | \$ 2.29        |
| Chula Vista - West    | 792,767           | 4.7%          | 1.1%             | 116,537           | 14.7%         | 21,590           | 2.7%                    | \$ 2.77        | \$ 1.98        |
| Downtown              | 9,750,011         | 57.8%         | 13.5%            | 1,813,502         | 18.6%         | (219,198)        | -2.2%                   | \$ 2.52        | \$ 2.38        |
| East County           | 1,824,377         | 10.8%         | 2.5%             | 233,520           | 12.8%         | 15,191           | 0.8%                    | \$ 2.35        | \$ 2.04        |
| National City         | 474,815           | 2.8%          | 0.7%             | 234,559           | 49.4%         | 31,004           | 6.5%                    | \$ -           | \$ 1.80        |
| Old Town              | 1,161,758         | 6.9%          | 1.6%             | 205,631           | 17.7%         | (44,261)         | -3.8%                   | \$ 2.71        | \$ 1.93        |
| Uptown                | 1,874,948         | 11.1%         | 2.6%             | 159,371           | 8.5%          | (2,050)          | -0.1%                   | \$ -           | \$ 2.14        |
| <b>Subtotal</b>       | <b>16,859,744</b> | <b>100.0%</b> | <b>23.3%</b>     | <b>3,152,772</b>  | <b>18.7%</b>  | <b>(181,774)</b> | <b>-1.1%</b>            | <b>\$ 2.51</b> | <b>\$ 2.23</b> |
| <b>Grand Total</b>    | <b>72,354,404</b> | <b>100.0%</b> | <b>100.0%</b>    | <b>14,036,754</b> | <b>19.4%</b>  | <b>606,808</b>   | <b>0.8%</b>             | <b>\$ 2.61</b> | <b>\$ 2.21</b> |

Source: Cassidy Turley BRE Commercial, Office Snapshot - Fourth Quarter 2010

Despite improving demand for office space, monthly asking rents remain compressed as excess space continues to be absorbed. The overall asking rate for countywide office space for all classes was \$2.27 per square foot at the end of 2010. This represents a 5.8% decrease from the previous year's average.

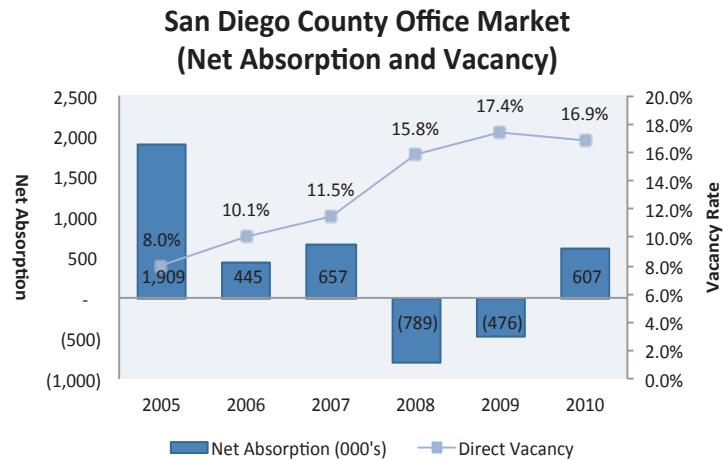
San Diego's office market is expected to slowly recover in 2011 as employment growth makes modest improvements. Moving into 2012, the office market recovery is projected to deepen as job growth begins to accelerate.

Construction activity in the office sector has slowed significantly, almost grinding to a halt. According to Cassidy Turley/BRE Commercial's 2010 Q4 Office Market Report for San Diego, only 133,600 square feet

of office space was under construction in the fourth quarter of 2010. Construction activity was limited to the North County market. With a countywide total vacancy rate of 19.4%, total available or vacant space in the fourth quarter of 2010 was estimated at 14,036,754 square feet.

Chula Vista's office market is part of the larger South County submarket. The South County submarket includes Downtown, East County, National City, Old Town, and Uptown. The submarket is dominated by the Downtown office market, a market comprised of about 9,775,011 square feet of office space that represents about 58% of South County's market and 13.5% of San Diego County's total market. The Downtown submarket ended 2010 with a total vacancy rate of 18.6%. The largest Downtown landowner, The Irvine Company, owns six of downtown's eleven Class A buildings, and has plans to construct a 680,000-square-foot building on West Broadway once market conditions improve.

Chula Vista's office market can be divided into an East and West market. Chula Vista – East includes about 981,068 square feet or 5.8% of the South County Market while Chula Vista – West includes about 792,767 square feet or 4.7% of the South County Market. At the end of 2010, Chula Vista – East was performing well below the countywide average with a 40.1% average vacancy rate as compared to a countywide average of 19.4%. Absorption for 2010 was a positive 15,950 square feet for Chula Vista – East. Conversely, Chula Vista –





West performed relatively well in 2010 with an average vacancy rate of 14.7% and positive absorption of 21,950 square feet. Combined, both Chula Vista – East/West, total 1,773,835 square feet or 10.5% of the South County Market. With combined vacant square footage of 509,945, the East/West market has a combined vacancy rate of 28.7%.

### Office Demand

The demand for office space is directly driven by growth in employment; in particular, office related employment. This principal was demonstrated recently in San Diego during the recent economic expansion and subsequent correction. In 2007, Non-Farm Employment peaked at 1,308,800 jobs. As employment levels have dropped each year since 2007, so too have office values, monthly asking rates, and occupancy levels. As job losses have stabilized, the office market is now in a period where demand is expected to improve modestly. However, rents and office values in the short-term will be restrained as available space is absorbed to more normal occupancy levels.

As part of our evaluation of Chula Vista's current and future office market, regional employment and office market trends were measured. Employment projections were based on the San Diego Association of Governments (SANDAG) 2050 Regional Forecast. For 2010 employment figures, data from the California Employment Development Department was utilized. SANDAG's job growth forecast through 2020 was utilized to calculate average annual growth rates through 2020 for this study. The total job growth over this forecast period was annualized on a simple average basis resulting in an average job growth rate of about 1.4% through 2020. SANDAG's job totals were adjusted to only include Non-farm employment. Job growth projections through 2030 were also included in this study.

As shown in Table VII.II on the following page, San Diego County's non-farm employment in 2010 is 1,214,992. Based on an annual job growth average of 1.4%, 173,284 jobs are anticipated to be added to the county by 2020. San Diego's job growth rate from 2020 to 2030 is anticipated by SANDAG to slow to a 1.2% annual growth rate, resulting in the addition of 285,041 jobs by 2030.

In order to estimate job growth for office sector jobs, Gafcon evaluated San Diego County and Chula Vista historical job totals by job category. The North American Industry Classification System (NAICS) was utilized to separate area jobs by job type. As a guide in identifying office jobs, a report prepared by John Burns Consulting Company for the National Association of Realtors (Who Are Your Future Tenants? Office Employment in the United States 2004 – 2014, January 2007) was utilized. As part of this study, job growth in office-using industries was measured. The study found that the overall average for office-

based employment in 23 metropolitan areas was 42.6% while 41.9% of jobs in San Diego were found to be office jobs.

As part of this study, Gafcon evaluated San Diego County's 2009 job base. Office jobs were estimated from each job category, resulting in an office job total of 514,751 office jobs. In 2009, this represented 41.9% of the county's total jobs. For this study, Gafcon adjusted San Diego's office job totals to exclude public or institutional job office users including: Government; Educational services; Healthcare & Social assistance. Excluding these job categories resulted in 346,216 selected office jobs or 28% of total San Diego county jobs. Applying this 28% factor to San Diego County total job growth results in a projected 80,381 non-public/institutional office jobs created by 2030.

In order to project future space demands for this forecasted job growth, an industry standard factor of 250 square feet of office space per office job was applied to the study's job forecast. Based on these assumptions, Gafcon forecasted demand for 20,095,356 square feet of office space for selected office job categories through 2030. On an annual basis, selected countywide space demand is projected to range from about 1.0 to 1.2 million square feet annually.

TABLE VII.II  
Office Demand Projections

|  | 2010      | 2012      | 2015      | 2020       | 2030       |
|--|-----------|-----------|-----------|------------|------------|
| <b>San Diego County - Jobs</b>                             | 1,214,992 | 1,249,283 | 1,301,406 | 1,388,276  | 1,500,032  |
| Job Growth (Cummulative)                                   | ---       | 34,292    | 86,414    | 173,284    | 285,041    |
| Job Growth (Annual Avg.)                                   | ---       | 17,146    | 17,283    | 17,328     | 14,252     |
| Average Annual Job Growth %                                | ---       | 1.4%      | 1.4%      | 1.4%       | 1.2%       |
| % Office Jobs  |           | 28%       | 28%       | 28%        | 28%        |
| Job Growth - Office (Cummulative)                          |           | 9,670     | 24,369    | 48,866     | 80,381     |
| Average Annual Job Creation                                | ---       | 4,835     | 4,874     | 4,887      | 4,019      |
| Avg Square Feet per Office Job (Square Feet)               |           | 250       | 250       | 250        | 250        |
| San Diego County Office Demand - Cummulative (Square Feet) |           | 2,417,573 | 6,092,190 | 12,216,553 | 20,095,356 |
| San Diego County Office Demand - Annual Avg. (Square Feet) |           | 1,208,786 | 1,218,438 | 1,221,655  | 1,004,768  |

Source: SANDAG; California Employment Development Department; U.S. Census Bureau, LEHD; Gafcon.

San Diego County's job growth over the forecast horizon was compared to SANDAG's job growth projections for Chula Vista. Table VII.III below highlights Chula Vista's forecasted job growth through 2030. Through 2020, approximately 10.1% of countywide job growth is estimated to occur in Chula Vista, resulting in the creation of 17,420 jobs by 2020 and 40,405 new jobs by 2030. Chula Vista's job growth rate is projected to exceed the countywide growth rate, averaging an annual rate of 2.9% through 2020 as compared to an average rate of 1.4% for San Diego County.

Chula Vista's share of office jobs is well below the estimated countywide average. In order to calculate Chula Vista's share of office jobs, Chula Vista's 2009 job totals were evaluated by NAICS classification. Each NAICS job category was reviewed and a related office job ratio was applied to calculate office jobs within that job category. Adjustments were then made to exclude public or institutional job office users including: Government; Educational services; Healthcare & Social assistance. Excluding these job categories resulted in 6,920 selected office jobs from a citywide job base of 55,133. Based on this analysis, it was assumed that about 13% of Chula Vista's future jobs within the evaluated job categories will be office jobs as compared to the estimated countywide average of 28%.

As shown below, Chula Vista is anticipated to add 5,091 office jobs by 2030 within the job categories evaluated as part of this study. Chula Vista's job growth was calculated based on SANDAG's job growth projections for Chula Vista relative to San Diego County's overall job growth. Adjustments were made to job projections to only include non-farm labor jobs. Additionally, SANDAG's long-term growth estimates were annualized to provide forecasts for periods selected as part of this study.

TABLE VII.III  
Office Demand Projections - Chula Vista

|   | 2010      | 2012      | 2015      | 2020       | 2030       |
|---|-----------|-----------|-----------|------------|------------|
| <b>San Diego County - Jobs</b>                        | 1,214,992 | 1,249,283 | 1,301,406 | 1,388,276  | 1,500,032  |
| Job Growth (Cummulative)                              | ---       | 34,292    | 86,414    | 173,284    | 285,041    |
| Job Growth (Annual Avg.)                              | ---       | 17,146    | 17,283    | 17,328     | 14,252     |
| Average Annual Job Growth %                           | ---       | 1.4%      | 1.4%      | 1.4%       | 1.2%       |
| <br>  |           |           |           |            |            |
| % Office Jobs   |           | 28%       | 28%       | 28%        | 28%        |
| Job Growth - Office (Cummulative)                     |           | 9,670     | 24,369    | 48,866     | 80,381     |
| Average Annual Job Creation                           | ---       | 4,835     | 4,874     | 4,887      | 4,019      |
| Avg Square Feet per Office Job                        |           | 250       | 250       | 250        | 250        |
| San Diego County Office Demand - Cummulative          |           | 2,417,573 | 6,092,190 | 12,216,553 | 20,095,356 |
| San Diego County Office Demand - Annual Avg.          |           | 1,208,786 | 1,218,438 | 1,221,655  | 1,004,768  |
| <b>Chula Vista - Jobs</b>                             |           |           |           |            |            |
| Chula Vista - Share of San Diego County Jobs          |           | 10.1%     | 10.1%     | 10.1%      | 14.2%      |
| Job Growth (Cummulative)                              | ---       | 3,447     | 8,687     | 17,420     | 40,405     |
| Job Growth (Annual Avg.)                              | ---       | 1,724     | 1,737     | 1,742      | 2,020      |
| Average Annual Job Growth %                           | ---       | 2.9%      | 2.9%      | 2.9%       | 3.4%       |
| <br>  |           |           |           |            |            |
| % Office Jobs   | ---       | 13%       | 13%       | 13%        | 13%        |
| Job Growth - Office (Cummulative)                     | ---       | 434       | 1,095     | 2,195      | 5,091      |
| Job Growth - Office (Annual Avg)                      | ---       | 217       | 219       | 219        | 255        |
| <br>  |           |           |           |            |            |
| Avg Square Feet per Office Job (Square Feet)          |           | 250       | 250       | 250        | 250        |
| Chula Vista Office Demand - Cummulative (Square Feet) |           | 108,589   | 273,640   | 548,724    | 1,272,750  |
| Chula Vista Office Demand - Annual Avg. (Square Feet) |           | 54,294    | 54,728    | 54,872     | 63,637     |

Source: SANDAG; U.S. Census Bureau, LEHD; Gafcon.

On average, an office worker requires about 250 square feet. Applying this space requirement to projected office worker growth in Chula Vista results in office space demand of about 1,272,750 square feet through 2030. Chula Vista's current office space supply is approximately 1,773,835 square feet. Based on a simple annual average growth rate, about 63,637 square feet of office space is projected to be demanded on average throughout this study's 20-year forecast horizon. In 2010, 37,540 square feet of office space was absorbed in Chula Vista.

Chula Vista's existing office market is largely centered in the City's Downtown/Urban Core and Otay Ranch area. With the notable exception of the Chula Vista Gateway project in the City's Downtown/Urban Core, the City's West office market is largely characterized by older low-rise office development.

The Palomar Gateway District does not provide a notable level of office space. In general, the area directly south of the District provides a significant concentration of Industrial land uses. This study anticipates that the City's existing centers of office activity will continue to capture future office demand activity. For Chula Vista's West-Office market, the City's Downtown/Urban Core office market and Chula Vista Bayfront is expected to absorb an overwhelming share of office demand within the City's western market. As such, this study assumes potential future office space provided within the Palomar Gateway District will be limited.

Office space within the District is anticipated to focus on neighborhood serving offices users. Additionally, other potential office users may be attracted to the area's proximity to the Palomar Trolley Station, freeway access, retail, and proximity to Downtown San Diego and the Mexican border. Based on the District's competitive strength relative to existing and planned office areas (Downtown/Urban Core & Bayfront), the study assumes that the Palomar Gateway District can potentially capture 4% of Chula Vista's total future office space demand. This capture rate assumes that future development programs offered in the Palomar Gateway District area are competitively positioned relative to other office properties. The study assumes that the area's lack of an existing office base can potentially be compensated by the area's positive attributes as well as the limited supply of new office properties within Chula Vista's Western office market.

As shown in Table VII.IV on the following page, the Palomar Gateway District is projected to have the capacity to capture 50,910 square feet of Chula Vista's 1,272,750 square feet demanded through 2030. If annualized over the forecast horizon on a simple average basis, this equates to about 2,172 square feet of demand annual.

TABLE VII.IV  
Office Demand Projections - Palomar Gateway District

|   | 2010 | 2012    | 2015    | 2020    | 2030      |
|---|------|---------|---------|---------|-----------|
| <b>Chula Vista - Jobs</b>                             |      |         |         |         |           |
| Chula Vista - Share of San Diego County Demand        |      | 10.1%   | 10.1%   | 10.1%   | 14.2%     |
| Job Growth (Cummulative)                              | ---  | 3,447   | 8,687   | 17,420  | 40,405    |
| Job Growth (Annual Avg.)                              | ---  | 1,724   | 1,737   | 1,742   | 2,020     |
| Average Annual Job Growth %                           | ---  | 2.9%    | 2.9%    | 2.9%    | 3.4%      |
| % Office Jobs   | ---  | 13%     | 13%     | 13%     | 13%       |
| Job Growth - Office (Cummulative)                     | ---  | 434     | 1,095   | 2,195   | 5,091     |
| Job Growth - Office (Annual Avg)                      | ---  | 217     | 219     | 219     | 255       |
| Avg Square Feet per Office Job                        |      | 250     | 250     | 250     | 250       |
| Chula Vista Office Demand - Cummulative (Square Feet) |      | 108,589 | 273,640 | 548,724 | 1,272,750 |
| Chula Vista Office Demand - Annual Avg. (Square Feet) |      | 54,294  | 54,728  | 54,872  | 63,637    |
| <b>Chula Vista - Office Space Demand</b>              |      |         |         |         |           |
| Palomar Gateway District (% Share of Citywide Office) |      | 4%      | 4%      | 4%      | 4%        |
| PGD Office Demand - Cummulative (Square Feet)         |      | 4,344   | 10,946  | 21,949  | 50,910    |
| PGD Office Demand - Annual Avg. (Square Feet)         |      | 2,172   | 2,189   | 2,195   | 2,545     |

Source: SANDAG; U.S. Census Bureau, LEHD; Gafcon.



## Office Conclusions

Chula Vista's office market can be divided into an East and West market. Chula Vista's East market at 981,068 square feet represents about 55% of the city's total office market. At the end of 2010, the East market posted a high total vacancy rate of 40.1% as compared to a South County average of 18.7% and a countywide average of 19.4%. Chula Vista's West market totals 792,767 square feet, or 45% of the city's total office supply. Unlike the city's East market, the West market ended 2010 relatively well with a 14.7% vacancy rate.

With the notable exception of Chula Vista's Gateway project, the Western office market can largely be characterized by older office space centered in the Downtown/Urban Core area. Chula Vista's Bayfront represents a significant potential development opportunity that could have a significant impact of the City's office supply.

The Palomar Gateway District area is not anticipated to become a notable center of office activity. Chula Vista's Otay Ranch/Eastlake, Downtown/Urban Core, and planned Bayfront areas are anticipated to capture an overwhelming share of the city's future office demand.

The Palomar Gateway District can, however, capture office demand on a more limited scale as part of providing office related services for the surrounding community. Also, in some cases, more general office users may be attracted to the potential of the District as a Transit Focus Area. Overall, office space demand is anticipated to be limited, reaching 50,910 over the study's 20-year forecast horizon.

The current General Plan land use designations that are applied to the Palomar Gateway District generate a potential capacity for office that is far above potential demand identified in this study. Approximately 37 acres have been designated as Mixed-use Transit Focus. This land use designation allows retail and office uses a FAR of 1.0. Based on the office demand levels projected as part of this study, the commercial land use capacity provided by the General Plan land use designations far exceeds the projected demand for office space.

The following list summarizes major opportunities and challenges the Palomar Gateway District provides as an area for office development:

### Opportunities:

- + Within walking distance of transit station
- + Within walking distance of restaurant/retail opportunities
- + Proximity to freeway on/off-ramp
- + Location between San Diego and Mexico

- + Vacant five-acre lot on Palomar/Industrial
- + Public infrastructure improvements
- + Proximity to Chula Vista Bayfront Plan Area
- + Aging office properties in west market
- + Comparative low vacancy rates in west market vs. east market

Challenges:

- Retail and industrial area identity
- Traffic congestion
- Mixed market perception
- Potentially limited floor plan flexibility if integrated into mixed-use project

## VIII. LAND USE DEMAND SUMMARY

The following table summarizes cumulative demand for the land uses evaluated as part of this study. A detailed discussion of market demand for these land uses is provided in the preceding sections of this study.

**TABLE VIII.I**  
**LAND USE DEMAND SUMMARY**  
**PALOMAR GATEWAY DISTRICT (2015 - 2030)**

| Land Use                                 | 2015   | 2020   | 2030   |
|--|--------|--------|--------|
| <b>Residential (Units)</b>               |        |        |        |
| Upper Range                              | 193    | 703    | 1,298  |
| Lower Range                              | 97     | 352    | 649    |
| <b>Commercial / Retail (Square Feet)</b> | 78,444 | 84,866 | 92,352 |
| <b>Commercial / Office (Square Feet)</b> | 10,946 | 21,949 | 50,910 |

## IX. DESIGNATED LAND USES

The Palomar Gateway District is currently comprised of a variety of land uses that include residential, commercial, and industrial uses. Residential land use is the dominant land use with densities ranging from around 5 to 20 dwelling units per acre. There are currently about 400 residential units in the District, including 67 rooms related to two hotels located in the District. Residential is primarily concentrated South of Palomar St., with community commercial, housing, motel, light industrial, and park land uses North of Palomar St. Directly adjacent to the District is a concentration of commercial centers anchored by large retailers such as Target, Costco, and Wal-Mart. Overall, the District and the area immediately surrounding it can be characterized as an auto-focused area with lower residential densities and a concentration of anchored and in-line retailers clustered around the intersection of Palomar Street and Broadway. Although the District's primary land use in terms of acreage is residential, heavy vehicle trips along Palomar St, Industrial Blvd, and Broadway characterize the District as less of a neighborhood and more a center for auto generating shopping trips.

Chula Vista's 2005 General Plan designates the Palomar Gateway District as one of five "areas of change." The General Plan objective for the District is to help transition the District from a low-density auto-focused interchange into a Mixed Use Transit Focus Area surrounding the Palomar Trolley Station. The vision for the Mixed Use Transit Focus Area includes higher intensity residential, as well as, mixed-use developments that offer a mix of residential, office, and retail uses in a pedestrian-friendly area with strong linkages to the Palomar Trolley Station. The Transit Area Mixed-Use projects are anticipated to provide a larger share of residential uses, with a mix of retail and office uses being located along Palomar St. Residential uses along



Palomar St. are envisioned above and/or behind retail and office uses.

The General Plan provides the following land use designations for the District:

**High Residential:** This land use designation is intended for multi-family units with densities ranging from 18 to 27 units per acre.

**Mixed Use Transit Focus Area:** This land use designation allows a mix of residential, office, and retail in pedestrian friendly areas with strong links to the trolley station. Residential densities up to 40 dwelling units per acre are allowed with retail and office uses allowed a Floor Area Ratio (FAR) of 1.0.

**Retail Commercial:** This designation only applies to a small area in the southeast corner of the District of only about one acre. This land use designation is intended to allow a range of neighborhood and community retail shopping services.

**Parks and Recreation:** This land use designation is provided for parks; sports fields; playgrounds; golf courses; and other passive urban recreation uses. The land use also includes community centers and urban parks.

The following table summarizes the General Plan Land Use designations within the Palomar Gateway District:

**Palomar Gateway District  
General Plan Land Use Designations and Potential Buildout**

|                   | District Acreage | Existing DU's |           | General Plan DU's |                   | Increase in DU's |
|-------------------|------------------|---------------|-----------|-------------------|-------------------|------------------|
|                   |                  | DU's          | DU's/Acre | Maximum DU's      | Maximum DU's/Acre |                  |
| Residential High  | 35               | 189           | 5         | 949               | 27                | 760              |
| Transit Focus     | 37               | 211           | 6         | 1,460             | 40                | 1,249            |
| Commercial Retail | 1                | 5             | 3         | --                | --                | -5               |
| Park              | 5                | --            | --        | --                | --                | --               |
| <b>Total</b>      | <b>78</b>        | <b>400</b>    | <b>5</b>  | <b>2,400</b>      | <b>--</b>         | <b>2,000</b>     |

Notes:

- (1) All numbers are approximate and have been rounded off.
- (2) Existing DU count includes 67 rooms related to two District motels.
- (3) Approximately 20 acres District land is designated Transportation Corridors & Right of Way.
- (4) Source: Palomar Gateway District Specific Plan - Existing Conditions Summary Report

The General Plan strives for a district wide distribution of land uses in the Palomar Gateway District as follows: Residential (~60%); Retail (~20%); and Office (~20%). The



demand projections generated as part of this study indicate that the General Plan's targeted distribution of land uses has the capacity to accommodate projected future demand.

## **Residential**

Utilizing the General Plan land use designations can result in a maximum of 2,400 dwelling units, resulting in a net increase capacity for 2,000 additional units. Based on this study's forecasted housing demand, as well as, the limited supply of undeveloped sites, the build out capacity for the District will not be achieved.

Although a demand potential ranging from 649 to 1,298 housing units was identified, it's likely the District will not be able to accommodate the market's projected future demand through 2030 due to the limited availability of developable sites. The most prominent developable site is a five-acre site located on the southwest corner of Palomar St. and Industrial Blvd. This site falls within the General Plan's Transit Focus Area land use designation. With this designation, up to 40 dwelling units per acre are permitted. This could potentially allow up to 200 units to be developed on this site. The ability to develop up to 40 units per acre on this site appears sufficient to attract future residential investment.

Areas north of Palomar St. are also provided a Transit Focus Area designation. These areas are already developed and would require significant redevelopment investment in order for these areas to provide the unit capacity allowed by the General Plan. The significant investment required to redevelop those areas as higher-density residential projects is anticipated to be a limiting factor that will likely preclude redevelopment of those areas in the near term and inhibit longer-term investment.

A small area adjacent to the Trolley Station is also provided a Transit Focus Area designation. The site currently provides parking for the Trolley Station. The site's size, configuration, and proximity to the Trolley Station, may present challenges for developing the site as a residential development.

Other areas in the District, south of Alda St., are provided a Residential High designation by the General Plan. This designation allows for development of up to 27 DU's per acre. The District areas that are provided this designation are largely lower density residential properties. Future development that provides this density is anticipated to be limited by the lack of undeveloped sites and the costs and challenges related to acquiring existing residential properties. Several properties appear to be roughly 1-acre lots with smaller residential units at the front of the property. These may represent selected opportunities over time for redevelopment, however, assembling such properties to accommodate larger scale redevelopment is difficult. As such, it is anticipated that these conditions will likely

prevent the District from being able to accommodate market demand over the study's forecast horizon resulting in actual housing unit growth below forecasted housing demand.

## **Retail**

Approximately 37 acres have been designated as Mixed-use Transit Focus. This land use designation allows retail and office uses a FAR of 1.0. Based on the retail demand levels projected as part of this study, 92,353 square feet, the commercial land use capacity provided by the General Plan land use designations far exceeds the projected demand for retail space.

Retail uses are generally only allowed along Palomar St. These areas are assigned the Transit Focus Area designation by the General Plan. As part of this designation, a mix of residential, retail, and office is allowed with retail uses allowed an FAR of 1.0. Based on the limited amount of retail demand forecasted as part of this study (92,352 square feet through 2030), the commercial land use capacity provided by the General Plan land use designations far exceeds the projected demand for retail space.

The Retail Commercial designation is also provided in the District. This designation appears appropriate to accommodate an approximately one-acre area in the southeast corner of the District. This designation allows for a range of neighborhood and community retail shopping services. This site is considered a secondary retail location relative to other retail sites along Palomar St. and Industrial Blvd.

## **Office**

General Plan land use designations allow office uses along Palomar St. These areas are assigned the Transit Focus Area designation by the General Plan. As part of this designation, a mix of residential, retail, and office is allowed with retail uses allowed an FAR of 1.0. Based on the limited amount of office demand forecasted as part of this study (50,910 square feet through 2030), the commercial land use capacity provided by the General Plan land use designations far exceeds the projected demand for office space.

## X. LAND USE IMPLEMENTATION STRATEGIES

While potential market demand has been identified for residential, retail, and office land uses, integrating these uses into a cohesive mixed-use transit oriented development program presents unique opportunities and challenges. A key element in helping to work through these challenges includes a proactive public sector that recognizes the benefits of transit-oriented developments and their role in shaping TODs.

Local government plays a key role in providing zoning and comprehensive planning authority. In addition to beginning the process of developing a Specific Plan for the Palomar Gateway District, the City of Chula Vista has also made several improvements aimed at promoting a more pedestrian and transit oriented neighborhood around the Palomar Trolley Station. In the fall of 2009, the following pedestrian and traffic improvements on Palomar Street and Industrial Boulevard were completed:

- 1) Construction of missing sidewalks, curbs, and gutters.
- 2) Traffic circle at the intersection of Industrial Boulevard and Ada Street.
- 3) Safety improvements at the intersection of Palomar Street and Industrial Boulevard.
- 4) Landscape improvements along Palomar Street and Industrial Boulevard.

While these improvements represent important beginning steps in creating a transit/pedestrian-oriented neighborhood, additional land use implementation strategies can be initiated to stimulate private investment and maximize public benefits. Some strategies and supportive public policies to help stimulate private sector investment into transit/pedestrian-oriented development in the Palomar Gateway District include the following:

### **PLANNING:**

- Prepare a Palomar Gateway District Specific Plan
  - A completed Palomar Gateway District Specific Plan will help provide a neighborhood vision for developers, reduce design uncertainty, reduce entitlement risk, and help provide market information as part of related market studies.
- Zoning Incentives – Incentives to consider during development of Specific Plan
  - Incentive zoning provides rewards to developers for improvements that create public benefits. Examples of zoning incentives include: Provide Density, FAR, and Height Bonuses. Increasing densities can help improve project revenues and overall project financial feasibility.
  - Residential parking requirements may be reduced. According to the California Department of Transportation, Transit-Oriented Development has the potential

to reduce parking per household by approximately 20% (Statewide Transit-Oriented Development Study: Factor for Success in California, California Department of Transportation, September 2002 Distribution). Reduction of retail and office parking requirements should be considered carefully as commercial tenants may have minimum parking requirements and parking should be flexible enough to provide for a range of commercial users.

- Flexible Zoning
  - Zoning should provide enough flexibility to allow developers to create programs that effectively respond to current market conditions on the project level while maintaining the overall vision of the area plan.
- Public Outreach
  - Facilitate neighborhood meetings, develop program website, facilitate print/media distribution, and conduct charettes to solicit input and build community support for area vision.
  - Provide the development community with area plan vision and program updates.
- Public-Private Partnering
  - Public entities and private investors should collaborate early in the planning process to help articulate and reconcile visions, expectations, responsibilities, schedules, concerns, etc.

#### **IMPLEMENTATION:**

- Area Infrastructure Improvements
  - Public improvements such as, landscaping, sidewalks, parks, lighting, signage, drainage, and utilities. Such improvements elevate the value and appeal to an area and demonstrate the public sector's commitment.
  - As noted above, Chula Vista has made improvements surrounding the trolley station. Additional improvements that enhance pedestrian access, connectivity, and provide a sense of "place-making" will help in making area developments more valuable and attractive to investors, tenants, and neighbors. Examples of improvements include: Signage, landscaping, streetscape improvements, and bicycle pathways/connectivity.
- Area Amenities
  - Utilize the northern portion of the Trolley Station parking lot as a Public Plaza that may include sitting areas, shading trees, and a water fountain/feature. The Plaza will provide an area for transit riders, shoppers, and residents to congregate. A small stage area can be incorporated for community related activities. Parking stalls that are eliminated as part of this improvement can be

transferred to the southern end of the trolley station parking lot into the SCE right of way.

- Developing a plaza would create an identifiable landmark for the district that communicates its vision as a pedestrian neighborhood. The public plaza can be utilized to fulfill public park/open space goals, as well as, offset potential open space requirements related to residential developments in the District.
- Expedite Development Review and Approval
  - The City can provide expedited planning review and permit priority to help reduce developer uncertainties and costs.
- Reduce Developer Impact Fees
  - Generally speaking, TOD developments impact infrastructure less than traditional developments. Impact fees can be applied on a sliding scale to help match development's real impact on infrastructure. For example, in 2011 the Chula Vista City Council suspended Development Impact Fees in Redevelopment Project Areas for residential development and limited retail and industrial development.
- Funding/Financing Incentives
  - The City can provide funding or discounts for infrastructure improvements and provide below market rate loans.
- District Branding
  - Construct impactful monument signage at the District entryways that creates a sense of place and promotes the vision of the District. In its current state, the District and the adjacent retail properties form a collection of individual uses with no cohesive connection. The use of signage that communicates a personality and vision at the main points of entry into the District can create a sense of identity and place for the area.
  - Marketing programs to customers and investors to promote the areas vision and identity.



APPENDIX C  
WATER SUPPLY ASSESMENT

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# **FINAL WATER SUPPLY ASSESSMENT**

## **Palomar Gateway District Specific Plan**

**Adopted by the Sweetwater Authority  
Governing Board on February 22, 2012**



**Sweetwater Authority**

Prepared by  
Sweetwater Authority Staff

# Palomar Gateway District Specific Plan Water Supply Assessment



Sweetwater Authority  
505 Garrett Avenue  
Chula Vista, CA 91910  
[www.sweetwater.org](http://www.sweetwater.org)

**Sweetwater Authority  
Water Supply Assessment**

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# Sweetwater Authority Water Supply Assessment

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## **Section 1 - Introduction**

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The City of Chula Vista is currently in the process of preparing a Specific Plan for the area known as the Palomar Gateway District, which is located in the Southwest part of Chula Vista. The proposed Palomar Gateway District Specific Plan (PGDSP) is being prepared in accordance with the Chula Vista Municipal Code Section 19.07, Specific Plans, and the California Government Code, Title 7, Division 1, Chapter 3, Article 8, Sections 65450 through 65457 and contains all the mandatory elements identified in Government Code Section 65451.

As shown in Appendix A, Regional Vicinity Map, the proposed PGDSP is located in the southwest corner of the City of Chula Vista, near the interchange of Palomar Street and Interstate 5 (I-5), within the County of San Diego, California. The proposed PGDSP is approximately four miles north of the international border with Mexico. The boundaries of the PGDSP include approximately 100-gross acres surrounding the Palomar Transit Station at the intersection of Palomar Street and Industrial Boulevard (see Attachment A). The PGDSP area includes the properties north of Palomar Street around Walnut Street, Trenton Street and Industrial Boulevard. Further east, the PGDSP also extends north from Palomar Street to Oxford Street. South of Palomar Street, the PGDSP extends along Industrial Boulevard and Frontage Road to Anita Street. A San Diego Trolley light rail transit station, Palomar Transit Station, is located within the PGDSP at the intersection of Palomar Street and Industrial Boulevard. The PGDSP area is considered the major southern gateway to the City of Chula Vista for visitors entering both from I-5 and from the San Diego Trolley.

The PGDSP is intended to implement the General Plan's Smart Growth vision for Transit-Oriented mixed-use development in proximity to a major regional transit center. The PGDSP will provide design guidance and a regulatory framework that maximize the full potential of multi-modal transit integration within the community and will be implemented as individual projects are constructed in the Palomar Gateway District over the next 15 to 20 years. Over time, the Palomar Gateway District will be transformed from its underutilized/lower-density setting into a vibrant and cohesive higher-density, pedestrian and transit-oriented community.

The purpose of the PGDSP is to encourage an appropriate mixture and density of activity adjacent to the existing San Diego Trolley light rail transit station at Palomar Street. The PGDSP is being created to promote a pedestrian, bicycle, public transit, and private automobile-supportive development environment and by integrating these mobility elements with a complementary mix of land uses, all within a comfortable walking and bicycling distance from the light rail station. Transit-oriented development will generally occur as infill and reuse within the Palomar Gateway area. Uses that do not support light rail transit ridership are generally discouraged within the Palomar Gateway District Specific Plan.

The specific objectives of this district are to:

- create a vibrant, safe, pedestrian friendly live/work/play environment that emphasizes the area as a southern gateway to the City of Chula Vista;
- achieve a compact pattern of development conducive to walking and bicycling;
- encourage light rail transit use and convenient access to services and jobs;
- allow for a mix of uses, designed to attract pedestrians;
- maintain an adequate level of parking and access for automobiles and integrate automobile use safely with pedestrians, bicyclists, and other users;
- provide sufficient density of employees, residents, and recreational users to support transit; and generate a relatively high percentage of trips serviceable by transit.

Based on the City's General Plan, the City's population is projected to reach approximately 300,000 by the year 2030. Based on the 2010 Census, the current population for Chula Vista is 243,916 people. The General Plan population coefficient for the Palomar Gateway District is 2.58 persons per household based on the residential land uses (Multi-Family) permitted. The City's General Plan includes intensification of retail, office and residential uses with less emphasis on industrial uses in this area of Chula Vista. The General Plan also proposes the replacement of a significant amount of existing lower density commercial and residential development in western Chula Vista with mixed use and higher density residential types. Due to the length of time that build-out of the PGDSP is expected to take (20+ years), as well as the nature of urban revitalization, the exact extent, timing and sequencing of development is difficult to predict.

The projected additional water use for the District and its four sub-districts is illustrated in Table 4, Palomar Gateway District Existing and Proposed Development 20-Year Horizon.

## **Section 2 - Identification of the Public Water Provider**

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In accordance with Water Code Section 10912(c), Sweetwater Authority (Sweetwater) is the "public water system" for the area in which the City's PGDSP is proposed. As such, the City requested that Sweetwater prepare a WSA. The WSA is intended to be used by the City in their evaluation of the PGDSP under the CEQA process. The Sweetwater Governing Board adopted the WSA on February 22, 2012.

Sweetwater was formed by the condemnation of a private water company that served the cities of Chula Vista and National City, and a portion of the county of San Diego. The condemnation suit was filed by the South Bay Irrigation District (SBID) and the City of Chula Vista on May 10, 1968, and was finalized on August 30, 1977. SBID and the City of Chula Vista formed Sweetwater by the Joint Powers Agreement of February 1, 1972. The Agreement was amended and re-adopted on July 22, 1977.

Sweetwater was formed pursuant to the provisions of Article 1, Chapter 5, Division 7, Title 1, of the Government Code of the State of California. Sweetwater is empowered by the Joint Powers Agreement to acquire, own, lease, operate, manage, maintain, and improve the water system.

SBID was formed during March 1951, under the Irrigation Law of California (Division 11, Section 20500 of the Water Code), and includes most of the city of Chula Vista and the unincorporated area within and adjacent to the Sweetwater River Valley. It also overlaps small segments of the cities of National City and San Diego. On May 1, 1990, SBID transferred ownership of the water system, including all of the property deeds and easements to Sweetwater. The City of Chula Vista is part of the urbanized South Bay region of the San Diego metropolitan area located on the San Diego Bay. Incorporated in 1887, National City is the second oldest city in the county of San Diego. SBID and the City of Chula Vista are members of the San Diego County Water Authority (CWA).

### **Section 3 – Previous Water Supply Assessments**

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Sweetwater has prepared this WSA in consultation with CWA and the City pursuant to Public Resources Code Section 21151.9, and California Water Code Sections 10631, 10657, 10910, 10911, 10912, and 10915 referred to as SB 610, and Business and Professions Code Section 11010. SB 610 amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties.

### **Section 4 – Sweetwater’s Urban Water Management Plan**

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Sweetwater prepares an Urban Water Management Plan (UWMP) every five years, in accordance with Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act (Act), which were added by Statute 1983, Chapter 1009, and became effective on January 1, 1984. The Act, which was Assembly Bill (AB) 797, requires that every urban water supplier providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet of water annually, shall prepare and adopt a UWMP in accordance with the prescribed requirements.

The Act requires urban water suppliers to file plans with the California Department of Water Resources (DWR) describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. As required by law, Sweetwater’s UWMP includes projected water supplies required to meet future demands. Sweetwater prepared UWMPs in 1985, 1990, 1995, 2000, 2005, and 2010 and filed those plans with the DWR.

As stated above, the adopted 2010 UWMP did not account for the water demands associated with the City's PGDSP. Therefore, in accordance with Water Code Section 10910 (c)(3), and Government Code Section 66473.7 (a)(2), this WSA includes a discussion with regard to whether Sweetwater's total projected water supplies, available during normal, single dry, and multiple dry water years during a 20-year projection, would meet the projected water demand associated with the proposed project, in addition to Sweetwater's existing and planned future uses. Applicable information from Sweetwater's 2010 UWMP has been used in the preparation of this WSA.

Sweetwater's 2010 UWMP includes all potential future development and redevelopment within its service area, including Chula Vista's Urban Core Specific Plan (UCSP), other projects identified in Chula Vista's Vision 2020 General Plan, the National City Downtown Specific Plan, the Unified Port of San Diego's Chula Vista Bayfront Master Plan, and the National City General Plan Update.

## **Section 5 – Supply and Demand Assessment**

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### **5.1 Project Demand Analysis**

Sweetwater's water system provides water service to approximately 177,288 consumers within the City of Chula Vista, a portion of the city of San Diego, and the South Bay Irrigation District, which consists of a portion of the city of Chula Vista and the unincorporated portion of the County of San Diego, known as Bonita. The Sweetwater service area covers 32 square miles and contains approximately 32,567 service connections. In addition, the system has emergency interconnections to three water agencies: Otay Water District, the City of San Diego, and the California American Water Company. At the present time, there are no plans for expansion of the Sweetwater service area.

Projected demands for years 2015 through 2035 were calculated using the SANDAG 2050 Regional Growth Forecast for population and multiplying the population by 105 gallons per capita per day (GPCD). The GPCD rate was based on the average of fiscal years 2008-09 and 2009-10.

#### **5.1.1 Climate**

Climate conditions within the service area are characteristically Mediterranean along the coast, with mild temperatures year-round. The majority of the service area is within two miles of the San Diego Bay. However, the Bonita area and the reservoirs are located farther inland, and experience slightly hotter summers and colder winters. More than 80 percent of the region's rainfall occurs in the period between December through March. Average annual rainfall is approximately 11.3 inches per year at the Sweetwater Reservoir based on records dating back to 1888. Climate data is



included in Table 1, and consists of the 122-year Sweetwater Reservoir average monthly rainfall, and Sweetwater Reservoir average monthly high temperature based on records dating back to 1961. Average monthly evapotranspiration (ETo) data was obtained from the California Irrigation Management Information System (CIMIS) website for the Otoy Lakes Station.

**Table 1  
 Climate Data**

|                  | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sept | Oct  | Nov  | Dec  |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Ave precip (in.) | 2.15 | 2.16 | 1.95 | 0.87 | 0.34 | 0.07 | 0.04 | 0.06 | 0.19 | 0.61 | 1.06 | 1.88 |
| Ave temp (°F)    | 68.7 | 69.1 | 69.1 | 71.8 | 72.9 | 76.2 | 81.4 | 84.1 | 82.8 | 79.0 | 73.6 | 68.9 |
| ETo              | 0.98 | 1.43 | 2.44 | 3.31 | 4.03 | 4.49 | 4.64 | 4.03 | 3.31 | 2.44 | 1.18 | 0.61 |

### 5.1.2 Population

Population and housing growth data for Sweetwater was obtained from the SANDAG 2050 Regional Growth Forecast for years 2010 through 2050. These estimates do not include the increase in population due to the PGDSP, but do include other redevelopment projects identified in Chula Vista’s Vision 2020 General Plan, the Unified Port’s Chula Vista Bayfront Master Plan, and National City’s Downtown Specific Plan, Westside Specific Plan, and General Plan Update.

