
CITY OF STOCKTON
THE DELTA COVE PLANNED DEVELOPMENT PROJECT
(REVISION)

■ ■ ■

Draft Addendum/Initial Study (P09-160)
to Previously Certified EIR File No. 11-05

Prepared for:

LEAD AGENCY
CITY OF STOCKTON
Community Development Department
Planning /Engineering Services Division
345 North El Dorado Street
Stockton, CA 95202
(209) 937-8444

Prepared by:

LSA Associates, Inc.
4200 Rocklin Road, Suite 11B
Rocklin, CA 95677
(916) 630-4600

■ ■ ■

AUGUST 2010

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ACRONYM LIST

ac	acres
AG	General Agriculture
CEQA	California Environmental Quality Act
City	City of Stockton
CN	Commercial Neighborhood
CNEL	community noise equivalent level
County	County of San Joaquin
dBA	A-weighted decibel
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
HDR	High Density Residential
L_{dn}	day-night average noise
L_{max}	maximum noise level
LDR	Low Density Residential
LUSD	Lodi Unified School District
MDR	Medium Density Residential
NA	not applicable
OS	Open Space
PF	Public Facilities
SJCOG	San Joaquin County Council of Governments

CITY OF STOCKTON
ENVIRONMENTAL INFORMATION AND INITIAL STUDY FORM
(Pursuant to Cal. Code of Regulations, Title 14, Sections 15063-15065)

ADDENDUM/INITIAL STUDY FILE NO: P09-160

EIR FILE NO: 11-05 (previously certified)

INITIAL STUDY FILING DATE: July 10, 2009

LEAD AGENCY

City of Stockton
Community Development Dept.
Planning/Engineering Services
Division
345 North El Dorado Street
Stockton, CA 95202
(209) 937-8444

Note: *The purpose of this document is to describe the project, its environmental setting, any potentially significant adverse environmental impacts which may be caused by the project or which may affect the project site and/or surrounding area, and any mitigation measures which will be incorporated into the project. Please complete all applicable portions of Section A (General Information/Project Description) and as much of Section B (Project Site Characteristics) as possible. If a question is not applicable, then, respond with "N/A". After completing Sections A and B, please sign the certification following Section B and attach any supplemental documentation and exhibits as deemed necessary. The completed form and applicable fees should be filed at the above-noted Lead Agency address. **PLEASE TYPE OR PRINT IN DARK INK.***

A. GENERAL INFORMATION/PROJECT DESCRIPTION
(Completed by Applicant)

1. **Project Title:** The Delta Cove Planned Development Project
2. **Property Owner(s):** A.G. Spanos Companies
Address: 10100 Trinity Parkway, Fifth Floor, Stockton, CA **Zip** 95219 **Phone** (209) 478-2200
3. **Applicant/Proponent:** A.G. Spanos Companies
Contact Person: Karen Garrett
Address: 10100 Trinity Parkway, Fifth Floor, Stockton, CA **Zip** 95219 **Phone** (209) 478-2200
4. **Consulting Firm:** LSA Associates, Inc. **Contact Person:** Kelly Jackson
Address: 4200 Rocklin Road, Suite 11B, Rocklin, CA **Zip** 95677 **Phone** (916) 630-4600
5. **Project Site Location:** (see attached Figure 1)
 - a. **Address (if applicable) or Geographic Location:** West of I-5, generally bounded by Bear Creek to the north, Mosher Slough to the south and west, and the existing Twin Creeks estates neighborhood to the east.
 - b. **Assessor's Parcel Number(s):** 071-170-05, 071-170-04, 071-170-02
 - c. **Legal Description [Attach metes and bounds (bearings and dimensions) description and corresponding map(s) or list existing lots of record from recorded deed]:** Exhibit "A"
6. **General Project Description:** *(Describe the whole action, including later phases of the project and any secondary, support, or offsite features necessary for its implementation. Attach additional sheets if necessary.)*

In December of 2008, the Stockton City Council certified the EIR 11-05 for the Preserve Planned Development and associated approvals, including:

General Plan Amendment. The request amended portions of the project area from Low-Density Residential to Medium-Density Residential, Open Space, Parks and Recreation designation and relocated a symbol for a proposed elementary school. This is GPA 11-05.

Zoning Classification. The request reclassified a portion of RL (Residential, Low-Density) and the CG (Commercial, General) to RL (Residential, Low-Density), RM (Residential, Medium-Density), OS (Open Space), and PF (Public Facilities). This is Z-13-05. The approvals also included a Planned Development (PD 3-08) to allow the development of single-family and multi-family residential and a proposed elementary school with open space/common areas, green belts, and parks in the community.

Vesting Tentative Maps. Two Vesting Tentative maps have been approved for the project (VTM7-08 and VTM28-08) a large lot map and a small lot map.