Sweetwater updated the land uses and densities associated with the National City GPU and the Port and Chula Vista Bayfront Master Plan, and recalculated the estimated population growth. Population projections are shown in Table 2.

**Table 2  
 SANDAG Population and Redevelopment Adjustment**

|   | 2010    | 2015    | 2020    | 2025    | 2030    | 2035    | Data Source                               |
|---|---------|---------|---------|---------|---------|---------|---|
| SANDAG 2050 Population Projection         | 177,288 | 181,531 | 185,122 | 190,096 | 195,069 | 201,454 | SANDAG 2050 Regional Growth Forecast      |
| National City General Plan Update (GPU)   | 0       | 4,710   | 9,421   | 14,131  | 18,841  | 23,551  | National City GPU                         |
| Port and Chula Vista Bayfront Master Plan | 0       | 0       | 905     | 2,051   | 3,181   | 3,870   | Port and Chula Vista Bayfront Master Plan |
| Service Area Population                   | 177,288 | 186,241 | 195,448 | 206,278 | 217,091 | 228,875 |   |

### 5.1.3 Demand Assessment

Table 3 shows the historical and projected water demands by use sector through 2035. The projected water demand below was calculated using the population estimates in Table 2 and multiplying them by 105 gallons per capita per day (gpcd).

**Table 3  
 Historical and Projected Potable Water Demands  
 (Not Including the PGDSP)  
 (acre-feet)**

| Water Use Sectors           | Fiscal Year Ending <sup>1</sup> |               |               |               |               |               |               |
|-----------------------------|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                             | 2005                            | 2010          | 2015          | 2020          | 2025          | 2030          | 2035          |
| Residential <sup>2</sup>    | 16,094                          | 14,151        | 14,905        | 15,643        | 16,509        | 17,375        | 18,318        |
| Commercial <sup>3,4</sup>   | 4,407                           | 3,721         | 3,919         | 4,113         | 4,341         | 4,569         | 4,817         |
| Industrial                  | 405                             | 291           | 308           | 323           | 341           | 359           | 378           |
| Public                      | 1,897                           | 1,781         | 1,876         | 1,969         | 2,078         | 2,187         | 2,305         |
| Irrigation/<br>Agricultural | 31                              | 21            | 22            | 23            | 24            | 26            | 27            |
| Other <sup>5</sup>          | 42                              | 16            | 17            | 18            | 19            | 20            | 21            |
| Unaccounted<br>for Water    | 694                             | 814           | 842           | 884           | 948           | 998           | 1,052         |
| <b>Total</b>                | <b>23,570</b>                   | <b>20,795</b> | <b>21,890</b> | <b>22,972</b> | <b>24,261</b> | <b>25,532</b> | <b>26,918</b> |

Notes:

1. Fiscal Year July 1 through June 30.
2. Residential includes domestic and irrigation for single-family, multi-family, and mobile homes.
3. Commercial includes domestic and irrigation for businesses and golf courses.
4. Prior to Fiscal Year 1991-92, commercial included mobile homes and apartments. Beginning in Fiscal Year 1991-92, mobile homes and apartments have been included in residential.
5. "Other" included construction meters and golf courses through Fiscal Year 1989-90. Subsequent to Fiscal Year 1989-90, "Other" only includes construction meters.

The total projected water demands for the PGDSP are shown in Table 4. These demands have been developed by Sweetwater, and based on the project density and land use information provided by the City, combined with actual water use data for each type of land use within Sweetwater's service area.

**Table 4  
 PGDSP Projected Water Demands**

| Land Use                       | Population <sup>1</sup> | Acres <sup>1</sup> | Water Duty <sup>2</sup> | Average Water Demand |                        |
|--------------------------------|-------------------------|--------------------|-------------------------|----------------------|------------------------|
|                                |                         |                    |                         | (MGD)                | (acre-feet per year)   |
| <b>Residential<sup>3</sup></b> | 3,354                   |                    | 83 gpcd                 | 0.28                 | 312                    |
| <b>Commercial</b>              |                         | 3.44               | 1,861<br>gal/ac/day     | 0.01                 | 7                      |
| <b>Total</b>                   |                         |                    |                         | <b>0.29</b>          | <b>319<sup>4</sup></b> |

1. Based on increased residential land use data included in the City's letter to Sweetwater dated November 2, 2011. Commercial acres are based on floor space in sq-feet.
2. Based on actual 2005 consumption within Sweetwater's service area for each land use type.
3. Includes Mixed Use Commercial-Residential (MCR-1 and MCR-2). Because the residential component of the land use was limited landscape water use, a water duty of 83 gpcd was used instead of the Authority's average of 105 gpcd.
4. Total demand in 2035 from development of the PGDSP.

The demands shown in Table 4 equate to an additional 0.29 mgd or 319 acre-feet per year in demand above existing land uses. The projected demands, which are shown in Table 5, have been increased to account for this difference.

**Table 5  
 Historical and Projected Potable Water Demands  
 (Including the PGDSP)  
 (acre-feet)**

| Water Use Sectors           | Fiscal Year Ending <sup>1</sup> |               |               |               |               |               |               |
|-----------------------------|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                             | 2005                            | 2010          | 2015          | 2020          | 2025          | 2030          | 2035          |
| Residential <sup>2</sup>    | 16,094                          | 14,151        | 14,951        | 15,731        | 16,652        | 17,561        | 18,548        |
| Commercial <sup>3,4</sup>   | 4,407                           | 3,721         | 3,930         | 4,135         | 4,377         | 4,616         | 4,875         |
| Industrial                  | 405                             | 291           | 307           | 323           | 342           | 361           | 381           |
| Public                      | 1,781                           | 1,860         | 1,888         | 1,987         | 2,103         | 2,218         | 2,342         |
| Irrigation/<br>Agricultural | 31                              | 21            | 27            | 28            | 29            | 33            | 34            |
| Other <sup>5</sup>          | 42                              | 16            | 17            | 18            | 19            | 20            | 20            |
| Unaccounted<br>for Water    | 694                             | 814           | 834           | 878           | 929           | 980           | 1,035         |
| <b>Total</b>                | <b>23,570</b>                   | <b>20,795</b> | <b>21,954</b> | <b>23,100</b> | <b>24,452</b> | <b>25,787</b> | <b>27,237</b> |

Notes:

1. Fiscal Year July 1 through June 30.
2. Residential includes domestic and irrigation for single-family, multi-family, and mobile homes.
3. Commercial includes domestic and irrigation for businesses and golf courses.
4. Prior to Fiscal Year 1991-92, commercial included mobile homes and apartments. Beginning in Fiscal Year 1991-92, mobile homes and apartments have been included in residential.
5. "Other" included construction meters and golf courses through Fiscal Year 1989-90. Subsequent to Fiscal Year 1989-90, "Other" only includes construction meters.

The total demands associated with the PGDSP have not been included in any of Sweetwater's 2010 UWMP. In addition, the PGDSP demand has not been included in CWA's 2010 UWMP. In its recently adopted 2010 Regional UWMP, Metropolitan utilized SANDAG's 2050 Regional Growth Forecast, and are therefore now included in Metropolitan's long range demand and supply forecast. It is intended that the additional demand associated with the PGDSP be met through purchase of imported water from Metropolitan.

#### **5.1.4 Demand Management Measures (Water Conservation)**

Sweetwater Authority recognizes water conservation and demand management as a priority in its water use planning. The long-term goal of Sweetwater Authority's water conservation program is to achieve and maintain water use efficiency goals for

various use categories that are reasonable for that category. Specific objectives of Sweetwater Authority's conservation program are to:

- Eliminate wasteful practices in water use;
- Continue to develop information on both current and potential water conservation practices;
- Ongoing, timely implementation of conservation practices; and
- Public information and education activities to spread knowledge of efficient water use techniques and devices.

Sweetwater Authority started a water conservation program in 1990. Initial efforts included a long-term public information program and cooperation with the conservation efforts of SDCWA. The water conservation program expanded significantly during the 1987-1992 drought, and the backbone of a long-term conservation program was formed. Since that time, Sweetwater Authority has continued to revamp the conservation program by developing a variety of innovative and effective approaches to demand management.

Water conservation programs are developed and implemented on the premise that water conservation increases water supply by reducing the demand on available supply, which is vital to the optimal use of the region's supply resources. Sweetwater Authority actively participates in countywide and regional conservation programs through SDCWA and Metropolitan. As a member of SDCWA, Sweetwater Authority benefits from regional programs performed on behalf of its member agencies. Sweetwater Authority also participates in water conservation programs operated on a shared-cost basis among SDCWA, Metropolitan, and their member agencies.

The vast majority of water savings result from the installation of residential and commercial Ultra Low Flow Toilets (ULFT), High Efficiency Toilets (HET), and High Efficiency Washers (HEW). In 2008, Sweetwater Authority shifted emphasis towards more water efficient landscaping and commercial appliances. These programs continue to evolve. The resulting savings in supply from these programs directly relates to additional available water in the San Diego region for beneficial use within SDCWA's service area, including Sweetwater Authority. In partnership with SDCWA and San Diego County, Sweetwater Authority's water conservation efforts are expected to grow and expand.

Sweetwater Authority's fiscal year 2010-11 budget included \$119,700 for conservation programs that are anticipated to save approximately 2,400 acre-feet for the year. This fiscal year financial commitment represents an average cost of approximately \$50 per acre-foot of projected water sales. Conservation programs also reduce imported water demand.

Demonstrating its commitment to conservation, Sweetwater Authority officials became an original signatory to the *Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California*, which created the California Urban Water Conservation Council (CUWCC) in 1991 in an effort to reduce



California's long-term water demands. As defined in the MOU, a water conservation Best Management Practice (BMP) is:

*“A policy, program, practice, rule, regulation or ordinance or the use of devices, equipment or facilities which meets either of the following criteria: (a) An established and generally accepted practice among water suppliers that results in more efficient use or conservation of water; (b) A practice for which sufficient data are available from existing water conservation projects to indicate that significant conservation or conservation related benefits can be achieved; that the practice is technically and economically reasonable and not environmentally or socially unacceptable; and that the practice is not otherwise unreasonable for most water suppliers to carry out.”*

Since becoming a signatory in 1991, Sweetwater Authority has made implementation of the BMPs a foundational element of its conservation programs, and a key component in its water resource management strategy. Sweetwater Authority is in full compliance with the CUWCC MOU. Since 2008, the BMPs have been updated to include current technology and credit agencies for their innovative water conservation programs. These revisions have been incorporated into Sweetwater's conservation program and resulting demand management measures. The current demand management measures implemented by Sweetwater Authority are described below.

#### **Foundational: Utility Operations**

- **System Water Audits, Leak Detection, and Repair**– Sweetwater Authority's system water audits, leak detection, and repair programs contribute to better water management and reduction in water loss.

*Water Audits.* Sweetwater Authority conducts a monthly audit of its overall system for unbilled and unaccounted for water loss. Using these comparisons, Sweetwater Authority can evaluate the need for implementation of a formal water loss reduction program. Unaccounted for water loss is determined by comparing total water use with total water production. Sweetwater Authority's 12-month average unaccounted for water loss was 4 percent between 2000 – 2010.

*Leak Detection.* A Supervisory Control and Data Acquisition (SCADA) system was installed in the distribution system in 2001, and is used to monitor water flow throughout the system. Rapid changes in water quantity and/or pressure at any of the monitoring points within the system are immediately evaluated. On the rare occasion a leak is discovered, it is quickly detected and corrected. A leak detection survey was performed on 19.49 miles of the distribution system in September 2002. There was no total annual water loss for surveyed portions of the system.

*Water System Improvements.* Routine and preventative maintenance is performed on the distribution system. In addition, Sweetwater Authority implements a capital improvement program to maintain and renew transmission, distribution, and storage facilities.

*Facility Inspection.* Critical facilities, including pump stations and valve vaults, are inspected bi-weekly. Other distribution facilities are inspected weekly. As part of Sweetwater Authority's preventative maintenance program, each system valve is exercised at least every three years, and each fire hydrant is visually inspected and maintained every one to two years.

*Meter Maintenance and Replacement Program.* A 15-year repair/replacement program covers every service meter within the Sweetwater Authority system. Meters sized below  $\frac{5}{8}$ -inch are calibrated and replaced as needed. Meters sized 1- $\frac{1}{2}$  to 2-inches are calibrated and rebuilt as necessary. Meters sized at 3-inches and larger are calibrated and maintained annually.

*Water Theft.* Sweetwater Authority monitors incidents of water theft, and has the ability to charge up to three times the water service rate when it is determined that water theft has occurred.

- **Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections**– Sweetwater Authority requires the installation of water meters on all services throughout its distribution system, and bills by volume of water metered.
- **Wholesale Agency Assistance Program**– This demand management measure applies only to wholesale agencies. SDCWA provides conservation-related technical support and information to its member agencies, and typically manages the programs on behalf of its member agencies. Sweetwater Authority, SDCWA, and Metropolitan share funding for some conservation incentives.
- **Retail Conservation Pricing**– Sweetwater Authority's water rate structure is set up as an increasing block rate, which increases the cost of water in three steps for residential use. This encourages residential users to limit their water use by charging more for units above a base amount. A new inclining block rate structure for single family residential accounts was adopted in 2010. The increasing rate structure was implemented with a higher rate starting at the 50<sup>th</sup> percentile of the average consumer use, to encourage average consumers to reduce their use below 28 units per billing cycle to avoid the higher rate. All other water users such as multi-family, commercial, industrial, public, and agricultural are billed at a single uniform rate, which is between the second and third tier rate of the residential customer. This rate is higher than the second tier rate for residential consumers, in order to encourage large users to control excess use of water. Sweetwater Authority currently offers a financial incentive (\$0.35 per unit) for single-family residential consumers who use less than 10 units per billing cycle.
- **Water Conservation Coordinator**– Sweetwater Authority first designated a Conservation Coordinator in 1991. During this same year, Sweetwater Authority used three temporary staff positions to handle the increased volume of conservation-related activities caused by the drought. In June 1992, a Water Conservation – Information Specialist staff position was created.

Sweetwater Authority currently has a Program Supervisor and Conservation Coordinator who manages and administers the water conservation program.

- **Water Waste Prohibition** – The following water waste prohibitions are designed to encourage efficient water use within the region, and provide a method for meeting demand reduction goals, should an extended water shortage occur.

*Region.* The County of San Diego enforces several state and local ordinances requiring water conservation, to assure available water resources are put to beneficial use for all citizens of the county. California Plumbing Code, Section 402, requires the installation of water conserving fixtures in new construction. Section 67.101 of the County's Code of Regulatory Ordinances simply prohibits water waste: "No person shall waste or cause or permit to be wasted any water furnished or delivered by any agency distributing for public benefit any water dedicated to or provided for public use within the unincorporated territory of the county of San Diego."

In addition, the State Legislature determined in the Water Conservation in Landscaping Act (Government Code sections 65591 et seq.) that the State's water resources are in limited supply. The Legislature also recognized that while landscaping is essential to the quality of life in California, landscape design, installation, maintenance and management must be water efficient. Land use agencies including the cities and counties are required by the Act to enforce California's Model Water Efficient Landscape Ordinance, or a similar ordinance which is at least as effective.

For property within the County of San Diego, Section 6717c.1 of the County's Zoning Ordinance meets this requirement as it applies to new and rehabilitated public and private landscapes that require a permit on developer installed residential landscapes. The County's Water Conservation and Landscape Design Manual implements Zoning Ordinance Section 6712 (d), which requires efficient irrigation uses (including rain sensors), transitional zones, use of native plantings, restriction on turf, use of mulch, the preservation of existing vegetation and natural features, and the use of reclaimed water when available.

Within the City of Chula Vista, the landscape water efficiency is regulated through the City of Chula Vista Landscape Water Conservation Ordinance (Chapter 20.12). The general purpose of this chapter is to establish water use standards for landscapes in Chula Vista that implement the landscape design requirements established by the Urban Water Management Planning Act. Similarly, the City Council of the City of National City passed Ordinance 2010-2331 amending Title 18 of the Municipal Code by amending Chapter 18.54 establishing water efficient landscape regulations.

*Agency.* Resolution 09-12, attached in Appendix C, passed on May 27, 2009 and amended the drought response plan and associated conservation pricing structure established in Resolution 08-19. For use during emergency conditions such as drought or catastrophic interruption in service where additional water use restrictions are necessary, Sweetwater Authority has developed a four-level drought response plan allowing for water use cutbacks up to 40 percent or more, and has established an allocation method of

rationing water during drought levels. The plan sets customer guidelines for water conservation.

On December 10, 2008, a Level 1 Drought Watch was declared that officially urges water consumers in the Sweetwater Authority's service area to voluntarily cut water use up to 10 percent. This resolution was passed in response to potential cutbacks to the region's imported water supply. On April 23, 2009, SDCWA took action to call for member agencies to reduce water consumption by up to 8 percent. Because Sweetwater Authority customers were already meeting or exceeding water use reduction goals, the Level 1 conservation measure remained in effect.

**Level 1 Drought Watch.** Demand reduction goal up to 10 percent. Encourages measures to use water wisely.

**Level 2 Drought Alert.** Designed to reduce water consumption up to 20 percent. Calls for voluntary compliance with measures to reduce water use and increase the efficiency of water use throughout the service area. Target water allocations, an allocation based conservation water pricing structure and penalties for willful violations drive customers to meet mandatory water use goals. Should allocation-based water conservation pricing be implemented, the Governing Board shall declare a Water Shortage Emergency Condition in the manner and on the criteria provided in California Water Code Section 350.

**Level 3 Drought Critical.** Designed to reduce water consumption up to 40 percent. In addition to target water allocations, an allocation based conservation water pricing structure and penalties, the Governing Board shall declare a Water Shortage Emergency Condition in the manner and on the criteria provided in California Water Code Section 350.

**Level 4 Drought Emergency.** Designed to reach in excess of a 40 percent water use reduction goal. In addition to target water allocations, an allocation based conservation water pricing structure and penalties, the Governing Board shall declare a Water Shortage Emergency Condition in the manner and on the criteria provided in California Water Code Section 350.

According to the *Drought Response Plan*, "When customers of Sweetwater Authority can no longer meet water use reduction goals as defined for any drought level through voluntary efforts, or when the amount of water supply available to Sweetwater Authority for service to customers is determined to be inadequate to the extent that there would be insufficient water for human consumption, sanitation and fire protection, and this condition is likely to exist until precipitation and inflow dramatically increases, the Governing Board may activate by resolution mandatory water use reductions and/or conditions in accordance with California Water Code 350."

## Foundational: Education

- **Public Information Programs**– Sweetwater Authority promotes water conservation in coordination with the Water Conservation Garden, neighboring water agencies, SDCWA, and Metropolitan. Regional activities include: public service announcements, demonstration gardens, conservation strategy meetings, water awareness month activities, water efficiency workshops, and landscape water use classes and contests. Sweetwater Authority independently distributes public information through its website, bill inserts, on-hold telephone messages, annual Consumer Confidence Report/Calendar, newsletters, news releases, brochures, keynote speakers, classroom presentations, facility tours, video library, and participation in year-round special events and community festivals. Sweetwater Authority participates in regional drought, conservation, and environmental stewardship public outreach programs including the 20 Gallon Challenge, WaterSmart programs, Climate Change Workgroups, and city Clean-Green programs.

*Literature-Brochures.* Sweetwater Authority provides brochures and literature on a variety of water conservation topics including gray water, lawn watering, Xeriscape planting, WaterSmart and California Friendly gardening, drip irrigation, swimming pool maintenance, leak detection, and general household conservation tips. These are made available to residents through a literature rack at Sweetwater Authority's Administration Office and website, through individual and group mailings, through distribution to residential complex managers, and through distribution at public appearances by Sweetwater Authority Board members and staff. Sweetwater Authority Customer Service Representatives also distribute Conservation Policy Brochures to new and other water consumers, while out in the field. The brochures contain leak detection information and water-saving tips. Most materials are available in English and Spanish.

*Videos and Electronic Media.* Sweetwater Authority has distributed "Water Wise Gardening," a video on Xeriscape plants and efficient irrigation, to all public libraries in its service area. Upon request, Sweetwater Authority makes available informational videos produced by Sweetwater Authority, which promote conservation as a source for future water needs. Computer CD's packed with water saving tips, titled the *Southern California Heritage Gardening Guide*, and the *Frugal Gardener* are distributed at community events and speaking engagements.

*Newsletters/Brochures.* Sweetwater Authority publishes a consumer newsletter, "Customer Connections" quarterly, incorporating conservation tips and programs. Brochures are developed and distributed to deal with specific conservation issues and to provide detailed information on drought response measures. Drought Information is provided in English and Spanish and bulk mailed to all physical addresses in Sweetwater Authority's service area.

*Personal Letters and Emails.* Sweetwater Authority sends a personalized letter or email to notify consumers of reported or observed water waste on their



property. These documents are sent to elicit cooperation in Sweetwater Authority's efforts to use water efficiently, and are sent with appropriate conservation materials, such as a lawn-watering guide, leak detection information, or general conservation tips.

*Seminars.* Sweetwater Authority works with local agencies to cooperatively host periodic conservation seminars for groups of water users, targeted toward high water use consumers, or toward specific types of use. These seminars include information on current water saving methods and devices, and contacts for additional assistance and information, as well as a summary of local agency information and contact persons for cooperative efforts between Sweetwater Authority and its consumers.

*Speakers Bureau.* Sweetwater Authority staff and its Board of Directors are available to address civic and community groups, clubs, associations, and other organizations on a wide variety of water issues. Speakers provide conservation handouts to interested audience members at these appearances. The Sweetwater Authority speakers' bureau is promoted through involvement in civic groups, through the customer newsletter, through letters to local libraries and schools, and through periodic newspaper announcements of availability.

*Committees.* Sweetwater Authority maintains a permanent Communications Committee to provide assistance and suggestions to staff regarding water awareness issues. This committee can be convened as needed to provide assistance and suggestions to staff regarding conservation issues and address consumer concerns resulting from water reduction allocations.

*Exhibits and Related Materials.* Sweetwater Authority is an agency member of the Water Conservation Garden at Cuyamaca College. This garden promotes water conservation, has nearly 5 acres of displays, and offers a variety of water conservation educational programs. Sweetwater Authority also participates in local business and community fairs to distribute water-saving devices, conservation literature, and to answer consumer questions face-to-face. Materials are provided to local merchants and libraries for their distribution and displays on general water conservation issues. Sweetwater Authority also partners with neighboring water agencies to put on water conservation public awareness events, including water-efficiency technology expos and landscape contests.

Sweetwater Authority partners with the Chula Vista Nature Center to provide displays featuring relationship of good water stewardship to environmental sustainability. Sweetwater Authority also promotes sustainable water practices and water conservation through partnerships with the City of Chula Vista's Green programs, Climate Change Initiatives, and Naturescape Program.

*Tours and Open Houses.* Sweetwater Authority provides tours of its Perdue Plant in Spring Valley and its Desalination Facility in Chula Vista. Open houses at Sweetwater facilities which feature water supply and water

conservation displays are also periodically held. Bus fees are reimbursed for any tour provided to elementary and secondary school students within the service area. Tours are also provided for college and military students, community groups, after school programs, and student enrichment clubs (i.e. scouting, boys and girls clubs). Leadership tours of facilities are offered periodically to local business leaders, elected officials, and representatives from high-use water consumers. Lessons and information presented during the tours incorporate information about the limited water supply for the region and efficient water use practices.

*News Relations.* Sweetwater Authority provides formal press releases and feature story information to the Chula Vista Star News, the San Diego Union Tribune, and local radio and television reporters, as well as to trade and special interest publications.

*Advertising.* Sweetwater Authority has purchased advertising or content space in local newspapers, school and city newsletters and chamber publications to promote water conservation and understanding of water issues. Additional advertising has been provided in the Star News through that newspaper's co-sponsorship of a Sweetwater Authority water conservation poster contest.

- **School Education Programs**— Since 1991, Sweetwater Authority has had an active school education program, which includes water conservation messages. In 2000, Sweetwater Authority created a regular education specialist position to support, in addition to other activities, the school education program. Sweetwater Authority's Education Specialist provides instructional assistance, educational materials, and classroom lessons that identify urban, agricultural, and environmental issues and conditions in the local watershed.

Sweetwater Authority also participates in SDCWA's countywide education programs. SDCWA offers students from kindergarten through high school, a wide array of educational opportunities including water testing kits, and computer programs.

*Elementary School Education Program.* A professional teacher provides classroom lessons in elementary schools throughout the service area, teaching students about the water cycle and watershed protection. Each of these lessons includes discussion of wise water use practices. The Water Conservation Garden at Cuyamaca College also has an Education Department. Sweetwater Authority funds tours of the Garden and pays for the Garden's Education Coordinator, Ms. Smarty Plants, to hold assemblies at elementary schools in the Sweetwater Authority's service area.

Sweetwater Authority has provided copies of water conservation videos and books to each elementary school library in the service area. Water conservation games, books, and posters have been distributed to each classroom, and Sweetwater Authority has provided each elementary student with promotional gifts reinforcing water conservation during various water awareness month campaigns. Sweetwater Authority also participates in the

Metropolitan poster contest. The contest has a theme every year and winning submissions from the local elementary schools are submitted to Metropolitan. Winning selections are printed in their annual calendar.

Sweetwater Authority provides web-based learning for elementary students on its website. Its teachers also prepare and present specialized lessons for science fairs, extended day programs, and classrooms upon request, and promote the use of SDCWA and Metropolitan education programs. Staff from Sweetwater Authority has received training and is certified in Project Wet Curriculum. Workshops are held annually to train local teachers on the curriculum so that they can implement water education into their lesson plans

*Junior and Senior High School Education Programs.* Sweetwater Authority's professional teachers have developed secondary-school classroom lessons on water treatment, groundwater, and water supply issues, all with a discussion of efficient water use practices. Laboratory equipment issued by SDCWA is provided to secondary school teachers for classroom use. Sweetwater staff promotes use of Metropolitan and SDCWA secondary school education programs on conservation gardening, water quality, water sources, and the effects of the political process on water supplies. Sweetwater Authority has been an active partner in programs geared toward local secondary school students, including a program to encourage student activities to benefit the Sweetwater River Watershed coordinated by the Resource Conservation District of Greater San Diego. Staff from throughout Sweetwater Authority has participated in career-based events with the local schools, and were featured in "Water Works," a curriculum unit developed by SDCWA and Metropolitan. Sweetwater Authority has provided a variety of water resources for use at local schools, including water maps and issues guides, distributed to social science and science teachers, and "The Cadillac Desert," an eight-hour video series produced by public television, distributed to secondary schools and public libraries in the service area.

Sweetwater Authority hosts an annual High School Photo Contest with schools in its service area. The winning photos are selected and used in the annual Water Quality Report which also serves as a calendar. Cash prizes are awarded to the students.

*Mini-Grant Program for Local Schools.* Sweetwater Authority provides mini-grants to teachers for the development and presentation of water-based lessons, to assist with providing conservation demonstration gardens at local school sites, and to host use of San Diego County's Splash Science Lab and Green Machine at local schools.

### **Programmatic: Residential**

In addition to the programmatic DMMs discussed below, additional programs may be developed as technology improves or as needed to ensure appropriate water use.

- **Water Survey Programs for Single-Family and Multi-Family Residential Consumers** – The Residential Survey Program is free to both single-family and

multi-family residential consumers, and has been available since 1995. The program helps consumers learn how to save water in their own homes, which in turn saves the consumers money. The survey includes a review of landscaping, outdoor irrigation system, indoor use, identification of indoor leaks, a complete educational packet, information about other water conservation programs, and free faucet aerators and low-flow showerheads. An irrigation surveyor will perform a meter leak detection test, check the irrigation system, suggest seasonal adjustments for a consumer's individual water schedule, check the soil to ensure that watering coincides with moisture absorption, discuss proper lawn maintenance, and offer low water use landscape information.

- **Residential Plumbing Retrofit** – Retrofit water conservation device packages, which include toilet tank displacement devices and shower head flow restrictors, were made available to essentially all households within Sweetwater Authority's service area in 1977 as part of DWR's pilot water conservation study. Sweetwater Authority offered retrofit devices, which included low-flow showerheads, toilet tank displacement kits, and faucet aerators to its customers from 1991 through 2003. By 1999, Sweetwater Authority had distributed 20,833 low-flow showerheads. SDCWA and its member agencies distributed over 550,000 showerheads between 1991 and 2002. Since January 1, 1994, showerheads manufactured in the United States must be in compliance with 2.5 GPM maximum flow. Data gathered from the Residential Survey Program (BMP 1) showed 80 to 90 percent saturation of low-flow showerheads in homes surveyed. Since 2002, customers have had access to a limited number of pre-purchase vouchers and/or after-purchase rebates for installing water efficient toilets, washers, and other appliances through the through programs administered by SDCWA and Metropolitan.
- **High-Efficiency Washing Machine Rebate Program**– Since 2000, Sweetwater Authority has participated in SDCWA's rebate program. New technology in washing machine design provides for more efficient water use and savings. Residential and commercial consumers have taken advantage of the up to \$185 rebates to replace their standard top-loading washers with low-water use, energy-efficient models. Prior to March 10, 2004, high-efficiency washers had water efficiency factor values of 9.5 or less. With greater availability of ultra-high efficiency washers, rebates are now limited to machines with water efficiency factor values of 5.0 or less. The water efficiency factor is determined by the amount of water it takes to wash a cubic foot of laundry. The lower the water efficiency factor, the greater the water efficiency of the clothes washer.
- **Residential ULFT Replacement Program**– Since 1991, Sweetwater Authority has participated in SDCWA's Ultra Low Flow and High Efficiency Toilet voucher and/or rebate programs. The current program offers rebates to multi-family residential consumers who have purchased water efficient devices to replace older, less efficient units.

Since 1992, toilets manufactured in the United States must comply with a 1.6 gallons per flush (gpf) maximum flow. Toilets with consistently lower water use

continue to be developed. Beginning in 2008, rebates are only available for high efficiency and dual flush toilets to encourage customers to install toilets that have met more rigorous water efficiency standards.

### **Programmatic: Landscape**

- **Large Landscape Conservation Programs and Incentives**– From 1991 to 2004, large landscape (defined as landscape with one acre or more) irrigation surveys were available to consumers at no charge through the *Professional Assistance for Landscape Management (PALM)* program, sponsored by SDCWA. Using methodology developed by the Irrigation Training and Research Center at California Polytechnic State University at San Luis Obispo, the surveyor performs catch can tests, makes numerous soil and plant observations, and calculates ETo based irrigation schedule.

Beginning in 2005, residential and commercial consumers with large landscapes (initially defined as over 2,000 square feet) receive the following services at no charge through the *Smart Landscape* program, sponsored by Sweetwater Authority, SDCWA, Metropolitan, and DWR:

*Landscape Irrigation Audits.* Audits are available at no charge to residential and commercial consumers with a minimum of 1 acre of irrigated landscaping. Site audits include a review of irrigation conditions, watering schedule, and sprinkler distribution uniformity, by a trained technician. Landscape area measurement and water use recommendations are provided.

*Weather-Based Irrigation Controllers.* Rebates are available to residential and commercial consumers with irrigated landscaping for weather-based irrigation controllers to retrofit old timers.

*Rotating Irrigation Nozzles.* Rebates are available for rotating irrigation nozzles. Rebates are only available for devices listed on the Qualified Product List, maintained by Metropolitan. No site size minimum applies to this incentive program; however the current rotating nozzle rebate is only available in quantities of 25 or greater per eligible customer.

*Irrigation System Upgrade Grants.* Grants up to \$2,500 per irrigated acre, up to \$5,000 for commercial sites and \$10,000 for public sites, in matching funds are available through the Commercial Landscape Incentive Program. Sites must have a minimum of one acre of irrigated landscape, and be currently over-irrigated to qualify.

*Water Budgets.* A voluntary program for consumers with dedicated irrigation meters was developed by SDCWA for member agencies. Using a custom software application, water use data is converted into web-accessible water budgets. Each billing cycle, participating consumer water use can be charted against previous use to calculate landscape water needs. Water budgets can help consumers determine the right amount of water required to maintain healthy landscaped areas, given weather conditions. Water budgets may



decrease outside water use by 20 percent. This software application is currently being transitioned SDCWA to the member agencies.

*Water Savings Performance Program.* Until the program ended in 2010, Metropolitan provided \$195 per acre foot of water saved or about \$3 per 1,000 gallons saved to sites within Sweetwater Authority's service area. The incentive was based on the potential for savings over 5 years. Eligible project costs included labor, hardware and up to one year of water management fees.

*Synthetic Turf.* Synthetic Turf is becoming increasingly popular for sports fields, golf courses, parks, and public spaces, as well as residential properties. For a limited period, a 50¢ per square foot incentive was available for synthetic turf.

### **Programmatic: Commercial, Industrial, and Institutional**

- **Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts**– Sweetwater Authority participates in the Metropolitan's *Save Water, Save a Buck* program which offers rebates to consumers for water-efficient devices. A limited number of rebates are available for commercial plumbing fixtures (high efficiency toilets, high efficiency ultra low-flow and waterless urinals), cleaning equipment (single and multi-load commercial clothes washers and water brooms) water efficient medical equipment (X-ray processors, dry vacuum pumps, and steam sterilizer retrofits), food service equipment (connectionless food steamers, air cooled ice machines, and spray valves used for pre-rinsing dishes in commercial kitchens), and cooling tower conductivity controllers. New rebates are added to the program, and rebate values are adjusted as water savings potentials are validated. The rebates reduce the costs for businesses, and the equipment produces long-term savings in water, sewer, and energy costs.

As more and better data are collected over time, the BMPs and their associated demand management measures are refined and revised based upon the most objective criteria available. The CUWCC MOU sets agency-specific implementation schedules and coverage goals based on standardized criteria, including signatory date and base year data. Per the CUWCC, compliance with the BMP water saving goals can be accomplished in one of three ways including: accomplishing the specific measures listed in each BMP; accomplishing a set of measures which achieves equal or greater water savings; and accomplishing set water savings goals as measured in gallons per capita per day consumption. As a BMP signatory, Sweetwater Authority may elect to adopt additional or alternative conservation measures, in part or in any combination provided that the demonstrated water savings in the selected activities are equal to or greater than the water savings that would be achieved by the stated BMP measures.

## 5.2 Existing and Projected Supplies

Water used in Sweetwater's service area comes from various sources. These sources include local groundwater, a brackish groundwater desalination facility, surface water, and imported water from the Colorado River and the State Water Project. The imported water is delivered by CWA, either purchased from, or wheeled by Metropolitan, and is then purchased by Sweetwater. Since 1955, local sources have met 45 percent of the water needs within Sweetwater's service area, while the 55 percent balance has been met with imported water. The percentage of local to imported water varies greatly with time due to local rainfall amounts. Historic and projected local and imported water deliveries from CWA to Sweetwater are shown in Table 6.

**Table 6**  
**Historic and Normal Water Year Projected Sweetwater Supplies**

| Fiscal Year Ending | Total Local Supply (acre-feet) | Local Supply (acre-feet) |                     |                          |
|--------------------|--------------------------------|--------------------------|---------------------|--------------------------|
|                    |                                | Reservoirs               | National City Wells | Reynolds Desal. Facility |
| 1980               | 18,700                         | 17,392                   | 1,308               | ---                      |
| 1985               | 21,271                         | 20,052                   | 1,219               | ---                      |
| 1990               | 1,853                          | ---                      | 1,853               | ---                      |
| 1995               | 17,247                         | 15,855                   | 1,392               | ---                      |
| 2000               | 20,319                         | 16,302                   | 1,899               | 2,118                    |
| 2005               | 12,228                         | 8,449                    | 1,793               | 1,986                    |
| 2010               | 6,251                          | 901                      | 2,174               | 3,176                    |
| 2015               | 13,200                         | 7,400                    | 2,200               | 3,600                    |
| 2020               | 18,400                         | 7,400                    | 2,200               | 8,800                    |
| 2025               | 18,400                         | 7,400                    | 2,200               | 8,800                    |
| 2030               | 18,400                         | 7,400                    | 2,200               | 8,800                    |
| 2035               | 18,400                         | 7,400                    | 2,200               | 8,800                    |

### 5.2.1 Local Supply

#### 5.2.1.1 Surface Water Sources

Sweetwater owns and operates two storage reservoirs known as Sweetwater Reservoir and Loveland Reservoir, which were constructed in 1888 and 1945 respectively. Sweetwater Reservoir has an approximate capacity of 28,079 acre-feet, and Loveland Reservoir capacity is 25,387 acre-feet, for a combined capacity of 53,466 acre-feet. The watershed for the Sweetwater River is approximately 230 square miles. Sweetwater Reservoir is downstream of Loveland Reservoir and has a treatment plant capable of producing 30 million gallons of water per day (MGD). Local supply from Sweetwater Reservoir varies from zero to 100 percent depending on the local runoff conditions.

During wet years when Sweetwater and Loveland Reservoirs are at or near full capacity, they are capable of providing up to a two-year supply to Sweetwater customers.

#### **5.2.1.2 Groundwater Sources**

Sweetwater produces groundwater from the Sweetwater Valley Groundwater Basin identified in the State of California Department of Water Resources (DWR) Bulletin 118 as Basin Number 9-17. Sweetwater adopted an interim groundwater management plan that governs groundwater management until a subsequent groundwater management plan can be prepared in accordance with Water Code Section 10750 (AB3030). The interim groundwater management plan is included as Appendix D.

The Sweetwater Valley Groundwater Basin underlies an alluvial valley that empties into the San Diego Bay and is bounded on the east by the impermeable Santiago Peak volcanic rocks. The north and south are Pliocene and Pleistocene semi-permeable terrestrial deposits, which constitute valley walls. The western boundary is San Diego Bay. Basin recharge is derived from seasonal runoff from precipitation, discharge from the Sweetwater and Loveland Reservoirs, and underflow from the reservoirs.

Two water-bearing formations in the Basin are the Quaternary Alluvium and the San Diego Formation. In 1997, CWA estimated a groundwater storage capacity of 13,000 acre-feet in the Quaternary Alluvium, and about 960,000 in the San Diego Formation. The Sweetwater Valley Groundwater Basin is not an adjudicated basin, therefore, there has never been any restriction on the rate of extraction since groundwater production began. However, the City of San Diego has filed a lawsuit challenging the Environmental Impact Report for the expansion project Sweetwater has proposed at the Richard A. Reynolds Groundwater Desalination Facility (Reynolds Facility). As a point of reference, Sweetwater Valley Groundwater Basin has not been identified in DWR Bulletin 118 as in overdraft.

Sweetwater operates the National City Wells, which produce potable groundwater (Total Dissolved Solids [TDS] approximately 600 mg/l) and the Reynolds Facility that produces drinking water from brackish groundwater (TDS between 2,000 and 2,500 mg/l). Both well fields pump from the San Diego Formation.

The National City Wells consist of three wells: Nos. 2, 3 and 4. Well Nos. 3 and 4 operate daily, while the oldest well, No. 2, serves as a backup. Sweetwater has produced an average of 1,790 acre-feet per year from the National City Wells from 1954 to 2010.

The Desalination Facility commenced operation in 1999. The facility was designed to take groundwater from four alluvial wells and five deep San Diego Formation wells, located on the north side of the Sweetwater River. A sixth San Diego Formation has

been constructed. The facility removes the TDS from the brackish groundwater using reverse osmosis technology (R/O). Currently, the alluvial wells are not operated for the following reasons: 1) summertime vegetative distress in the Sweetwater River, and 2) because of surface water influence on the relatively shallow alluvial formation, and the R/O membranes not being approved for surface water treatment by the California Department of Public Health. Groundwater production for the past eight years is included in Table 7.

**Table 7  
 Groundwater Production 2004 through 2010**

| Fiscal Year Ending | Total GW Produced (acre-feet) | Source (acre-feet) |                       |
|--------------------|-------------------------------|--------------------|-----------------------|
|                    |                               | NC Wells           | Desalination Facility |
| 2004               | 3,637                         | 1,595              | 2,042                 |
| 2005               | 3,779                         | 1,793              | 1,986                 |
| 2006               | 3,941                         | 1,670              | 2,271                 |
| 2007               | 5,398                         | 2,161              | 3,237                 |
| 2008               | 5,887                         | 2,188              | 3,699                 |
| 2009               | 5,399                         | 1,945              | 3,454                 |
| 2010               | 5,351                         | 2,175              | 3,176                 |
| 2011               | 5,627                         | 2,113              | 3,514                 |

Phase I of the Desalination Facility was designed to produce four MGD of drinking water. The facility was constructed with space to accommodate a Phase 2 expansion to produce up to eight MGD. Currently, Sweetwater is in the design phase to expand the facility to a maximum 10 MGD capacity with an average production of 8 MGD. Construction should be completed by 2017. Additionally, Sweetwater is currently participating in studies with the United States Geological Survey (USGS) to evaluate the San Diego Formation Aquifer, and to make safe use of the available yield from the aquifer.

### 5.2.1.3 Water Recycling

#### Water Recycling

Sweetwater does not produce or distribute recycled water. Several potential changes in the service area could have significant impacts on the future potable water demands. These include:

- The previously planned construction of a new LSP Southbay, LLC Energy Power Plant with up to 5 MGD of recycled water demand. However, it does not appear that this project will move forward.

- The development of the Chula Vista Bayfront. This planned project will cover approximately 550 acres along San Diego Bay. The land uses being considered include parks and open space. This development will increase the demand for potable water.

Due to these developments, Sweetwater completed a master plan for the distribution of recycled water within its service area. Additionally, Sweetwater has participated in studies with CWA, Otay Water District (Otay) and the City of Chula Vista to analyze potential water recycling plant locations within Sweetwater's service area.

Due to uncertainties surrounding these new developments, the implementation of recycled water service within Sweetwater's service area is unknown; therefore, the use of recycled water has not been considered in the preparation of this WSA. However, this section provides a summary of the results of the master planning effort and the plant siting study now underway.

#### **5.2.1.4 Sweetwater's Recycled Water Master Plan**

Sweetwater's Recycled Water Master Plan evaluated 8 recycled water system alternatives with demands ranging from 4,300 acre-feet per year to 5,470 acre-feet per year. Recycled water sources included both a new recycled water plant that would be constructed by Sweetwater and the City of Chula Vista, and a supply from the City of San Diego's South Bay Water Reclamation Facility. A preferred alternative was identified that included demands of 4,300 acre-feet per year and a supply from the South Bay Water Reclamation Facility. However, approximately 2,700 acre-feet per year is related to the development of a new water-cooled power plant that is unlikely to be constructed. At this time, it is unclear if the power plant will be developed or if it will be air or water-cooled. Without the development of the water-cooled plant, it is likely that development of a recycled water system within Sweetwater's service area would be cost prohibitive.

#### **5.2.1.5 Membrane Bioreactor Studies**

Sweetwater participated in CWA's Membrane Bioreactor Study. Recent technology advancements have made satellite treatment plants utilizing membrane bioreactor (MBR) technology a feasible cost effective alternative to traditional centralized wastewater treatment plants. The ability of MBR technology to comply with strict effluent requirements, operate reliably with minimal operator attendance, and occupy far less space than traditional systems, which allows it to be easily sited close to the recycled water consumers. The study includes evaluation of "scalping" plants taking raw sewage from the City of Chula Vista by intercepting existing regional sewer lines, treating it locally through a miniature version of a wastewater treatment plant and putting the residuals back in the sewer downstream of the withdrawal point.

A second MBR Study was a collaborative project involving Otay Water District (Otay) and the City of Chula Vista (City), with Sweetwater as the Lead Agency. The intent was to determine if an MBR Recycled Water Treatment Plant (MBR Plant) is feasible



in order to provide recycled water to both, or either, Sweetwater and Otay, as well as to determine if the City can find an alternative to acquiring needed wastewater capacity from the City of San Diego's Metropolitan Wastewater System (Metro System).

The results of the study showed the cost of installing a recycled water distribution system in Sweetwater's service area is prohibitively expensive. Therefore, Sweetwater has determined that it will not participate in any near-term studies regarding an MBR Plant to serve recycled water in its service area. However, it may appear to be feasible for Otay and the City of Chula Vista.

### **5.2.2 Imported Supply**

Sweetwater represents two (City of Chula Vista and South Bay Irrigation District) of the 24 member agencies of CWA. Member agency status entitles Sweetwater to directly purchase water from CWA on a wholesale basis. One hundred percent of Sweetwater's imported water is purchased from CWA, a member agency of Metropolitan. The statutory relationships between CWA and its member agencies, and Metropolitan and its member agencies, respectively, establish the scope of Sweetwater's entitlements to water from these two agencies. The historical quantities of water purchased from CWA by Sweetwater are shown on Table 8.

**Table 8  
 Historic Sweetwater Imported Supplies**

| Fiscal Year Ending | Total Imported Water (acre-feet) | Source (acre-feet) |         |
|--------------------|----------------------------------|--------------------|---------|
|                    |                                  | Untreated          | Treated |
| 1985               | 4,634                            | ---                | 4,634   |
| 1986               | 20,842                           | ---                | 20,842  |
| 1987               | 16,384                           | ---                | 16,384  |
| 1988               | 20,514                           | ---                | 20,514  |
| 1989               | 19,519                           | ---                | 19,519  |
| 1990               | 24,019                           | ---                | 24,019  |
| 1991               | 20,508                           | ---                | 20,508  |
| 1992               | 14,722                           | ---                | 14,722  |
| 1993               | 6,188                            | ---                | 6,188   |
| 1994               | 1,387                            | ---                | 1,387   |
| 1995               | 5,045                            | ---                | 5,045   |
| 1996               | 1,589                            | ---                | 1,589   |
| 1997               | 14,230                           | ---                | 14,230  |
| 1998               | 8,452                            | ---                | 8,452   |
| 1999               | 10                               | ---                | 10      |
| 2000               | 5,520                            | 5,429              | 91      |
| 2001               | 14,841                           | 14,381             | 47      |
| 2002               | 19,551                           | 19,408             | 143     |
| 2003               | 20,271                           | 20,226             | 45      |
| 2004               | 20,526                           | 19,456             | 1,070   |
| 2005               | 11,342                           | 11,234             | 108     |
| 2006               | 7,723                            | 7,723              | ---     |
| 2007               | 12,102                           | 11,987             | 115     |
| 2008               | 16,658                           | 16,650             | 8       |
| 2009               | 12,864                           | 11,312             | 1,552   |
| 2010               | 14,548                           | 11,375             | 3,173   |
| 2011               | 7,029                            | 6,377              | 652     |

CWA was organized on June 9, 1944 under the County Water Authority Act for the sole purpose of importing Colorado River Water into San Diego County. The imported water, now a combination of Colorado River water and State Project water, is sold wholesale to the 24 member agencies of CWA. The member agencies are autonomous and their City Councils or Boards of Directors set local policies and pricing structures.

Imported water delivered by CWA is either purchased from or wheeled by Metropolitan from Metropolitan facilities, located just south of the San Diego/Riverside county line. Metropolitan is a public agency organized in 1928 by a vote of the electorates of 13 Southern California cities. Since its formation, Metropolitan has

grown to include 27 member agencies of which CWA is the largest. Metropolitan was formed for the purpose of developing, storing, and distributing water to the residents of Southern California.

#### **5.2.2.1 Metropolitan's 2010 Regional UWMP**

Metropolitan's 2010 Regional UWMP was adopted by the Metropolitan board of directors on November 9, 2010. The 2010 Regional UWMP provides member agencies, retail water utilities, cities, and counties within its service area with water supply information for purposes of developing local UWMPs, water supply assessments, and written verifications. As part of this process, Metropolitan also uses SANDAG's Regional Growth Forecast in calculating regional water demands for the Water Authority's service area. Metropolitan incorporated SANDAG's 2050 Regional Growth Forecast into the 2010 Regional UWMP, which included demands for the City's WSP. Since the last Regional UWMP update in 2005, conditions in the Sacramento/San Joaquin Delta have changed significantly, reducing exports from Northern California. Metropolitan has described the supply reliability risks in its 2010 Regional UWMP update. The Regional UWMP also summarizes Metropolitan's implementation plans and continued progress in developing a diversified resource mix that enables the region to meet its water supply needs. Copies of Metropolitan's 2010 Regional UWMP are available at Metropolitan's Administration Office or online at: [www.mwdh2o.com](http://www.mwdh2o.com).

#### **5.2.2.2 San Diego County Water Authority's 2010 UWMP**

On June 23, 2011, the CWA's Board of Directors approved the CWA's 2010 UWMP for distribution to member agencies, the County of San Diego, and cities within the county. The purpose of the report is to provide a statement regarding the CWA's supplies and implementation of the CWA plans and programs to meet the future water supply requirements of its member agencies. The 2010 UWMP contains documentation on the CWA/Imperial Irrigation District Water Conservation and Transfer Agreement, All American Canal and Coachella Canal Lining Projects, and a planned seawater desalination facility at the Encina Power Station. The documentation included in the 2010 UWMP was prepared for use by the CWA's member agencies in preparation of local UWMP, water supply assessments, and written verifications required under state law. Copies of the CWA's 2010 UWMP are available at the CWA's website: [www.sdcwa.org](http://www.sdcwa.org).

In its 2010 UWMP, CWA included a traditional scenario planning process, which assesses potential risks associated with implementation of its projected resource mix, and that also identifies management strategies to help deal with the related uncertainties. Potential risks include impacts from drought, limited supply development, climate change, and demographic shift. Under the demographic shift scenario, land-use development approval would differ from that identified in the cities' and county general plans. In part to deal with this uncertainty associated with land-

use approvals occurring during the 2010 UWMP planning horizon, an additional demand increment, termed Accelerated Forecasted Growth, has been included in the CWA’s regional total demand forecast included in the 2010 UWMP.

### 5.3 Dry Year Demand Assessment

The dry year demand assessment is shown in Table 9 and includes demands during single and multiple dry water years. The estimated demands for multiple dry years are reflective of years 2026, 2027, and 2028. No extraordinary conservation measures, beyond BMP implementation, are reflected in the demand projections.

\*Source: *Weather-Related Water Demand Variability in Metropolitan Water District Service Area, 09/1990*

**Table 9**  
**Projected Water Demand during Normal, Single and Multiple Dry-Years**  
**(acre-feet per year)**

|              | Normal Water Year (2025) | Single Dry Water Year (2025) | Multiple Dry Water Years |               |               |
|--------------|--------------------------|------------------------------|--------------------------|---------------|---------------|
|              |                          |                              | Year 1 (2026)            | Year 2 (2027) | Year 3 (2028) |
| Total Demand | 24,452                   | 24,452                       | 24,719                   | 24,986        | 25,253        |

### 5.4 Dry Year Supply Assessment

Probability estimates for usable runoff were calculated using the hydrologic data for the period between 1926 and 2010 within the Sweetwater River Watershed, excluding that runoff spilled from the Sweetwater Dam to San Diego Bay. Based on this data the historical amount of useable runoff for normal, single and multiple dry years were determined. The normal water year for local production from Sweetwater Reservoir is based on the average since 1960, the single dry year is the year with the lowest run-off (1961), and the multiple dry year period is the lowest average runoff for a consecutive three-year period (1959 through 1961). The National City Wells and the Desalination Facility are relatively fixed supplies that are not weather dependent; therefore, the production from these sources has not been reduced during a drought event. Table 10 shows the estimated supply from local sources.

**Table 10**  
**Local Projected Water Supply during Normal, Single, and Multiple Dry Years**  
**(acre-feet per year)**

| Supply Source               | Normal Water Year | Single Dry Water Year | Multiple Dry Year Period |               |               |
|-----------------------------|-------------------|-----------------------|--------------------------|---------------|---------------|
|                             |                   |                       | Year 1                   | Year 2        | Year 3        |
| Sweetwater Reservoir        | 7,400             | 350                   | 830                      | 830           | 830           |
| National City Wells         | 2,200             | 2,200                 | 2,200                    | 2,200         | 2,200         |
| Reynolds Desalination       | 8,800             | 8,800                 | 8,800                    | 8,800         | 8,800         |
| <b>Total Local Supplies</b> | <b>18,400</b>     | <b>11,350</b>         | <b>11,830</b>            | <b>11,830</b> | <b>11,830</b> |

## **Section 6 – Conclusion: Availability of Sufficient Supplies**

Sweetwater is committed to developing local resources within and outside its service area to offset the region’s need for imported water from CWA. Within its service area, Sweetwater is in the process of expanding its Reynolds Desalination Facility, which reclaims brackish groundwater from the underlying San Diego Formation. Sweetwater supports the development of ocean desalination by supporting the Poseidon Resources Desalination Project in Carlsbad. Sweetwater has studied the development of recycled water in its service area, and concluded that it is prohibitively expensive at this time. However, Sweetwater continues to support other agencies that are developing this very important local resource.

Sweetwater, as with other agencies in the region, continues to rely on imported water from CWA and Metropolitan to bridge the gap between its available local supply and current and future demands within its service area. Metropolitan’s 2010 Regional UWMP utilized SANDAG’s most recent 2050 Regional Growth Forecast in calculating regional water demands for CWA’s service area. Their 2010 Regional UWMP also identifies implementation plans to develop a reliable resource mix that enables the region to meet its water supply needs. CWA’s 2010 UWMP also utilized SANDAG’s most recent 2050 Regional growth forecast in calculating demands for its service area and identifies projects and programs to help ensure that the existing and planned water users within Sweetwater’s service area have an adequate supply. CWA’s 2010 UWMP also includes scenario planning to manage uncertainties associated with providing supply reliability. Implementation of these strategies by Metropolitan, CWA, and local water agencies will assure adequate supply to support growth and redevelopment within the region. If CWA and member agency supplies are developed as planned, along with implementation of Metropolitan’s 2010 Regional UWMP, shortages are not anticipated within CWA’s service area through 2035. It should be noted that programs in the updated CWA and Metropolitan planning documents require future discretionary decisions by their respective board of directors. Until these programs are fully implemented to manage current changed



conditions and other uncertainties, the San Diego region will remain susceptible to potential shortages. Metropolitan, CWA, and Sweetwater do have shortage response plans in place to manage any potential shortages. The plans include shortage response actions, such as dry-year storage withdrawals, voluntary and mandatory water use restrictions, and outreach. Sweetwater is currently in Level 1 of its Drought Response Plan.

Table 11 shows the forecasted water demands compared with projected supplies within Sweetwater’s service area. This demonstrates that with implementation of the projects and strategies discussed in MWD and CWA’s planning documents and implementation of new strategies being developed, there will be adequate water supplies to serve the proposed Project along with existing and future uses.

**Table 11**  
**Projected Water Supply and Demand for**  
**Normal Years**  
**(acre-feet per year)**

| <b>Supply Source</b>          | <b>2005</b>   | <b>2010</b>   | <b>2015</b>   | <b>2020</b>   | <b>2025</b>   | <b>2030</b>   | <b>2035</b>   |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Imported Water                | 11,342        | 14,543        | 8,754         | 4,700         | 6,052         | 7,387         | 8,837         |
| Sweetwater Reservoir          | 8,449         | 901           | 7,400         | 7,400         | 7,400         | 7,400         | 7,400         |
| National City Wells           | 1,793         | 2,175         | 2,200         | 2,200         | 2,200         | 2,200         | 2,200         |
| Reynolds Desalination         | 1,986         | 3,176         | 3,600         | 8,800         | 8,800         | 8,800         | 8,800         |
| <b>Total Available Supply</b> | <b>23,570</b> | <b>20,795</b> | <b>21,954</b> | <b>23,100</b> | <b>24,452</b> | <b>25,787</b> | <b>27,237</b> |
| <b>Total Projected Demand</b> | <b>23,570</b> | <b>20,795</b> | <b>21,954</b> | <b>23,100</b> | <b>24,452</b> | <b>25,787</b> | <b>27,237</b> |

The normal, single, and multiple dry-year scenarios are shown in Table 12, and demonstrate that with implementation of the projects and strategies discussed in MWD and CWA’s planning documents, and implementation of new strategies being developed, supplies will be adequate to meet future demands in dry-year periods.

**Table 12**  
**Projected Water Supply and Demand during**  
**Normal, Single, and Multiple Dry-Years**  
**(acre-feet per year)**

| Supply Type                     | Normal Water Year (2025) | Single Dry Water Year (2025) | Multiple Dry Water Years |               |               |
|---------------------------------|--------------------------|------------------------------|--------------------------|---------------|---------------|
|                                 |                          |                              | Year 1 (2026)            | Year 2 (2027) | Year 3 (2028) |
| Imported Water                  | 6,052                    | 13,102                       | 12,889                   | 13,156        | 13,423        |
| Sweetwater Reservoir            | 7,400                    | 350                          | 830                      | 830           | 830           |
| National City Wells             | 2,200                    | 2,200                        | 2,200                    | 2,200         | 2,200         |
| Reynolds Desalination           | 8,800                    | 8,800                        | 8,800                    | 8,800         | 8,800         |
| <b>Total Supplies Available</b> | <b>24,452</b>            | <b>24,452</b>                | 24,719                   | 24,986        | 25,253        |
| <b>Total Projected Demand</b>   | <b>24,452</b>            | <b>24,452</b>                | 24,719                   | 24,986        | 25,253        |

This WSA Report demonstrates and verifies that with development of the resources identified, there will be sufficient water supplies, over a 20-year planning horizon, to meet the projected demands of the proposed Project, and the existing and planned development projects within Sweetwater’s service area.

These findings further verify that there will be sufficient water supply to serve the proposed Project, including existing and other planned projects in both normal and dry year forecasts. However, while Sweetwater is developing new local water supplies, and Metropolitan retains its conclusion of available surplus supplies, Sweetwater advises the City of Chula Vista that given the current water supply issues, including: a) drought conditions in California and the Colorado River Basin, b) legal and regulatory issues involving utilization of the San Francisco Bay Delta to convey California State Project Water to Southern California, Sweetwater cannot guarantee that, at some time in the future, Metropolitan may not project a supply of surplus water required to serve the project. Finally, as noted in Section 5.1.4, BMP 13 – Water Waste Prohibition, there are four drought levels. Under Drought levels 3 and 4, Sweetwater’s Drought Response Plan states that no new services will be provided with some exceptions. Refer to Appendix C for further discussion.

Finally, in the letter from the City of Chula Vista, dated November 2, 2011, requesting the WSA, the city also requested the Authority to confirm if the existing water delivery facilities are adequate to serve the future water needs of the area and the required fire flow of 4,000 gallons per minute (gpm). Sheet 2 of 3 in Appendix E indicates that the future water demands of the proposed district can be met by the Authority’s

existing water delivery system with a pressure in excess of 70 pounds per square inch (psi) (minimum of 40 psi is required for new customers). Also, Sheet 3 of 3 in Appendix E indicates that the required fire flow of 4,000 gpm (near the intersection of Palomar Street and Industrial Boulevard) can be met by the existing water delivery system.

I:\engr\Gen\City of Chula Vista WSA for Palomar Gateway District SP\Water Supply Assessment - Palomar Gateway District Specific Plan - final 2-22-12.docx

**Appendix A**  
**City of Chula Vista Request to Prepare a**  
**Water Supply Assessment**



## Development Services Department

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November 2, 2011

Mr. Héctor Martínez  
Sweetwater Authority  
505 Garrett Avenue  
Post Office Box 2328  
Chula Vista, CA 91912-2328



**RE: Palomar Gateway District Specific Plan: Water Supply Assessment and 2010 Water Master Plan Distribution System**

Dear Mr. Martínez:

The City of Chula Vista is currently preparing the Palomar Gateway District Specific Plan (PGDSP), for which a Program Environmental Impact Report (PEIR) will be prepared. The Specific Plan will establish zoning regulations for the plan area (see attached PGD map), which will then be applied as the area incrementally redevelops over the next 10-20 years. The attached table identifies the projected development levels based on the land uses envisioned by the draft Specific Plan. The table shows the number of existing dwelling units and commercial/industrial square footage, as well as the projected residential and commercial development for the next 20 years. It is expected that this information will enable you to determine the maximum incremental water supply demand that could result from the build-out, as shown in the table, under the proposed Specific Plan.

As discussed at the meeting between you and City planning staff and Fire Prevention staff on October 27, 2011, the purpose of this letter is to formally request that Sweetwater Authority prepare a water supply/delivery assessment pursuant to Senate Bill (SB) 610 (Costa), which amended the California Water Code effective January 1, 2002, regarding land use planning and water supply availability. SB 610 requires the City of Chula Vista to request that the purveyor of a public water system, which will serve a proposed development area meeting the minimum threshold size defined by the statute, prepare a water supply assessment to be included as part of the environmental document prepared for the project. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights and contracts. If the assessment concludes that the total projected water supplies are or will be insufficient, the public water system is asked to submit plans for acquiring additional water supplies.

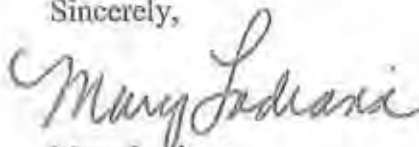


In addition, City staff understands that the Sweetwater Authority has recently completed the 2010 Water Distribution System Master Plan. City staff would like to confirm that, based on the projected build-out for the PGDSP, which is less than the City's 2005 General Plan, the water delivery system is sufficient for the projected new growth for the next 10-20 years. Please confirm if the existing water delivery facilities are adequate to serve the future water needs of the area and the required fire flows as required by the Fire Department. During the meeting of October 27, 2011, a fire flow of 4,000 gallons per minute was determined to be an adequate estimate for purposes of this planning assessment. It was noted that this assumption is appropriate for planning purposes but that individual development projects would be reviewed based on a variety of site-specific criteria at the time of project submittal (e.g. sprinklers, access, building height, construction type, etc.).

Please note that the governing body of the public water system must submit the water supply assessment to the City within 90 days from receipt of the request. However, due to the City's desire to keep up with the schedule for the preparation of the PEIR for this project, we would very much appreciate your efforts, with assistance from the City to the extent possible, to complete and provide the assessment at the earliest possible time.

If you have any questions regarding this request or wish to meet with us to formulate a collaborative approach to facilitate the completion of the assessment in the most expeditious manner possible, please contact Miguel Z. Tapia, Project Manager, at (619) 691-5291.

Sincerely,

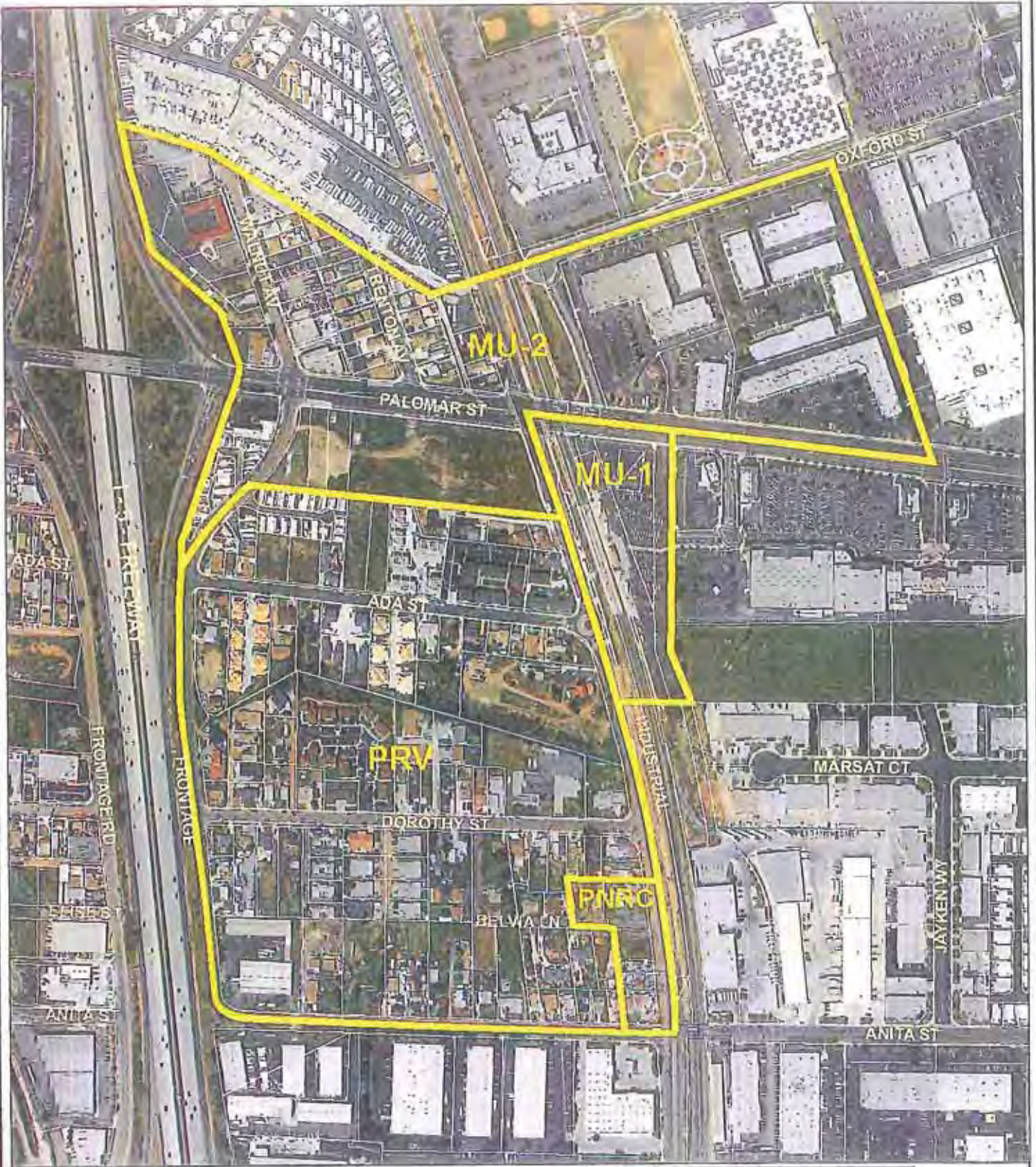


Mary Ladiana  
Development Planning Manager

#### Attachments

cc: Tom Adler, Land Development Division  
Justin Gipson, Fire Marshall  
Richard Gari, Fire Prevention  
Miguel Z. Tapia, Planning Division





**Palomar Gateway District  
Sub-Districts Map**

- Sub-Districts:**  
 MU-1: Palomar Transit Plaza  
 MU-2: Mixed Use Corridor  
 PRV: Palomar Residential Village  
 PNRC: Palomar Neighborhood Retail Cluster





**Palomar Gateway District  
Existing and Projected<sup>(1,2)</sup> Development  
20-Year Horizon**

|                                 | Existing Development | Projected Additional Development | Total Estimated Buildout | Projected Buildout by Sub-District |                    |                   |                   |
|---------------------------------|----------------------|----------------------------------|--------------------------|------------------------------------|--------------------|-------------------|-------------------|
|                                 |                      |                                  |                          | MU-1<br>(3.5 ac.)                  | MU-2<br>(31.5 ac.) | PRV<br>(43.5 ac.) | PNRC<br>(1.5 ac.) |
| Residential (Units)             | 400                  | 1,300                            | 1,700                    | 150 <sup>(3)</sup>                 | 450 <sup>(4)</sup> | 700               |                   |
| Retail (Sq. Ft.) <sup>(5)</sup> | 200,000              | 100,000                          | 300,000                  | 10,000                             | 85,000             |                   | 5,000             |
| Office (Sq. Ft.)                |                      | 50,000                           | 50,000                   | 5,000                              | 40,000             |                   | 5,000             |
| Industrial (Sq. Ft.)            | 30,000               |                                  |                          |                                    |                    |                   |                   |

- <sup>1</sup> Numbers are approximations.
- <sup>2</sup> Projected residential units and commercial square footages are based on 2011 Market Study conducted by Gafcon.
- <sup>3</sup> Projected residential units for MU-1 Sub-District are based on the designated FAR with the proportional commercial development indicated on note 5 below.
- <sup>4</sup> Sub-Districts MU-2 and PRV residential units were estimated proportional to the Sub-District land area.
- <sup>5</sup> Retail/Office square footages are assumed 10%/90% split of projected buildout between the MU-1/ MU-2 Sub-Districts, which is roughly proportional to the Sub-Districts land area.

**Appendix B**  
**2009-10 CUWCC BMP Annual Report**

The fields in red are required.



Agency name:  Primary contact:  
First name:   
Reporting unit name (District name):  Last name:   
Reporting unit number:  Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

## Base Year Data

[Link to FAQs](#)

### Reporting Unit Base Year

Base Year

What is your reporting period?

### BMP 1.3 Metering

Number of unmetered accounts in Base Year

### BMP 3.1 & BMP 3.2 & BMP 3.3 Residential Programs

Number of Single Family Customers in Base Year

Number of Multi Family Units in Base Year

### BMP 3.4 WaterSense Specification (WSS) Toilets

Number of Single Family Housing Units constructed prior to 1992

Number of Multi Family Units prior to 1992

Average number of toilets per single family household

Average number of toilets per multi family household

Five year average resale rate of single family households

Five-year average resale rate of multi family households

Average number of persons per single family household

Average number of persons per multi family household

### BMP 4.0 & BMP 5.0 CII & Landscape

Total water use (in Acre Feet) by CII accounts

Number of accounts with dedicated irrigation meters

Number of CII accounts without meters or with Mixed Use Meters

Number of CII accounts

Comments:

No unmetered connections within the system at the time MOU was signed. Total number of mixed use CII accounts derived by totalling commercial, industrial and public accounts and subtracting from this amount the landscape only meters. May include 'indoor only' water use.



The fields in red are required.

Primary contact:

Agency name:  First name:

Reporting unit name (District name):  Last name:

Reporting unit number:  Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

# 2009

## BMP 1.1 Operations Practices

Comments:

### Conservation Coordinator

Conservation Coordinator  Yes  No

### Contact Information

First Name:

Last Name:

Title:

Phone:

Email:

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

### Water Waste Prevention

Water Agency shall do one or more of the following:

- a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
- b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- c. Support legislation or regulations that prohibit water waste
- d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- e. Support local ordinances that prohibit water waste
- f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- a. A description of, or electronic link to, any ordinances or terms of service
- b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Enter a description:



The fields in red are required.



Agency name:  Primary contact: First name:  Last name:  Email:

Reporting unit name (District name):  Reporting unit number:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)

# 2009 BMP 1.2 Water Loss Control

## AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software  Yes  No  
Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

Water Audit Validity Score from AWWA spreadsheet

Agency Completed Training In The AWWA Water Audit Method  Yes  No  
Agency Completed Training In The Component Analysis Process  Yes  No

Completed/Updated the Component Analysis (at least every 4 years)?  Yes  No  
Component Analysis Completed/Updated Date

## Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective  Yes  No

### Recording Keeping Requirements:

|   |   |
|---|---|
| Date/Time Leak Reported                 | Leak Location                           |
| Type of Leaking Pipe Segment or Fitting | Leak Running Time From Report to Repair |
| Leak Volume Estimate                    | Cost of Repair                          |

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective  Yes  No

Type of Program Activities Used to Detect Unreported Leaks

A supervisory control and data acquisition (SCADA) system is used to monitor water flow throughout the system any rapid changes or abnormal readings are investigated and evaluated immediately.

## Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

| Total Leaks Repaired | Economic Value Of Real Loss | Economic Value Of Apparent Loss | Miles Of System Surveyed For Leaks | Pressure Reduction Undertaken for loss reduction | Cost Of Interventions | Water Saved (AF/Year) |
|----------------------|-----------------------------|---------------------------------|------------------------------------|--|-----------------------|-----------------------|
|                      |                             |                                 |                                    |  |                       |                       |

Comments:



The fields in red are required.



Agency name: Sweetwater Authority  
Reporting unit name (District name): Sweetwater Authority  
Reporting unit number: 213

Primary contact:  
First name: Sue  
Last name: Mosburg  
Email: smosburg@sweetwater.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)

# 2009 BMP 1.2 Water Loss Control

Did your agency complete a pre-screening system audit in 2009? Yes  No

If yes, answer the following:

Determine metered sales in AF: 21,906.00

Definition: other accountable uses not included in metered sales, such as unbilled water use, fire suppression, etc.

Determine system verifiable uses AF: 303.00

Determine total supply into the system in AF: 22,691.00

Does your agency keep necessary data on file to verify the answers above? Yes  No

Did your agency complete a full-scale system water audit during 2009? Yes  No

Does your agency maintain in-house records of audit results or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC? Yes  No

Did your agency operate a system leak detection program? Yes  No

## Comments:

Sweetwater Authority conducts a monthly audit of its overall system for unbilled and unaccounted for water. By comparing the findings Sweetwater Authority can evaluate the need for implementation of a formal water loss reduction program.

Agency name:  First name:   
 Reporting unit name (District name):  Last name:   
 Reporting unit number:  Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



## BMP 1.3 Metering with Commodity

[Link to FAQs](#)

[See the complete MOU: View MOU](#)

[See the coverage requirements for this BMP:](#)

### Implementation

Does your agency have any unmetered service connections?  Yes  No

If YES, has your agency completed a meter retrofit plan?  Yes  No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered?  Yes  No

Are all new service connections being billed volumetrically?  Yes  No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters?  Yes  No

Please Fill Out The Following Matrix

| Account Type         | # Metered Accounts                  | # Metered Accounts Read             | # Metered Accounts Billed by Volume | Billing Frequency Per Year              | # of estimated bills/yr        |
|----------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|--------------------------------|
| Single-Family        | <input type="text" value="26,275"/> | <input type="text" value="26,275"/> | <input type="text" value="26,275"/> | <input type="text" value="Bi-monthly"/> | <input type="text" value="6"/> |
| Multi-Family         | <input type="text" value="3,304"/>  | <input type="text" value="3,304"/>  | <input type="text" value="3,304"/>  | <input type="text" value="Bi-monthly"/> | <input type="text" value="6"/> |
| Commercial           | <input type="text" value="2,555"/>  | <input type="text" value="2,555"/>  | <input type="text" value="2,555"/>  | <input type="text" value="Bi-monthly"/> | <input type="text" value="6"/> |
| Industrial           | <input type="text" value="33"/>     | <input type="text" value="33"/>     | <input type="text" value="33"/>     | <input type="text" value="Bi-monthly"/> | <input type="text" value="6"/> |
| Institutional        | <input type="text" value="261"/>    | <input type="text" value="261"/>    | <input type="text" value="261"/>    | <input type="text" value="Bi-monthly"/> | <input type="text" value="6"/> |
| Agricultural         | <input type="text" value="8"/>      | <input type="text" value="8"/>      | <input type="text" value="8"/>      | <input type="text" value="Bi-monthly"/> | <input type="text" value="6"/> |
| Dedicated Irrigation | <input type="text" value="581"/>    | <input type="text" value="581"/>    | <input type="text" value="581"/>    | <input type="text" value="Bi-monthly"/> | <input type="text" value="6"/> |
| Other                | <input type="text"/>                | <input type="text"/>                | <input type="text"/>                | <input type="text" value="Other"/>      | <input type="text"/>           |
| Other                | <input type="text"/>                | <input type="text"/>                | <input type="text"/>                | <input type="text" value="Other"/>      | <input type="text"/>           |
| Other                | <input type="text"/>                | <input type="text"/>                | <input type="text"/>                | <input type="text" value="Other"/>      | <input type="text"/>           |

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

### Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?  Yes  No

If YES, please fill in the following information:

A. When was the Feasibility Study conducted

B. Email or provide a link to the feasibility study (or description of):

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

### General Comments about BMP 1.3:



The fields in red are required.

Primary contact:

Agency name: Sweetwater Authority

First name: Sue

Reporting unit name (District name): Sweetwater Authority

Last name: Mosburg

Reporting unit number: 213

Email: smosburg@sweetwater.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



# BMP 1.4 Retail Conservation Pricing

[Link to FAQs](#)

[View MOU](#)

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

## 2009

### Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

| Rate Structure   | Customer Class       | Total Revenue | Commodity Charges | Total Revenue | Customer Meter/Service (Fixed Charges) |
|------------------|----------------------|---------------|-------------------|---------------|--|
| Increasing Block | Single-Family        | 10,395,450.00 |                   | 5,968,598.00  |  |
| Uniform          | Multi-Family         | 8,230,531.00  |                   | 1,819,713.00  |  |
| Uniform          | Commercial           | 4,639,339.00  |                   | 1,429,975.00  |  |
| Uniform          | Industrial           | 495,265.00    |                   | 47,650.00     |  |
| Uniform          | Institutional        | 1,713,142.00  |                   | 356,287.00    |  |
| Uniform          | Agricultural         | 26,466.00     |                   | 5,508.00      |  |
| Uniform          | Dedicated Irrigation | 2,305,668.00  |                   | 568,398.00    |  |

### Implementation Option (Conservation Pricing Option)

- Use Annual Revenue As Reported
- Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

### Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service  Yes  No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

| Rate Structure      | Customer Class | Total Revenue | Commodity Charges | Total Revenue | Customer Meter/Service (Fixed Charges) |
|---------------------|----------------|---------------|-------------------|---------------|--|
| Select a Rate Struc | Other          |               |                   |               |  |
| Select a Rate Struc | Other          |               |                   |               |  |
| Select a Rate Struc | Other          |               |                   |               |  |
| Select a Rate Struc | Other          |               |                   |               |  |
| Select a Rate Struc | Other          |               |                   |               |  |
| Select a Rate Struc | Other          |               |                   |               |  |
| Select a Rate Struc | Other          |               |                   |               |  |

Comments:



The fields in red are required.



Agency name:  Primary contact: First name:   
 Reporting unit name (District name):  Last name:   
 Reporting unit number:  Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

# 2009

## BMP 2.1 Public Outreach - Retail Reporting

### Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

Yes  No

Enter the name(s) of the wholesale agency (comma delimited)

San Diego County Water Authority, Metropolitan Water District of Southern California

### Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

#### Public Information Programs List

Did at least one contact take place during each quarter of the reporting year?

| Number of Public Contacts | Public Information Programs  |
|---------------------------|--|
| 3                         | Newsletter articles on conservation  |
| 197,000                   | Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets |
| 5                         | Landscape water conservation media campaigns   |
| 5                         | General water conservation information   |
| 4                         | Website  |

### Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP?

Yes  No

Enter the name(s) of the wholesale agency (comma delimited)

San Diego County Water Authority, Metropolitan Water District of Southern California

### OR Retail Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year?

#### Media Contacts List

| Number of Media Contacts | Did at least one contact take place during each quarter of the reporting year? | Media Contact Types                         |
|--------------------------|--|---|
| 2                        |  | News releases                               |
| 5                        |  | Articles or stories resulting from outreach |
| 2                        |  | Newspaper contacts                          |
|                          |  | Articles or stories resulting from outreach |
|                          |  | Select a type of media contact              |
|                          |  | Select a type of media contact              |

**Is a Wholesale Agency Performing Website Updates?**

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP?  Yes  No

Enter the name(s) of the wholesale agency (comma delimited)

San Diego County Water Authority,  
Metropolitan Water District of Southern California

**Is Your Agency Performing Website Updates?**

Enter your agency's URL (website address):

www.sweetwater.org

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

- 1) Drought Level 1 Watch message
- 2) Calling all super (water savers)
- 3) Residential & Commercial Conservation Programs
- 4) Water- Efficient Landscape Contest

Did at least one Website Update take place during each quarter of the reporting year?  Yes  No

**Public Outreach Annual Budget**

Enter budget for public outreach programs. You may enter total budget in a single line or break the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

| Category         | Amount   | Personnel Costs Included?<br><i>If yes, check the box.</i> | Comments                                       |
|------------------|----------|--|--|
| Communications   | \$84,000 | <input type="checkbox"/>                                   | Events, media, publications, print, web, oh no |
| School Education | \$26,000 | <input type="checkbox"/>                                   | Classroom Programs, outreach to students. [x]  |
| Garden           | \$65,000 | <input type="checkbox"/>                                   | Water Conservation Garden support              |
| Public Info.     | \$10,000 | <input type="checkbox"/>                                   | Public Outreach                                |
|                  |          | <input type="checkbox"/>                                   |  |
|                  |          | <input type="checkbox"/>                                   |  |

Comments:

Water saving devices and items (i.e. eye balls, shut off hose nozzles and other items) are available to customers at community fairs, lobby, walk-ins, and are advert



The fields in red are required.

Primary contact:

Agency name:  First name:

Reporting unit name (District name):  Last name:

Reporting unit number:  Email:

Click here to open a table that displays your agency name, reporting unit name and reporting unit number. Please ensure that you enter the correct information.



[Link to FAQs](#)

# 2009

## BMP 2.1 Public Outreach Cont'd

[View MOU](#)

### Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

| Expense Category                    | Expense Amount | Personnel Costs Included?                                    |
|-------------------------------------|----------------|--|
| Communications & Public Information | \$199,600      | <input type="checkbox"/> <i>If yes, check the check box.</i> |
| Garden Programs                     | \$75,000       | <input type="checkbox"/>                                     |
|                                     |                | <input type="checkbox"/>                                     |
|                                     |                | <input type="checkbox"/>                                     |

### Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts?

Yes  No

### Public Outreach Additional Information

| Public Information Programs                                   | Importance |
|---|------------|
| Booth At Major Community Events                               |            |
| Publications, mailers and bill messages                       |            |
| Personal contacts with customers in the field, by phone, etc. |            |

### Social Marketing Programs

#### Branding

Does your agency have a water conservation "brand," "theme" or mascot?  Yes  No

Describe the brand, theme or mascot.

What does the Drought mean to you? messaging and outreach theme. WaterSmart trademark with Wholesaler

#### Market Research

Have you sponsored or participated in market research to refine your message?  Yes  No

|                         |   |
|-------------------------|---|
| Market Research Topic   | Water usage and saving needs were based on internal data  |
| Brand Message           | Customers were encouraged to save up to 10% on their water use during the Drought Watch Level-1 |
| Brand Mission Statement | Sweetwater Authority is your water - savings partner  |

**Community Committees**

Do you have a community conservation committee?  Yes  No

Enter the names of the community committees:

**Training**

| Training Type | # of Trainings | # of Attendees | Description of Other                                 |
|---------------|----------------|----------------|--|
| Classroom     | \$5            | \$1            | Water Smart Conference - lecture/ hands on           |
| Classroom     | \$1            | \$1            | Lecture/ hands on Troubleshooting irrigation systems |
|               |                |                |  |
|               |                |                |  |

**Social Marketing Expenditures**

**Public Outreach Social Marketing Expenses**

| Expense Category | Expense Amount | Description |
|------------------|----------------|-------------|
|                  |                |             |
|                  |                |             |
|                  |                |             |

**Partnering Programs - Partners**

**Name**

**Type of Program**

CLCA? Conservation Coordinator is a current member

Green Building Programs? City of Chula Vista Green Building Standards

Master Gardeners? Receive mailings and announcements

Cooperative Extension?

Local Colleges? Partnership through inten programs

Other? City of Chula Vista Climate Change Initiative/workgroups

Retail and wholesale outlet; name(s) and type(s) of programs:

**Partnering Programs - Newsletters**

Number of newsletters per year

Number of customers per year

**Partnering with Other Utilities**

Describe other utilities your agency partners with, including electrical utilities

Coop training with Otay Water District on irrigation controller training for customers

**Conservation Gardens**

Describe water conservation gardens at your agency or other high traffic areas or new

Supporting member of The Water Conservation Garden  
Provide staff support at annual events  
[WWW.thegarden.org](http://WWW.thegarden.org)

**Landscape contests or awards**

Describe water wise landscape contest or awards program conducted by your agency

Conduct annual landscape contest with other member agencies and cities, promoting water wise gardening. Each agency has their own winner, winner reconized at the Conservation Garden

**Comments:**

Also participate in the Chula Vista Go Green program, Naturescape program, and the Regional Conservation Action Committee



The fields in red are required.



Agency name:

Reporting unit name (District name):

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name, reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

# 2009

## BMP 2.2 School Education Programs, Retail Agencies School Programs

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP?  Yes  No

Enter Wholesaler Names, separated by commas:

Materials meet state education framework requirements?