In an effort to promote sustainability, preserve existing wetland areas, increase park and open space, increase site walkability and community orientation, and generally improve land uses for the Preserve (Delta Cove), A.G. Spanos proposes to redesign the land use plan. The revised project will involve some increase in the density and intensity of the land uses studied in the certified EIR but not to the extent as to cause entirely new significant environmental effects. The minor environmental effects resulting from the project redesign are addressed in this Draft Addendum/Initial Study. An Addendum was considered appropriate based on CEQA Guidelines

15162 and 15164. These guidelines state that an Addendum to a previously certified EIR is appropriate if no substantial changes have occurred or are proposed in the project that will require major revisions to the previous document or if new information of substantial importance shows additional or increased significant effects. Except for the modifications mentioned in this Addendum, the Project Description presented in the certified EIR is incorporated by this reference into this Addendum Project Description. The attached Environmental Significance Checklist describes in detail why, despite the addition of residential homes and commercial uses, environmental impacts will remain similar or be reduced with the revised plan.

Modifications to the revised design include realigning the westerly end of Otto Drive slightly to the north, incorporating approximately 16,000 square feet of Commercial Neighborhood uses, moving the proposed school site to a more centrally located lot, and promoting sustainability by: preserving and enhancing existing wetland features on the site, expanding park acreage, providing high density residential housing and additional transit opportunities, enhancing pedestrian and bicycle circulation, and improving community orientation (Figure 1 illustrates a site plan for the revised project). These modifications are described in further detail below.

Commercial Neighborhood. The addition of Commercial Neighborhood uses will provide a community focus, enhance community identity, and support social interaction. It will provide a variety of community-serving retail and other commercial uses, which will provide residents of Delta Cove with the opportunity to meet many of their daily needs within their community, thus reducing vehicle miles traveled (VMTs). The Commercial Neighborhood Center is located on three parcels at the center of the community. The 2.5-acre Parcel 1, located just south of the community park, provides for up to up to 12,000 square feet of retail uses and 3,000 square feet of office space. The remaining 5.75 acres, include parcel 2 and 3 located on both sides of Otto Drive and would allow live/work residential units. These units could have up to 450 square feet (average of 266 square feet) of ground floor office/retail space with residential living space above. The maximum number of live/work units would be 60 units. In addition at the corners of these parcels, freestanding retail or office space may be provided. Parking for the live/work units would be available behind the residential units with guest parking available on Otto Drive. Up to 16,000 square feet of office, retail or live/work space will be permitted.

Wetlands. Existing wetlands on the site will be preserved and protected. Immediately adjacent to the linear wetlands, excavation of soil will re-contour the steep banks to create gently sloping benches that will be designed to support native riparian vegetation. No earthwork will take place below the elevation of the Ordinary High Water Mark (the highest elevation within the wetlands), but creation of riparian benches adjacent to the wetlands will take advantage of the high water table to support the newly planted native trees and shrubs. In some areas a trail will be incorporated along the top of bank above the 25-year flood elevation to give pedestrians visual access to the preserved wetlands and restored riparian habitat.

Parks and Open Space. The development program for Delta Cove includes a significant amount of open space and park land. This land plan more than meets the General Plan requirements for park land with a total of 42.91 acres of dedicated parkland and 95.02 acres of open space. Design and implementation for all improvements proposed for public open space, public right-of-way or public parks will be done in coordination with the Director of City Parks and Recreation or a designee. It should be noted that pocket parks surrounded by residential neighborhoods will be developed and maintained by a homeowner's association or equivalent entity.

Transit. Delta Cove is designed to accommodate multiple forms of transportation. A vehicular and non-vehicular circulation plan shall encourage bicycle and pedestrian travel, as well as alternatives to the automobile, through a comprehensive transit system. Bus turnouts and shelters shall be included along the Otto Drive arterial, pending approval of the design and locations by the San Joaquin Regional Transit District (SJRTD) and the City Engineer of Stockton. Bus stops could be used for fixed-route public bus service, private commuter bus service or a shuttle system connection from Delta Cove to other parts of the City of Stockton.

Pedestrian and Bicycle. A pedestrian/bicycle trail system provides access between important destinations within the project area, such as the residential neighborhoods, public facilities and parks. The pedestrian/bicycle circulation system is planned to link to areas outside Delta Cove, including the commercial power center site in Spanos Park West, and the Paradise Point Marina and Oak Grove Regional Park to the north. Several key components are proposed for the bicycle and pedestrian circulation system. These components include a 5-foot-wide pedestrian and bicycle path located within landscaped corridors adjacent to Otto Drive and a 12-foot-wide path/maintenance road, located along the top of the Reclamation District levee along Bear Creek, Mosher Slough and the dry land levee providing a connection to the paths within the proposed development. Four and five foot-wide concrete sidewalks are proposed to provide pedestrian access throughout the neighborhoods. The sidewalk system is typically separated from the roadway system by a landscape strip. Figure 2 illustrates project pedestrian and bicycle paths.