Description of Materials

Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

Number of students reached

Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

### School Program Activities

**Classroom presentations:**

Number of presentations

Number of attendees

**Large group assemblies:**

Number of presentations

Number of attendees

**Children's water festivals or other events:**

Number of presentations

Number of attendees

**Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:**

Number of presentations

Number of attendees

**Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):**

|   |   |                        |         |
|---|---|------------------------|---------|
| Description   | Water testing kits for teachers   |                        |         |
| Number distributed  | 4   |                        |         |
| <b>Staffing children's booths at events &amp; festivals:</b>  |   |                        |         |
| Number of booths  | 0   | Number of attendees    | 0       |
| <b>Water conservation contests such as poster and photo:</b>  |   |                        |         |
| Description   | Elementary school poster contest in coordination with the MWD poster contest; High School Photo Contest |                        |         |
| Number distributed  | 250   |                        |         |
| <b>Offer monetary awards/funding or scholarships to students:</b>   |   |                        |         |
| Number Offered  | 10 mini grants  | Total Funding          | 3051.60 |
| <b>Teacher training workshops:</b>  |   |                        |         |
| Number of presentations   | 33  | Number of attendees    | 791     |
| <b>Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:</b> |   |                        |         |
| Number of tours or field trips  | 1   | Number of participants | 35      |
| <b>College internships in water conservation offered:</b>   |   |                        |         |
| Number of internships   | 0   | Total funding          | 0       |
| <b>Career fairs/workshops:</b>  |   |                        |         |
| Number of presentations   | 0   | Number of attendees    | 0       |
| <b>Additional program(s) supported by agency but not mentioned above:</b>   |   |                        |         |
| Description   | Water Technology program Cuyamaca Comm. College   |                        |         |
| Number of events (if applicable)  | 6   | Number of participants | 1000    |
| <b>Total reporting period budget expenditures for school education programs (include all agency costs):</b>                   |   |                        | 26000   |















The fields in red are required.



Agency name:  Primary contact: First name:  Last name:  Email:

Reporting unit name (District name):  Reporting unit number:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[See the complete MOU:](#) [View MOU](#)

[See the coverage requirements for this BMP:](#)

# 2010

## BMP 1.1 Operations Practices

Comments:

### Conservation Coordinator

Conservation Coordinator  Yes  No

### Contact Information

First Name:

Last Name:

Title:

Phone:

Email:

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

### Water Waste Prevention

Water Agency shall do one or more of the following:

- a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
- b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- c. Support legislation or regulations that prohibit water waste
- d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- e. Support local ordinances that prohibit water waste
- f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- a. A description of, or electronic link to, any ordinances or terms of service
- b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Enter a description:

The fields in red are required.



Agency name: Sweetwater Authority

Reporting unit name (District name): Sweetwater Authority

Reporting unit number: 213

Primary contact:

First name: Sue

Last name: Mosburg

Email: smosburg@sweetwater.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)

# 2010 BMP 1.2 Water Loss Control

## AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software  Yes  No  
Email to natalle@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

Water Audit Validity Score from AWWA spreadsheet: 86

Agency Completed Training In The AWWA Water Audit Method  Yes  No

Agency Completed Training In The Component Analysis Process  Yes  No

Completed/Updated the Component Analysis (at least every 4 years)?  Yes  No

Component Analysis Completed/Updated Date:

## Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective  Yes  No

### Recording Keeping Requirements:

|   |   |
|---|---|
| Date/Time Leak Reported                 | Leak Location                           |
| Type of Leaking Pipe Segment or Fitting | Leak Running Time From Report to Repair |
| Leak Volume Estimate                    | Cost of Repair                          |

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective  Yes  No

Type of Program Activities Used to Detect Unreported Leaks

Sweetwater Authority conducts a monthly audit of its overall system for unbilled and unaccounted for water. By comparing the findings Sweetwater Authority can evaluate the need for implementation of a formal water loss reduction

## Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

| Total Leaks Repaired | Economic Value Of Real Loss | Economic Value Of Apparent Loss | Miles Of System Surveyed For Leaks | Pressure Reduction Undertaken for loss reduction | Cost Of Interventions | Water Saved (AF/Year) |
|----------------------|-----------------------------|---------------------------------|------------------------------------|--|-----------------------|-----------------------|
|                      |                             |                                 |                                    |  |                       |                       |

Comments:



The fields in red are required.

Primary contact:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Agency name: Sweetwater Authority

First name: Sue

Reporting unit name (District name): Sweetwater Authority

Last name: Mosburg

Reporting unit number: 213

Email: smosburg@sweetwater.org



# BMP 1.3 Metering with Commodity 2010

[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

## Implementation

Does your agency have any unmetered service connections?  Yes  No

If YES, has your agency completed a meter retrofit plan?  Yes  No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered?  Yes  No

Are all new service connections being billed volumetrically?  Yes  No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters?  Yes  No

Please Fill Out The Following Matrix

| Account Type        | # Metered Accounts | # Metered Accounts Read | # Metered Accounts Billed by Volume | Billing Frequency Per Year | # of estimated bills/yr |
|---------------------|--------------------|-------------------------|-------------------------------------|----------------------------|-------------------------|
| Single-Family       | 26,568             | 26,568                  | 26,568                              | Bi-monthly                 | 6                       |
| Multi-Family        | 3,335              | 3,335                   | 3,335                               | Bi-monthly                 | 6                       |
| Commercial          | 2,668              | 2,668                   | 2,668                               | Bi-monthly                 | 6                       |
| Industrial          | 38                 | 38                      | 38                                  | Bi-monthly                 | 6                       |
| Institutional       | 273                | 273                     | 273                                 | Bi-monthly                 | 6                       |
| Agricultural        | 8                  | 8                       | 8                                   | Bi-monthly                 | 6                       |
| Dedicated Irrigatic | 638                | 638                     | 638                                 | Bi-monthly                 | 6                       |
| Other               |                    |                         |                                     | Other                      |                         |
| Other               |                    |                         |                                     | Other                      |                         |
| Other               |                    |                         |                                     | Other                      |                         |

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

## Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?  Yes  No

If YES, please fill in the following information:

A. When was the Feasibility Study conducted

B. Describe, upload or provide an electronic link to the Feasibility Study Upload File

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Comments:

No unmetered connections within the system at the time the MOU was signed. Total



The fields in red are required.

Primary contact:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Agency name: Sweetwater Authority

First name: Sue

Reporting unit name (District name): Sweetwater Authority

Last name: Mosburg

Reporting unit number: 213

Email: smosburg@sweetwater.org



2010

## BMP 1.4 Retail Conservation Pricing

[Link to FAQs](#)

[View MOU](#)

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

### Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

| Rate Structure   | Customer Class       | Total Revenue | Commodity Charges | Total Revenue Customer Meter/Service (Fixed Charges) |
|------------------|----------------------|---------------|-------------------|--|
| Increasing-Block | Single-Family        | 10,566,862.00 |                   | 7,177,284.00   |
| Uniform          | Multi-Family         | 9,153,116.00  |                   | 2,163,686.00   |
| Uniform          | Commercial           | 5,121,576.00  |                   | 1,705,656.00   |
| Uniform          | Industrial           | 468,527.00    |                   | 52,385.00  |
| Uniform          | Institutional        | 1,901,730.00  |                   | 417,552.00   |
| Uniform          | Agricultural         | 31,222.00     |                   | 6,834.00   |
| Uniform          | Dedicated Irrigation | 2,707,498.00  |                   | 659,430.00   |

### Implementation Option (Conservation Pricing Option)

- Use Annual Revenue As Reported  
 Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

### Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service  Yes  No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

| Rate Structure      | Customer Class | Total Revenue | Commodity Charges | Total Revenue Customer Meter/Service (Fixed Charges) |
|---------------------|----------------|---------------|-------------------|--|
| Select a Rate Struc | Other          |               |                   |  |
| Select a Rate Struc | Other          |               |                   |  |
| Select a Rate Struc | Other          |               |                   |  |
| Select a Rate Struc | Other          |               |                   |  |
| Select a Rate Struc | Other          |               |                   |  |
| Select a Rate Struc | Other          |               |                   |  |
| Select a Rate Struc | Other          |               |                   |  |

Comments:

The fields in red are required.



Agency name:  Primary contact:  
 Reporting unit name (District name):  First name:   
 Reporting unit number:  Last name:   
 Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

# 2010

## BMP 2.1 Public Outreach - Retail Reporting

### Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

Yes  No

Enter the name(s) of the wholesale agency (comma delimited)

### Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

#### Public Information Programs List

Did at least one contact take place during each quarter of the reporting year?

| Number of Public Contacts | Public Information Programs  |
|---------------------------|--|
| 4                         | Newsletter articles on conservation  |
| 197,000                   | Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets |
| 5                         | Landscape water conservation media campaigns   |
| 4,572                     | General water conservation information   |
| 4                         | Website  |

### Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP?

Yes  No

Enter the name(s) of the wholesale agency (comma delimited)

### OR Retail Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year?

#### Media Contacts List

| Number of Media Contacts | Did at least one contact take place during each quarter of the reporting year? | Media Contact Types                         |
|--------------------------|--|---|
| 2                        | <input type="checkbox"/>   | News releases                               |
| 2                        | <input type="checkbox"/>   | Articles or stories resulting from outreach |
| 2                        | <input type="checkbox"/>   | Newspaper contacts                          |
|                          | <input type="checkbox"/>   | Articles or stories resulting from outreach |
|                          | <input type="checkbox"/>   | Select a type of media contact              |
|                          | <input type="checkbox"/>   | Select a type of media contact              |



**Is a Wholesale Agency Performing Website Updates?**

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP?  Yes  No

San Diego County Water Authority,  
Metropolitan Water District of Southern California

**Is Your Agency Performing Website Updates?**

Enter your agency's URL (website address):

www.sweetwater.org

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

- 1) Added professional water-efficient landscape plans
- 2) Residential and Commercial Conservation Programs
- 3) Landscape Contest
- 4) Free home & business water audits

Did at least one Website Update take place during each quarter of the reporting year?  Yes  No

**Public Outreach Annual Budget**

Enter budget for public outreach programs. You may enter total budget in a single line or break the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

| Category         | Amount    | Personnel Costs Included?<br><small>(If yes, check the box.)</small> | Comments                                       |
|------------------|-----------|--|--|
| Communications   | \$140,000 | <input type="checkbox"/>   | Events, media, publications, web, on hold mail |
| School Education | \$21,400  | <input type="checkbox"/>   | Classroom programs, outreach to students, etc. |
| Garden           | \$85,000  | <input type="checkbox"/>   | The Water Conservation Support                 |
| Public info      | \$7,000   | <input type="checkbox"/>   | public outreach                                |
|                  |           | <input type="checkbox"/>   |  |
|                  |           | <input type="checkbox"/>   |  |

Comments:

Water saving devices and items (i.e. dye tabs, shut off hose nozzles and other items) are available to customers at community fairs, lobby, walk ins and are advertised.

The fields in red are required.

Primary contact:

Agency name:  First name:

Reporting unit name (District name):  Last name:

Reporting unit number:  Email:

Click here to open a table that displays your agency name, reporting unit name and reporting unit number. Please ensure that you enter the correct information.



[Link to FAQs](#)

# 2010

## BMP 2.1 Public Outreach Cont'd

[View MQU](#)

### Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

| Expense Category                    | Expense Amount | Personnel Costs Included?                                    |
|-------------------------------------|----------------|--|
| Communications & Public information | \$78,000       | <input type="checkbox"/> <i>If yes, check the check box.</i> |
| Garden Programs                     | \$92,000       | <input type="checkbox"/>                                     |
|                                     |                | <input type="checkbox"/>                                     |
|                                     |                | <input type="checkbox"/>                                     |

### Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts?

Yes  No

### Public Outreach Additional Information

| Public Information Programs                                 | Importance |
|---|------------|
| Booth and major community events                            | \$1        |
| Publications, mailers, and bill messages                    | \$1        |
| Personal contact with customers in the field by phone, etc. | \$1        |

### Social Marketing Programs

#### Branding

Does your agency have a water conservation "brand," "theme" or mascot?  Yes  No

Describe the brand, theme or mascot.

Theme, "Get a Handle on Leaks"

#### Market Research

Have you sponsored or participated in market research to refine your message?  Yes  No



|                         |   |
|-------------------------|---|
| Market Research Topic   | Staff review of water conservation programs around the region and state |
| Brand Message           | Together we can help stop water waste                                   |
| Brand Mission Statement | Water Efficiency is Our Way of Life                                     |

**Community Committees**

Do you have a community conservation committee?  Yes  No

Enter the names of the community committees:

**Training**

| Training Type | # of Trainings | # of Attendees | Description of Other                       |
|---------------|----------------|----------------|--|
| classroom     | \$1            | \$1            | Water Smart Conference Lecture/ hands on   |
| classroom     | \$2            | \$1            | Hands on - Irrigation manufacture (Hunter) |
|               |                |                |  |
|               |                |                |  |

**Social Marketing Expenditures**

**Public Outreach Social Marketing Expenses**

| Expense Category | Expense Amount | Description |
|------------------|----------------|-------------|
|                  |                |             |
|                  |                |             |
|                  |                |             |

**Partnering Programs - Partners**

**Name**

**Type of Program**

- CLCA? Conservation Coordinator current member
- Green Building Programs? City of Chula Vista Green Building Standards
- Master Gardeners? San Diego Master gardener mailing list
- Cooperative Extension?
- Local Colleges? partnership through intern programs
- Other? City of Chula Vista Climate Change Initiative / Workgroups

Retail and wholesale outlet; name(s) and type(s) of programs:

**Partnering Programs - Newsletters**

Number of newsletters per year

Number of customers per year

**Partnering with Other Utilities**

Describe other utilities your agency partners with, including electrical utilities

Coop training with other water agencies on irrigation controller training and exriscap gardening for customers

**Conservation Gardens**

Describe water conservation gardens at your agency or other high traffic areas or new

Supporting Member of The Water Conservation Garden  
Provide staff support at annual events  
[www.thegarden.org](http://www.thegarden.org)

**Landscape contests or awards**

Describe water wise landscape contest or awards program conducted by your agency

Conduct annual landscape contest with other local cities and municipalities in promoting water wise gardening. Each agency has their own winner, winner is reconized at the Water Conservation Graden

Comments:

Also participate in the Chula Vista Go Green program, Naturescape program, and the Regional Conservation Action Committee



The fields in red are required.



Agency name:  Primary contact: First name:   
 Reporting unit name (District name):  Last name:   
 Reporting unit number:  Email:

Click here to open a table that displays your agency name, reporting unit name and reporting unit number. Please ensure that you enter the correct information.

# 2010

## BMP 2.2 School Education Programs, Retail Agencies School Programs

[Link to FAQs](#)  
[View MOU](#)

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP?  Yes  No

Enter Wholesaler Names, separated by commas:

Materials meet state education framework requirements?

Description of Materials:

Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students:

Number of students reached:

Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students:

Number of Distribution:

Annual budget for school education program:

Description of all other water supplier education programs:

### School Program Activities

#### Classroom presentations:

Number of presentations:  Number of attendees:

#### Large group assemblies:

Number of presentations:  Number of attendees:

#### Children's water festivals or other events:

Number of presentations:  Number of attendees:

#### Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations:  Number of attendees:

#### Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

|  |  |                        |         |
|--|--|------------------------|---------|
| Description  | Water testing kits for teachers  |                        |         |
| Number distributed   | 2  |                        |         |
| Staffing children's booths at events & festivals:  |  |                        |         |
| Number of booths   | 0  | Number of attendees    | 0       |
| Water conservation contests such as poster and photo:  |  |                        |         |
| Description  | High School Photo Contest, Elementary School Poster Contest  |                        |         |
| Number distributed   | 240  |                        |         |
| Offer monetary awards/funding or scholarships to students:   |  | Total Funding          | \$3,075 |
| Number Offered   | 11 mini grants   |                        |         |
| Teacher training workshops:  |  |                        |         |
| Number of presentations  | 0  | Number of attendees    | 0       |
| Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.: |  |                        |         |
| Number of tours or field trips   | 38   | Number of participants | 791     |
| College internships in water conservation offered:   |  |                        |         |
| Number of internships  | 0  | Total funding          | 0       |
| Career fairs/workshops:  |  |                        |         |
| Number of presentations  | 0  | Number of attendees    | 0       |
| Additional program(s) supported by agency but not mentioned above:   |  |                        |         |
| Description  | Funded Conservation Garden school assemblies and Garden tours. Water Technology program Cuyamaca Comm. College |                        |         |
| Number of events (if applicable)   | 6  | Number of participants | 1000    |
| Total reporting period budget expenditures for school education programs (include all agency costs):                   |  |                        | 25000   |

2011 COMMITMENTS







The fields in red are required.

Agency name:  Primary contact: First name:  Last name:  Email:

Division name (Reporting unit):

Reporting unit number:



## WATER SOURCES

Service Area Population:

### Potable Water

| Own Supply Source Name | AF/YEAR  | Water Supply Type | Water Supply Description |
|------------------------|----------|-------------------|--------------------------|
| Wells                  | 2,175.00 | Groundwater       |                          |
| Reynolds Desal         | 3,176.00 | Groundwater       |                          |
| Reservoir              | 901.00   | Surface           |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |
|                        |          | Other             |                          |

|                                  | AF/YEAR   | Water Supply Type | Water Supply Description            |
|----------------------------------|-----------|-------------------|-------------------------------------|
| San Diego County Water Authority | 13,730.00 | Other             | State water project/ colorado river |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |
|                                  |           | Other             |                                     |

| Exported Water Name | AF/YEAR | Where Exported? |
|---------------------|---------|-----------------|
|                     |         |                 |
|                     |         |                 |
|                     |         |                 |
|                     |         |                 |
|                     |         |                 |
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|                     |         |                 |
|                     |         |                 |

# 2010







# CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

## Foundation Best Management Practices for Urban Water Efficiency

Agency: **Sweetwater Authority** District Name: **Sweetwater Authority** CUWCC Unit #: **213**  
 Retail Mosburg Telephone (619)-420-1413 Email: [smosburg@sweetwater.org](mailto:smosburg@sweetwater.org)

Primary Contact: **Sue Mosburg**  
 Compliance Option Chosen By Reporting Agency:  
 (Traditional, Flex, Track or GPCD)  
**GPCD if used.**

GPCD in 2010 **101**  
 GPCD Target for 2018 **96**

| Year | Report | Target | Highest Acceptable Bound |      |
|------|--------|--------|--------------------------|------|
|      | % Base | GPCD   | % Base                   | GPCD |
| 2010 | 96.4%  | 113    | 100%                     | 118  |
| 2012 | 92.8%  | 109    | 96%                      | 113  |
| 2014 | 89.2%  | 105    | 93%                      | 109  |
| 2016 | 85.6%  | 101    | 89%                      | 105  |
| 2018 | 82.0%  | 96     | 82%                      | 96   |

Not on Track if 2010 GPCD is greater than target

GPCD in 2010 **101**  
 Highest Acceptable GPCD for 2010 **118**

On Track



## CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

### Foundation Best Management Practices for Urban Water Efficiency

#### Foundational BMPs BMP 1.1 Operational Practices

|  | 2009  | 2010  | Conservation Coordinator provided with necessary resources to implement BMPs?  |
|--|---|---|--|
| 1. Conservation Coordinator provided with necessary resources to implement BMPs? | <p>Doug Roberts<br/>Water Conservation Coordinator<br/>On Track</p> | <p>Doug Roberts<br/>Water Conservation Coordinator<br/>droberts@sweetwater.org<br/>On Track</p> |  |
| 2. Water waste prevention documentation Descriptive File                         |   |   | On Track if any one of the 6 ordinance actions done, plus documentation or links provided  |
| Descriptive File 2010  |   |   |  |
| URL  |   |   | Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from Customer Service Lead (high bill investigators/direct customer assistance). Staffing expense only for Coordinator. Speci<br><a href="http://www.ci.national-city.ca.us/">http://www.ci.national-city.ca.us/</a> , <a href="http://www.ci.chula-vista.ca.us/">http://www.ci.chula-vista.ca.us/</a> ,<br><a href="http://sdpublic.sdcouny.ca.gov">http://sdpublic.sdcouny.ca.gov</a> |
| URL 2010   |   |   | Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from Customer Service Lead (high bill investigators/direct customer assistance). Staffing expense only for Coordinator. Speci   |
| Describe Ordinance Terms   |   |   | Conservation Specialist with 15+ years conservation program experience, Communications staff, field technical staff, and support from  |
| Describe Ordinance Terms 2010  |   |   | On Track   |



**CUWCC BMP RETAIL COVERAGE REPORT 2009-2010**  
Foundation Best Management Practices for Urban Water Efficiency

**BMP 1.2 Water Loss Control**

|   | 2009   | 2010     |
|---|--------|----------|
| Complete a prescreening Audit                                   | Yes    | On Track |
| Metered Sales   | 21,906 |          |
| Ventilable Other Uses   | 303    |          |
| Total Supply  | 22,691 |          |
| (Metered Sales + System uses)                                   |        |          |
| Total Supply >0.89  | 0.98   | On Track |
| If ratio is less than 0.9, complete a full scale Audit in 2009? | Yes    | On Track |
| Verify Data with Records on File?                               | Yes    | On Track |
| Operate a system Leak Detection Program?                        | Yes    | On Track |

On Track if Yes

On Track if =>.89, Not on Track if No

On Track if Yes

On Track if Yes

On Track if Yes

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012

Info only until 2012

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012

|   | 2010  | 2011            | 2012                  |
|---|-------|-----------------|-----------------------|
| Compile Standard Water Audit using AWWA Software?   | Yes   | On Track        | On Track              |
| AWWA file provided to CUWCC?  | Yes   | On Track        | On Track              |
| AWWA Water Audit Validity Score?  | 86    |                 |                       |
| Completed Training in AWWA Audit Method?  | yes   |                 |                       |
| Completed Training in Component Analysis Process?   | Yes   |                 |                       |
| Complete Component Analysis?  | No    |                 |                       |
| Repaired all leaks and breaks to the extent cost effective?   | Yes   | On Track        | On Track              |
| Locate and repair unreported leaks to the extent cost effective.  | Yes   | On Track        | On Track              |
| Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. |       |                 |                       |
| Provided 7 types of Water Loss Control Info   |       |                 |                       |
| Leaks Repaired  | Value | Apparent Losses | Miles Surveyed        |
| 0   | \$    | \$              | 0                     |
|   |       | Press Reduction | Cost of Interventions |
|   |       | Off             | Water Saved           |
|   |       | \$              | 0                     |





## CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

### Foundation Best Management Practices for Urban Water Efficiency

#### 1.3 METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

Exemption or 'At least as Effective As' accepted by CUWCC

Numbered Unmetered Accounts

Metered Accounts billed by volume of use

Number of CII accounts with Mixed Use meters

Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?

Feasibility Study provided to CUWCC?

Completed a written plan, policy or program to test, repair and replace meters

| 2009  |
|-------|
| 0     |
| Yes   |
| 2,268 |
| No    |
| No    |
| Yes   |

| 2010  |
|-------|
| 0     |
| Yes   |
| 2,341 |
| No    |
| No    |
| Yes   |

If signed MOU prior to 31 Dec 1997, On Track. If all connections metered, If signed after 31 Dec 1997, complete meter installations by 1 July 2012 or within 6 yrs of signing and 20% biannual reduction of unmetered connections.

On Track if no unmetered accounts

Volumetric billing required for all connections on same schedule as metering

Info only

Required by 2012

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

On Track

On Track

On Track



# CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

## Foundation Best Management Practices for Urban Water Efficiency

Agency: Retail  
 Primary Contact: Sue Mosburg  
 District Name: Sweetwater Authority  
 Email: smosburg@sweetwater.org  
 CUWCC Unit #: 213  
 Coverage Report Date: June 20, 2011

**1.4 Retail Conservation Pricing**  
**Metered Water Rate Structure**

Date 2009 data received: June 1, 2011  
 Date 2010 data received: June 1, 2011

On Track if: Increasing Block, Uniform, Allocation, Standby Service; Not on Track if otherwise

| Customer Class       | 2009 Rate Type   | Conserving Rate? | Customer Class       | 2010 Rate Type   | Conserving Rate? |
|----------------------|------------------|------------------|----------------------|------------------|------------------|
| Single-Family        | Increasing Block | Yes              | Single-Family        | Increasing Block | Yes              |
| Multi-Family         | Uniform          | Yes              | Multi-Family         | Uniform          | Yes              |
| Commercial           | Uniform          | Yes              | Commercial           | Uniform          | Yes              |
| Industrial           | Uniform          | Yes              | Industrial           | Uniform          | Yes              |
| Institutional        | Uniform          | Yes              | Institutional        | Uniform          | Yes              |
| Agricultural         | Uniform          | Yes              | Agricultural         | Uniform          | Yes              |
| Dedicated Irrigation | Uniform          | Yes              | Dedicated Irrigation | Uniform          | Yes              |
|                      | <b>On Track</b>  |                  |                      | <b>On Track</b>  |                  |

Year Volumetric Rates began for Agencies with some Unmetered Accounts

Info only

Agencies with Partially Metered Service Areas: If signed MOU prior to 31 Dec. 1997, implementation starts no later than 1 July 2010. If signed MOU after 31 Dec. 1997, implementation starts no later than 1 July 2013, or within seven years of signing the MOU,



## CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

### Foundation Best Management Practices for Urban Water Efficiency

Adequacy of Volumetric Rates) for Agencies with No Unmetered Accounts

| Customer Class                       | 2009 Rate Type   | 2009 Volumetric Revenues \$1000s | 2010 Rate Type       | 2010 Volumetric Revenues \$1000s |
|--------------------------------------|------------------|----------------------------------|----------------------|----------------------------------|
| Single-Family                        | Increasing Block | \$ 10,395                        | Single-Family        | \$ 10,567                        |
| Multi-Family                         | Uniform          | \$ 8,231                         | Multi-Family         | \$ 9,153                         |
| Commercial                           | Uniform          | \$ 4,639                         | Commercial           | \$ 5,122                         |
| Industrial                           | Uniform          | \$ 495                           | Industrial           | \$ 469                           |
| Institutional                        | Uniform          | \$ 1,713                         | Institutional        | \$ 1,902                         |
| Agricultural                         | Uniform          | \$ 26                            | Agricultural         | \$ 31                            |
| Dedicated Irrigation                 | Uniform          | \$ 2,306                         | Dedicated Irrigation | \$ 2,707                         |
| Total Revenue Commodity Charges (V): |                  | \$ 27,806                        |                      | \$ 29,951                        |
| Total Revenue Fixed Charges (M):     |                  | \$ 9,840                         |                      | \$ 12,183                        |
| Calculate: V / (V + M):              |                  | 74%                              |                      | 71%                              |
|                                      |                  | <b>On Track</b>                  |                      | <b>On Track</b>                  |

Agency Choices for rates:

A) Agencies signing MOU prior to 13 June2007, implementation starts 1 July2007: On Track if (V / (V + M) ≥ 70% x .8 = **56% for 2009** and **70% x 0.90 = 63% for 2010**; Not on track if (V / (V + M)) < 70%;

B) Use Canadian model. Agencies signing MOU after 13June2007, implementation starts July 1 of year following signing.

Canadian Water & Wastewater Rate Design Model Used and Provided to CUWCC  
If Canadian Model is used, was 1 year or 3 year period applied?

**No**  
**On Track**

**No**  
**On Track**

**Wastewater Rates**  
Does Agency Provide Sewer Service?

**2009** If 'No', then wastewater rate info not required.  
**No**

**2010**  
**No**



## CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

### Foundation Best Management Practices for Urban Water Efficiency

#### BMP 2. EDUCATION PROGRAMS

##### BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

- 1) Contacts with the public (minimum = 4 times per year)
- 2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).
- 3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly).
- 4) Description of materials used to meet minimum requirement.

|   | 2009   | 2010   |
|---|--|--|
| 1) Contacts with the public (minimum = 4 times per year)  | 13   | 9  |
| 2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).                       | 9  | 6  |
| 3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly). | Yes  | Yes  |
| 4) Description of materials used to meet minimum requirement.   | Newsletter articles on conservation<br>Newsletter articles on conservation<br>General water conservation information<br>Website<br>News releases<br>Articles or stories resulting from outreach<br>Newspaper contacts<br>Articles or stories resulting from outreach | Newsletter articles on conservation<br>Newsletter articles on conservation<br>General water conservation information<br>Website<br>News releases<br>Articles or stories resulting from outreach<br>Newspaper contacts<br>Articles or stories resulting from outreach |
| 5) Annual budget for public outreach program.   | \$ 84,000  | \$ 140,000   |
| 6) Description of all other outreach programs   | Description is too large for text area. Data will be stored in the BMP Reporting database when online.   | Description is too large for text area. Data will be stored in the BMP Reporting database when online.   |
|   | <b>OnTrack</b>   | <b>OnTrack</b>   |

All 6 action types implemented and reported to CUWCC to be 'On Track')





## CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

### Foundation Best Management Practices for Urban Water Efficiency

#### 2.2 School Education Programs Implemented and Reported to CUWCC

Does a wholesale agency implement School Education Programs for this utility's benefit?

Name of Wholesale Supplier?

1) Curriculum materials developed and/or provided by agency

2) Materials meet state education framework requirements and are grade-level appropriate?

3) Materials Distributed to K-6?

Describe K-6 Materials

Materials distributed to 7-12 students?

4) Annual budget for school education program.

5) Description of all other water supplier education programs

|  | 2009   | 2010   |
|--|--|--|
|  | Yes  | Yes  |
|  | San Diego County Water Authority (SDCWA), Metropolitan Water District of Southern California   | San Diego County Water Authority (SDCWA), Metropolitan Water District of Southern California   |
|  | Children's books, activity books, games, pamphlets, model & kits, posters, reference materials | Children's books, activity books, games, pamphlets, model & kits, posters, reference materials |
|  |  | Yes/ No  |
|  | Yes  | Yes  |
|  | Yes  | Yes  |
|  | Water for You; Let's Learn About Water; Respecting the Water Cycle; Using Water Wisely         | Water for You; Let's Learn About Water; Respecting the Water Cycle; Using Water Wisely         |
|  | No   | No   |
|  | \$ 26,000  | \$ 25,000  |
|  | School assembly programs, classroom presentations, materials, poster contest, plant tours      | School assembly programs, classroom presentations, materials, poster contest, plant tours      |
|  | See Wholesale Report<br>On Track   | See Wholesale Report<br>On Track   |

All 5 actions types implemented and reported to CUWCC to be On Track

Describe materials to meet minimum requirements

Info Only

Number of customers per year

**Partnering with Other Utilities**

Describe other utilities your agency partners with, including electrical utilities

Coop training with Otay Water District on irrigation controller training for customers

**Conservation Gardens**

Describe water conservation gardens at your agency or other high traffic areas or new

Supporting member of The Water Conservation Garden  
Provide staff support at annual events  
[www.thegarden.org](http://www.thegarden.org)

**Landscape contests or awards**

Describe water wise landscape contest or awards program conducted by your agency

Conduct annual landscape contest with other member agencies and cities, promoting water wise gardening. Each agency has their own winner, winner reconized at the Conservation Garden

Comments:





The fields in red are required

Primary contact:

Agency name:  First name:

Reporting unit name (District name):  Last name:

Reporting unit number:  Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.



[Link to FAQs](#)

# 2009

## BMP 2.2 School Education Programs, Retail Agencies School Programs

[View MOU](#)

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP?

Yes  No

Enter Wholesaler Names, separated by commas:

Materials meet state education framework requirements?

Description of Materials

Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

Number of students reached

Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

### School Program Activities

**Classroom presentations:**

Number of presentations

Number of attendees

**Large group assemblies:**

Number of presentations

Number of attendees

**Children's water festivals or other events:**

Number of presentations

Number of attendees

**Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:**

Number of presentations

Number of attendees

**Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):**



**Appendix C**  
**Sweetwater Authority Brought**  
**Resolution 09-12 and Drought Response**  
**Plan**

**RESOLUTION 09-12**

**RESOLUTION OF THE GOVERNING BOARD OF SWEETWATER AUTHORITY  
AMENDING THE DROUGHT RESPONSE PLAN AND ASSOCIATED CONSERVATION  
PRICING STRUCTURE ESTABLISHED IN RESOLUTION 08-19**

*WHEREAS, the Colorado River, snow pack in the Sierras , and state water deliveries to Southern California from the Bay-Delta continue to endure extended periods of less than average precipitation and delivery system limitations; and*

*WHEREAS, by Resolution 08-19 Sweetwater Authority adopted its Drought Response Plan including an allocation based conservation water pricing structure and the criteria required to adopt this structure; and*

*WHEREAS, Sweetwater Authority has been presented with information and data demonstrating that the Metropolitan Water District of Southern California and San Diego County Water Authority are experiencing water shortage conditions and are, in response to those water shortage conditions, imposing mandatory conservation measures on Sweetwater Authority, and*

*WHEREAS, on April 23, 2009, the San Diego County Water Authority Board of Directors took action to call for member agencies to reduce water consumption by up to eight percent; and*

*WHEREAS, Sweetwater Authority customers have, for the past nine months, reduced water consumption within the service area in excess of eight percent through voluntary actions;*

*WHEREAS, it is the desire and intent of the Governing Board of Sweetwater Authority to make all required reductions through self-directed efforts on the part of all customers; and*

*WHEREAS, in order to achieve mandatory reduction levels, recognize voluntary water use reductions already achieved, and preserve the ability to allocate available water supplies should conditions change, flexibility to declare the appropriate drought level to meet pre-defined water reduction goals is necessary.*

**NOW THEREFORE BE IT RESOLVED** by the Governing Board of Sweetwater Authority, as follows:

**SECTION 1.** The Governing Board of Sweetwater Authority hereby adopts the attached amended Drought Response Plan including an allocation based conservation water pricing structure to guide the drought response activities of Sweetwater Authority until such time as it is replaced by a subsequent Drought Response Plan.

**SECTION 2.** The Governing Board of Sweetwater Authority hereby directs the General Manager to continue the implementation of the conservation measures identified in the Drought Response Plan for Level 1.

**RESOLUTION 09-12**

SECTION 3. This Resolution shall become effective as of the date of adoption and shall be published within ten days of adoption, pursuant to California Water Code Section 376.

SECTION 4. All previous water conservation measures including Resolution 08-19 under which prior water conservation and drought response programs were established are hereby rescinded and replaced by this Resolution.

SECTION 5. This Resolution has been adopted, following a Public Hearing which was noticed on the May 27, 2009 Governing Board meeting agenda.

**PASSED, APPROVED, AND ADOPTED** by the Governing Board of Sweetwater Authority at a regular meeting duly held on the 27<sup>th</sup> day of May, 2009, by the following roll call vote:

AYES: Directors Morrison, Muehleisen, Pocklington, Preciado, Rubalcaba,  
Thomas and Welsh  
NOES: None  
ABSENT: None  
ABSTAIN: None

  
\_\_\_\_\_  
W.D. Pocklington, Chair

Attest:

  
\_\_\_\_\_  
Rita Schoonderwoerd, Secretary

**SWEETWATER AUTHORITY  
DROUGHT RESPONSE PLAN**

**SECTION 1. Declaration of Policy.** California Water Code Section 375 et seq. permits public entities which supply water at retail to adopt and enforce water conservation programs to reduce the quantity of water used by water customers for the purpose of conserving the water supplies of such public entity. The Governing Board hereby establishes a comprehensive water conservation program, including an allocation-based conservation water pricing structure pursuant to California Water Code Section 375 et seq., based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortage.

**SECTION 2. Findings.** The Governing Board finds and determines that a water shortage could exist based upon the occurrence of one or more of the following conditions:

- A) A general extended water supply shortage due to increased demand or limited supplies.
- B) The supply and/or distribution of water by the San Diego County Water Authority or certain other agencies becomes inadequate.
- C) A major failure of the supply, storage, and distribution facilities of the Metropolitan Water District of Southern California, the San Diego County Water Authority, or Sweetwater Authority occurs.

The Governing Board also finds and determines that the conditions prevailing in the San Diego region require that the water resources available be put to maximum beneficial use, and that the waste or unreasonable use, or unreasonable method of use of water be discouraged and that the conservation of such water be encouraged to achieve the maximum reasonable and beneficial use thereof in the interest of the customers of Sweetwater Authority and for the public welfare.

**SECTION 3. CEQA Exemption.** Sweetwater Authority finds that resolution and action taken hereafter pursuant to the Resolution are exempt from the California Environmental Quality Act as specific actions necessary to prevent or mitigate an emergency pursuant to Public Resources Code Section 21080(b) (4) and the California Environmental Quality Act Guidelines Section 15269(c). The General Manager of Sweetwater Authority is hereby authorized and directed to file a Notice of Exemption as soon as possible following the adoption of this Resolution.

**SECTION 4. Application.** This Resolution shall apply to all persons who use any water provided by Sweetwater Authority.

- A) This Resolution is only intended to further the conservation of water. It is not intended to implement any provision of federal, state, or local statutes, ordinances, or regulations relating to the protection of water quality or control of drainage or runoff.
- B) Nothing in this Resolution is intended to limit the ability of Sweetwater Authority to declare and respond to an emergency, including an emergency that affects the ability of Sweetwater Authority to supply water.
- C) The provisions of this Resolution do not apply to use of water from private wells.



**SWEETWATER AUTHORITY  
DROUGHT RESPONSE PLAN**

*SECTION 5. Authorization. Sweetwater Authority's General Manager or a designated representative, is hereby authorized and directed to implement the provisions of this Resolution.*

*SECTION 6. Revenue Neutral Water Conservation Pricing Structure. Sweetwater Authority intends to establish a revenue neutral water conservation pricing structure, which will enable Sweetwater Authority to retain current revenue projections and encourage customer conservation by adopting changes to its inclining block rate structure. The pricing structure involves changes in water commodity rates and charges in current block rate tiers or the addition of new block rate tiers, to encourage conservation by water users. Adoption of any such water conservation pricing structure shall be the subject of a Proposition 218 Notice and hearing procedure.*

*SECTION 7. Reduction Levels. The identified water conservation levels enable Sweetwater Authority to control water use demands, assure reasonable and beneficial use of water, prevent unreasonable use of water within Sweetwater Authority's service area, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.*

*Water use reduction goals are percentage water reductions from a base ("the Base"). The Base is the annual average of potable water used by all Sweetwater Authority customers during the immediately preceding three consecutive years in which no water use restrictions were implemented. The three-year period is between July 1, 2004 and June 30, 2007.*

*Customer target water allocations ("Target Water Allocations") will be established for each parcel based upon each parcel's average historic water use between July 1, 2004, and June 30, 2007. Details concerning the method of calculation of Target Water Allocations shall be set forth in the Supplement to the Sweetwater Authority Rates and Rules.*

*The four levels of drought are defined as:*

- A) Level 1 - Drought Watch. A Drought Watch condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach up to a ten percent (10%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to ten percent (10%) from the Base. At this level, the current water pricing structure remains in effect with no imposition of allocation-based conservation water pricing. The General Manager shall declare a Drought Watch condition.*
- B) Level 2 - Drought Alert. A Drought Alert condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach up to a twenty percent (20%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to twenty percent (20%) from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for customers using eleven (11) or more units may be implemented as noted in the Supplement to the Sweetwater Authority Rates and Rules. Should allocation-based conservation water pricing be implemented, the Governing Board shall declare a Drought Alert condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.*

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DROUGHT RESPONSE PLAN**

- C) *Level 3 - Drought Critical.* A Drought Critical condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach up to a forty percent (40%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption up to forty percent (40%) from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for all customers is implemented as noted in the Supplement to the Sweetwater Authority Rates and Rules. The Governing Board shall declare a Drought Critical condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.
- D) *Level 4 - Drought Emergency.* A Drought Emergency condition may occur when a program is initiated by the San Diego County Water Authority and/or Metropolitan Water District of Southern California to reach in excess of a forty percent (40%) water use reduction goal. Customers of Sweetwater Authority are requested to reduce consumption by more than forty percent (40%) from the Base. At this level, allocation-based conservation water pricing, which includes drought penalties for all customers is implemented as noted in the Supplement to the Sweetwater Authority Rates and Rules. The Governing Board shall declare a Drought Emergency condition in the manner and on the criteria provided in California Water Code Section 350. Also, the Adjustment to Customer's Water Bill policy shall be suspended.

**SECTION 8. Water Conservation Guidelines.** These guidelines are established to encourage all customers to ensure that they use available water wisely and take all reasonable steps to reduce their water use and are designed to increase the efficiency of water use throughout the service area. Sweetwater Authority customers are encouraged to carefully manage indoor and outdoor water use and eliminate water waste. "Use Water Wisely" is the underlying theme designed to encourage a voluntary water conservation ethic for all customers, which is especially important during the drought.