The proposed project will also include a bicycle/pedestrian bridge on the south side of the project crossing over Mosher Slough to connect Delta Cove with Shima Tract, a development to the south and west. The bridge is proposed as a project feature to assist in reducing GHG emissions. This non-vehicular bridge could potentially be built after Delta Cove is partially or totally built out and associated homes are occupied. The proposed pedestrian crossing will be a clear span bridge with approaches located atop the Reclamation District levee system. See Figure 1 for bridge location and Figure 3 for a sample bridge design. The developer shall not be responsible to finance or construct the proposed bicycle/pedestrian bridge.

Community Orientation. Improved community orientation is a major development concept of the residential neighborhoods in Delta Cove, and is based on providing a diverse range of residential housing opportunities, recreational facilities and natural areas for future residents. By combining multiple housing options, which range from traditional detached single-family homes, small-lot single-family homes, and other more progressive housing types (See Table 5.1 of the Planned Development for examples of progressive housing types) into one complete community, Delta Cove is able to provide its residents with a sense of place within their own unique environment. The character and quality of life exemplified by the residential components of the project are based on the relationship of land uses, the configuration of neighborhoods, and the layout of the streets and pedestrian walkways. The architecture styles of residential buildings and the landscape elements, including plant materials, signage, site furnishings and public amenities, establish the

project's overall character. The Design Guidelines are intended to ensure that the development is in accord with the Delta Cove PD and the development of a sustainable and quality community.

Development of Delta Cove will include 1,545 residential units on approximately 360 acres, an increase of 264 residential units. In general, the overall development intensity proposed in the re-design has increased marginally by approximately ten (10%) percent in light of the additional residential units and additional 16,000 square feet of Commercial Neighborhood uses. Fundamental to the re-design is the concept of retaining forecasted traffic volumes approved in the former design.

The revised project mix of land uses is set forth below:

<u>Project Acres:</u>	<u>Original Plan</u>	<u>Revised Plan</u>
<u>Wetlands Impacted (acres)</u>	<u>7.56acre</u>	<u>0 acre (avoidance)</u>
<u>Parks (Acres)</u>	<u>40.28 ac.</u>	<u>42.91ac.</u>
<u>Open Space (acres)</u>	<u>73.77 ac.</u>	<u>95.02 ac</u>
<u>Single Family Homes (units)</u>	<u>1,308</u>	<u>1,165</u>
<u>Multi-Family Homes (units)</u>	<u>96</u>	<u>380</u>
<u>Neighborhood serving retail and office uses (sq. ft)</u>	<u>0 sq. ft</u>	<u>up to 16,000 sq.ft</u>
<u>School Site (acres)</u>	<u>13.86 Gross ac.</u>	<u>11.06 Gross ac. (10 acre net)</u>

This addendum will address the environmental impacts of the revised project.

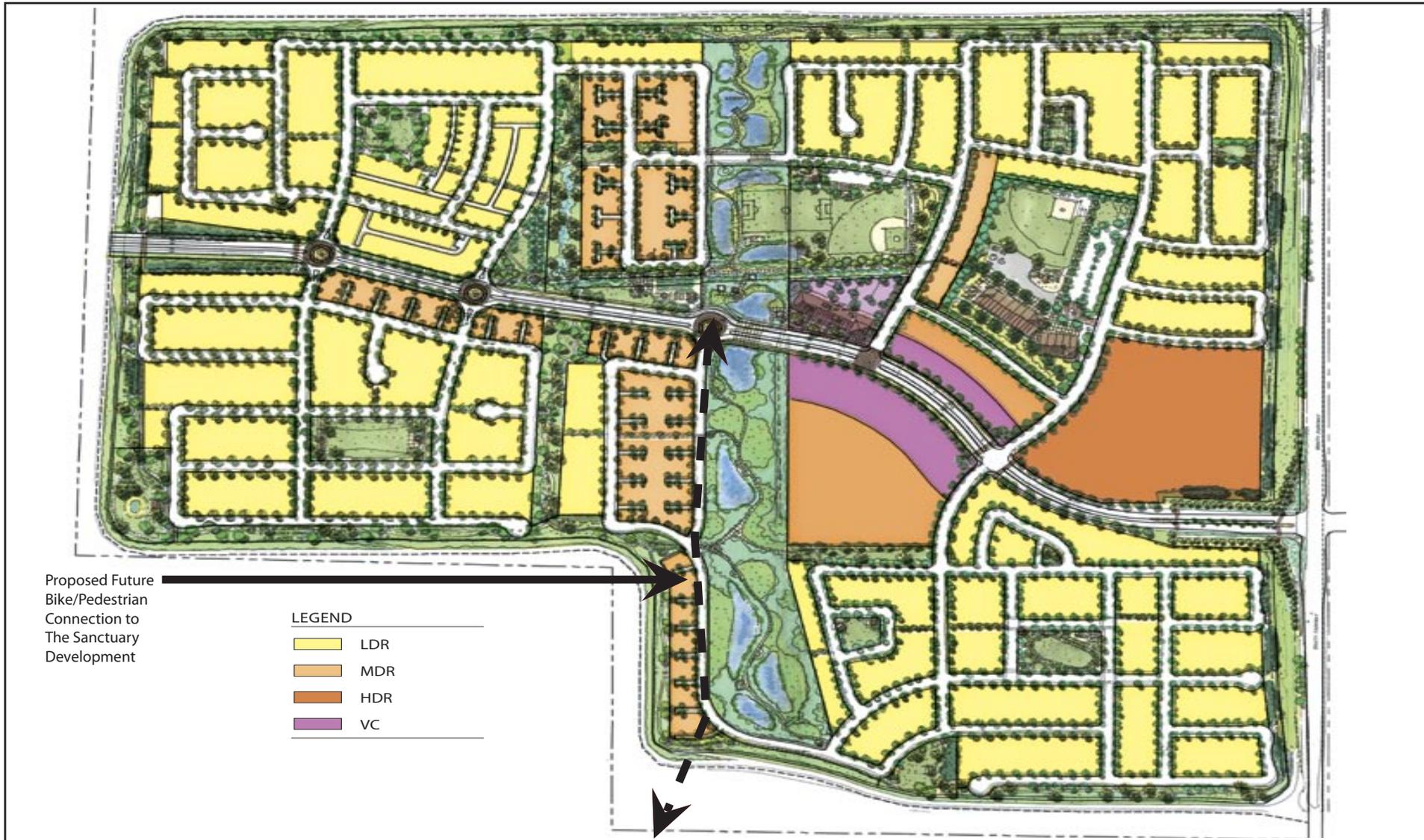


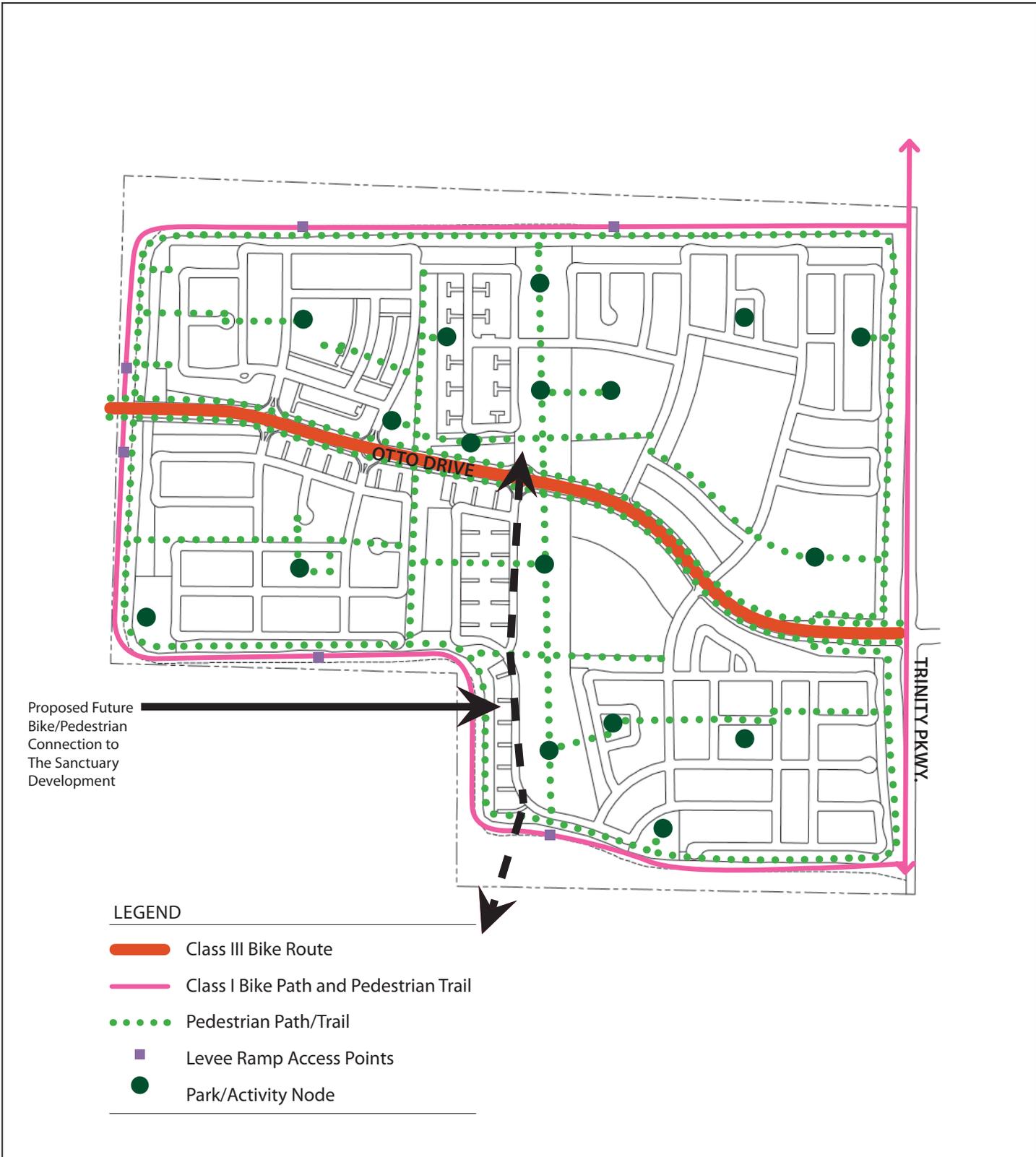
FIGURE 1

LSA



SOURCE: Mid-Valley Engineering, 2009

Delta Cove Redesign
Revised Site Plan



LSA

FIGURE 2



7. **Applications Currently Under City Review:**

File Number(s):

Addendum/Initial Study to previously certified EIR 11-05
 General Plan Amendment
 Rezoning
 Planned Development Permit
 Vesting Tentative Maps

P09-160

8. **Other permits/reviews required by the City, County, State, Federal or other agencies for project implementation:**

Agency:

Community Development Department, Building Division
 Public Works Department

Permits/Reviews:

Building Permits
 Final Map

9. **Describe proposed General Plan (GP) amendments and/or rezoning/rezoning (Zoning) requests, if applicable:**

<u>Existing GP Designation</u>	<u>Proposed GP Designation</u>	<u>Acres</u>	<u>Existing Zoning</u>	<u>Proposed Zoning</u>	<u>Acres</u>
Low Density Residential	High, Med, & Low	180.32	RL	RL, RM, RH	180.32
	Density Residential				
Medium Density Residential	Commercial	8.31	RM	CN	8.31
Open Space	Open Space	95.02	OS	OS	95.02
Parks & Recreation	Parks & Recreation	42.91	PF	PF	42.91

10. **Describe any site alterations which result from the proposed project: (Address the amount and location of grading, cuts and fills, vegetation/tree removal, alterations to drainage, removal of existing structures, etc.)**