The following measures shall apply at all times:

1. *Water should be used reasonably and productively at all times.*
2. *Customers are to keep water from draining onto adjacent properties, public or private roadways, and streets.*
3. *Customers are to repair major water leaks immediately and minor water leaks within twenty-four (24) hours of discovery.*
4. *Customers are encouraged to restrict hose washing of sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas to periods of immediate safety or sanitary hazards.*
5. *Customers are encouraged to use drip methods or hand-irrigation whenever possible and prudent, and to restrict sprinkler operation to the hours of 4:00 p.m. to 9:00 a.m. the following morning, except for the first thirty (30) days necessary to establish a new lawn.*

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6. *Customers are encouraged to use an automatic shut-off nozzle when using a hand-held hose for spraying, lawn watering, vehicle washing, or structure washing.*
7. *Customers are encouraged to use re-circulating systems for decorative fountains and landscape water features.*
8. *Serve and refill water in restaurants and other food service establishments only upon requests.*
9. *Offer guests in hotels, motels and other commercial lodging establishments the option of not laundering towels and linens daily.*

*These additional measures are encouraged during a Drought Alert – Level 2:*

1. *Customers are encouraged to limit residential and commercial landscape irrigation to no more than three (3) days per week.*
2. *Customers are encouraged to limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per day. This recommendation does not apply to landscape irrigation systems using water efficient devices, including but not limited to weather-based controllers, drip/micro-irrigation systems and stream rotor sprinklers.*
3. *Customers are encouraged to only use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs that are not irrigated by a landscape irrigation system.*
4. *Customers are encouraged to stop operating ornamental fountains or similar decorative water features unless recycled water is used.*

*These additional measures are encouraged during a Drought Critical – Level 3:*

1. *Customers are encouraged to stop filling or re-filling pools, ornamental lakes and/or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.*
2. *Customers are encouraged to stop washing vehicles except at commercial carwashes that re-circulate (reclaim) water onsite, or by high pressure/low volume wash systems.*
3. *No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances:*
  - a. *A valid, unexpired building permit has been issued for the project; or*
  - b. *The project is necessary to protect the public's health, safety, and welfare; or*

**SWEETWATER AUTHORITY  
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- c. *The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of Sweetwater Authority.*

*This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted for a period of one (1) year or less.*

*These additional measures are encouraged during a Drought Emergency – Level 4:*

1. *Customers are encouraged to stop all landscape irrigation, except:*
  - a. *Crops and landscape products of commercial growers and nurseries*
  - b. *Maintenance of existing landscaping necessary for fire protection as specified by the fire marshal of the local fire protection agency having jurisdiction over the property to be irrigated*
  - c. *Maintenance of existing landscaping for erosion control*
  - d. *Maintenance of plant materials identified to be rare or essential to the well-being of rare animals*
  - e. *Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week*
  - f. *Watering of livestock*
  - g. *Public works projects and actively irrigated environmental mitigation projects*

**SECTION 9. Mandatory Restrictions.** *When customers of Sweetwater Authority can no longer meet water use reduction goals as defined for any drought level through voluntary efforts, or when the amount of water supply available to Sweetwater Authority for service to customers is determined to be inadequate to the extent that there would be insufficient water for human consumption, sanitation and fire protection, and this condition is likely to exist until precipitation and inflow dramatically increases, the Governing Board may activate by resolution mandatory water use reductions and/or conditions in accordance with California Water Code 350.*

*During such mandatory water use reductions, any time a Drought Alert, Drought Critical, or Drought Emergency level is declared, no customer account shall use more than the Target Water Allocation for that parcel. This Target Water Allocation is the average historic water use between July 1, 2004 and June 30, 2007 for the same billing period for the same parcel, less the percentage reduction goal of the particular drought Level. The Target Water Allocation will be printed on each bill for both the current and next billing period. This will allow all customers to see their Target Water Allocation for the next billing cycle.*



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**SECTION 10. Violations and Penalties.** *Customers using more than the Target Water Allocation, will be notified of their overage and given one (1) full billing cycle to bring their usage below Target Water Allocation. Failure to do so may result in the implementation of drought penalties as shown in the Supplement and/or other measures that Sweetwater Authority may determine at a later date.*

*Should mandatory water use reductions and/or conditions be activated by resolution, any person who used, causes to be used, or permits the use of water in violation of such resolution is guilty of an offense punishable as provided herein.*

- 1. Each violation of this Resolution may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding one thousand dollars (\$1,000) (U.S.A. currency), or by both, as provided in California Water Code Section 377.*
- 2. Willful violations of mandatory conservation measures which may be put into place during any drought level may be enforced by discontinuing service to the property at which the violation occurs, as provided by California Water Code Section 356.*
- 3. All remedies provided herein, both civil and criminal, shall be cumulative, and not exclusive.*

**SECTION 11. Exemptions and Appeals.** *In order to encourage the efficient use of water for sanitary, health care, and conservation benefit purposes, specific customer classes are exempted from the water use reduction penalties as noted in the Supplement to the Sweetwater Authority Rates and Rules.*

*Any customer desiring to initiate a Target Water Allocation Appeal may do so at any time. Any customer desiring to appeal a penalty may do so within two (2) weeks of receipt of the bi-monthly or monthly bill. Any such request must be in writing utilizing the appeal form and filed with the General Manager, or their designee. Customers shall have the right to appeal the decision of the General Manager or their designee to the Governing Board by filing a written appeal within seven days of receipt of the written decision of the General Manager, or their designee. The Governing Board may delegate to a committee of its members the authority to consider and rule upon the written appeal.*

**SECTION 12. Activation and Deactivation.** *The Governing Board of Sweetwater Authority hereby directs the General Manager to implement this Plan by making appropriate declarations, determinations and findings necessary and establishing Level 1 conditions set forth in this Resolution. The declaration of any change in Level 1 shall be reported to the Governing Board at its next Regular Meeting. The establishment of Level 2, Level 3 and Level 4 conditions shall be made by the Governing Board, in accordance with the provisions hereof.*

*Following the establishment of Levels pursuant to this Resolution, the General Manager shall implement the Drought Response Plan and make appropriate public announcements and notices. The Level designated shall become effective immediately upon announcement, unless otherwise stated at the time of resolution by the Governing Board.*

**SWEETWATER AUTHORITY  
DROUGHT RESPONSE PLAN**

*When the shortage of water is no longer declared, the requirements for reduction shall be deactivated by resolution of the Governing Board.*

*SECTION 13. Effective Date and Publication. This Resolution shall become effective as of the date of adoption and shall be published within ten days of adoption, pursuant to California Water Code Section 376.*

*SECTION 14. Replacement of Prior Resolutions. All previous water conservation measures including Resolution 08-19 under which prior water conservation and drought response programs were established are hereby rescinded and replaced by this Resolution.*

**Appendix D**  
**Sweetwater Authority Resolution**  
**Adopting an Interim Groundwater**  
**Management Plan**  
**and Draft Interim Groundwater**  
**Management Plan**

**RESOLUTION 01-19**

**RESOLUTION OF THE GOVERNING BOARD  
OF SWEETWATER AUTHORITY  
ADOPTING AN INTERIM  
GROUNDWATER MANAGEMENT PLAN**

**WHEREAS**, Sweetwater Authority and its predecessors have been engaged in groundwater management activities associated with the Authority's groundwater projects in the Sweetwater Valley (Department of Water Resources Basin Number 9-17) and the San Diego Formation for over one hundred and thirty-two years, and

**WHEREAS**, the Governing Board of Sweetwater Authority, by approval of Budget Project Number 99-21A approved funding of the preparation of a Groundwater Management Plan, and

**WHEREAS**, Sweetwater has plans to contract with an engineering consultant to work with staff to prepare a formal Groundwater Management Plan pursuant to Water Code Section 10750 et seq. (AB 3030), and

**WHEREAS**, the Governing Board wishes to memorialize it's existing groundwater management activities as an interim Groundwater Management Plan,

**NOW, THEREFORE, BE IT RESOLVED** by the Governing Board of Sweetwater Authority that, the attached Interim Groundwater Management Plan is adopted to guide the groundwater management activities of Sweetwater Authority until such time as it is replaced by a subsequent Groundwater Management Plan under Water Code Section 10750 et Seq. (AB3030) or other statutes.

**PASSED AND ADOPTED** at a regular meeting of the Governing Board of Sweetwater Authority held on this 9<sup>th</sup> day of November, 2001 by the following vote, to wit:

|                 |   |
|-----------------|---|
| <b>AYES:</b>    | Directors Doud, Jarrett, Pocklington, Waters, Welsh, Wolniewicz, and Wright |
| <b>NOES:</b>    | None  |
| <b>ABSENT:</b>  | None  |
| <b>ABSTAIN:</b> | None  |

Attest:

  
Marisa Farpón-Friedman, Secretary

  
Margaret Cook Welsh, Chair



# **Sweetwater Authority Draft Interim Groundwater Management Plan**

## **A. Interim Plan**

This interim groundwater management plan shall govern the groundwater management activities of the Sweetwater Authority until a subsequent Groundwater Management Plan is adopted by the Sweetwater Authority Governing Board.

## **B. Groundwater Management Area Boundaries**

Sweetwater Authority shall engage in groundwater management in the area of the Sweetwater Valley basin. This basin is as described in the State of California Department of Water Resources Bulletin Number 118 as the Sweetwater Valley Basin Number 9-17. Also included in the groundwater management activities are the watershed of the Sweetwater River and the underlying San Diego Formation within the Service area of the Sweetwater Authority.

## **C. Groundwater Management Strategies**

### **1. Maintain static groundwater levels**

It shall be the policy and goal of Sweetwater Authority groundwater management to extract from the San Diego Formation so as to not cause a decline in the long-term static water levels. In the Sweetwater Valley basin alluvial areas, the policy and goal of Sweetwater Authority groundwater management shall be to extract groundwater to not increase seawater intrusion or cause environmental impacts or damage other producers in the alluvial portion of the basin through the operations of Sweetwater Authority's groundwater projects.

### **2. Protect groundwater from pollution by manmade activities**

Sweetwater Authority shall work with the San Diego Regional Water Quality Control Board (Region 9) to ensure that the groundwater quality within the Sweetwater Valley Basin and the San Diego Formation is protected from contamination.

### **3. Monitor seawater intrusion**

Sweetwater Authority shall monitor groundwater levels, quality and seawater intrusion to ensure that activities of Sweetwater Authority are not causing seawater intrusion.

#### **4. Monitor groundwater quality and quantity**

Sweetwater Authority shall periodically monitor the levels and quality of groundwater in the monitoring wells shown in Appendix A. The Authority shall maintain a database of this periodic information for display on the Sweetwater Authority web page located at [www.sweetwater.org](http://www.sweetwater.org).

#### **5. Sweetwater Authority Groundwater Projects**

Current Sweetwater Authority groundwater projects include the following:

- a. Existing National City Wells.
- b. Existing Richard A. Reynolds Brackish Groundwater Demineralization Facility and its nine groundwater extraction wells
- c. Monitoring of existing groundwater monitoring wells and maintenance of a groundwater level and groundwater quality database.
- d. Proposed National City Aquifer Storage and Recovery (ASR) Project.

#### **6. Develop New or Expanded Groundwater Supplies**

Staff shall perform activities to develop new groundwater supplies and expand existing groundwater supplies and provide Budget Requests for the Governing Board's approval for these activities, as follows:

- a. Investigate the development of new wells to extract potable or brackish groundwater to facilitate expansion of existing groundwater projects as in paragraph C.5. above.
- b. Investigate new technologies and their application to existing groundwater sources.
- c. Explore conjunctive use activities to augment or expand existing groundwater supplies.

#### **D. Implementation**

Sweetwater Authority shall work within the watershed of the Sweetwater River, the Sweetwater Valley Basin (Number 9-17) and the San Diego Formation within the service area of the Sweetwater Authority to manage groundwater levels and

protect groundwater quality. By adoption of this document, the Sweetwater Authority Governing Board hereby authorizes staff to maintain databases and perform groundwater management activities as described in this interim groundwater management plan.

#### **E. Data Collection and Management**

Sweetwater Authority shall maintain a database of groundwater levels and water quality for the existing monitoring wells shown in Appendix A. Staff shall, to the best of its abilities, carry out groundwater management activities using the strategies in Section C of this interim groundwater management plan.

#### **F. Education**

The Sweetwater Authority Stakeholder Survey identifies issues important to stakeholders in the watershed of the Sweetwater River, the Sweetwater Valley basin and the San Diego Formation within the Sweetwater Authority service area. As a part of the groundwater management activities to be carried out under the auspices of this interim groundwater management plan, Sweetwater Authority staff is directed to meet with other public entities and the public interested in the groundwater activities of the Sweetwater Authority. The purpose of these meetings shall be to coordinate information about Sweetwater Authority groundwater management activities and projects, receive input and responses from the public and public entities. Also these meetings shall strive to develop a base of support and a forum for constructive criticism and input to Sweetwater Authority for the groundwater management activities of the Authority.

#### **G. Resolutions of the Governing board, Sweetwater Authority Policy and Legal Authority**

##### **1. Resolutions of the Governing Board**

Adoption of the attached Resolution 01-19 establishes governing board adoption of this interim groundwater management plan and provides authorization for Sweetwater Authority staff to proceed with the activities described within.

##### **2. Sweetwater Authority Policy concerning groundwater management**

Sweetwater Authority's policies regarding groundwater management activities are described within this plan and any subsequent amendments to this interim groundwater management plan authorized by the Governing Board.

### **3. Legal Authority**

Sweetwater Authority operates under the legal authority contained in Irrigation District Law as included in water code section 20500 et seq. Under this authorization the Sweetwater Authority may control, distribute, store, spread, sink, treat, purify, recapture and salvage any water for the beneficial use of the district. Further Sweetwater Authority according to water code 22078 may do any act to put to any beneficial use any water under its control.

Also under water code section 22076 Sweetwater Authority has, though its groundwater management practices have not been previously memorialized in an AB 3030 plan (water code section 10750 et seq.) programs that relate to the following:

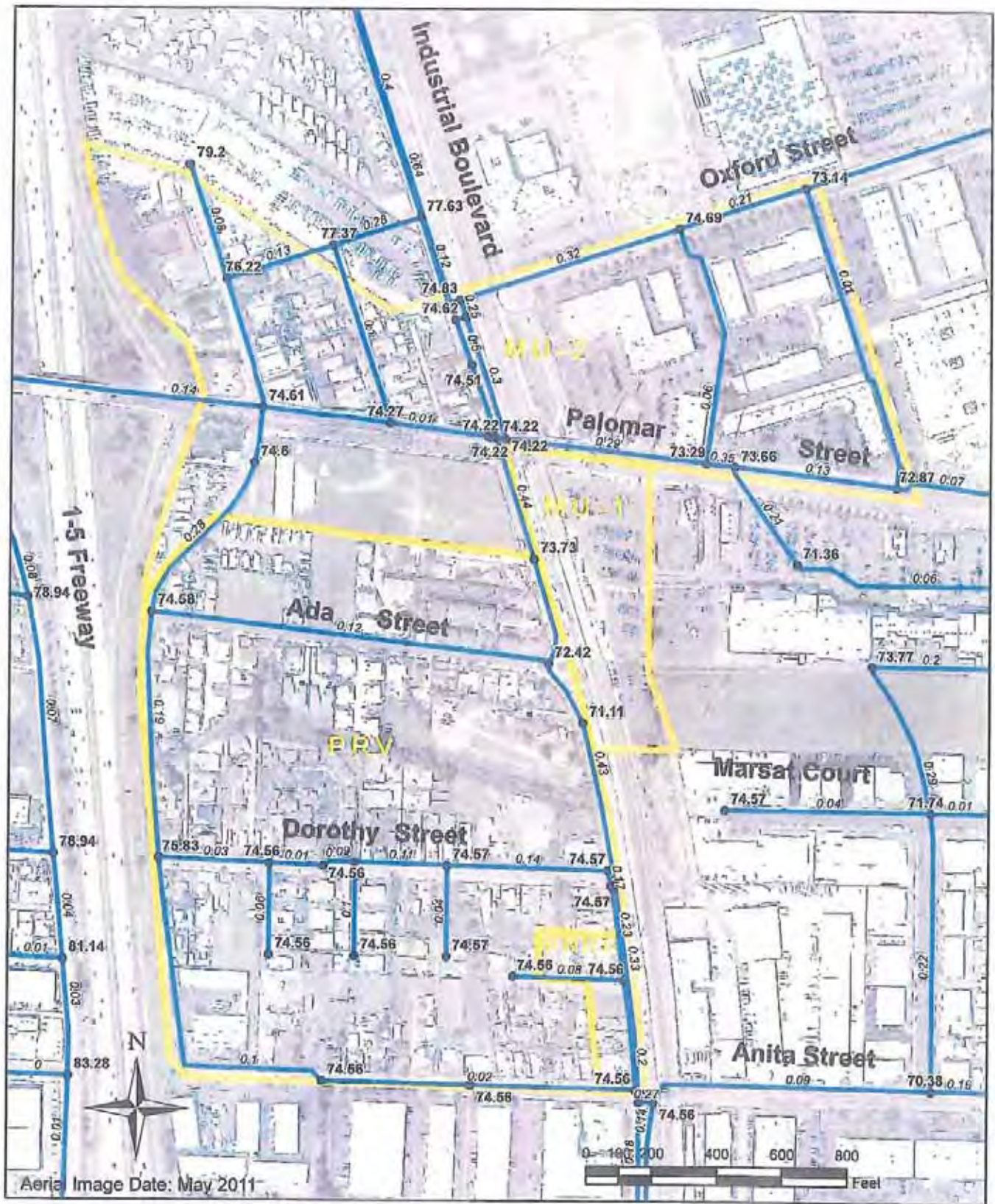
- a. the control of saline water intrusion
- b. identification of and management of wellhead protection areas and recharge areas
- c. replenishment of groundwater
- d. monitoring of groundwater levels and storage
- e. construction and operation of a brackish groundwater demineralization facility
- f. development of state and federal partnerships in the funding of groundwater management activities
- g. review and coordination of land use permitting with the County of San Diego to access development activities and their impact on groundwater
- h. management of its groundwater resources by Sweetwater Authority as a local agency thereby making state-controlled groundwater management unnecessary

### **H. Program Coordination**

The General Manager and the Operations Manager of Sweetwater Authority shall be responsible to the Governing Board for the performance of the groundwater management activities described in this interim groundwater management plan.



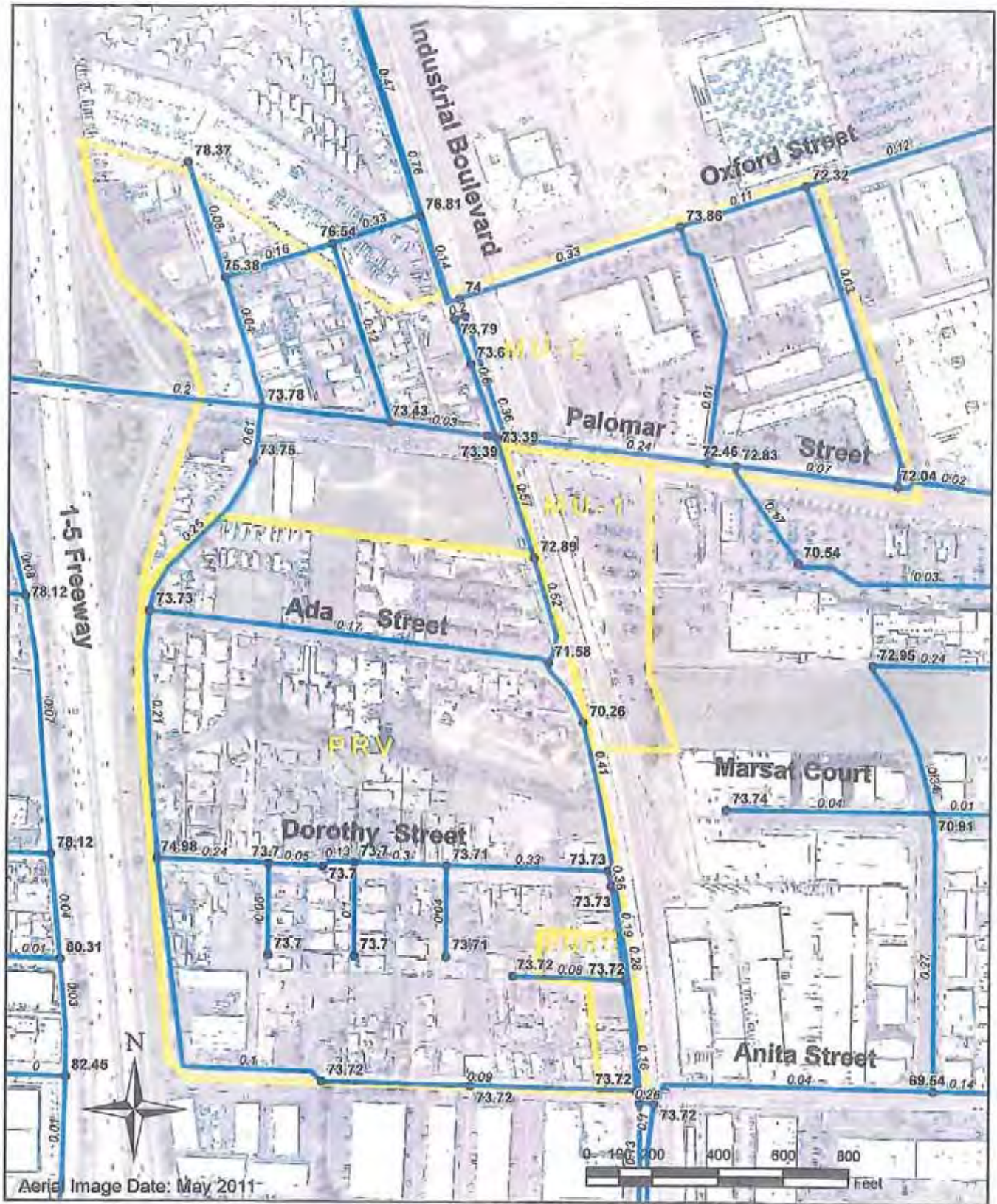
**Appendix E**  
**Confirmation of Existing Water Delivery**  
**Facility to Deliver Adequate Water**  
**Demands and Fire Flow of 4,000 gpm**



## Palomar Gateway District - Water Assessment

The hydraulic model was set for current (2011) maximum day water system demands with test results shown at 10:00 AM.

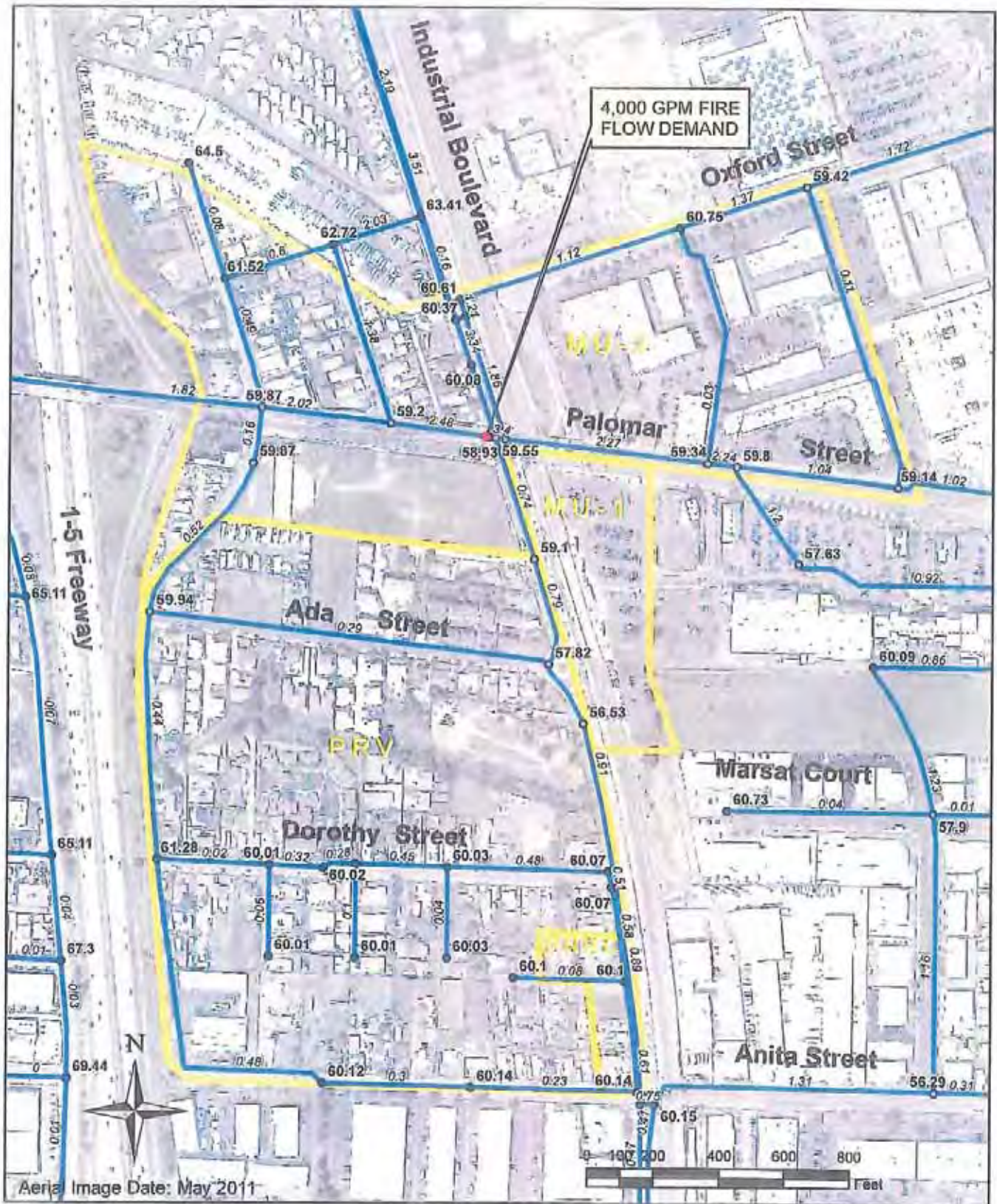




## Palomar Gateway District - Water Assessment

The hydraulic model was set for future Palomar Gateway District maximum day water system demands with test results shown at 10:00 AM.





## Palomar Gateway District - Water Assessment

The hydraulic model was set for future Palomar Gateway District maximum day water system demands with a 4,000 GPM four-hour fire flow. Test results shown at 10:00 AM.



APPENDIX D  
MOBILITY STUDY

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# Palomar Gateway District Specific Plan Final Mobility Study

*April 27, 2012*



LINSCOTT  
LAW &  
GREENSPAN

engineers





## REPORT INFORMATION

**Project:** **Palomar Gateway District Specific Plan – Mobility Study**  
Chula Vista, CA

**Date:** April 27, 2012

**LLG Ref.:** 3-11-2023

**Prepared For:** City of Chula Vista  
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# PALOMAR GATEWAY DISTRICT SPECIFIC PLAN MOBILITY STUDY

City of Chula Vista, California  
April 27, 2012

## 1.0 INTRODUCTION

The Palomar Gateway District (PGD) is one of five planning districts contained within the Southwest Area Plan in the City of Chula Vista's General Plan. The PGD is considered the major southern gateway to the City via the Palomar Street/ I-5 interchange and the Palomar Street trolley station. The PGD currently serves a variety of land uses including residential, commercial, retail and industrial.

According to the City of Chula Vista 2005 General Plan, the PGD was identified as a district where more intensive development, revitalization and/or redevelopment is proposed to occur. The General Plan vision for the district includes a mixed-use Transit Focus Area (TFA), high-density residential, commercial retail and a neighborhood park. SANDAG also designated the District as a Smart Growth Community Center. The goal is to revitalize the District through mixed-use density, Smart Growth design, and Transit Oriented Development (TOD); all of which promote mobility through active transportation and maximize the current transportation infrastructure. Active Transportation encourages safe, convenient and fun bicycling, walking and public transit to achieve a measurable shift from environmentally harmful and sedentary travel.

Based on the goals and vision of the PGD, the following Mobility Study was prepared. The Mobility Study was developed to analyze mobility conditions (motorized and non-motorized) to accommodate expected growth and the City's vision of a vibrant, multi-use PGD. The Mobility Study reviews the current and future transportation system across all modes of travel (i.e. pedestrians, bikes, autos and transit) and user abilities (children, elderly and disabled). The study departs from the traditional traffic impact studies and address mobility with a focus on *moving people*, not cars.

## 2.0 PROJECT DESCRIPTION

The Palomar Gateway District (PGD) is ideally situated for one of Chula Vista's in-fill Transit Oriented Development (TOD) villages. The PGD is bounded by Walnut Avenue/ Frontage Road to the west, Oxford Street to the north, Trolley Center to the east and Anita Street to the south.

The project site is ideally located for Smart Growth development with regional and local access provided by I-5 and Palomar Street respectively with the Palomar Street Transit Center served by the Trolley Blue Line. The Blue Line is the most heavily traveled corridor in San Diego with more than 10,000 average daily boardings. Per the SANDAG "State of Commute 2010 Report", the highest ranking transit route by ridership in the San Diego County is the Blue Line Trolley, which totaled 20 million passengers in Year 2009. By comparison, all other light rail service (Orange Line, Green Line trolley services and Sprinter) combined totaled 18 million passengers or 91.5% of the Blue Line passenger count. The Orange and Green Line trolley services each carried approximately 8 million passengers (Year 2009 data) and ranked 2<sup>nd</sup> and 3<sup>rd</sup> in transit ridership in San Diego County.

### General Plan Vision

According to the City of Chula Vista 2005 General Plan, the PGD was identified as a district where more intensive development, revitalization and/or redevelopment is proposed to occur. There are four General Plan land use designations within the Palomar Gateway District. The General Plan describes these land use designations as follows:

- *High Residential:* The High Residential designation is intended for multi-family units, such as apartment and condominium-type dwellings in multiple-story buildings, with densities ranging from 18 to 27 dwelling units per gross acre. At an average of 2.5 persons per unit, population density in this designation would range from 45 to 67 persons per acre.
- *Mixed Use Transit Focus Area:* The Mixed Use Transit Focus Area designation is intended within approximately ¼ mile of the existing Palomar Trolley Station, and is intended for the highest intensity mixed use residential environment. This designation allows a mix of residential, office, and retail uses in an area that is pedestrian-friendly and has a strong linkage to provision of mass transit. District-wide gross residential density within this designation is an average of 40 dwelling units per acre.
- *Retail Commercial:* The Retail Commercial designation (a small area located along Industrial Boulevard at Anita Street) is intended to allow a range of neighborhood and community retail shopping and services. This category may include limited thoroughfare retail and automobile-oriented services.
- *Parks and Recreation:* The Parks and Recreation designation is intended for parks; sports fields; playgrounds; golf courses; and other passive and active recreation uses. The designation may also include community centers and urban parks.



Based on coordination with City staff and pursuant to recent City council direction, a portion of the office land use in the Transit Focus Area may be developed with a College/ Institution use. This use has been suggested on the 4.8 acre property at the southwest corner of Palomar Street/ Industrial Boulevard intersection; however, no detailed plans or project has been proposed.

The PGD is divided into four (4) sub-districts:

- MU–1: Palomar Transit Plaza / Transit Focus Area
- MU–2: Mixed-use corridor
- PRV: Palomar Residential Village/ Residential High
- PRNC: Palomar Residential Retail Cluster / Commercial Retail

In addition to these sub-districts, a neighborhood park within the Specific Plan Area is also envisioned whose location is not yet finalized. Initial discussions on a planning level are focused on the SDGE parcel, south of the existing Palomar transit station.

### Market Absorption

The land use intensities in the City of Chula Vista General Plan have been reduced based on findings from the Year 2011 market absorption study. No changes to the land use types were proposed. The updated land use quantities are shown in **Table 1**.

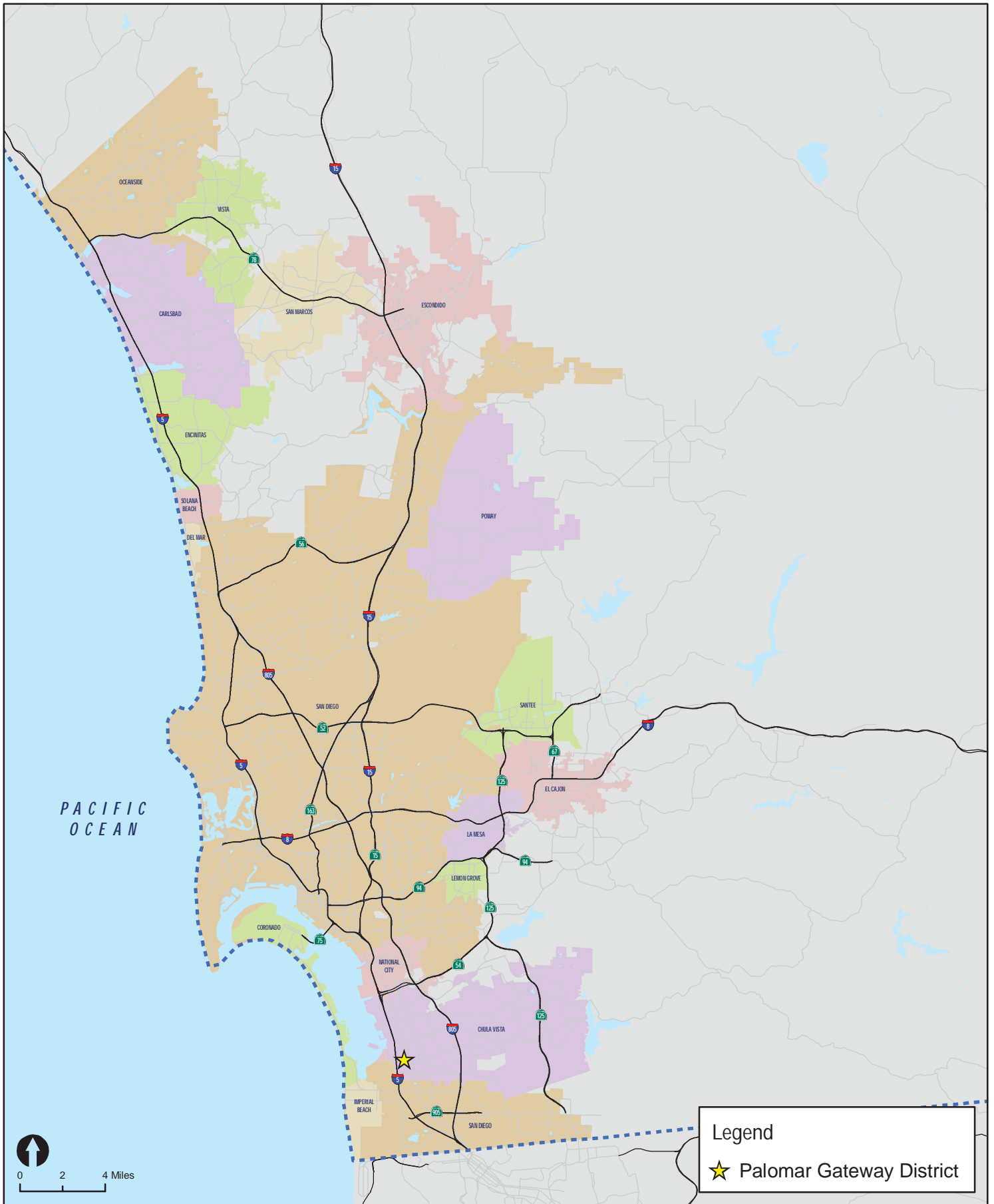
TABLE 1  
PALOMAR GATEWAY EXISTING AND PROJECTED LAND USES

| Land Uses        | Existing Development | Projected Additional Development | Total Estimated Buildout | Projected Buildout by sub-district |                   |                  |                  |
|------------------|----------------------|----------------------------------|--------------------------|------------------------------------|-------------------|------------------|------------------|
|                  |                      |                                  |                          | MU-1<br>(3.5 ac)                   | MU-2<br>(31.5 ac) | PRV<br>(43.5 ac) | PNRC<br>(1.5 ac) |
| Residential (DU) | 400                  | 1,300                            | 1,700                    | 150                                | 450               | 700              | –                |
| Retail (SF)      | 200,000              | 100,000                          | 300,000                  | 10,000                             | 85,000            | –                | 5,000            |
| Office (SF)      | –                    | 50,000                           | 50,000                   | 5,000                              | 40,000            | –                | 5,000            |
| Industrial (SF)  | 30,000               | –                                | –                        | –                                  | –                 | –                | –                |

**Footnotes:**

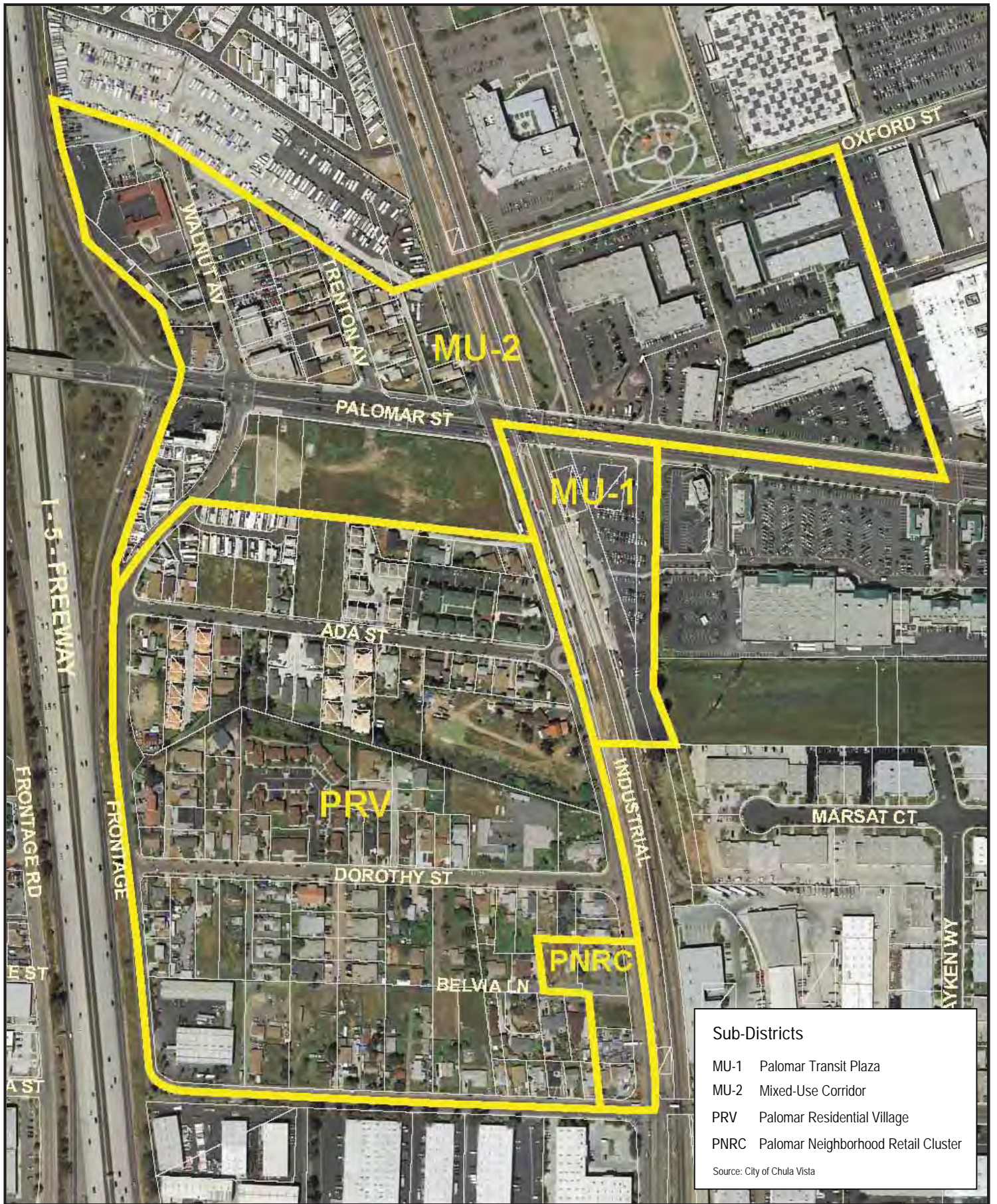
- a. Land use quantities and densities provided by City of Chula Vista.

**Figure 1** shows the project location map and **Figure 2** shows the project land use map. **Appendix A** contains the City of Chula Vista General Plan Vision and market absorption study for PGD.



**Figure 1**  
**Project Location Map**





**Figure 2**  
**Project Land Use Map**



## 3.0 STUDY OBJECTIVES AND GUIDING PRINCIPLES

### Study Objectives

The Mobility study’s objective is to analyze existing and future mobility conditions in PGD and provide recommendations to *revitalize the District through mixed-use density, Smart Growth design, and Transit Oriented Development (TOD)*.

The intent of the study is to present a Mobility Plan containing strategies, regulations and design parameters, to be implemented as individual projects are constructed in the District. Over time, the District will be transformed from its underutilized/lower-density setting into a vibrant and cohesive higher-density, multi-modal transit-oriented community.

### Guiding Principles

The review of mobility across all modes of transportation can be challenging due to existing constraints, competing interests of travel modes, and the complexity of planning for a 80-acre site. To achieve the above objectives, the following key principles were developed:

*Principle A:* Balance all modes of transportation giving equal importance to motorized (autos) travel and non-motorized travel (pedestrians, bicycles and transit). Promote Complete Streets concepts in accordance with the Assembly Bill (AB) 1358.

The “*California Complete Streets Act of 2008*” (AB 1358) was passed into law on September 30, 2008. Commencing January 1, 2011, the bill requires, “*that the legislative body of a city or county, upon any substantive revision of the circulation element of the general plan, modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan. By requiring new duties of local officials, this bill would impose a state-mandated local program*”

Implementing Complete Streets also supports California Global Warming Solutions Act of 2006 (AB 32) and Senate Bill 375.

*Principle B:* Explore efficient, flexible, creative and context sensitive solutions.

*Principle C:* Ensure safety for all users without compromise.

*Principle D:* Recognize that the best overall mobility solution may decrease operations for a particular mode of travel.

*Principle E:* Prioritize transportation recommendations for both motorized and non-motorized travel based on a tiered ranking system.



## 4.0 NON-MOTORIZED TRAVEL CONDITIONS

The following section details the existing conditions and the challenges faced by pedestrian, bicycle and transit users.

### Pedestrian Facilities

#### Existing Conditions

The following discussion provides a description of the existing pedestrian conditions in the project area at street segments and intersections. The key features identified at the street segment level include the provision of contiguous sidewalks and their connectivity to adjacent intersections. At the intersections level, the provision of adequate ADA accessible curb ramps and crosswalks were noted.

Palomar Street between Bay Boulevard and I-5 includes a sidewalk only on the north side. The I-5 overcrossing on Palomar Street includes a sidewalk only on the south side. With only one sidewalk on the bridge, there is limited pedestrian interaction between the east side and west side of I-5. The Palomar Street interchange ranks high among the improvements needed for I-5 interchanges in Chula Vista based on traffic volumes and levels of service. Caltrans, SANDAG and the City of Chula Vista are currently working on the *I-5 South Multimodal Corridor Study*, which identifies an overcrossing with additional lanes and proposed 6-foot sidewalks on both sides to enhance pedestrian activity and interaction.



Palomar Street between I-5 and Transit Center Place includes 6-foot sidewalks on both sides of the roadway. Even though sidewalks are provided, the lack of crosswalks forces pedestrians to cross at uncontrolled locations such as driveways and on travel lanes, or in the middle of parking lots, compromising safety. For instance: the driveway leading into the Transit Center Parking lot is 60 feet wide. Pedestrians heading toward the transit station face high-volume high-speed right-turning traffic. Older pedestrians, children and other people that lack



speed and detection skills are exposed further.



Industrial Boulevard, north of Palomar Street, currently does not include a sidewalk on the east side fronting the railroad tracks. This is particularly concerning, given the proximity of the Harborside Elementary School.

There are planned improvements in Fiscal Year 2012 to provide curb, gutter, sidewalk and bike lane improvements on Industrial Boulevard between Moss Street and Palomar Street. Over the past several years,

City staff has submitted grant applications to complete improvements on the east side from L Street to Moss Street but these applications have been unsuccessful.

Industrial Boulevard, south of Palomar Street to Ada Street provides good pedestrian circulation with standards width sidewalks on both sides of the street given the proximity of the transit center. The sidewalks also include staircase and curb ramps to/from the transit center platform providing convenient access for all user types. Industrial Boulevard between Ada Street and Anita Street does not include sidewalks on both sides of the street. Industrial Boulevard, south of Anita Street, includes a sidewalk only on the west side that provides access to the businesses.



Ada Street and Dorothy Street are east-west roadways connecting Industrial Boulevard and Frontage Road. The adjacent land uses on Ada Street and Dorothy Street are residential. Ada Street and Dorothy Street includes sidewalks on both sides of the roadway providing good mobility and a safe dedicated walking space for residents.

Anita Street also connects Industrial Boulevard and Frontage Road but includes a sidewalk only on the south side, which serves the businesses. The north side fronting residential uses does not include a sidewalk.