The project site is near level with few distinguishing features. Levees surround the project site on the north, west, and south. The site is currently graded due to long-term use of the site for agricultural purposes, as well as from levee improvements completed under a separate project. Mosher Slough bounds the project on the west and south. Bear Creek bounds the project on the north. The Slough and Creek eventually discharge to the San Joaquin River.

11. **Specific Project Description/Operational Characteristics:**

a. **Describe Proposed Commercial, Industrial, Institutional, and Recreational Uses (all non-residential uses):**

The project will include approximately 16,000 square feet of Commercial Retail Center, 16,000 square feet of office/live-work uses, as well as an 11 acre school site and 137.93 acres of parks, open space, trails, a pedestrian/bicycle bridge, landscaping, and community gardens.

b. **Describe Proposed Residential Land Uses: [Check (X) or specify applicable types]**

Conventional 1-F , 2-F , or 3-F ; PD ; Condominiums ; Townhouses Apartments ; Dormitory/Rooming/Boarding Houses ; Elderly Apartments ; Residential Care Facility ; Employee Housing ; Mobile Homes ; Motel/Hotel/B&B; Extended Stay/Single Rm. Occupancy Facilities ; Other

(1) **Residential Land Use Summary:**

<u>Type of Unit</u>	<u>Zoning</u>	<u>Acres</u>	<u>Proposed Units</u>	<u>Units/Acre</u>	<u>Max. Units Allowed</u>	<u>Max. Density</u>
Single Family	LDR	132.73	833	6.27	1,166	8.7
MDR	MDR	34.84	331	9.50	606	17.4
HDR	HDR	12.75	281	22.0	370	29
Commercial	CN	5.73	100	17.50	100	17.50

(2) **Describe Project Phasing:** The revised project will be phased as described in the Planned Development.

(3) **Population Projection for Proposed Project:** = 4,805
Projected Population Density (Persons/Unit): = 3.11

(4) **Student Generation Projected for Proposed Project:** = 834
Projected Student Density (K-12 Students/Unit): = 0.54

(5) **Estimated total number of vehicle trip ends (TE) per day generated by proposed project:** = 13,080

(6) **Estimated maximum number of TE/Day based on proposed General Plan Designation:** = 13,080

12. **Will the project generate any substantial short-term and/or long-term air quality impacts, including regional/cumulative contributions? Yes No .** If so, estimate the type and amount of emissions below (e.g., tons per year of PM10, ROG, Nox, and CO): Potential air quality impacts of the project are addressed in EIR 11-05.

a. **Construction Emissions:** See section C.3 Air Quality

b. **Stationary Source Emissions:** See Section C.3 Air Quality

c. **Mobile Source Emissions:** See Section C.3 Air Quality

B. PROJECT SITE CHARACTERISTICS

(Completed by Applicant and/or Lead Agency, as applicable):

1. **Total Site Acreage (ac.) (or) Square Footage (S.F.):** 359.52 ac.
2.

<u>Ex. General Plan Designations</u>	<u>Acres</u>	<u>Ex. Zoning (City or County)</u>	<u>Acres</u>
Low Density Residential	208.81	LDR	208.81
Medium Density Residential	6.59	MDR	6.59
Public Facilities	72.38	PF	72.38
Open Space	71.91	OS	71.91
3. **Identify and describe any specific plans, redevelopment areas, and/or other overlay districts/zones which are applicable to the project site:** Reclamation District 21-26 operates within the area and development of the project should include consultation with the Reclamation District.

4. **Identify Existing On-Site Land Uses and Structures:** Undeveloped/Vacant **Acres or Sq. Ft.:**
359.52 ac.

5. **Prior Land Uses if Vacant:** Agricultural

6. **Describe any on-site and adjacent utility/infrastructure improvements and right-of-ways/easements:** Reclamation District 21-26 maintains canals on the site periphery (south, west and north) used for drainage and flood control purposes. Development tracts to the north include Spanos Park West, to the north west is Westlake Villages, and to the east is Twin Creeks Estates. Sewage and water lines are in place along Trinity Parkway to the east and will be expanded into the Delta Cove development.

7. **Adjacent land uses, zoning and General Plan designations:**

Adjacent Uses	Zoning (City or County)	General Plan Designations
North: Open Space	RL, OS	Open Space
South: Agricultural	MX	Mixed Uses
East: Residential	RL OS,	Low Density Residential
West: Agricultural	MX	Mixed Uses

8. **If site contains at least ten (10) acres of undeveloped and/or cultivated agricultural land, complete the following:**

- a. **Is the land classified as "Prime Farmland" and/or "Farmland of Statewide Importance" (as identified on the San Joaquin County "Important Farmland Map")?** Yes ___ No X
- b. **Is the site under a Williamson Act Land Conservation Contract?** Yes ___ No X
- c. **If the site is under contract, has a "Notice of Non-Renewal" been filed?** N/A
Yes ___ No ___ If yes, when will the contract expire? Date: _____

9. **Describe important on-site and/or adjacent topographical and water features:**

On-Site: Agricultural ditches run throughout the property and connect to Mosher Slough
Adjacent: Mosher Slough extends along the western and southern site boundary. Bear Creek runs along the northern site boundary.

10. **Describe any important on-site and/or adjacent vegetation/wildlife habitat:**

On-Site: None
Adjacent: Land uses to the east are residential. Land uses to the south and west are approved for residential and commercial development. Land uses to the north are predominately residential.

11. **Describe any general and special status wildlife species known to inhabit the site or for which the site provides important habitat:** Burrowing Owl, Swainson's Hawk, giant garter snake, delta smelt, Tricolored Blackbird, White-tailed Kite, Northern Harrier, Western Pond Turtle, Central Valley Steelhead Chinook Salmon.

12. **Identify and describe any significant cultural resources on or near the site (attach a "Records Search", "Site Survey", and/or other documentation, if applicable):** None.

13. **Identify and describe any on-site or nearby public health and safety hazards or hazardous areas (attach a "Preliminary Site Assessment" and/or "Remediation Plan", if applicable):** None.

14. **Identify and describe any potentially hazardous geologic/soil conditions:** None.

15. **Is any portion of the site subject to a 100-year flood?** Yes ___ No X If so, what flood zone? _____