Frontage Road is 2-lane undivided north-south roadway connecting Palomar Street to Anita Street. Frontage Road does not include sidewalks on the west side and for majority on the east side. The only sidewalks available on the east side are north of Ada Street for approximately 350 feet.

Walnut Avenue is 2-lane undivided north-south north of Palomar Street that terminates into a cul-de-sac. Walnut Avenue provides sidewalks on both sides of the roadway that serve the residential uses on the east side and commercial retail establishments on the west side.

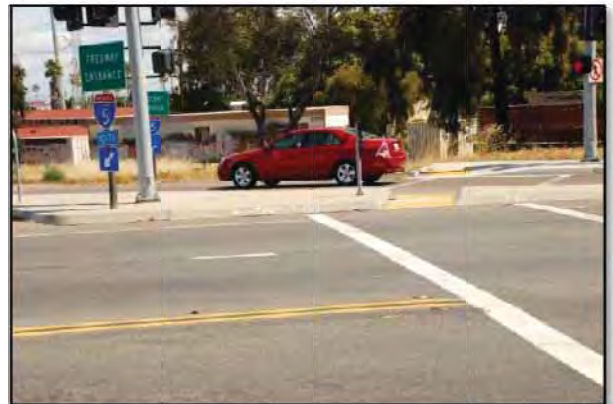
Trenton Avenue is 2-lane undivided north-south north of Palomar Street that terminates into a cul-de-sac. Trenton Avenue provides sidewalks on both sides of the roadway serving the residential uses.

The following are the existing pedestrian conditions at the study area intersections:

The Palomar Street/I-5 Southbound Ramps intersection includes adequate ADA accessible curb ramps and crosswalks to help facilitate pedestrian crossings. However, with regards to connectivity to the street segments, the eastbound approach of the intersection currently does not include a sidewalk. Even though pedestrian connectivity is adequate at the intersection level, it must be ensured that the sidewalks on the street segments leading to/from intersections are also provided to prevent pedestrians from jaywalking at mid-block locations. The Palomar Gas station project is proposing street improvements on Palomar Street, west of I-5 at the southwest quadrant.



The Palomar Street/I-5 Northbound Ramps intersection affords good pedestrian features such as ADA accessible curb ramps and crosswalks. Based on field observations, it was noted that the westbound right-turn is currently a “free” movement with a pedestrian crossing. Pedestrian crossings at free movements generally are not favorable given the high speeds and longer crossing distances. The I-5 South Multi-Modal Corridor Study addresses this deficiency by squaring-up the intersection.



The Palomar Street/Industrial Boulevard intersection was recently upgraded to include landscape medians, enhanced crosswalk paving, sidewalks, chain-link fence to discourage jaywalking, and tree-lined parkways as a part of the SANDAG Palomar Gateway Enhancement project Smart Growth Incentive Program (SGIP). This intersection along with the Palomar Transit Center serves as the primary influence area for the PGD and it is important to provide inviting, well-planned, pedestrian-friendly street environments to promote a vibrant pedestrian-





oriented community that encourages people to walk.

The Palomar Street/Transit Center Place intersection also serves as one of the pedestrian generators given the neighboring commercial/retail opportunities and its interaction with the transit center. This intersection affords curb ramps at all the corners of the intersection. However, the curb ramp at the northeast corner is “skewed” and does not provide direct convenient access with the curb ramp at the southeast corner. Additionally, the curb ramp at the northwest corner has degraded and the push-button is placed on grass making it inconvenient for ADA users. The intersection includes a marked crosswalk only on the southside with no crosswalk markings on the other legs.



The Industrial Boulevard/Ada Street intersection was recently upgraded to include a roundabout as a part of SANDAG Palomar Gateway Enhancement project Smart Growth Incentive Program (SGIP). This intersection affords desirable pedestrian features such as crosswalks (splitter islands) and flashing crosswalk markers to help driver visibility at night, etc. However, the intersection is poorly connected to the street segment south of Ada Street, which includes no sidewalks.



The Industrial Boulevard/Anita Street intersection forms the southern boundary of the PGD. This intersection currently does not include sidewalks on Industrial Boulevard. There is poor pedestrian connectivity across the rail road tracks from Industrial Boulevard to Anita Street. Based on our field observations, it was noted that there were truck turning issues from Industrial Boulevard to Anita Street. MTS plans to upgrade the Anita Street rail crossing to improve roadway and pedestrian connections in FY 2012/2013.

#### Planned Improvements – City of Chula Vista Pedestrian Master Plan

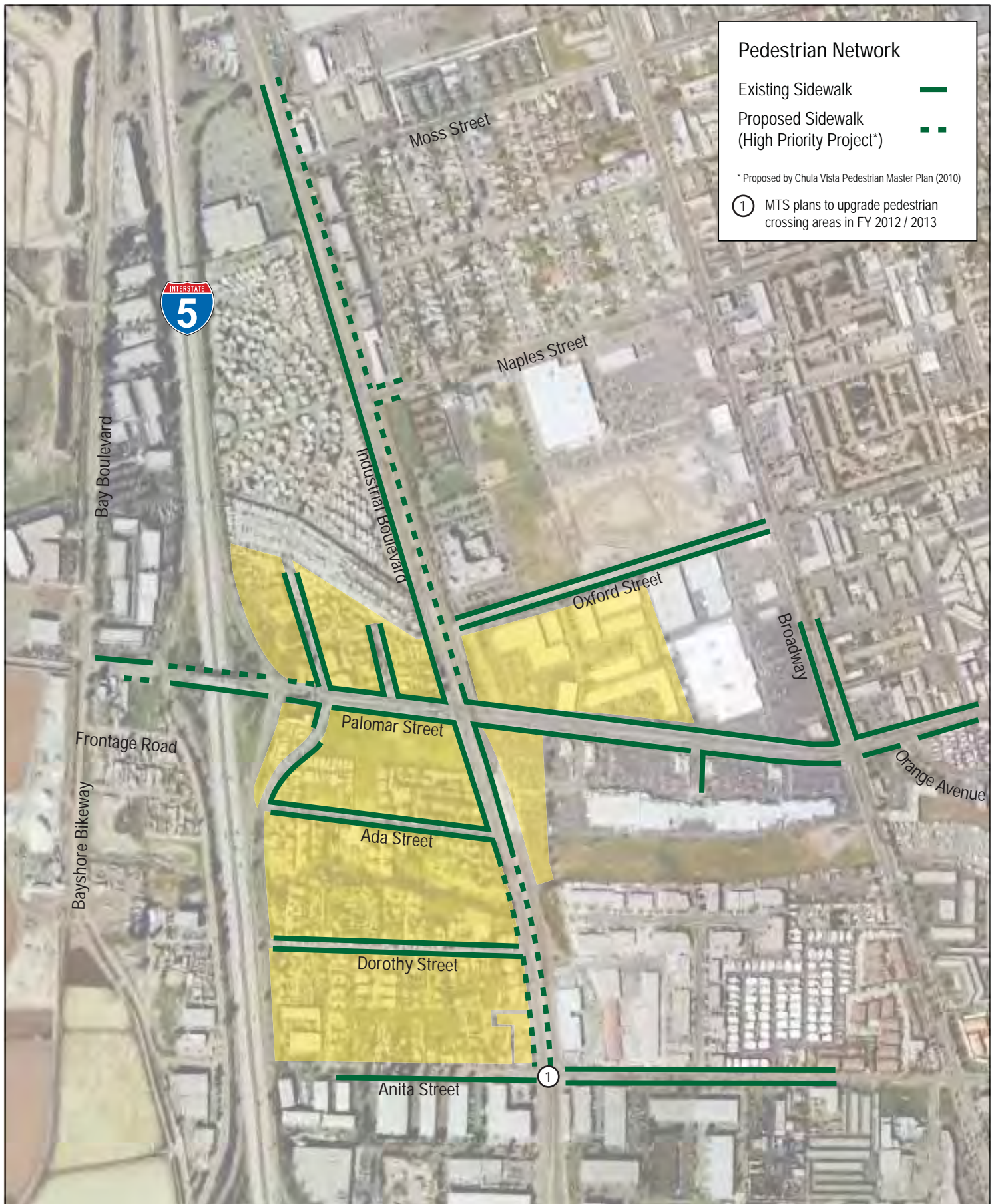
LLG reviewed the City of Chula Vista Pedestrian Master Plan, which provides an inventory of existing missing sidewalks and curb ramps on segments and intersections respectively. The Master Plan also includes a “Needs Assessment” and based on findings from this assessment, the document provides High Priority Project Areas within the City of Chula Vista. The Master Plan identifies the following facilities within the Palomar Gateway District as High Priority locations:



- Rank #3: Palomar Street between Bay Boulevard to Orange Avenue
- Rank #4: Industrial Boulevard between L Street and Anita Street.

In addition to the recommendations outlined in the Pedestrian Master Plan, MTS plans to upgrade the Anita Street rail crossing to improve roadway and pedestrian connections in FY 2012/2013.

*Figure 3* shows the existing pedestrian network and improvements proposed by the Pedestrian Master Plan. *Appendix B* contains the City of Chula Vista Pedestrian Master Plan excerpts.



**Pedestrian Network**

Existing Sidewalk ———

Proposed Sidewalk (High Priority Project\*) - - -

\* Proposed by Chula Vista Pedestrian Master Plan (2010)

① MTS plans to upgrade pedestrian crossing areas in FY 2012 / 2013

**Figure 3**  
**Existing Pedestrian Facilities and Proposed Master Plan**

## Bicycle Facilities

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### Existing Conditions

The following section provides an existing conditions assessment of bicycle facilities within the Palomar Gateway District.

Palomar Street currently affords a Class II bike lane between Walnut Avenue and Industrial Boulevard. A Class III bike route is provided between Industrial Boulevard and Broadway. Dedicated bike lanes are provided at the Palomar Street/ Industrial Boulevard intersection.

Industrial Boulevard currently affords a Class III bike route in the project area. A Class II bike lane is provided between Palomar Street and Ada Street. The Class II bike lane terminates, south of Ada Street and turns into a Class III bike route.



### Planned Improvements – City of Chula Vista Bicycle Master Plan

The *City of Chula Vista Bicycle Master Plan* provides a description of existing bicycle facilities as well as future planned facilities. The City of Chula Vista Bicycle Master Plan identifies the following facilities within the Palomar Gateway District:

- Palomar Street – Walnut Avenue to Industrial Boulevard: Maintain the existing Class II bike lanes.
- Palomar Street – Industrial Boulevard to Orange Avenue: Maintain the existing Class III bike route.
- Naples Street – Industrial Boulevard to Broadway: Include a Class III bike route.
- Oxford Street – Industrial Boulevard to Broadway: Include a Class III bike route.
- Industrial Boulevard – L Street to Anita Street: Upgrade from the existing Class III bike route to Class II bike lanes.

**Figure 4** shows the existing bikeway network and the improvements proposed by the Bicycle Master Plan. **Appendix C** contains the City of Chula Vista Bicycle Master Plan excerpts.





**Figure 4**  
**Existing Bicycle Facilities and Proposed Master Plan**

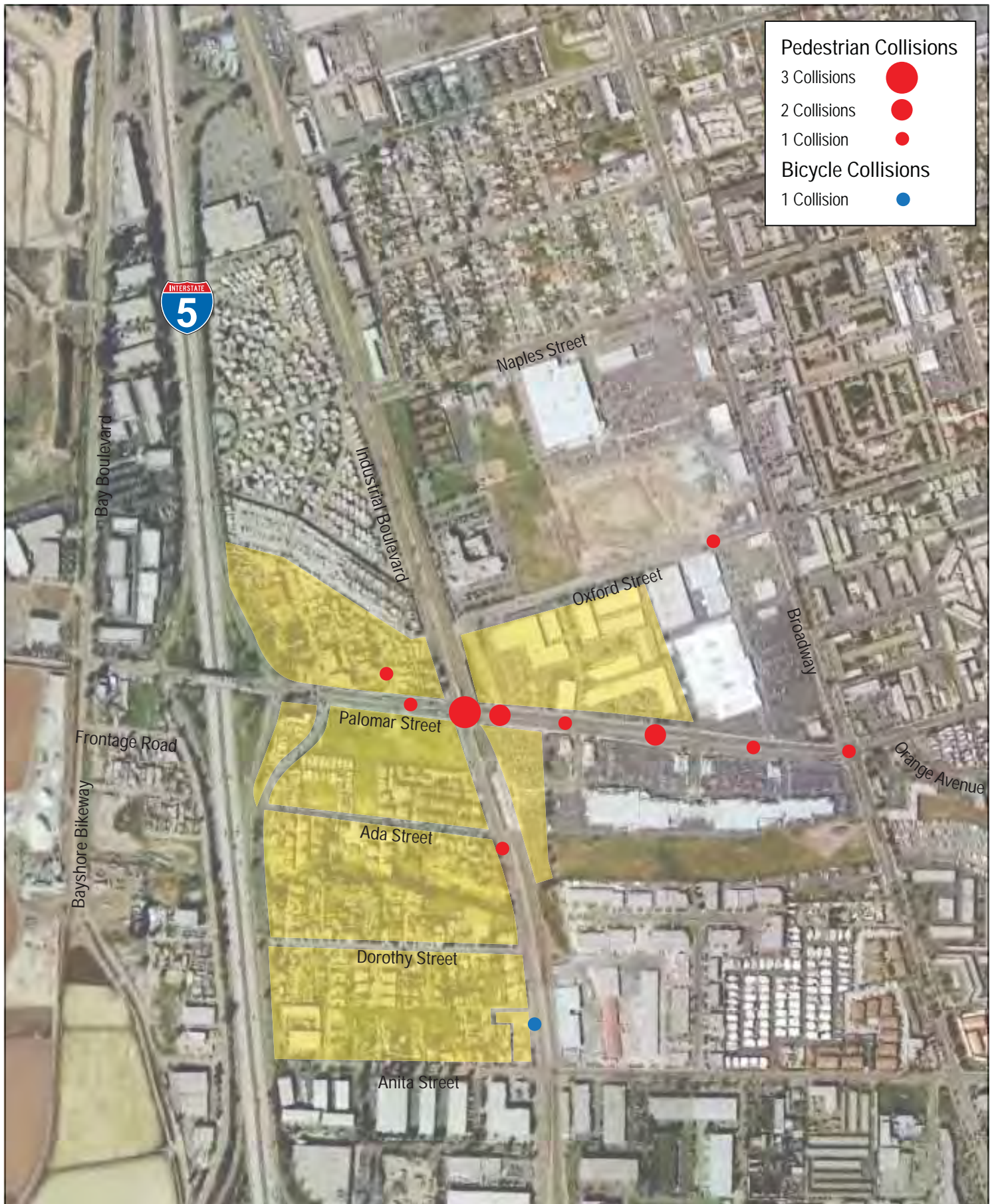


## Pedestrian and Bicycle Collisions

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LLG also researched and identified the pedestrian and bicycle collisions in the project study area between Year 2002 and 2007 from the California Highway Patrol – Statewide Integrated Traffic Records System (2011). Based on our review, there were multiple pedestrian collisions at the Palomar Street/ Industrial Boulevard intersection. This is considered a high risk location given the at-grade trolley crossing conflicts associated with pedestrians and bicyclists.

*Figure 5* presents the pedestrian and bicycle collision data.



**Figure 5**  
**Pedestrian and Bicycle Collisions (2002 - 2007)**

## Transit Facilities

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### Existing Conditions

The Palomar Transit Center, located at the southeast quadrant of the Palomar Street / Industrial Boulevard intersection, provides both regional and local transit facilities through the San Diego Trolley Blue Line and MTS bus services, respectively.

**BUSES** – Local transit service is provided by the Metropolitan Transit System (MTS) bus service. The routes serving the transit center and the Palomar Gateway District include 701, 704, and 712. These transit routes provide service to/from Southwestern College and the trolley station on E Street and H Street.

**Trolley Blue Line** – Regional transit service to the PGD is provided by the Trolley Blue Line, which connects the District to Downtown San Diego / Old Town to the north and to San Ysidro / Mexican border to the south. The Blue line is considered the most heavily traveled corridor with more than 10,000 average daily boarding's and alightings. The weekday headways are approximately between 7 and 15 minutes and the weekend headways are around 15 minutes.

### Planned Improvements

**Buses** – The City of Chula Vista is currently working on a Federal ARRA Grant titled “Seniors, Sidewalks and the Centennial”. This grant focuses on the needs of the senior community in western Chula Vista. The final report will be completed in January 2012 and includes discussion on encouraging shade structures (sun sensitivity) for bus stops that are in close proximity to senior centers and shopping centers.

**Trolley Blue Line** – SANDAG and MTS are currently working on a project that upgrades the Trolley Blue Line. The project proposes to introduce new sleek low-floor trolley cars to the region. The project proposes to raise 33 station platforms to accommodate the easy access vehicles. The project aims at increasing system efficiency and reliability which include level ramp boarding, eliminating the need for mechanical lifts for people using mobility devices making operations much faster.

Additionally, in conversations with MTS, City staff have indicated an additional LRT car from the current 3-car to 4-car LRT for the Blue Line service. The planning for this improvement is in the preliminary stages as the trolley blocks in Downtown San Diego are currently tight and unable to accommodate an additional LRT car. Hence to accommodate the demand, headway reductions in the day are being considered as a short- term solution.

In the long-term, the 2050 Regional Transportation Plan includes the *I-5 South Multi-Modal Corridor Study*, which analyzes a variety of conceptual alternatives for multimodal improvements along I-5 between State Route (SR) 54 and Main Street within the City of Chula Vista. The study focuses on multi-modal improvements such as transit, freight rail, bicycle, and pedestrian modes between SR-54 and Main Street.



As a part of I-5 South Multi-Modal Corridor study, the increasing demand for the Blue Line and associated conflicts of at-grade trolley crossings with vehicular traffic in this corridor was reviewed, including Palomar Street. As the frequency of the trolley increases with demand, the level of service at the Palomar Street at-grade rail crossing decreases due to the increased crossing arm down time. The at-grade rail crossings also create potential safety risks to rail workers during maintenance activities, and to the general public.

The I-5 South Multi-Modal Corridor study conducted a detailed assessment of four rail alignment alternatives which include grade separated structures at E Street, H Street and Palomar Street. Grade separated structures were considered as SANDAG has ranked Palomar Street, E and H as priority locations for grade separated crossings. Palomar Street trolley crossing ranks (#4) in this list.

This Ranking is Agency Item #10  
Project TWC073AC  
September 4, 2016

**DRAFT RAIL GRADE CROSSING EVALUATION SUMMARY**  
Points Based on Rail Grade Separation Evaluation Criteria  
Approved by the SANDAG Transportation Committee on October 16, 2006

| At-Grade Crossing Junction                            | Rank | Veh. per Day ADT | Traffic per Day | Accidents per Day | Total Points | Estimated Cost to Grade Separation (2016) (Mill) | Assumption               |
|---|------|------------------|-----------------|-------------------|--------------|--|--------------------------|
| Washington/Laurel/Interpalm/Graves/Ashtabuck          | 1    | 202,840          | 127             | 0                 | 39.0         | \$2,200  | heavy at-grade structure |
| Palomar Street/San Diego                              | 2    | 42,470           | 170             | 4                 | 62.0         | \$70   | at-grade underpass       |
| Broadway/Carroll/Grove Avenue/Laurel/Olive            | 3    | 40,407           | 144             | 2                 | 57.8         | \$60   | light rail overpass      |
| Palomar Street/Chula Vista                            | 4    | 38,237           | 206             | 0                 | 54.5         | \$40   | light rail overpass      |
| H Street/Chula Vista                                  | 5    | 47,506           | 206             | 0                 | 63.3         | \$40   | light rail overpass      |
| E Street/Chula Vista                                  | 6    | 42,058           | 206             | 1                 | 58.3         | \$40   | light rail overpass      |
| Laurel Avenue/San Diego                               | 7    | 37,688           | 145             | 0                 | 46.3         | \$40   | light rail overpass      |
| Washington Street/San Diego (light rail only)         | 8    | 38,348           | 206             | 0                 | 46.2         | \$40   | light rail overpass      |
| Vieta/Village Drive/San Diego Street/Vieta            | 9    | 31,656           | 97              | 0                 | 48.6         | \$60   | light rail overpass      |
| Civic Center Drive/Vieta                              | 10   | 46,792           | 97              | 0                 | 48.6         | \$40   | light rail overpass      |
| Vieta Street/San Diego                                | 11   | 35,275           | 206             | 0                 | 48.6         | \$40   | light rail overpass      |
| Ashtabuck/San Diego (light rail only)                 | 12   | 36,575           | 206             | 0                 | 44.0         | \$100  | light rail overpass      |
| Broadway/San Diego (light rail only)                  | 13   | 37,845           | 144             | 0                 | 43.2         | \$110  | light rail overpass      |
| East Street/San Diego                                 | 14   | 19,470           | 206             | 0                 | 42.5         | \$40   | light rail overpass      |
| Adriano Avenue/University Avenue/Alamo Street/La Mesa | 15   | 24,700           | 144             | 0                 | 40.2         | \$100  | light rail overpass      |
| Sevenson Drive/La Mesa                                | 16   | 12,011           | 206             | 2                 | 40.2         | \$40   | light rail overpass      |
| Interpalm Valley Street/San Diego                     | 17   | 37,688           | 21              | 1                 | 39.5         | \$130  | heavy rail overpass      |
| McPherson Drive/Vieta                                 | 18   | 29,421           | 67              | 0                 | 37.8         | \$40   | light rail overpass      |
| Palomar Street/Terrace                                | 19   | 18,911           | 67              | 0                 | 31.7         | \$40   | light rail overpass      |
| North Drive/Vieta                                     | 20   | 8,752            | 67              | 0                 | 19.5         | \$30   | light rail overpass      |
| Mar Vista Drive/Vieta                                 | 21   | 4,989            | 67              | 0                 | 23.8         | \$30   | light rail overpass      |
| Line Avenue/Vieta                                     | 22   | 4,281            | 67              | 0                 | 23.8         | \$30   | light rail overpass      |
| Grant Avenue/Carroll Village Drive/Cambod             | 23   | 21,119           | 21              | 0                 | 20.5         | \$110  | heavy rail overpass      |
| Diagona Street/Vieta                                  | 24   | 4,192            | 67              | 0                 | 23.8         | \$30   | light rail overpass      |
| Terrace Avenue/Fieldston                              | 25   | 10,268           | 21              | 0                 | 23.8         | \$30   | heavy rail overpass      |
| Palomar Road/Carroll                                  | 26   | 19,470           | 67              | 0                 | 22.2         | \$30   | heavy rail overpass      |
| Laurel Avenue/Carroll                                 | 27   | 34,650           | 67              | 1                 | 22.0         | \$30   | heavy rail overpass      |
| Total   |      |                  |                 |                   |              | \$3,750  |                          |

Excluded: this table lists the cost to grade separate or also includes in the total cost of other projects in the RTP  
\* Included in the Center double track project  
\*\* Included in the Sprinter double track project

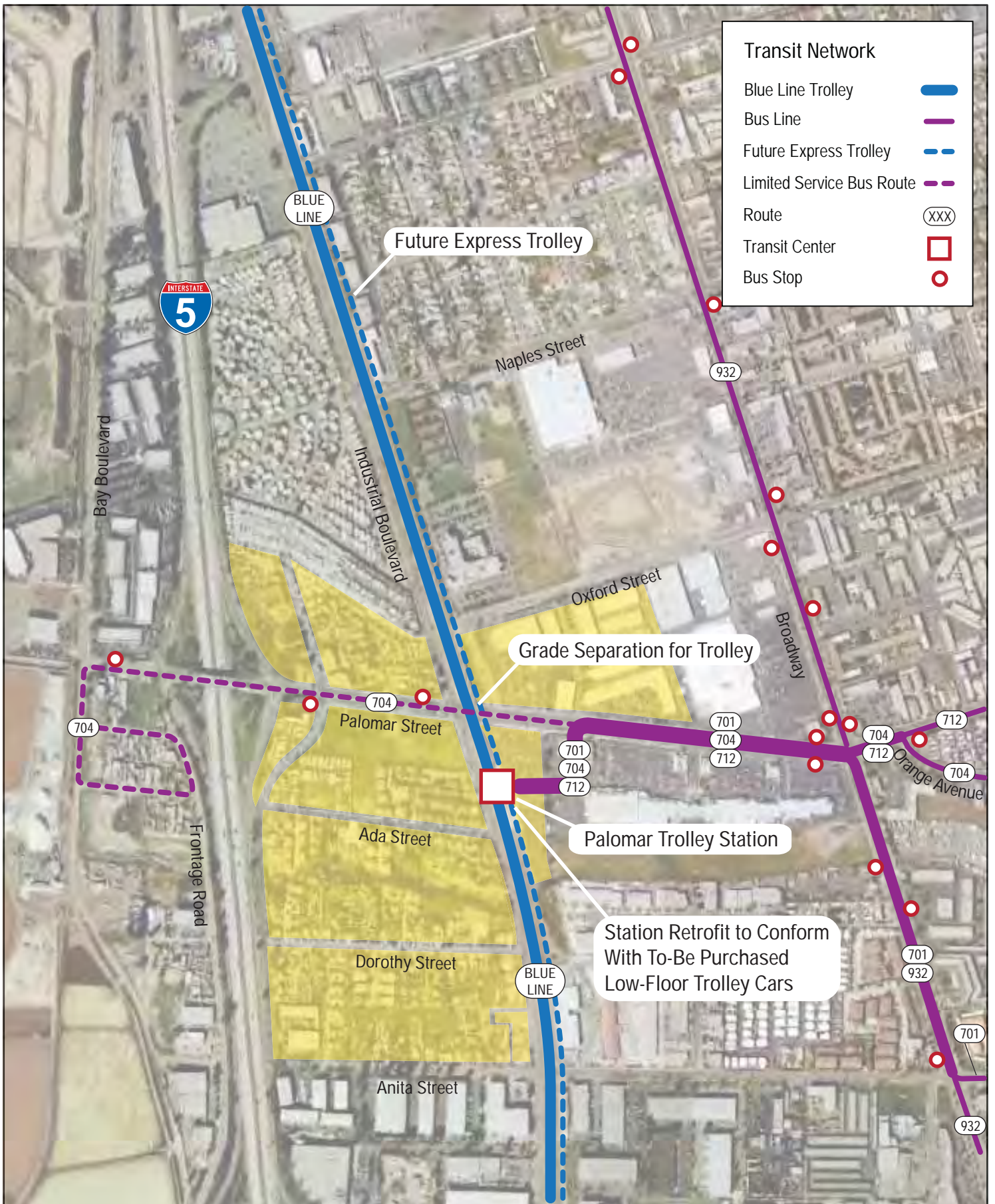
The proposed grade separations at E Street, H Street, and Palomar Street are also included on the regional priority list for rail grade separation projects in SANDAG's 2050 Regional Transportation Plan (2050 RTP) in the Revenue Constrained Plan to be completed by Year 2020. Eliminating the at-grade rail crossings would be a practical alternative for improving traffic and transit operations.

SANDAG in preliminary studies, has identified that Express Trolley operations could be a potential benefit to ridership in this corridor. In addition to passenger operations, freight operations also use this corridor to interchange cargo with Mexico and serve local industries along the alignment. The I-5 South Multi-Modal Corridor study evaluated alignment alternatives for adding a third mainline track for Express Trolley operations, as well as maintaining or increasing currently planned and future freight operations.

Based on discussions with City of Chula Vista staff, the I-5 South Multi-Modal Corridor study recommends freight to be at-grade. The project also recommends split grades for the light rail tracks. A new SANDAG MTS study is underway to determine the split grade (under or over) for light-rail tracks.

**Figure 6** shows the existing transit network and planned improvements. **Appendix D** contains the excerpts from the 2050 RTP and I-5 South Multi-Modal Corridor Study.





**Figure 6**  
**Existing Transit Network and Planned Improvements**

## 5.0 MOTORIZED TRAVEL CONDITIONS

### Roadway Network

Palomar Gateway District is regionally accessed via Interstate 5 and Palomar Street. The principal roadways in the project study area are described briefly below. The description includes the roadway classification, physical characteristics and adjacent land uses.



Palomar Street is classified as a 6-lane Major Arterial between I-5 and Broadway in the City of Chula Vista Circulation Plan – West. Palomar Street is currently constructed as a 4-lane roadway between the I-5 ramps, 5-lane roadway between the I-5 NB ramps and Walnut Avenue, and as a 6-lane roadway between Walnut Avenue and Broadway. The posted speed limit is 35 mph and parking is prohibited. The Palomar Transit Center is located at the southeast quadrant of the Palomar Street / Industrial Boulevard

intersection and includes an at-grade rail-road crossing at this intersection.

The land uses on Palomar Street include a variety of commercial and retail establishments between I-5 and Broadway. Between I-5 and Industrial Boulevard, the land uses on Palomar Street include an Arco gas station on the north side, Palomar Inn on the south side and other retail uses. East of Industrial Boulevard, the primary land uses on Palomar Street are commercial/retail. Recent street and safety improvements in this area have been completed, consisting of landscaped medians, enhanced paving at the intersection of Palomar Street and Industrial Boulevard, and sidewalks and tree-lined parkways, including bike lanes along Palomar and Industrial Boulevard.

Ada Street is an unclassified east-west roadway in the City of Chula Vista Circulation Plan – West. Ada Street is currently constructed as a 2-lane roadway. This east-west street is fully improved with sidewalks, curbs and gutters and parking is allowed on both sides of the street. The land uses on Ada Street include several new residential developments consisting of a mix of multi- and single-family units. There are also vacant and underutilized parcels, which have potential for additional development.



There has been significant new development along Ada Street such as the Trolley Terrace Townhomes (18 units) and Trolley Trestle Apartments (11 units). As a part of calming traffic, a “roundabout” was recently constructed at the Ada Street/Industrial Boulevard intersection. These



improvements were part of the \$2.1 million SANDAG Palomar Gateway Enhancement project Smart Growth Improvement Program (SGIP).

Dorothy Street is an unclassified east-west roadway in the City of Chula Vista Circulation Plan – West. Dorothy Street is currently constructed as a 2-lane undivided roadway connecting Frontage Road to Industrial Boulevard. The adjacent land uses on Dorothy Street are residential units.

Industrial Boulevard is an unclassified north-south roadway in the City of Chula Vista Circulation Plan – West. Industrial Boulevard is currently constructed as a 2-lane roadway north and south of Palomar Street. Industrial Boulevard, north of Palomar Street, includes residential land uses on the west side bounded by the railroad tracks on the east. The speed limit on Industrial Boulevard is 40 mph.

Walnut Avenue is an unclassified north-south roadway in the City of Chula Vista Circulation Plan – West. Walnut Avenue, a 2-lane undivided roadway is currently built only on the north side of Palomar Street terminating into a cul-de-sac. Walnut Avenue is characterized by a mixture of uses, including residential, commercial, and industrial. Current uses include retail stores, an Arco gas station, auto towing and storage yard, the Palomar Motel, office building, and residences north of Palomar Street.

Frontage Road is an unclassified 2-lane undivided roadway and constitutes an extension of Anita Street at the southerly end, as it extends along the western edge of the district parallel to I-5, and connects to Palomar Street at the northerly-end. It is a narrow street without street improvements; an asphalt curb serves as edge between the street and private property. Frontage Road provides access to the industrial uses at the corner of Anita Street, and residential properties that front it.

Trenton Avenue is an unclassified north-south roadway in the City of Chula Vista Circulation Plan – West. Trenton Avenue, a 2-lane undivided roadway is currently built on the north side of Palomar Street terminating into a cul-de-sac. The adjacent land uses are residential.

Anita Street is an unclassified 2-lane undivided roadway and serves as interface between residential uses on the north and commercial/industrial uses on the south side of the street. The north side is predominantly residential, except for industrial development on the most westerly lot, adjacent to I-5. There are no sidewalks, curbs, gutters on the north side of the street. Anita Street has an at-grade rail crossing but pedestrian facilities across the rail tracks were observed to be deficient. MTS plans to upgrade the Anita Street rail crossing to improve roadway and pedestrian connections in FY 2012/2013.

## Traffic Volumes

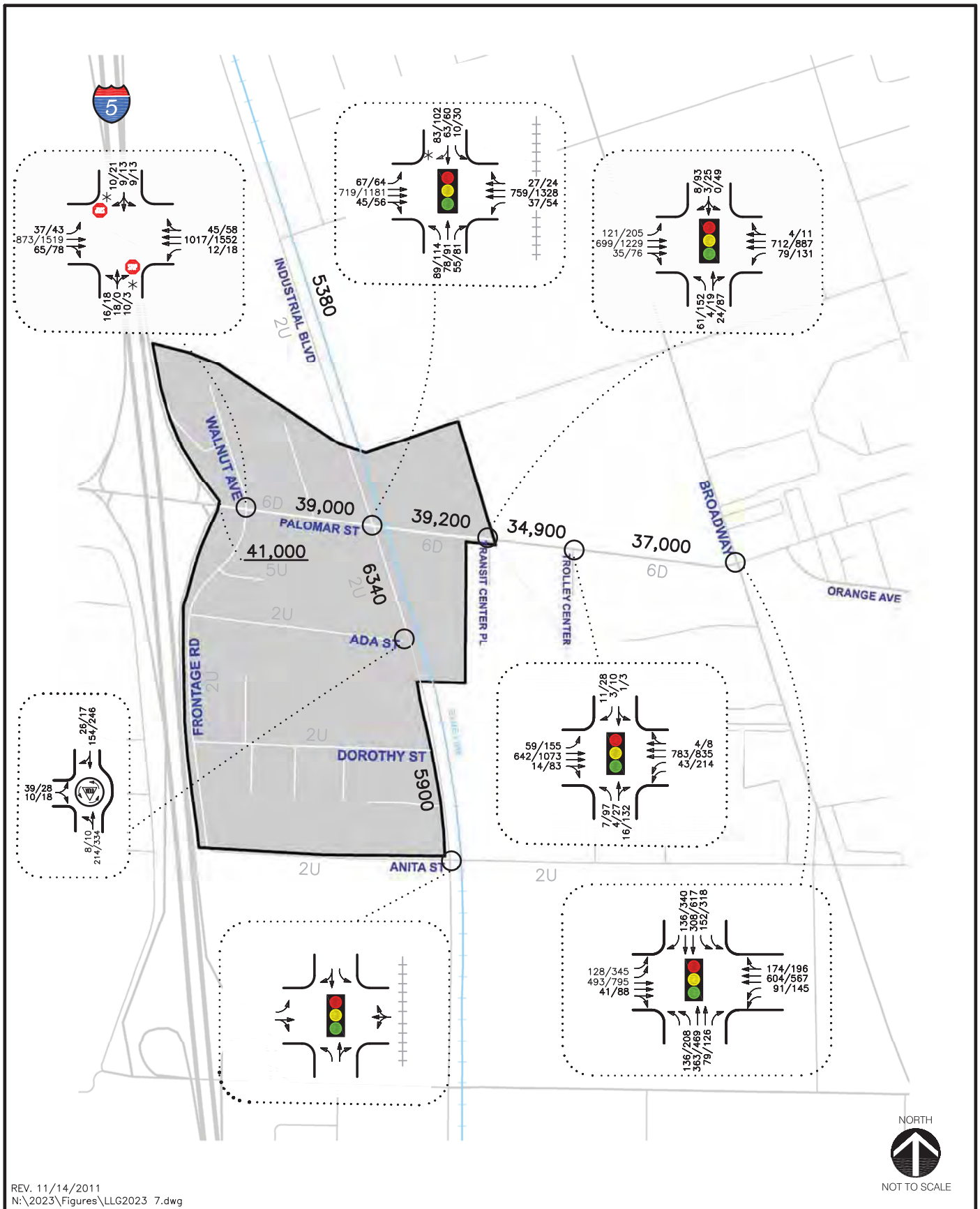
Weekday peak hour intersection and bi-directional daily traffic counts on the street segments were collected from several sources including City of Chula Vista counts, the *Olson Bayvista Walk* Traffic Impact Study, and the *Palomar Gas and Carwash* Traffic Study. The sources contained counts

dating from 2005 to present. LLG conducted a count validation using a recent 2011 count at the Industrial Boulevard/ Palomar Street intersection.

Comparing traffic volumes for every movement at this intersection, the 2005 count was found to be generally higher than the 2011 count for both the AM and PM peak periods. As such, the 2005 counts for the study intersections were validated and used in this study. It was also decided to use the recent 2011 count data at the Industrial Boulevard/ Palomar Street intersection since this represents the most current data for one of the most critical intersections in this study. Slight adjustments were made to balance the 2011 counts with the 2005 counts at the adjacent intersections. As a part of the adjustments, the traffic volumes were always increased to be conservative.

**Figure 7** contains the existing roadway conditions and traffic volumes. The traffic count data validation worksheet is contained in **Appendix E**.





**LEGEND**

- Traffic Signal
- Stop Sign
- Roundabout
- \* - Sneaker Lane
- XX - Number of lanes, divided (D), or undivided (U)

**Existing Roadway Conditions & Traffic Volumes**

**Figure 7**

## Existing Operations

Intersection capacity analyses were conducted for the study intersections under Existing conditions. **Table 2** and **Appendix F** report the intersection operations during peak hour conditions. **Table 2** includes delays at the Palomar Street/ Industrial Boulevard intersection with the trolley crossing. All intersections are calculated to operate at LOS D or better with the exception of:

- Walnut Avenue / Palomar Street—LOS F—AM and PM peak periods

To confirm existing traffic operations, LLG conducted field visits at the project site. The intersection operation at Walnut Avenue/ Palomar Street was validated as the intersection is currently unsignalized and vehicles on Walnut Avenue experience excessive delay as they wait for gap on 6-lane Palomar Street. Further excessive queues were also observed on Palomar Street during trolley crossings, especially during disabled loading/ unloading maneuvers. To account for trolley delays, a delay factor was developed and added to the overall intersection delay. **Appendix G** contains a detailed description of this methodology.

TABLE 2  
EXISTING INTERSECTION OPERATIONS

| Intersection   | Control           | Peak Hour | Existing           |                  |
|--|-------------------|-----------|--------------------|------------------|
|  |                   |           | Delay <sup>a</sup> | LOS <sup>b</sup> |
| 1. Walnut Avenue / Palomar Street                              | TWSC <sup>c</sup> | AM        | >100               | F                |
|  |                   | PM        | >100               | F                |
| 2. Industrial Boulevard / Palomar Street<br>(at-grade trolley) | Signal            | AM        | 39.8 <sup>e</sup>  | D                |
|  |                   | PM        | 44.4 <sup>e</sup>  | D                |
| 3. Transit Center Place / Palomar Street                       | Signal            | AM        | 10.3               | B                |
|  |                   | PM        | 22.8               | C                |
| 4. Trolley Center / Palomar Street                             | Signal            | AM        | 8.0                | A                |
|  |                   | PM        | 13.4               | B                |
| 5. Broadway / Palomar Street                                   | Signal            | AM        | 22.5               | C                |
|  |                   | PM        | 27.3               | C                |
| 6. Ada Street / Industrial Boulevard                           | Roundabout        | AM        | 0.18 <sup>d</sup>  | A                |
|  |                   | PM        | 0.33 <sup>d</sup>  | A                |

**Footnotes:**

- Average delay expressed in seconds per vehicle.
- Level of Service.
- TWSC – Two-Way Stop Controlled Intersection. Minor street left-turn delays reported.
- Synchro does not present vehicular delays at roundabouts. Therefore, maximum volume to capacity ratio is reported.
- 24 seconds of delay added to account for the trolley crossings at this intersection. *Appendix G* contains further explanation of this methodology.

| SIGNALIZED           |     | UNSIGNALIZED         |     |
|----------------------|-----|----------------------|-----|
| DELAY/LOS THRESHOLDS |     | DELAY/LOS THRESHOLDS |     |
| Delay                | LOS | Delay                | LOS |
| 0.0 ≤ 10.0           | A   | 0.0 ≤ 10.0           | A   |
| 10.1 to 20.0         | B   | 10.1 to 15.0         | B   |
| 20.1 to 35.0         | C   | 15.1 to 25.0         | C   |
| 35.1 to 55.0         | D   | 25.1 to 35.0         | D   |
| 55.1 to 80.0         | E   | 35.1 to 50.0         | E   |
| ≥ 80.1               | F   | ≥ 50.1               | F   |

Existing street segment analyses were conducted for roadways in the study area. **Table 3** reports existing street segment operations on a daily basis.

During the arrival of the trolley, the gate closure time affects intersection capacity and thereby reduces the street segment throughput. Hence, to account for trolley delays, the street segment capacities on Palomar Street and Industrial Boulevard were reduced by 10%.

As seen in **Table 3** all street segments are calculated to operate at LOS D or better with the exception of Palomar Street between I-5 and Walnut Avenue, which is calculated to operate at LOS E.

TABLE 3  
EXISTING STREET SEGMENT OPERATIONS

| Street Segment   | Functional Classification | Capacity (LOS C) <sup>a</sup> | ADT <sup>b</sup> | V/C <sup>c</sup> | LOS <sup>d</sup> |
|--|---------------------------|-------------------------------|------------------|------------------|------------------|
| <b>Palomar Street</b><br>I-5 to Walnut Avenue  | 5-Lane Major              | 35,000                        | 41,000           | 1.171            | <b>E</b>         |
| Walnut Avenue to Industrial Boulevard<br>(at-grade trolley)                              | 6-Lane Major              | 36,000 <sup>e</sup>           | 39,000           | 1.083            | D                |
| Industrial Boulevard to Transit Center Pl.<br>(at-grade trolley)                         | 6-Lane Major              | 36,000 <sup>e</sup>           | 39,200           | 1.089            | D                |
| Transit Center Pl. to Trolley Center   | 6-Lane Major              | 40,000                        | 34,900           | 0.872            | B                |
| Trolley Center to Broadway   | 6-Lane Major              | 40,000                        | 37,000           | 0.925            | C                |
| <b>Industrial Boulevard<sup>f</sup></b><br>North of Palomar Street<br>(at-grade trolley) | 2-Lane Collector          | 10,500 <sup>e</sup>           | 5,380            | 0.512            | A                |
| Palomar Street to Ada Street<br>(at-grade trolley)                                       | 2-Lane Collector          | 10,500 <sup>e</sup>           | 6,340            | 0.603            | A                |
| Ada Street to Anita Street   | 2-Lane Collector          | 12,000                        | 5,900            | 0.491            | A                |

**Footnotes:**

- a. Capacity based on *City of Chula Vista's* roadway classification operating at LOS C shown in *Appendix H*.
- b. Average Daily Traffic.
- c. Volume to Capacity.
- d. Level of Service.
- e. To account for the at-grade trolley crossing, segment capacity has been reduced by 10% .
- f. Industrial Boulevard analyzed using the Class II Collector roadway classification.