16. Identify and describe, below, any existing and/or projected on-site ambient noise levels which exceed adopted noise standards (*plot noise contours on proposed tentative maps or on a site plan for the project, if applicable*):
- Do on-site ambient noise levels from existing land uses (locally regulated noise sources) located on-site or off-site exceed adopted noise standards? Yes ___ No X If so, describe: See Section C.11. Noise.
 - Does or will transportation-related noises exceed 60 dB Ldn at any exterior location or 45 dB Ldn at any interior location? Yes ___ No X. If so, describe: See Section C.11. Noise and Appendix A for Noise Analysis.
17. Indicate by checking (X) whether the following public facilities/infrastructure, utilities, and services are presently or readily available to the project site and whether the proposed project can be adequately served without substantial improvements or expansion of existing facilities and services. If new or expanded/modified facilities or services are necessary, explain below.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
a. Water supply/treatment facilities	<u>X</u>	___	___
b. Wastewater collection/treatment facilities	<u>X</u>	___	___
c. Storm drainage, flood control facilities	<u>X</u>	___	___
d. Solid waste collection/disposal/recycling services	<u>X</u>	___	___
e. Energy/communication services	<u>X</u>	___	___
f. Public/private roadway and access facilities	<u>X</u>	___	___
g. Public/private parking facilities	<u>X</u>	___	___
h. Other public/private transportation services (public transit, railway, water or air transport, etc.)	<u>X</u>	___	___
i. Fire and emergency medical services	<u>X</u>	___	___
j. Police/law enforcement services	<u>X</u>	___	___
k. Parks and recreation services	<u>X</u>	___	___
l. Library services	<u>X</u>	___	___
m. General government services	<u>X</u>	___	___
n. School facilities	<u>X</u>	___	___

Explanation(s): Public services including water supply, storm drainage, utilities, emergency services etc. were evaluated in the previous EIR and found to be adequately available. Likewise, consistent with City standards/policies and prior approvals, adequate parkland, open space, and a school site will be provided within the development. Public and private roadways were also evaluated in the previous EIR 11-05. The revised project will not change these conclusions, as discussed in the checklist explanations.

SIGNATURE (Completed by Owner or Legal Agent)

I certify, under penalty of perjury, that the foregoing is true and correct and that I am (*check one*):

- _____ Legal property owner (*owner includes partner, trustee, trustor, or corporate officer*)
 _____ Owner's legal agent, authorized project applicant, or consultant (*attach proof of consent to file on owner's behalf*)

 (Signature)

 (Date)

 (Type or Print Name and Title)

C. ENVIRONMENTAL SIGNIFICANCE CHECKLIST (COMPLETED BY LEAD AGENCY OR AUTHORIZED CONSULTANT)

-- Check (X) Responses and Provide Supporting Documentation and References, as applicable

- *In completing this Checklist, the Lead Agency shall evaluate each environmental issue based on the preceding Sections A and B of this Initial Study and shall consider any applicable previously-certified or adopted environmental analysis. The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in light of the whole record before the Lead Agency. All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.*
- *Following each section of this Checklist is a subsection to incorporate environmental documentation and to cite references in support of the responses for that particular environmental issue. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources the Lead Agency cites (in parentheses) at the end of each section. This subsection provides (a) the factual basis for determining whether the proposal will have a significant effect on the environment; (b) the significance criteria or threshold, if any, used to evaluate each question; and (c) the new or revised mitigation measures and/or previously-adopted measures that are incorporated by reference to avoid or mitigate potentially significant impacts. Mitigation measures from Section D, "Earlier Analyses", may be cross-referenced. In addition, background and support documentation may be appended and/or incorporated by reference, as necessary. This section is required to support a "Mitigated Negative Declaration". If an Environmental Impact Report (EIR) will be prepared, this section shall provide an "EIR Scope of Work" in order to focus on issues to be addressed in the Draft EIR.*
- *A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project site is not subject to flooding). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).*
- *Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is "Potentially Significant", "Less-than-Significant with Mitigation Incorporated", or "Less-than-Significant". "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant and mitigation measures to reduce the impact to a less-than-significant level have not been identified or agreed to by the project applicant. If there are one or more "Potentially Significant Impact" entries upon completing the Checklist, an Environmental Impact Report (EIR) is required.*
- *The "Less-than-Significant with Mitigation Incorporated" category applies when revisions in the project plans or proposals made, or agreed to, by the applicant would avoid or mitigate the effect(s) of the project to a point where, clearly, no significant adverse environmental effect would occur. The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. Upon completing the Checklist, if there is no substantial evidence in light of the whole record before the Lead Agency that the project, as revised, may have a significant effect on the environment, then, a "Mitigated Negative Declaration" shall be prepared.*
- *The Checklist shall incorporate references to common or comprehensive information sources [e.g., the City's General Plan, redevelopment plans, infrastructure master plans, zoning ordinance/development code(s), and related environmental documents, etc.] for potential regional (Citywide) and cumulatively considerable impacts. In addition, any prior site-specific environmental documents and/or related studies (e.g., traffic studies, geo-technical/soils reports, etc.) should be cited and incorporated by reference, as applicable. Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated. Referenced documents shall be available for public review in the City of Stockton Community Development Department, Planning and Engineering Services Division, 345 N. El Dorado St., Stockton, CA.*
- *Supporting Information Sources: A source list should be attached and other sources used and/or individuals contacted should be cited in the discussion.*

ENVIRONMENTAL SIGNIFICANCE CHECKLIST

1. AESTHETICS - Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?			X	
c. Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?			X	

ENVIRONMENTAL SETTING

Aesthetic issues related to development of the project site were addressed in the previous EIR (see section 4.12). The site is currently designated and zoned for residential uses. The project site consists of undeveloped land, but is adjacent to existing and planned urban development. There are no scenic vistas or substantial scenic resources located in the immediate vicinity of the site.