## Significance Criteria

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Traffic impacts will be defined as either project specific impacts or cumulative impacts. Project specific impacts are those impacts for which the addition of project trips results in an identifiable degradation in level of service on roadway facilities, triggering the need for specific project-related improvement strategies. Cumulative impacts are those in which the project trips contribute to a poor level of service, at a nominal level.

Criteria for determining whether the project results in either project specific or cumulative impacts on roadway segments, or intersections are as follows:

### Short-Term (Study Horizon Year 0 To 4)

For purposes of the short-term analysis roadway sections may be 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 Growth Management Plan Traffic Monitoring Program. Analysis of roadway links under short-term conditions may require a more detailed analysis using the Growth Management Oversight Committee (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 (HCM) methodology of average travel speed based on actual measurements on the segments as listed in the Growth Management Plan Traffic Monitoring Program.

### Intersections

- a. Project specific impact if both the following criteria are met:
  - i. Level of service is LOS E or LOS F.
  - ii. Project trips comprise 5% or more of entering volume.
- b. Cumulative impact if only (i) 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 may be utilized. The following criteria would then be utilized.

- a. Project specific impact if all the following criteria are met:
  - i. Level of service is LOS D for more than 2 hours or LOS E/F for 1 hour (GMOC method only)
  - ii. Project trips comprise 5% or more of segment volume
  - iii. Project adds greater than 800 ADT to the segment
- b. Cumulative impact if only (i) is met. However, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is considered not significant since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If segment Level of Service is LOS F, impact is significant regardless of intersection LOS.



## Long-Term (Study Horizon Year 5 And Later)

### Intersections

- a. Project specific impact if all the following criteria are met:
  - i. Level of service is LOS E or LOS F.
  - ii. Project trips comprise 5% or more of entering volume.
- b. Cumulative impact if only (i) is met.

### Street Links/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.

- a. Project specific impact if all the following criteria are met:
  - i. Level of service is LOS D, LOS E, or LOS F.
  - ii. Project trips comprise 5% or more of total segment volume.
  - iii. Project adds greater than 800 ADT to the segment.
- b. Cumulative impact if only (i) is met. However, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is considered not significant since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If segment Level of Service is LOS F, impact is significant regardless of intersection LOS.

Notwithstanding the foregoing, if the impact identified in paragraph a. above occurs at study horizon year 10 or later, and is offsite and not adjacent to the project, the impact is considered cumulative. Study year 10 may be that typical SANDAG model year which is between 8 and 13 years in the future. Study horizon year 10 would correspond to the SANDAG model for year 2010 and would be 8 years in the future. If the model year is less than 7 years in the future, study horizon year 10 would be 13 years in the future.

In the event a project specific impact is identified per paragraph a. above at study horizon year 5 or earlier and the impact is offsite 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 project specific impact, then the impact shall be considered cumulative.

## Trip Generation

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LLG reviewed the market absorption study for the Palomar Gateway District for land use types, densities and location. LLG coordinated with City staff to validate this information and developed the following trip generation table based on the prescribed land use type and densities.

**Table 4** summarizes the trip generation for the project. The PGD offers mixed-use and transit opportunities with planned pedestrian, bicycle connectivity and the adjacent Palomar Transit Center. Mixed-use and transit adjustments were applied, where applicable and without deviation, per the *SANDAG Trip Generation Rates*. Considering the project site is planned to be located within a dense suburban setting with many modal choices available, such an approach is considered conservative.

The Palomar Gateway District is subdivided into the following 4 sub-districts:

- MU-1: Palomar Transit Plaza / Transit Focus Area
- MU-2: Mixed-Use Corridor
- PRV: Palomar Residential Village/ Residential High
- PNRC: Palomar Neighborhood Retail Cluster / Commercial Retail

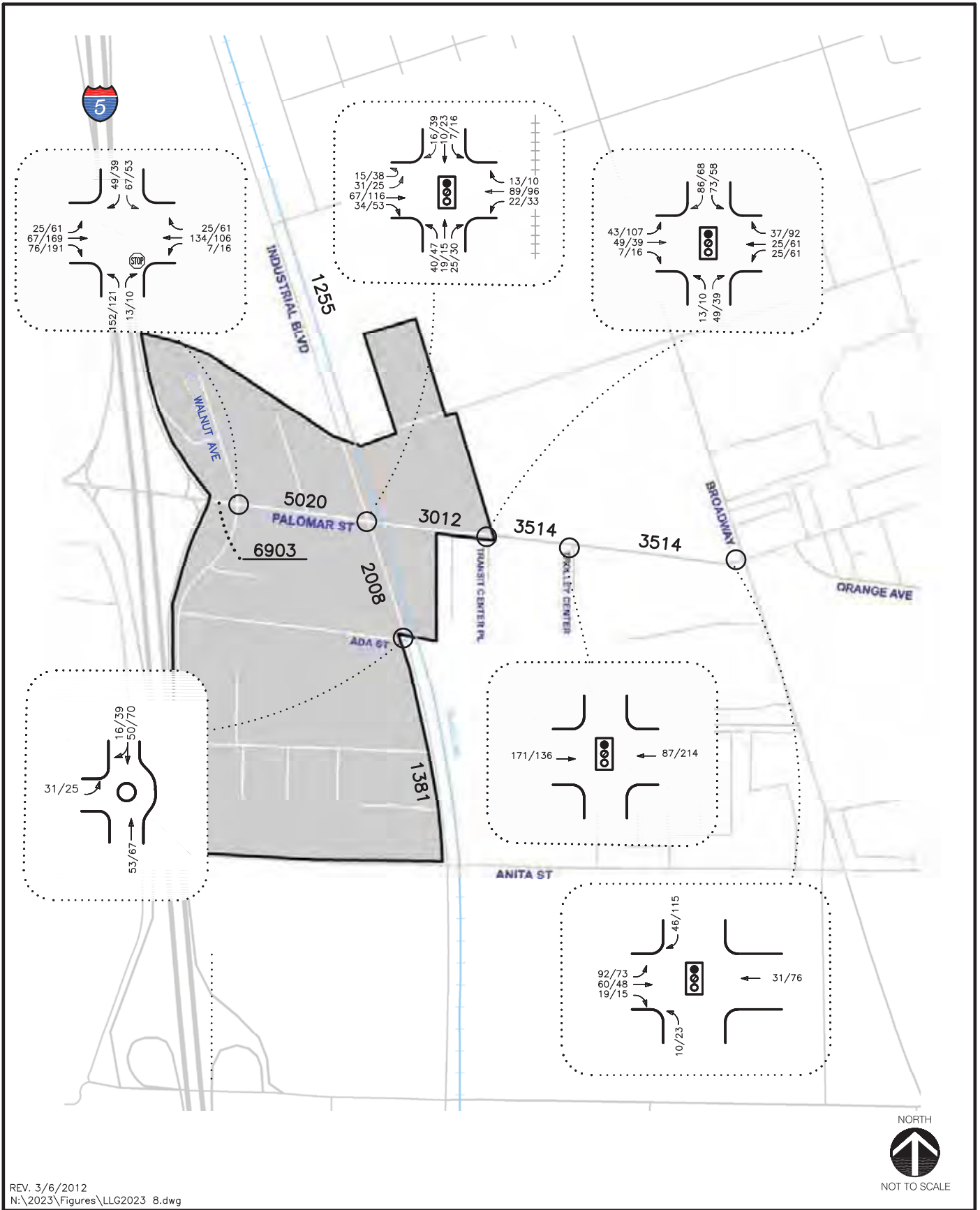
Section 2.0 includes a discussion of these land uses. **Figure 8** illustrates the project traffic volumes.

TABLE 4  
PALOMAR GATEWAY TRIP GENERATION



| Sub-Districts/ Land Use <sup>a</sup>   | Quantity               | Trip Rate <sup>b</sup> | ADT <sup>c</sup> | AM Peak Hour |              |            |            |              | PM Peak Hour |              |            |            |              |
|--|------------------------|------------------------|------------------|--------------|--------------|------------|------------|--------------|--------------|--------------|------------|------------|--------------|
|  |                        |                        |                  | % of ADT     | In:Out Split | Volume     |            |              | % of ADT     | In:Out Split | Volume     |            |              |
|  |                        |                        |                  |              |              | In         | Out        | Total        |              |              | In         | Out        | Total        |
| <b>MU-1 : Palomar Transit Plaza / Transit Focus Area (3.5 acres)</b>             |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| <i>Residential</i>   |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 150 DU                 | 8 / DU                 | 1,200            | 8%           | 20:80        | 19         | 77         | 96           | 10%          | 70:30        | 84         | 36         | 120          |
| Pass-by Trips  |                        |                        | 30               |              |              | 1          | 2          | 3            |              |              | 2          | 1          | 3            |
| Net Trips (Cumulative Trips)   |                        |                        | 1,170            |              |              | 18         | 75         | 93           |              |              | 82         | 35         | 117          |
| <i>Retail</i>  |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 10,000 SF              | 40/ 1,000 SF           | 400              | 3%           | 60:40        | 7          | 5          | 12           | 9%           | 50:50        | 18         | 18         | 36           |
| Pass-by Trips  |                        |                        | 60               |              |              | 1          | 1          | 2            |              |              | 2          | 3          | 5            |
| Net Trips (Cumulative Trips)   |                        |                        | 340              |              |              | 6          | 4          | 10           |              |              | 16         | 15         | 31           |
| <i>Office</i>  |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 5,000 SF               | 20/ 1,000 SF           | 100              | 14%          | 90:10        | 13         | 1          | 14           | 13%          | 20:80        | 3          | 10         | 13           |
| Pass-by Trips  |                        |                        | 10               |              |              | 1          | 0          | 1            |              |              | 0          | 1          | 1            |
| Net Trips (Cumulative Trips)   |                        |                        | 90               |              |              | 12         | 1          | 13           |              |              | 3          | 9          | 12           |
| <b>MU-2 : Mixed Use Corridor (31.5 acres)</b>                                    |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| <i>Residential</i>   |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 450 DU                 | 8 / DU                 | 3,600            | 8%           | 20:80        | 58         | 230        | 288          | 10%          | 70:30        | 252        | 108        | 360          |
| Pass-by Trips  |                        |                        | 110              |              |              | 2          | 7          | 9            |              |              | 8          | 3          | 11           |
| Net Trips (Cumulative Trips)   |                        |                        | 3,490            |              |              | 56         | 223        | 279          |              |              | 244        | 105        | 349          |
| <i>Retail</i>  |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 85,000 SF <sup>d</sup> | 40/ 1,000 SF           | 3,400            | 3%           | 60:40        | 61         | 41         | 102          | 9%           | 50:50        | 153        | 153        | 306          |
| Pass-by Trips  |                        |                        | 510              |              |              | 9          | 6          | 15           |              |              | 23         | 23         | 46           |
| Net Trips (Cumulative Trips)   |                        |                        | 2,890            |              |              | 52         | 35         | 87           |              |              | 130        | 130        | 260          |
| <i>Office</i>  |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 40,000 SF              | 20/ 1,000 SF           | 800              | 14%          | 90:10        | 101        | 11         | 112          | 13%          | 20:80        | 21         | 83         | 104          |
| Pass-by Trips  |                        |                        | 30               |              |              | 4          | 0          | 4            |              |              | 1          | 3          | 4            |
| Net Trips (Cumulative Trips)   |                        |                        | 770              |              |              | 97         | 11         | 108          |              |              | 20         | 80         | 100          |
| <b>PRV: Palomar Residential Village / Residential High (43.5 acres)</b>          |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| <i>Residential</i>   |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 700 DU                 | 8 / DU                 | 5,600            | 8%           | 20:80        | 90         | 358        | 448          | 10%          | 70:30        | 392        | 168        | 560          |
| Pass-by Trips  |                        |                        | 160              |              |              | 3          | 10         | 13           |              |              | 11         | 5          | 16           |
| Net Trips (Cumulative Trips)   |                        |                        | 5,440            |              |              | 87         | 348        | 435          |              |              | 381        | 163        | 544          |
| <b>PNRC: Palomar Neighborhood Retail Cluster / Commercial Retail (1.5 acres)</b> |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| <i>Retail</i>  |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 5,000 SF               | 40/ 1,000 SF           | 200              | 3%           | 60:40        | 4          | 2          | 6            | 9%           | 50:50        | 9          | 9          | 18           |
| Pass-by Trips  |                        |                        | 30               |              |              | 1          | 0          | 1            |              |              | 2          | 1          | 3            |
| Net Trips (Cumulative Trips)   |                        |                        | 170              |              |              | 3          | 2          | 5            |              |              | 7          | 8          | 15           |
| <i>Office</i>  |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 5,000 SF               | 20/ 1,000 SF           | 100              | 14%          | 90:10        | 13         | 1          | 14           | 13%          | 20:80        | 3          | 10         | 13           |
| Pass-by Trips  |                        |                        | 10               |              |              | 1          | 0          | 1            |              |              | 1          | 0          | 1            |
| Net Trips (Cumulative Trips)   |                        |                        | 90               |              |              | 12         | 1          | 3            |              |              | 2          | 10         | 12           |
| <b>Floating Park (5 acres)</b>   |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| <i>Active Park</i>   |                        |                        |                  |              |              |            |            |              |              |              |            |            |              |
| Driveway Trips   | 5 Acres                | 50/ Acre               | 250              | 13%          | 50:50        | 16         | 16         | 32           | 9%           | 50:50        | 11         | 12         | 23           |
| Pass-by Trips  |                        |                        | 10               |              |              | 1          | 0          | 1            |              |              | 0          | 1          | 1            |
| Net Trips (Cumulative Trips)   |                        |                        | 240              |              |              | 15         | 16         | 31           |              |              | 11         | 11         | 22           |
| <b>Total Driveway Trips</b>  |                        |                        | <b>15,650</b>    |              |              | <b>382</b> | <b>742</b> | <b>1,124</b> |              |              | <b>946</b> | <b>607</b> | <b>1,553</b> |
| <b>Total Pass-by Trips</b>   |                        |                        | <b>960</b>       |              |              | <b>24</b>  | <b>26</b>  | <b>50</b>    |              |              | <b>50</b>  | <b>41</b>  | <b>91</b>    |
| <b>Total Net New Trips (Cumulative Trips) Subtotal</b>                           |                        |                        | <b>14,690</b>    |              |              | <b>358</b> | <b>716</b> | <b>1,074</b> |              |              | <b>896</b> | <b>566</b> | <b>1,462</b> |
| Mixed Use Credit (5%)  |                        |                        | 740              |              |              | 18         | 36         | 54           |              |              | 45         | 28         | 73           |
| Transit Credit (10%)   |                        |                        | 1,400            |              |              | 36         | 72         | 108          |              |              | 90         | 57         | 147          |
| <b>Total Net New Trips</b>   |                        |                        | <b>12,550</b>    |              |              | <b>304</b> | <b>608</b> | <b>912</b>   |              |              | <b>761</b> | <b>481</b> | <b>1,242</b> |

Footnotes:

- Land use quantities and densities provided by City of Chula Vista. The above table reflects only additional development over existing land uses.
- Trip Generation rates based on SANDAG Not So Brief Guide Vehicular Traffic Generation Rates, April 2002.
- ADT's rounded to nearest 10. Driveway trips represent trips entering/exiting the project driveways. Cumulative trips represent net new trips added to the external roadway network and are a subset of driveway trips based on SANDAG rates. A pass-by rate of 3% for residential, 15% for retail, 4% for office and 6% for parks was taken to determine the net new trips.
- A portion of the office land use may be substituted by a College/ Institution of comparable trip generation of 24 trips per 1000 SF.



**LEGEND**

-  - Traffic Signal
-  - Stop Sign
-  - Roundabout

**Figure 8**  
**Project Traffic Volumes**



## Existing + Project Operations

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Intersection capacity analyses were conducted for the study intersections under Existing + Project conditions. **Figure 8** illustrates the Existing + Project traffic volumes. **Table 5** and **Appendix F** report the intersection operations during peak hour conditions. All intersections are calculated to operate at LOS D or better with the exception of the following:

- Walnut Avenue / Palomar Street—*LOS F–AM and PM peak periods*
- Industrial Boulevard / Palomar Street—*LOS E–PM peak period*

Based on City of Chula Vista’s significance criteria, significant project specific impacts are identified at both these intersections.

TABLE 5  
EXISTING + PROJECT INTERSECTION OPERATIONS

| Intersection   | Peak Hour | Existing           |                  | Existing + Project |     |                       | Impact           |
|--|-----------|--------------------|------------------|--------------------|-----|-----------------------|------------------|
|  |           | Delay <sup>a</sup> | LOS <sup>b</sup> | Delay              | LOS | $\Delta$ <sup>f</sup> |                  |
| 1. Walnut Avenue / Palomar Street                              | AM        | >100               | F                | >100               | F   | 615<br>22.5%          | Project Specific |
|  | PM        | >100               | F                | >100               | F   | 826<br>19.8%          | Project Specific |
| 2. Industrial Boulevard / Palomar Street<br>(at-grade trolley) | AM        | 39.8 <sup>e</sup>  | D                | 45.2 <sup>e</sup>  | D   | 388<br>16.0%          | None             |
|  | PM        | 44.4 <sup>e</sup>  | D                | 57.7 <sup>e</sup>  | E   | 541<br>14.5%          | Project Specific |
| 3. Transit Center Place / Palomar Street                       | AM        | 10.3               | B                | 14.5               | B   | 407<br>18.9%          | None             |
|  | PM        | 22.8               | C                | 26.9               | C   | 551<br>15.7%          | None             |
| 4. Trolley Center / Palomar Street                             | AM        | 7.4                | A                | 7.8                | A   | 257<br>13.9%          | None             |
|  | PM        | 13.4               | B                | 15.1               | B   | 349<br>11.6%          | None             |
| 5. Broadway / Palomar Street                                   | AM        | 22.5               | C                | 23.5               | C   | 259<br>8.7%           | None             |
|  | PM        | 27.3               | C                | 29.3               | C   | 352<br>7.7%           | None             |
| 6. Ada Street / Industrial Boulevard <sup>d</sup>              | AM        | 0.18 <sup>d</sup>  | A                | 0.23 <sup>d</sup>  | A   | 148<br>24.6%          | None             |
|  | PM        | 0.33 <sup>d</sup>  | A                | 0.34 <sup>d</sup>  | A   | 201<br>23.5%          | None             |

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. TWSC – Two-Way Stop Controlled Intersection. Minor street left-turn delays reported.
- d. Synchro does not present vehicular delays at roundabouts. Therefore, maximum volume to capacity ratio is reported.
- e. 24 seconds of delay added to account for the trolley crossings at this intersection. *Appendix G* contains further explanation of this methodology.
- f. “ $\Delta$ ” denotes the project-induced increase in trips entering the intersection (X% = percentage of total entering trips comprised of project trips)

Existing + Project Street segment analyses were conducted for the roadways in the study area. **Table 6** reports the existing + project street segment operations on a daily basis. As seen in **Table 6**, the following street segments are calculated to operate at LOS D, E or F:

- Palomar Street: I-5 to Walnut Avenue —*LOS F*
- Palomar Street: Walnut Avenue to Industrial Boulevard (at-grade trolley) —*LOS E*
- Palomar Street: Industrial Boulevard to Transit Center Place (at-grade trolley) —*LOS E*

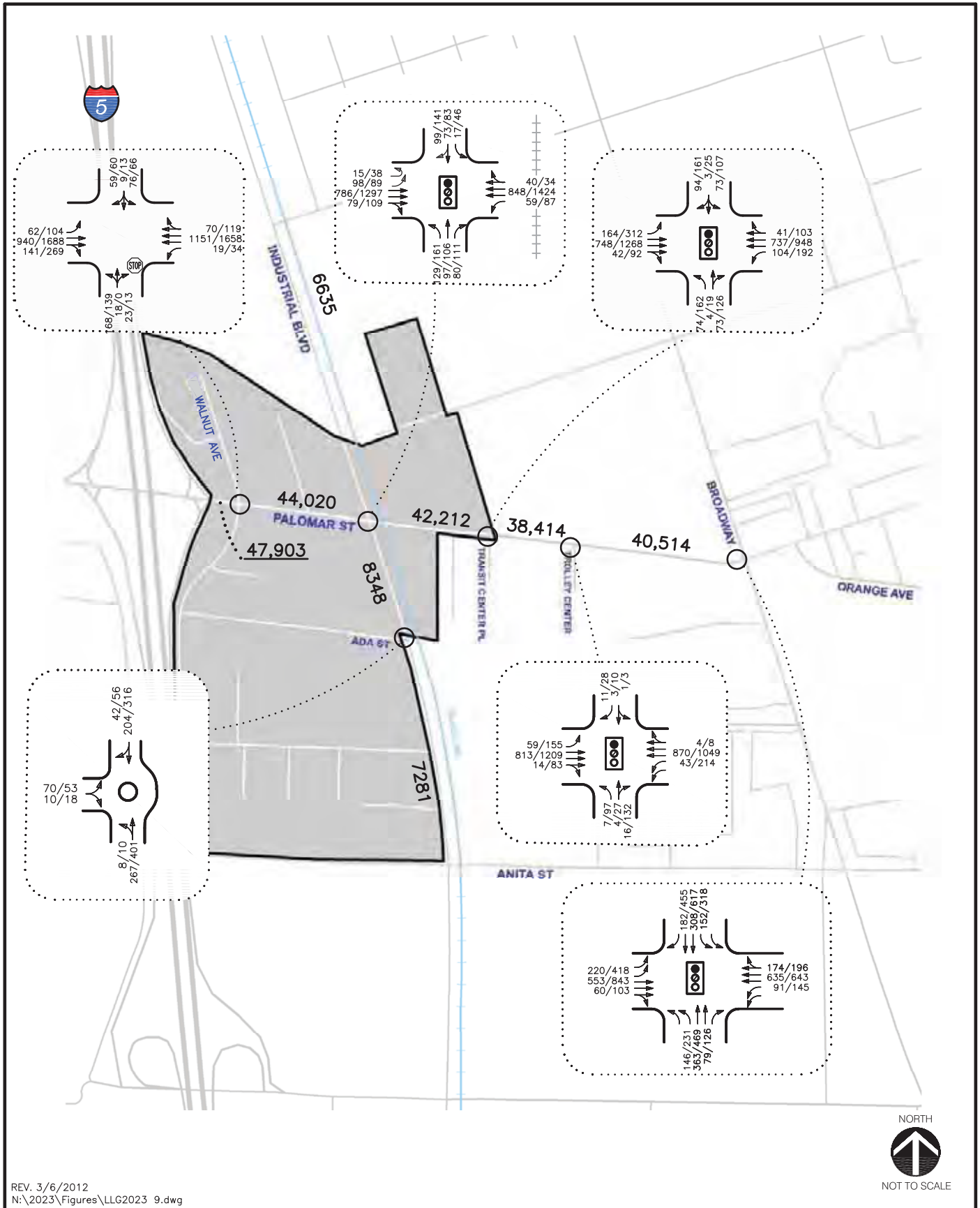
Based on City of Chula Vista’s significance criteria, significant project specific impacts are identified at all of the above street segments.

TABLE 6  
EXISTING + PROJECT STREET SEGMENT OPERATIONS

| Street Segment   | Capacity (LOS C) <sup>a</sup> | Existing         |                  |                  | Existing + Project |       |     |                | Impact            |
|--|-------------------------------|------------------|------------------|------------------|--------------------|-------|-----|----------------|-------------------|
|  |                               | ADT <sup>b</sup> | V/C <sup>c</sup> | LOS <sup>d</sup> | ADT                | V/C   | LOS | Δ <sup>g</sup> |                   |
| <b>Palomar Street</b>  |                               |                  |                  |                  |                    |       |     |                |                   |
| I-5 to Walnut Avenue   | 35,000                        | 41,000           | 1.171            | E                | 47,903             | 1.369 | F   | 6,903<br>14.4% | Project Specific  |
| Walnut Avenue to Industrial Boulevard<br>(at-grade trolley)      | 36,000 <sup>e</sup>           | 39,000           | 1.083            | D                | 44,020             | 1.223 | E   | 5,020<br>11.4% | Project Specific  |
| Industrial Boulevard to Transit Center Pl.<br>(at-grade trolley) | 36,000 <sup>e</sup>           | 39,200           | 1.089            | D                | 42,212             | 1.173 | E   | 3,012<br>7.1%  | Project Specific  |
| Transit Center Pl. to Trolley Center                             | 40,000                        | 34,900           | 0.872            | B                | 38,414             | 0.953 | C   | 3,514<br>9.1%  | None              |
| Trolley Center to Broadway                                       | 40,000                        | 37,000           | 0.925            | C                | 40,514             | 1.013 | D   | 3,514<br>8.7%  | None <sup>h</sup> |
| <b>Industrial Boulevard<sup>f</sup></b>                          |                               |                  |                  |                  |                    |       |     |                |                   |
| North of Palomar Street<br>(at-grade trolley)                    | 10,500 <sup>e</sup>           | 5,380            | 0.512            | A                | 6,635              | 0.632 | A   | 1,255<br>18.9% | None              |
| Palomar Street to Ada Street<br>(at-grade trolley)               | 10,500 <sup>e</sup>           | 6,340            | 0.603            | A                | 8,348              | 0.795 | B   | 2,008<br>24.1% | None              |
| Ada Street to Anita Street                                       | 12,000                        | 5,900            | 0.491            | A                | 7,281              | 0.607 | A   | 1,381<br>19.0% | None              |

**Footnotes:**

- a. Capacity based on *City of Chula Vista’s* roadway classification operating at LOS C shown in *Appendix H*.
- b. Average Daily Traffic.
- c. Volume to Capacity.
- d. Level of Service.
- e. To account for the at-grade trolley crossing, segment capacity has been reduced by 10%.
- f. Industrial Boulevard analyzed using the Class II Collector roadway classification.
- g. “Δ” denotes the project-induced ADT increase (X% = the percentage of total ADT comprised of project trips)
- h. No impact is calculated on this segment as the intersections adjacent to this segment are calculated to operate at LOS D or better.





## Year 2020 Traffic Volumes and Operations

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The future transportation analyses were conducted for two horizon years, Year 2020 and Year 2030. The following section discusses the traffic forecast volumes and traffic operations for each scenario. The recommendations are provided at the end these sections.

To develop Year 2020 volumes, the Year 2030 volumes were derived from the SANDAG Southbay traffic model (Baseline scenario). Year 2020 traffic volumes were then interpolated and developed based on existing and Year 2030 traffic volumes. The growth factor calculations are attached in *Appendix I*.

Based on the interpolated forecast ADT volumes, the Year 2020 peak hour volumes were calculated based on the existing relationship between ADT and peak hour volumes. The forecast volumes were also checked for consistency between intersections, where no driveways or roadways exist between intersections, and were compared to existing volumes for accuracy.

The forecast volumes were also checked for growth progression in comparison to Existing and Existing + Project traffic volumes. The near-term project traffic volumes assignment was conducted manually and does not fully take into account the synergies between the different land uses and the benefit of the adjacent Palomar Transit Center. By way of comparison, the forecast volumes were developed based on a traffic model that provides trip matching based on various inputs such as population, land uses, roadway network etc. and accounts for the mixed use and transit interaction between the different uses. Therefore, some of the traffic volumes in the Existing + project traffic volume may be calculated to be higher than the forecast volumes. This approach results in a conservative near-term analysis. All future scenarios assumed 100% build-out of PGD's prescribed land uses. *Figure 10* contains the Year 2020 forecast traffic volumes.

Intersection capacity analyses were conducted for the study intersections under Year 2020 conditions. *Table 7* reports the intersection operations during peak hour conditions. *Appendix J* contains the calculation sheets. All intersections are calculated to operate at LOS D or better with the exception of:

- Walnut Avenue / Palomar Street—*LOS F-AM and PM peak periods*
- Industrial Boulevard / Palomar Street (at-grade trolley)—*LOS E-PM peak period*

TABLE 7  
YEAR 2020 INTERSECTION OPERATIONS

| Intersection  | Peak Hour | Existing           |                  | Year 2020         |          |
|---|-----------|--------------------|------------------|-------------------|----------|
|   |           | Delay <sup>a</sup> | LOS <sup>b</sup> | Delay             | LOS      |
| 1. Walnut Avenue / Palomar Street   | AM        | >100               | F                | >100              | F        |
|   | PM        | >100               | F                | >100              | F        |
| 2. Industrial Boulevard / Palomar Street<br><i>(grade-separated trolley)</i><br><br><i>(at-grade trolley)<sup>c</sup></i> | AM        | 15.8               | B                | 20.2              | C        |
|   | PM        | 20.4               | C                | 32.2              | C        |
|   | AM        | 39.8               | D                | 50.2              | D        |
|   | PM        | 44.4               | D                | <b>62.2</b>       | <b>E</b> |
| 3. Transit Center Place / Palomar Street  | AM        | 10.3               | B                | 11.4              | B        |
|   | PM        | 22.8               | C                | 22.9              | C        |
| 4. Trolley Center / Palomar Street  | AM        | 8.0                | A                | 9.6               | A        |
|   | PM        | 13.4               | B                | 14.6              | B        |
| 5. Broadway / Palomar Street  | AM        | 22.5               | C                | 23.4              | C        |
|   | PM        | 27.3               | C                | 29.6              | C        |
| 6. Ada Street / Industrial Boulevard <sup>d</sup>   | AM        | 0.18 <sup>d</sup>  | A                | 0.23 <sup>d</sup> | A        |
|   | PM        | 0.33 <sup>d</sup>  | A                | 0.35 <sup>d</sup> | A        |

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. 24 and 30 seconds of delay added to the existing and Year 2020 scenarios, respectively, to account for the trolley crossing which occurs at this intersection. *Appendix G* contains further explanation of this methodology.
- d. Synchro does not present vehicular delays at roundabouts. Therefore, maximum volume to capacity ratio is reported.

| SIGNALIZED           |     | UNSIGNALIZED         |     |
|----------------------|-----|----------------------|-----|
| DELAY/LOS THRESHOLDS |     | DELAY/LOS THRESHOLDS |     |
| Delay                | LOS | Delay                | LOS |
| 0.0 ≤ 10.0           | A   | 0.0 ≤ 10.0           | A   |
| 10.1 to 20.0         | B   | 10.1 to 15.0         | B   |
| 20.1 to 35.0         | C   | 15.1 to 25.0         | C   |
| 35.1 to 55.0         | D   | 25.1 to 35.0         | D   |
| 55.1 to 80.0         | E   | 35.1 to 50.0         | E   |
| ≥ 80.1               | F   | ≥ 50.1               | F   |

Street segment analyses were conducted for roadways in the study area for the Year 2020 scenario. **Table 8** reports Year 2020 street segment operations on a daily basis. As seen in **Table 8**, all street segments are calculated to operate at LOS D or better, with the exception of the following:

- Palomar Street: Walnut Avenue to Industrial Boulevard (at-grade trolley) —*LOS E*
- Palomar Street: Industrial Boulevard to Transit Center Place (at-grade trolley) —*LOS E*

Due to the conflicts of at-grade trolley with vehicular traffic in this corridor, poor street segment operations are calculated in the Year 2020. As trolley and vehicular traffic demands increase with time, operations on Palomar Street will continue to degrade.

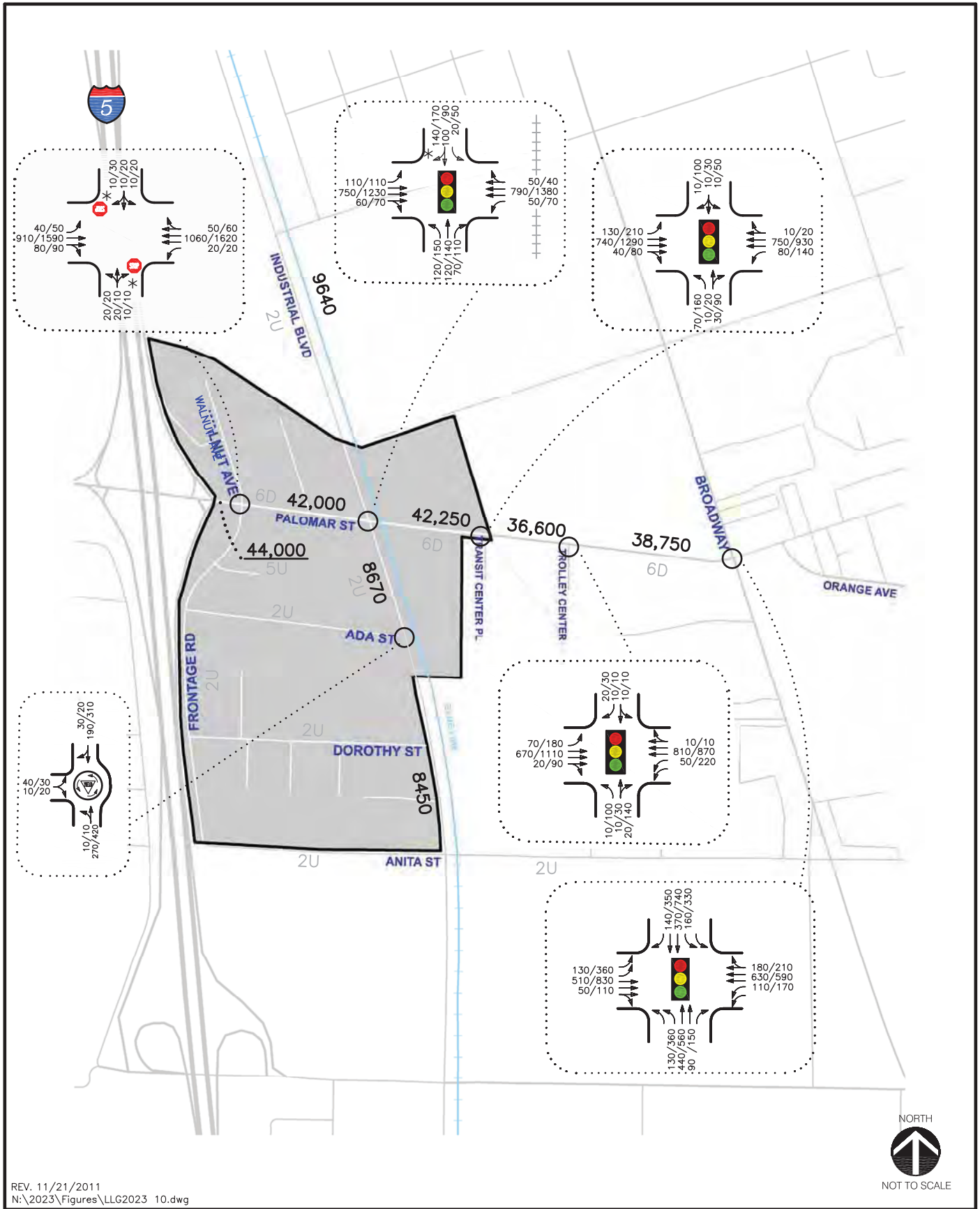
TABLE 8  
YEAR 2020 STREET SEGMENT OPERATIONS

| Street Segment  | Buildout Capacity (LOS C) <sup>a</sup> | Existing         |                  |                  | Year 2020 |              |          |
|---|--|------------------|------------------|------------------|-----------|--------------|----------|
|   |  | ADT <sup>b</sup> | V/C <sup>c</sup> | LOS <sup>d</sup> | ADT       | V/C          | LOS      |
| <b>Palomar Street</b><br>I-5 to Walnut Avenue   | 40,000 <sup>e</sup>                    | 41,000           | 1.171            | E                | 44,000    | 1.100        | D        |
| Walnut Avenue to Industrial Boulevard<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> )                  | 40,000                                 | 39,000           | 0.975            | C                | 42,000    | 1.050        | D        |
|   | 36,000 <sup>e</sup>                    | 39,000           | 1.083            | D                | 42,000    | <b>1.200</b> | <b>E</b> |
| Industrial Boulevard to Transit Center Pl.<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> )             | 40,000                                 | 39,200           | 0.980            | C                | 42,250    | 1.056        | D        |
|   | 36,000                                 | 39,200           | 1.089            | D                | 42,250    | <b>1.207</b> | <b>E</b> |
| Transit Center Pl. to Trolley Center  | 40,000                                 | 34,900           | 0.872            | B                | 36,600    | 0.915        | C        |
| Trolley Center to Broadway  | 40,000                                 | 37,000           | 0.925            | C                | 38,750    | 0.968        | C        |
| <b>Industrial Boulevard</b><br>North of Palomar Street<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> ) | 12,000 <sup>g</sup>                    | 5,380            | 0.448            | A                | 9,640     | 0.803        | B        |
|   | 10,500                                 | 5,380            | 0.512            | A                | 9,640     | 0.918        | C        |
| Palomar Street to Ada Street<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> )                           | 12,000 <sup>g</sup>                    | 6,340            | 0.528            | A                | 8,670     | 0.722        | A        |
|   | 10,500                                 | 6,340            | 0.603            | A                | 8,670     | 0.825        | B        |
| Ada Street to Anita Street  | 12,000 <sup>f</sup>                    | 5,900            | 0.491            | A                | 8,450     | 0.704        | A        |




**Footnotes:**

- a. Roadway classifications based on City of Chula Vista Circulation Plan West. Roadway capacities based on City of Chula Vista Roadway Classification Table shown in *Appendix H*.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity.
- e. Palomar Street between I-5 and Walnut Avenue classified as a 6-lane Major in the City of Chula Vista Circulation Plan West.
- f. For at-grade crossings, segment capacity has been reduced by 10% to account for trolley crossing delay.
- g. Industrial Boulevard analyzed using the Class II Collector roadway classification thresholds.





**LEGEND**

-  - Traffic Signal
-  - Stop Sign
-  - Roundabout
- \* - Sneaker Lane
- XX - Number of lanes, divided (D), or undivided (U)

**Figure 10**

**Year 2020 Roadway Conditions & Traffic Volumes**

## Year 2030 Traffic Volumes & Operations

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Year 2030 traffic volumes were developed based on a SANDAG Southbay traffic model (Baseline scenario) for Chula Vista. The South bay model was reviewed and verified to include the build-out of the PGD. The Southbay model includes Year 2030 average daily traffic volumes (ADT's). The forecast ADT volumes were then used to calculate peak hour volumes based on the existing relationship between ADT and peak hour volumes. The forecast volumes were also checked for consistency between intersections, where no driveways or roadways exist between intersections, and were compared to existing volumes for accuracy.

All future scenarios assumed 100% build-out of PGD's prescribed land uses. *Figure 11* contains the Year 2030 forecast traffic volumes.

Intersection capacity analyses were conducted for the study intersections under Year 2030 conditions. *Table 9* reports the intersection operations during peak hour conditions. *Appendix K* contains the calculation sheets. All intersections are calculated to operate at LOS D or better with the exception of:

- Walnut Avenue / Palomar Street—*LOS F-AM and PM peak periods*
- Industrial Boulevard / Palomar Street (at-grade trolley)—*LOS E-AM and PM peak periods*

As shown in the table below, with the grade-separated trolley alternative, the Industrial Boulevard/Palomar Street intersection is calculated to operate at LOS D or better. The grade-separated alternative removes vehicle-trolley conflicts thereby improving vehicular delay and traffic operations on Palomar Street and Industrial Boulevard.

TABLE 9  
YEAR 2030 INTERSECTION OPERATIONS

| Intersection   | Peak Hour | Existing           |                  | Year 2020         |          | Year 2030         |          |
|--|-----------|--------------------|------------------|-------------------|----------|-------------------|----------|
|  |           | Delay <sup>a</sup> | LOS <sup>b</sup> | Delay             | LOS      | Delay             | LOS      |
| 1. Walnut Avenue / Palomar Street  | AM        | >100               | F                | >100              | F        | >100              | F        |
|  | PM        | >100               | F                | >100              | F        | >100              | F        |
| 2. Industrial Boulevard / Palomar Street<br>( <i>grade-separated trolley</i> )<br><br>( <i>at-grade trolley</i> ) <sup>c</sup> | AM        | 15.8               | B                | 20.2              | C        | 26.9              | C        |
|  | PM        | 20.4               | C                | 32.2              | C        | 40.9              | D        |
|  | AM        | 39.8               | D                | 50.2              | D        | <b>62.9</b>       | <b>E</b> |
|  | PM        | 44.4               | D                | <b>62.2</b>       | <b>E</b> | <b>76.9</b>       | <b>E</b> |
| 3. Transit Center Place / Palomar Street   | AM        | 10.3               | B                | 11.4              | B        | 12.2              | B        |
|  | PM        | 22.8               | C                | 22.9              | C        | 22.9              | C        |
| 4. Trolley Center / Palomar Street   | AM        | 8.0                | A                | 9.6               | A        | 11.5              | B        |
|  | PM        | 13.4               | B                | 14.6              | B        | 15.9              | B        |
| 5. Broadway / Palomar Street   | AM        | 22.5               | C                | 23.4              | C        | 25.4              | C        |
|  | PM        | 27.3               | C                | 29.6              | C        | 33.8              | C        |
| 6. Ada Street / Industrial Boulevard   | AM        | 0.18 <sup>d</sup>  | A                | 0.23 <sup>d</sup> | A        | 0.28 <sup>d</sup> | A        |
|  | PM        | 0.33 <sup>d</sup>  | A                | 0.35 <sup>d</sup> | A        | 0.42 <sup>d</sup> | B        |

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. 24, 30 and 36 seconds of delay added to the existing, Year 2020 and Year 2030 scenarios, respectively, to account for the trolley crossing which occurs at this intersection. *Appendix G* contains further explanation of this methodology.
- d. Maximum v/c ratio reported.

| SIGNALIZED           |     | UNSIGNALIZED         |     |
|----------------------|-----|----------------------|-----|
| DELAY/LOS THRESHOLDS |     | DELAY/LOS THRESHOLDS |     |
| Delay                | LOS | Delay                | LOS |
| 0.0 ≤ 10.0           | A   | 0.0 ≤ 10.0           | A   |
| 10.1 to 20.0         | B   | 10.1 to 15.0         | B   |
| 20.1 to 35.0         | C   | 15.1 to 25.0         | C   |
| 35.1 to 55.0         | D   | 25.1 to 35.0         | D   |
| 55.1 to 80.0         | E   | 35.1 to 50.0         | E   |
| ≥ 80.1               | F   | ≥ 50.1               | F   |

Street segment analyses were conducted for roadways in the study area for the Year 2030 scenario. *Table 10* reports existing street segment operations on a daily basis. As seen in *Table 10*, the following street segments are calculated to operate at LOS E or F:

- Palomar Street: I-5 to Walnut Avenue —*LOS E*
- Palomar Street: Walnut Avenue to Industrial Boulevard (at-grade trolley) —*LOS E*
- Palomar Street: Industrial Boulevard to Transit Center Place (grade-separated and at-grade trolley) —*LOS E/F*
- Industrial Boulevard: North of Palomar Street (grade-separated and at-grade trolley) —*LOS E/F* respectively.

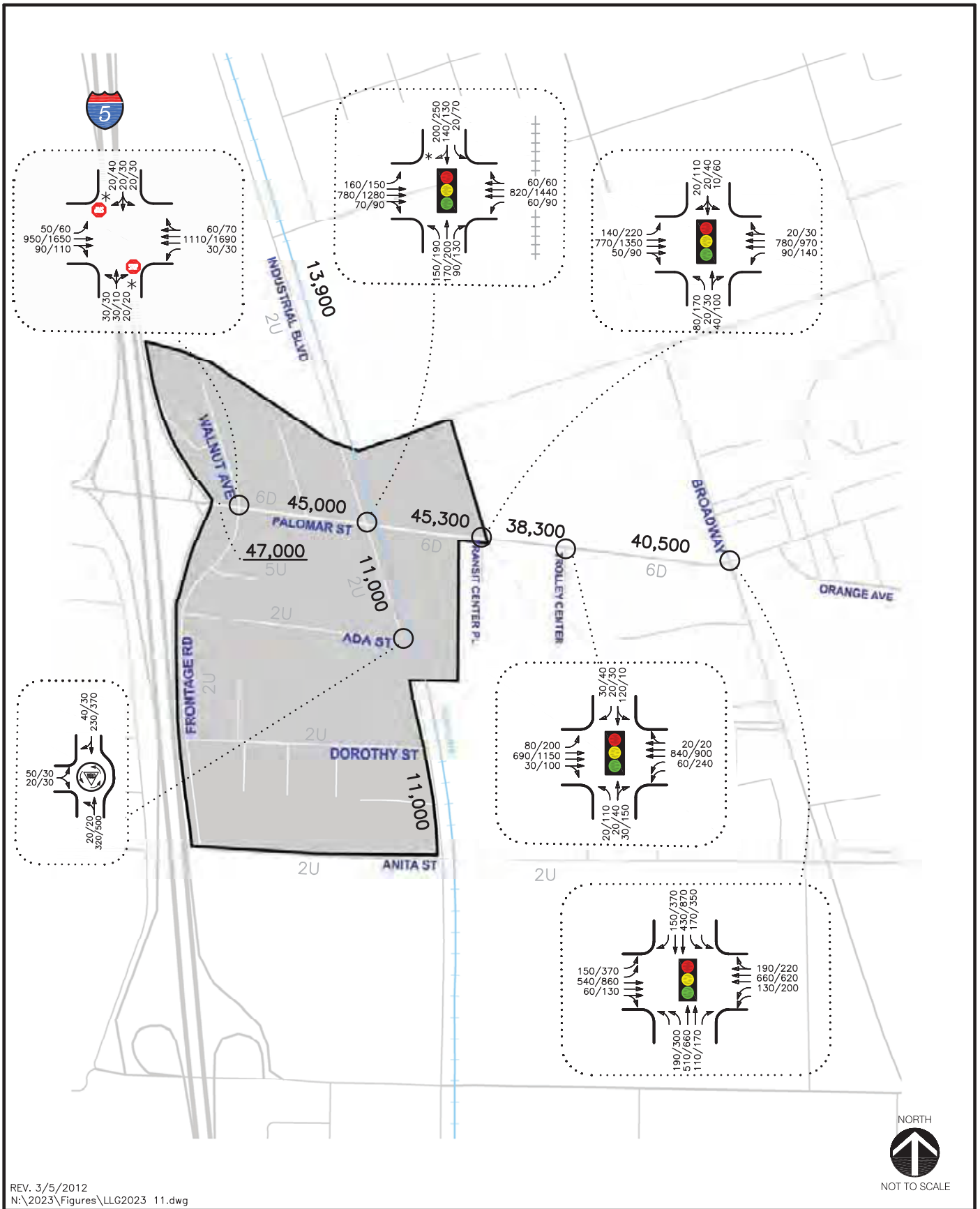


TABLE 10  
YEAR 2030 STREET SEGMENT OPERATIONS

| Street Segment  | Buildout Capacity (LOS C) <sup>a</sup> | Existing         |                  |                  | Year 2020 |       |          | Year 2030 |       |          |
|---|--|------------------|------------------|------------------|-----------|-------|----------|-----------|-------|----------|
|   |  | ADT <sup>b</sup> | V/C <sup>c</sup> | LOS <sup>d</sup> | ADT       | V/C   | LOS      | ADT       | V/C   | LOS      |
| <b>Palomar Street</b><br>I-5 to Walnut Ave  | 40,000 <sup>e</sup>                    | 41,000           | 1.171            | <b>E</b>         | 44,000    | 1.100 | <b>D</b> | 47,000    | 1.175 | <b>E</b> |
| Walnut Ave to Industrial Blvd<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> )                          | 40,000                                 | 39,000           | 0.975            | <b>C</b>         | 42,000    | 1.050 | <b>D</b> | 45,000    | 1.125 | <b>D</b> |
|   | 36,000 <sup>f</sup>                    | 39,000           | 1.083            | <b>D</b>         | 42,000    | 1.200 | <b>E</b> | 45,000    | 1.285 | <b>E</b> |
| Industrial Blvd to Transit Center Place<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> )                | 40,000                                 | 39,200           | 0.980            | <b>C</b>         | 42,250    | 1.056 | <b>D</b> | 45,300    | 1.132 | <b>E</b> |
|   | 36,000                                 | 39,200           | 1.089            | <b>D</b>         | 42,250    | 1.207 | <b>E</b> | 45,300    | 1.294 | <b>F</b> |
| Transit Center Place to Trolley Center  | 40,000                                 | 34,900           | 0.872            | <b>B</b>         | 36,600    | 0.915 | <b>C</b> | 38,300    | 0.957 | <b>C</b> |
| Trolley Center to Broadway  | 40,000                                 | 37,000           | 0.925            | <b>C</b>         | 38,750    | 0.968 | <b>C</b> | 40,500    | 1.012 | <b>D</b> |
| <b>Industrial Boulevard</b><br>North of Palomar Street<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> ) | 12,000 <sup>g</sup>                    | 5,380            | 0.448            | <b>A</b>         | 9,640     | 0.803 | <b>B</b> | 13,900    | 1.158 | <b>E</b> |
|   | 10,500                                 | 5,380            | 0.512            | <b>A</b>         | 9,640     | 0.918 | <b>C</b> | 13,900    | 1.323 | <b>F</b> |
| Palomar Street to Ada Street<br>( <i>grade-separated trolley</i> )<br>( <i>at-grade trolley</i> )                           | 12,000 <sup>g</sup>                    | 6,340            | 0.528            | <b>A</b>         | 8,670     | 0.722 | <b>A</b> | 11,000    | 0.916 | <b>C</b> |
|   | 10,500                                 | 6,340            | 0.603            | <b>A</b>         | 8,670     | 0.825 | <b>B</b> | 11,000    | 1.047 | <b>D</b> |
| Ada Street to Anita Street  | 12,000 <sup>g</sup>                    | 5,900            | 0.491            | <b>A</b>         | 8,450     | 0.704 | <b>A</b> | 11,000    | 0.916 | <b>C</b> |

**Footnotes:**

- a. Roadway classifications based on City of Chula Vista Circulation Plan West. Roadway capacities based on City of Chula Vista Roadway Classification Table shown in *Appendix H*.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity.
- e. Palomar Street between I-5 and Walnut Avenue classified as a 6-lane Major in the City of Chula Vista Circulation Plan West.
- f. For at-grade crossings, segment capacity has been reduced by 10% to account for trolley crossing delay.
- g. Industrial Boulevard analyzed using the Class II Collector roadway classification thresholds.



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**LINSCOTT  
 LAW &  
 GREENSPAN**  
 engineers

**LEGEND**

- Traffic Signal
- Stop Sign
- Roundabout
- \* - Sneaker Lane
- XX - Number of lanes, divided (D), or undivided (U)

**Figure 11**

**Year 2030 Roadway Conditions & Traffic Volumes**

PALOMAR GATEWAY MOBILITY STUDY

## Significance of Impacts and Mitigation Measures

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CEQA mandates the assessment of existing (ground) conditions with Project build-out conditions. Thus, the Existing + Project analysis presumes the existing environment (existing traffic volumes, existing roadway infrastructure, and existing land uses) plus full build out of the Project immediately. A long-range development project such as the Palomar Gateway Specific Plan is not anticipated to reach full build-out until after the Year 2030. Notwithstanding, an Existing + Project analysis has been conducted and the results of the analysis are presented in this section.

Analysis of the study area intersections and street segments under Existing + Project conditions revealed significant impacts at several facilities operating at LOS E or F. The following section discusses the significant impacts and recommended mitigation measures. The analysis below presents the results with the mitigation measures in place to meet CEQA requirements.

### Significant Impacts

The following significant intersection impacts are identified:

- Walnut Avenue / Palomar Street—*LOS F—AM and PM peak periods*
- Industrial Boulevard / Palomar Street—*LOS E—PM peak period*

The following significant segment impacts are identified:

- Palomar Street: I-5 to Walnut Avenue —*LOS F*
- Palomar Street: Walnut Avenue to Industrial Boulevard (at-grade trolley) —*LOS E*
- Palomar Street: Industrial Boulevard to Transit Center Place (at-grade trolley) —*LOS E*

### Intersection Mitigation Measures

**Table 11** summarizes the deficient intersection operations with the mitigation measures in place.

**Walnut Avenue / Palomar Street:** To achieve an acceptable level of service, it is recommended to provide a raised median across the intersection and reconfigure Walnut Avenue to allow right-in / right-out movements only. This improvement is recommended to enhance safety by restricting minor street left-turn movements from Walnut Avenue across high-speed multiple-lanes of traffic on Palomar Street. Pedestrians would be restricted to cross north-south and would utilize the/ Palomar Street intersection to cross Palomar Street.

As left-turns movements are proposed to be restricted at Walnut Avenue/Palomar Street intersection, EB vehicles on Palomar Street intending to turn left at Walnut Avenue will need to make u-turns at the Palomar Street/ Industrial Boulevard intersection. Similar westbound left-turning vehicles to

Walnut Avenue would be required to make a left-turn at the Palomar Street/ Industrial Boulevard intersection and turn right on Ada Street.

**Industrial Boulevard / Palomar Street:** To achieve an acceptable level of service, the following mitigation measures are proposed:

- Grade-separate the light-rail trolley rail crossing to improve automobile operations. This would result in no additional vehicular delay during a trolley crossing. With the grade-separation, the intersection is calculated to operate at LOS D or better. Grade-separation would also eliminate vehicle, pedestrian and bicycle conflicts with the trolley.
- Change the left-turn lane signal phasing from permitted-protected to protected at all approaches to improve safety.

TABLE 11  
INTERSECTION OPERATIONS WITH MITIGATION MEASURES

| Intersection                             | Peak Period | Existing           |                  | Existing + Project |     | Existing + Project with Mitigation |     | Improvements  |
|--|-------------|--------------------|------------------|--------------------|-----|------------------------------------|-----|---|
|  |             | Delay <sup>a</sup> | LOS <sup>b</sup> | Delay              | LOS | Delay                              | LOS |   |
| 1. Walnut Avenue / Palomar Street        | AM          | >100.0             | F                | >100.0             | F   | 15.6                               | C   | Reconfigure intersection to provide right-in/right-out only |
|  | PM          | >100.0             | F                | >100.0             | F   | 26.3                               | D   |   |
| 2. Industrial Boulevard / Palomar Street | AM          | 39.8               | D                | 45.2               | D   | 34.9                               | C   | Trolley grade-separation and protected phasing              |
|  | PM          | 44.4               | D                | 57.7               | E   | 53.0                               | D   |   |

**Footnotes:**

- a. Delay – measured in seconds.
- b. LOS – Level of Service.



## Street Segment Mitigation Measures

The following mitigation measures are proposed to achieve an acceptable level of service on the significant street segments in the study area. **Table 12** shows the street segment operations with the mitigation measures in place.

**Palomar Street – I-5 to Walnut Avenue:** With the addition of the Palomar Gateway Specific Plan, this segment is calculated to operate at LOS F analyzing Palomar Street under its current configuration as a 5-lane Major Street. A long-range development Project such as the Palomar Gateway Specific Plan is not anticipated to reach full build-out until after the Year 2030, at which (according to the City of Chula Vista General Plan) Palomar Street is expected to be built to 6-lanes with the project. A reasonable scenario would be to assume Palomar Street as a 6-lane Major Street for which LOS E operations would be calculated.

Based on the above and discussions with the City staff, with the addition of the project, LOS E operations on Palomar Street between I-5 and Walnut Avenue are accepted due to the following:

- To enhance segment capacity and improve safety on Palomar Street, the study proposes providing a raised median across the Walnut Avenue/ Palomar Street intersection. This mitigation measure is proposed to achieve an acceptable level of service and also enhance safety by restricting minor street left-turn movements from Walnut Avenue across multiple-lanes of traffic on Palomar Street. Reconfigure Walnut Avenue to a right-in / right-out configuration.
- The Palomar Street interchange ranks high among the improvements needed for I-5 interchanges in Chula Vista based on traffic volumes and levels of service as identified in the 2050 RTP. Caltrans, SANDAG and the City of Chula Vista have completed the *I-5 South Multimodal Corridor Study*, which identifies an overcrossing with additional lanes. This study proposes improvements to achieve LOS C at the I-5 ramp intersections on Palomar Street. Since intersection operations influence segment capacity, the I-5 improvements will enhance segment operations on Palomar Street between I-5 and Walnut Avenue.
- The proposed trolley grade separation on Palomar Street is included on the regional priority list for rail grade separation projects in SANDAG's 2050 Regional Transportation Plan (2050 RTP) in the Revenue Constrained Plan to be completed by Year 2020. Eliminating the at-grade trolley rail crossings would be a practical alternative for improving traffic and transit operations, thereby improving queuing and segment capacity on Palomar Street between I-5 and Walnut Avenue. The freight rail will be maintained at-grade.
- As a long-term improvement, a connecting roadway (north of Palomar Street) between Walnut Avenue and Industrial Boulevard is also recommended. This improvement would relieve congestion on Palomar Street thereby enhancing the capacity and throughput. The new connecting roadway is envisioned to be a 2-lane Local Collector with sidewalks and parking on both sides.

- With the Palomar Gateway Specific Plan, the intersections along Palomar Street corridor are calculated to operate at LOS D or better.

**Palomar Street –Walnut Avenue to Industrial Boulevard:** To mitigate the significant impact to this segment, it is recommended to grade-separate the trolley crossing to achieve maximum throughput and capacity on Palomar Street. With the grade-separation, this segment is calculated to operate at LOS D.

**Palomar Street – Industrial Boulevard to Transit Center Place:** To mitigate the significant impact to this segment, it is recommended to grade-separate the trolley crossing to achieve maximum throughput and capacity on Palomar Street. With the grade-separation, this segment is calculated to operate at LOS D.

TABLE 12  
STREET SEGMENT OPERATIONS WITH MITIGATION MEASURES

| Street Segment                        | Existing + Project            |                  |                  |          | Existing + Project with Improvements |        |       |          | Improvements  |
|---------------------------------------|-------------------------------|------------------|------------------|----------|--------------------------------------|--------|-------|----------|---|
|                                       | Capacity (LOS C) <sup>a</sup> | ADT <sup>b</sup> | V/C <sup>d</sup> | LOS      | Capacity (LOS C)                     | ADT    | V/C   | LOS      |   |
| <b>Palomar Street</b>                 |                               |                  |                  |          |                                      |        |       |          |   |
| I-5 to Walnut Ave.                    | 35,000                        | 47,903           | 1.369            | <b>F</b> | 40,000                               | 47,903 | 1.197 | <b>E</b> | Trolley grade-separation and restrict movements with median |
| Walnut Avenue to Industrial Blvd      | 36,000                        | 44,020           | 1.223            | <b>E</b> | 40,000                               | 44,020 | 1.100 | <b>D</b> | Trolley grade-separation                                    |
| Industrial Blvd to Transit Center Pl. | 36,000                        | 42,212           | 1.173            | <b>E</b> | 40,000                               | 42,212 | 1.055 | <b>D</b> | Trolley grade-separation                                    |

**Footnotes:**

- Capacity based on *City of Chula Vista's* roadway classification operating at LOS E.
- Average Daily Traffic.
- Level of Service.
- Volume to Capacity.

## Long-Term Motorized Travel Deficiencies and Recommended Improvements

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The following section discusses the recommended transportation improvements that met the study objectives and guiding principles of the project, which can be succinctly expressed as improving overall mobility. Improvements prove especially challenging balancing both motorized and non-motorized travel.

Analysis of the study area motorized facilities under future conditions revealed transportation deficiencies resulting in facilities operating at LOS E or F. The recommendations presented in this section improve long-term deficient facilities to achieve an acceptable LOS (LOS D or better) wherever possible. It is recommended that the City of Chula Vista identify improvements that promote mobility for all modes of travel.

### INTERSECTION IMPROVEMENTS

**Table 13** summarizes the deficient intersection operations with the improvements in place.

**Walnut Avenue / Palomar Street:** This intersection shows deficient operations in Year 2020 and Year 2030 scenarios. The study recommends to provide a raised median across the intersection and reconfigure Walnut Avenue to allow right-in / right-out movements only. This improvement is recommended to enhance safety by restricting minor street left-turn movements from Walnut Avenue across high-speed multiple-lanes of traffic on Palomar Street.

As left-turns movements are proposed to be restricted at Walnut Avenue/Palomar Street intersection, EB vehicles on Palomar Street intending to turn left at Walnut Avenue will need to make u-turns at the Palomar Street/ Industrial Boulevard intersection. Similar westbound left-turning vehicles to Walnut Avenue would be required to make a left-turn at the Palomar Street/ Industrial Boulevard intersection and turn right on Ada Street. These improvements bring the level of service to acceptable levels.

**Industrial Boulevard / Palomar Street:** This intersection shows deficient operations in Year 2020 and Year 2030 in the at-grade trolley crossing alternative only. The following improvements are recommended to achieve LOS D or better:

- Grade-separate the rail crossing to improve automobile operations. This would result in no additional vehicular delay during a trolley crossing. With the grade-separation, the intersection is calculated to operate at LOS D or better. Grade-separation would also eliminate vehicle, pedestrian and bicycle conflicts with the trolley.
- Change the left-turn lane signal phasing from permitted-protected to protected at all approaches to improve safety.

**Transit Center Place/ Palomar Street:** Despite this intersection not calculating as deficient, the following improvements are recommended to improve intersection operations, pedestrian access and safety based on field observations.

- Realign the north leg of the Transit Center Place/ Palomar Street intersection to align with the south leg which would eliminate intersection offset. This improvement is also intended to benefit pedestrians by allowing shorter walking distances.
- Install pavement markings after realignment on the north leg showing exclusive left-turn lane and shared through-right lanes. This will formalize the intersection configuration and improve operations.

*Appendix L* contains the intersection calculation sheets with improvements.

TABLE 13A  
YEAR 2020 INTERSECTION OPERATIONS WITH IMPROVEMENTS

| Intersection                             | Peak Period | Year 2020 without Improvements |                  | Year 2020 with Improvements |     | Improvements   |
|--|-------------|--------------------------------|------------------|-----------------------------|-----|--|
|  |             | Delay <sup>a</sup>             | LOS <sup>b</sup> | Delay                       | LOS |  |
| 1. Walnut Avenue / Palomar Street        | AM          | >100                           | F                | 13.6                        | B   | Reconfigure intersection to provide right-in/right-out only. |
|  | PM          | >100                           | F                | 21.3                        | C   |  |
| 2. Industrial Boulevard / Palomar Street | AM          | 50.2                           | D                | 24.5                        | C   | Trolley grade-separation and protected phasing               |
|  | PM          | 62.2                           | E                | 37.1                        | D   |  |

**Footnotes:**

- a. Delay – measured in seconds.
- b. LOS – Level of Service.

TABLE 13B  
YEAR 2030 INTERSECTION OPERATIONS WITH IMPROVEMENTS

| Intersection                             | Peak Period | Year 2030 without Improvements |                  | Year 2030 with Improvements |     | Improvements   |
|--|-------------|--------------------------------|------------------|-----------------------------|-----|--|
|  |             | Delay <sup>a</sup>             | LOS <sup>b</sup> | Delay                       | LOS |  |
| 1. Walnut Avenue / Palomar Street        | AM          | >100                           | F                | 14.9                        | B   | Reconfigure intersection to provide right-in/right-out only. |
|  | PM          | >100                           | F                | 24.9                        | C   |  |
| 2. Industrial Boulevard / Palomar Street | AM          | 62.9                           | E                | 26.9                        | C   | Trolley grade-separation and protected phasing               |
|  | PM          | 76.9                           | E                | 40.9                        | D   |  |

**Footnotes:**

- a. Delay – measured in seconds.
- b. LOS – Level of Service.



## STREET SEGMENT IMPROVEMENTS

The following improvements are recommended to improve mobility at deficient roadway segments in the study area. **Table 14** lists these improvements.

**Palomar Street – I-5 to Walnut Avenue:** To enhance segment capacity and improve safety on Palomar Street, the study recommends providing a raised median across the Walnut Avenue/Palomar Street intersection. This improvement is recommended to enhance safety by restricting minor street left-turn movements from Walnut Avenue across multiple-lanes of traffic on Palomar Street.

In addition to the above improvement, the segment operations on Palomar Street between I-5 and Walnut Avenue are expected to operate better due to the following:

- The Palomar Street interchange ranks high among the improvements needed for I-5 interchanges in Chula Vista based on traffic volumes and levels of service. Caltrans, SANDAG and the City of Chula Vista have completed the *I-5 South Multimodal Corridor Study*, which identifies an overcrossing with additional lanes. This study proposes improvements to achieve LOS C at the I-5 ramp intersections on Palomar Street. Since intersection operations influence segment capacity, the I-5 improvements will enhance segment operations on Palomar Street between I-5 and Walnut Avenue.
- The proposed trolley grade separation on Palomar Street is included on the regional priority list for rail grade separation projects in SANDAG's 2050 Regional Transportation Plan (2050 RTP) in the Revenue Constrained Plan to be completed by Year 2020. Eliminating the at-grade rail crossings would be a practical alternative for improving traffic and transit operations, thereby improving queuing and segment capacity on Palomar Street between I-5 and Walnut Avenue.
- As a long-term improvement, a connecting roadway (north of Palomar Street) between Walnut Avenue and Industrial Boulevard is also recommended. This improvement would relieve congestion on Palomar Street and Walnut Avenue and load traffic onto Industrial Boulevard thereby enhancing the capacity and throughput of Palomar Street. The new connecting roadway is envisioned to be a 2-lane Local Collector with sidewalks and parking on both sides.

Additionally, the City of Chula Vista supports the notion that acceptable levels of service at intersections during peak hours are a valid indicator of adequate street segment operations. Therefore, if intersections operate at LOS D or better, a segment impact is considered not significant since intersection analysis is more indicative of actual roadway system operations than the street segment analysis. Even though the segment of Palomar Street between I-5 and Walnut Avenue is calculated to operate at LOS E, the intersections along Palomar Street corridor are calculated to operate at LOS D or better.

Given the above improvements and discussions with City staff, LOS E on Palomar Street between I-5 and Walnut Avenue is accepted.

**Palomar Street –Walnut Avenue to Industrial Boulevard:** This segment is calculated to operate deficiently in the at-grade trolley alternative only. To mitigate this deficiency, it is recommended to grade-separate the trolley crossing to achieve maximum throughput on Palomar Street. With the grade-separation, this segment is calculated to operate at LOS D.

**Palomar Street – Industrial Boulevard to Transit Center Place:** To mitigate the deficiency to this segment, it is recommended to grade-separate the trolley crossing to achieve maximum throughput on Palomar Street. With the grade-separation, this segment is calculated to operate at LOS E. Based on discussions with City of Chula Vista staff, this street segment is accepted at LOS E due to the following reasons:

- The proposed trolley grade-separation is expected to enhance segment capacity, traffic flow and operations on Palomar Street and Industrial Boulevard.
- Even though the segment of Palomar Street between Industrial Boulevard to Transit Center Place is calculated to operate at LOS E, the intersections along Palomar Street corridor are calculated to operate at LOS D or better.

**Industrial Boulevard – North of Palomar Street:** To mitigate the deficiency to this segment, it is recommended to grade-separate the trolley crossing to achieve maximum throughput on Industrial Boulevard. With the grade-separation, this segment is calculated to operate at LOS E. Based on discussions with City of Chula Vista staff, this street segment is accepted at LOS E due to the following reasons:

- The proposed trolley grade-separation is expected to enhance segment capacity and traffic operations on Palomar Street and Industrial Boulevard.
- Even though the segment of Industrial Boulevard – North of Palomar Street is calculated to operate at LOS E, the Palomar Street/ Industrial Boulevard intersection is calculated to operate at LOS D or better.

TABLE 14A  
YEAR 2020 STREET SEGMENT OPERATIONS WITH IMPROVEMENTS

| Deficient Street Segments  | Year 2020 without Improvements |                  |                  |                  | Year 2020 with Improvements |        |       |     | Improvements             |
|--|--------------------------------|------------------|------------------|------------------|-----------------------------|--------|-------|-----|--------------------------|
|  | Capacity (LOS C) <sup>a</sup>  | ADT <sup>b</sup> | V/C <sup>d</sup> | LOS <sup>c</sup> | Capacity (LOS C)            | ADT    | V/C   | LOS |                          |
| <b>Palomar Street</b><br>Walnut Avenue to Industrial Blvd<br>( <i>at-grade trolley</i> ) | 36,000                         | 42,000           | 1.200            | E                | 40,000                      | 42,000 | 1.050 | D   | Trolley grade-separation |
| Industrial Blvd to Transit Center Pl.<br>( <i>at-grade trolley</i> )                     | 36,000                         | 42,250           | 1.207            | E                | 40,000                      | 42,250 | 1.056 | D   | Trolley grade-separation |

**Footnotes:**

- a. Capacity based on *City of Chula Vista's* roadway classification operating at LOS E.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity.

TABLE 14B  
YEAR 2030 STREET SEGMENT OPERATIONS WITH IMPROVEMENTS

| Deficient Street Segments   | Year 2030 without Improvements |                  |                  |                  | Year 2030 with Improvements |        |       |                | Improvements                                  |
|---|--------------------------------|------------------|------------------|------------------|-----------------------------|--------|-------|----------------|---|
|   | Capacity (LOS C) <sup>a</sup>  | ADT <sup>b</sup> | V/C <sup>d</sup> | LOS <sup>c</sup> | Capacity (LOS C)            | ADT    | V/C   | LOS            |   |
| <b>Palomar Street</b><br>I-5 to Walnut Ave.   | 40,000                         | 47,000           | 1.175            | E                | 40,000                      | 47,000 | 1.175 | E <sup>e</sup> | Trolley grade-separation and install a median |
| Walnut Avenue to Industrial Blvd<br>( <i>at-grade trolley</i> )                       | 36,000                         | 45,000           | 1.285            | E                | 40,000                      | 45,000 | 1.125 | D              | Trolley grade-separation                      |
| Industrial Blvd to Transit Center Pl.<br>( <i>at-grade trolley</i> )                  | 36,000                         | 45,300           | 1.294            | F                | 40,000                      | 45,300 | 1.132 | E <sup>e</sup> | Trolley grade-separation                      |
| <b>Industrial Boulevard</b><br>North of Palomar Street<br>( <i>at-grade trolley</i> ) | 10,500                         | 13,900           | 1.323            | F                | 12,000                      | 13,900 | 1.158 | E <sup>e</sup> | Trolley grade-separation                      |

**Footnotes:**

- a. Capacity based on *City of Chula Vista's* roadway classification operating at LOS C.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity.
- e. Based on the City of Chula Vista significance criteria, no significant impact are calculated to these segments as intersections adjacent to these segments are calculated to operate at LOS D or better.

## **Horizon Years (Year 2020 and 2030) Mitigation Measures**

Currently, it is unknown when the first or any subsequent development(s) in the PGDSP will be constructed, where they will be located and what types of uses they will include. The PGDSP Mobility Study analyzes the PGDSP project at a programmatic level assuming the build out of the approved General Plan land uses and not individual, pending projects. This is consistent with Section 15146(b) of the CEQA Guidelines, which states that an EIR on a project such as the adoption of a general plan [or specific plan] should focus on the secondary effects that can be expected to follow from the plan's adoption, but the EIR need not be as detailed as that for a specific construction project. Therefore, for the Horizon Year scenarios, the Mobility Study analyzed the PGSDP land uses with a straight line growth assumption added to the proposed land uses to obtain Year 2020 and 2030 traffic volumes. Tables 13A and 13B summarize the deficient intersection operations with the improvements in place. Tables 14A and 14B, shows the recommended improvements to improve mobility at deficient roadway segments in the study area. As shown in the tables, the recommended mitigation measures improve the deficient facilities to achieve an acceptable LOS.

It's important to note that the listed Light Rail Transit (LRT) split grade improvement is outside of the jurisdiction of the city of Chula Vista but its completion is paramount to the operation of East Palomar Street and the localized intersections. The separation would physically remove the conflict between the operation of the trolley tracks and that of the vehicular traffic on Palomar Street. It would do away with the impacts due to the anticipated increase in trolley frequency and the subsequent increase in the lowering of the crossing gates by eliminating the vehicular conflict for all movements. Implementation of the project to split grade the tracks would require coordination with Caltrans and SANDAG/MTS and a combination of local, state and federal funding sources. The city will continue to stress the importance of the split grade crossing with appropriate authorities.

**MITIGATION - Walnut Avenue/Palomar Street:** The mitigation to reconfigure the intersection to provide right-in/right-out only movements only, has been added to the city's Capital Improvements Plan for 2013 and is now fully funded. As shown in tables 13A and 13B the recommended mitigation measure improves the deficient facility to achieve an acceptable LOS.

**TRAFFIC MONITORING PROGRAM -** In addition and not a part of any project mitigation, it is important to remember that during the of implementation of the plan to develop the Palomar Gateway District Specific Plan, the city shall apply the Traffic Monitoring Program (TMP) to monitor actual performance of the street system in the area by conducting roadway segment travel time studies in accordance with the city's existing Growth Management Program through its Traffic Monitoring Program (TMP). The results of the annual study under the TMP will be used by the city to determine the timing and need for implementation of any other improvements to the street segments and intersections identified as having potential significant impacts. The city shall continue to stress the need for the implementation of the identified street segment and



intersection improvements [split grade] based upon the results of the annual TMP monitoring.

**FUTURE PROJECT TRAFFIC ASSESSMENTS** - In addition to the listed CEQA impacts and mitigations, all PGDSP projects shall prepare traffic assessments to examine local access and safety issues as well as to quantify the project's potential traffic impacts on a local level. Subsequent projects shall be required to fully mitigate localized near-term project specific impacts and to contribute their fair share to the city's existing Transportation Development Impact Fee (TDIF) program, as well as to the existing Traffic Impact Signal Fee, as amended from time to time.

In addition to quantifying a future project's potential traffic impacts, future traffic assessments shall identify how alternative modes of transportation will be accommodated. Mitigation may be in the form of:

1. Compliance with the development regulations and design guidelines of the PGDSP to accommodate pedestrians, bicyclists and public transit; and
2. Where applicable, construction of the improvements within the project boundaries; and/or
3. Early advancement of improvements beyond the project boundaries, subject to a reimbursement agreement.

## 6.0 MOBILITY PLAN

The Palomar Gateway District (PGD) Mobility Plan identifies infrastructure improvements (motorized and non-motorized) based on the guiding principles introduced in Section 3.0. The relationship between the community's land uses, circulation system and transportation infrastructure network is an important consideration for comprehensive planning. Efficiency, access, and safety for all modes of travel, including pedestrian, bicycling, and transit will afford citizens to have options when trip planning and lessen dependence on single passenger auto-mobile travel. The result will be cleaner air, a safer environment, an improved economy, and a higher quality of life. Additionally, integrating sidewalks, bike lanes, transit amenities, and safe crossings into the initial design of a project spares the expense of retrofits later. Communities that incorporate complete streets gain quality of life benefits as increased bicycling and walking are indicative of vibrant and livable communities.

### Multi-Modal Recommendations

The Mobility Plan reviews the constraints and opportunities of each travel mode. Recommendations are prioritized based on a defined tiered system. These recommendations were developed by adhering to AB 1358 principles outlined in *Section 3.0*, PGD's need and purpose, researching Multi-Modal transportation industry standards and guidelines practiced nationwide (such as Designing for Smart Growth by SANDAG) and findings outlined by Walkable and Living Communities Institute Inc. Report on PGD shown in *Appendix M*.

#### TIER I:

- Addresses high-volume high-accident locations.
- Improves Mobility substantially for all modes. Moves people, not cars.
- Essential component of activating the community, applying Smart Growth principles and achieving the objectives of the PGD vision.

#### TIER II:

- Improves Mobility and has little to no impact on other travel modes.
- Creates a better balance between motorized and non-motorized travel.
- Enhances mobility by introducing missing links and ensures continuation of capacity.
- Ease of implementation from a constructability, political and financial standpoint.
- Promotes ADA compliance.

#### TIER III:








- Creates places of human scale that promotes active lifestyles and enhances the user experience.
- Involves the beautification of the District.
- Improves mobility to lesser extent and may impact other modes of travel.
- Feasibility unclear with potential concerns of constructability, political and financial support.

*Table 15* and *Figure 12* presents the Palomar Gateway District Mobility Plan.

It is important to note that the improvements suggested in the following Mobility Plan are conceptual and provide a long-range vision for the community and the Palomar Gateway District. These recommended improvements were developed to achieve the PGD's spirit and intent to develop a Smart Growth Transit Oriented Development integrated with the Palomar Transit Center.

The proposed improvements are intended to foster multi-modal choices for the residents of Chula Vista while maintaining appropriate levels of service. The motorized improvements outlined in the Mobility Plan below are CEQA mitigations to achieve an acceptable LOS and non-motorized improvements are considered project features to improve overall mobility. A detailed engineering study is recommended to identify the feasibility, constructability and funding of these improvements when appropriate.

TABLE 15  
Palomar Gateway District Mobility Plan

| Mobility Element   | Constraints   | Opportunities   |   |   |
|--|---|---|---|---|
|  |   | Tier I (High Priority)  | Tier II (Medium Priority)   | Tier III (Low Priority)   |
| Pedestrian<br>  | <ul style="list-style-type: none"> <li>At-grade trolley crossing compromises pedestrian safety and bisects community</li> <li>Missing sidewalk links hinders mobility</li> <li>Lack of ADA compliance at certain locations</li> <li>No buffer on Palomar Street creates a dangerous and unpleasant user experience</li> <li>"Mega-blocks" lack human scale and hinder walkability</li> <li>Abundance of driveways along Palomar Street exposes pedestrians</li> </ul>   | <ul style="list-style-type: none"> <li>Grade-separate trolley line per 2050 RTP (recommend trolley under Palomar Street to avoid bisecting the community and avoid visual impact)<sup>a</sup></li> <li>Introduce new roadways that introduce human scale and encourage walkability</li> <li>Add countdown timers to existing traffic signals</li> <li>Square up the at-1-5 SB ramps at Palomar Street to avoid free high-speed right-turns</li> </ul>   | <ul style="list-style-type: none"> <li>Close/modify driveways on Palomar Street</li> <li>Provide non-contiguous sidewalks on Palomar Street</li> <li>Provide sidewalks on missing links</li> <li>Provide ADA compliant curb ramps</li> <li>Provide high visibility crosswalks</li> <li>Provide adequately sized islands for pedestrian refuge on Palomar Street</li> <li>Provide two pedestrian curb ramps per intersection corner</li> </ul> | <ul style="list-style-type: none"> <li>Provide a multi-use path in the SDGFE easement.</li> <li>Provide a multi-use bridge over I-5 at Ada Street extension</li> </ul>  |
| Bicycle<br>     | <ul style="list-style-type: none"> <li>At-grade trolley crossing compromises bicycle safety</li> <li>Missing bicycle links hinders mobility</li> <li>Poor accessibility to future Bayshore Bikeway</li> <li>"Mega-blocks" lacks any human scale and does not promote bicycle activity</li> </ul>  | <ul style="list-style-type: none"> <li>Grade-separate trolley line per 2050 RTP recommend trolley under Palomar Street to avoid bisecting the community and avoid visual impact)</li> <li>Class II bike lanes on Palomar Street and Industrial Boulevard to integrate with the Bayshore Bikeway</li> <li>Provide bicycle facilities on missing links</li> <li>Provide bicycle lockers at the Palomar Transit Station</li> </ul>   | <ul style="list-style-type: none"> <li>Use colorized or elevated bike lanes to enhance bicycle safety and create driver awareness at vehicle-bicycle conflict points<sup>a</sup></li> <li>Developer subsidy of transit passes</li> </ul>  | <ul style="list-style-type: none"> <li>Provide a multi-use path in the SDGFE easement.</li> <li>Provide a multi-use bridge over I-5 at Ada Street extension</li> </ul>  |
| Transit<br>     | <ul style="list-style-type: none"> <li>At-grade trolley crossing lowers transit capacity</li> <li>Increasing demand on Blue Line adds congestion and delay to buses on Palomar Street</li> <li>Increasing congestion on Palomar Street reduces reliability of bus service</li> <li>Only one driveway with limited movements serves both buses and vehicles</li> <li>On-board bus collection increases dwell and route travel times<sup>a</sup></li> </ul>   | <ul style="list-style-type: none"> <li>Grade-separate trolley line per 2050 RTP (recommend trolley under Palomar Street to avoid bisecting the community and avoid visual impact)</li> <li>Shade structures at busiest stops such as Broadway and Palomar Street</li> </ul>   | <ul style="list-style-type: none"> <li>Passive transit signal priority along Palomar Street<sup>a</sup></li> <li>Allow level boarding by providing low-floor buses</li> <li>Provide amenities such as illuminated bus shelters, system maps and schedule, wayfinding signage and bars that passengers that can lean on while standing</li> <li>Display real time arrival information at Palomar Transit Center</li> </ul>                     | <ul style="list-style-type: none"> <li>Off-board bus collection system<sup>a</sup> to improve headways</li> <li>Consider public art and unique design for bus shelters, benches and other street furniture</li> </ul> |
| Light Rail<br>  | <ul style="list-style-type: none"> <li>At-grade trolley crossing impedes vehicular, pedestrian and bicycle mobility</li> <li>Increasing demand on Blue Line adds congestion and delay to Palomar Street</li> <li>High-floor trolley cars inhibit disabled and bicycle loading leading to increased queuing time and excessive delays to vehicles</li> <li>Frequency of trolley line needs to increase to serve highest ridership trolley blue line demand</li> <li>Trolley vehicle lengths needs to increase to serve highest ridership trolley blue line demand</li> </ul> | <ul style="list-style-type: none"> <li>Grade-separate trolley line per 2050 RTP (recommend trolley under Palomar Street to avoid bisecting the community and avoid visual impact)</li> <li>Consider low-floor trolley cars to reduce passenger loading and unloading times (currently under construction)</li> </ul>  | <ul style="list-style-type: none"> <li>Grade-separate trolley line at Ada Street</li> <li>Increase trolley car length and reduce headways to serve Blue Line demand</li> </ul>  | <ul style="list-style-type: none"> <li>None</li> </ul>  |
| Vehicular<br> | <ul style="list-style-type: none"> <li>At-grade trolley crossing at Industrial Boulevard/ Palomar Street intersection causes excessive vehicular delay and poor LOS during peak hours</li> <li>Loading and unloading maneuvers on high-floor trolley cars causes excessive queuing and disrupts signal progression on Palomar Street</li> <li>Absence of parallel routes, limited roadway network and multiple driveways affects traffic throughput</li> </ul>  | <ul style="list-style-type: none"> <li>Grade-separate trolley line per 2050 RTP recommend trolley under Palomar Street to avoid bisecting the community and avoid visual impact)<sup>a</sup></li> <li>Restrict Walnut Avenue access to/from Palomar Street to allow right-in/right-out only<sup>a</sup></li> <li>Introduce new access to Oxford Street from Industrial Boulevard to relieve traffic congestion on Palomar Street</li> <li>Change left-turn phasing from permitted-protected to protected<sup>b</sup></li> </ul> | <ul style="list-style-type: none"> <li>Realign Transit Center Place driveway to avoid intersection offset</li> <li>Enhance segment capacity on Palomar Street by modifying and/or closing driveway access where feasible</li> <li>Increase curb-radii on Anita Street to allow truck turning to/from Industrial Boulevard</li> </ul>  | <ul style="list-style-type: none"> <li>Provide landscaping along the median on Palomar Street to add visual character</li> </ul>  |
| ADA<br>       | <ul style="list-style-type: none"> <li>Disintegrated/absent sidewalks and crosswalks hinders mobility for disabled and senior users</li> <li>Wide curb radii on driveways create high-turning speeds of traffic compromising safety</li> </ul>  | <ul style="list-style-type: none"> <li>Repair all disintegrated sidewalks and provide sidewalks on missing links</li> <li>Retrofit all intersections within the RGD to ADA compliant crosswalks and curb-camps.</li> <li>Remove or relocate street furniture on sidewalks that hinder mobility</li> <li>Close/modify driveways on Palomar Street to reduce exposure</li> </ul>  | <ul style="list-style-type: none"> <li>Introduce infrastructure such as audible count-down pedestrian signals, municipal domes/ ADA pads to enhance mobility</li> <li>Provide dedicated ADA parking at the Transit Station</li> </ul>   | <ul style="list-style-type: none"> <li>None</li> </ul>  |
| Parking<br>   | <ul style="list-style-type: none"> <li>Current parking layout promotes auto use</li> <li>Free parking does not provide a revenue source</li> <li>Lack of parking efficiency with over-supply and non-shared land uses</li> </ul>  | <ul style="list-style-type: none"> <li>Promote mixed-use, compact development with shared parking</li> <li>Provide parking interior to the development and not along roadway to add visual character and promote other travel modes</li> </ul>  | <ul style="list-style-type: none"> <li>Use dynamic pricing to promote non-motorized travel and create a revenue stream</li> <li>Consider on-street parking as supply for development</li> </ul>   | <ul style="list-style-type: none"> <li>None</li> </ul>  |





**Figure 12**  
**Conceptual Mobility Plan**  
 PALOMAR GATEWAY MOBILITY STUDY