ENVIRONMENTAL IMPACT

The previously certified Preserve EIR found aesthetic impacts associated with the project to be less-than-significant with incorporation of mitigation measures. The revised project will add 264 new residential units, approximately 16,000 square feet of commercial uses, and a bicycle/pedestrian bridge between the proposed project and the Sanctuary project (approved, but not constructed) to the south. Design guidelines and design standards included in the proposed Planned Development document will ensure that the proposed project will reflect state-of-the-art planning and design principles, and uphold the design concepts envisioned by the City’s General Plan for future developments. Implementation of mitigation measure VIS-1 would ensure that the addition of residential units and commercial uses will not have a substantial adverse effect on a scenic vista by requiring a landscape plan for Trinity Parkway. No new mitigation is required.

The addition of 264 new residential units and 16,000 square feet of commercial uses will slightly increase lighting and glare at the project site as compared to the approved project. However, implementation of mitigation measure VIS-2 as described in the previously certified Preserve EIR will reduce any additional aesthetic impacts to a less than significant level. No new mitigation is required for lighting and glare impacts. Like the approved project, the revised project will not damage scenic resources or degrade the existing visual character of the site as the project location has not changed. Likewise, relocation of land uses within the project site will not create new aesthetic impacts as the site will be urban in nature and rearrangement of land uses will not significantly alter the appearance of the project site. The addition of the non-vehicular bridge across Mosher Slough will present some changes to the visual environment similar to the proposed Mosher Slough/Trinity Parkway Bridge and Mosher Slough/Otto Drive Bridge that were previously approved with the prior Delta Cove entitlements. The bridge will also be in compliance with all City standards regarding design and aesthetics. For these reasons, the new bridge will not create a significant impact to visual resources. Preservation of existing wetlands on the site and expansion of park and open space facilities associated with the project redesign are expected to have beneficial aesthetic effects. No additional aesthetic impacts will result from the proposed redesign of land uses.

Based on the analysis above, the proposed project does not affect aesthetic impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: Less than Significant.

Mitigation Measures: None required.

2. AGRICULTURAL RESOURCES

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. Would the project:

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?
- c. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
			X
			X
			X

ENVIRONMENTAL SETTING

The previous EIR evaluated impacts associated with conversion of agricultural lands (see section 4.6). The project site is not within an area defined as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The site is defined as Farmland of Local Importance, making the project area exempt from City agriculture mitigation fees. The project site is currently designated for urban uses and is not under a Williamson Act contract.

ENVIRONMENTAL IMPACT

The previously certified Preserve EIR found agricultural impacts associated with the project to be less-than-significant with no mitigation measures necessary. The revised project will add 264 residential units, a pedestrian/bicycle bridge across Mosher Slough, and 16,000 square feet of commercial uses and revises the locations of certain approved land uses. The addition of these uses and the relocation of certain approved uses will not create new significant impacts, nor increase the severity of previously identified impacts since agricultural uses at the site and associated effects will not change. No mitigation is required.

Based on the analysis above, the proposed project does not affect agricultural impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

3. AIR QUALITY

When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- a. Conflict with or obstruct implementation of the applicable air quality plan?
- b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?
- d. Expose sensitive receptors to substantial pollutant concentrations?
- e. Create objectionable odors affecting a substantial number of people?

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
			X
			X
			X
			X
			X

ENVIRONMENTAL SETTING

Air quality issues related to development of the project site were addressed in the previous EIR, including construction-related emissions and operational-related impacts emanating from motor vehicle emissions (see section 4.2). Significant environmental effects were identified for operational-related impacts. The previous EIR listed mitigation measures for the identified impacts.

ENVIRONMENTAL IMPACTS

A Draft Supplemental Traffic Analysis memorandum was prepared for the revised project in November 2009. The analysis found that despite the increase of 264 residential units and 16,000 square feet of commercial uses, project trip generation will be slightly reduced due to redesign of project land uses. This reduction in daily trips can be attributed to an increased internal trip capture rate due to the addition of commercial uses (residents will not need to travel outside the project site as often as with the approved project), as well as enhanced pedestrian and bicycle facilities (including the non-vehicular bridge over Mosher Slough). Likewise, the revised project has added three transit facilities along Otto Drive which will encourage transit use when compared to the approved project which included only one transit facility on Trinity Parkway. Accordingly, operational air quality impacts will be comparable or slightly reduced to those identified in the previous EIR. Incorporation of Mitigation Measure AIR-1 will help reduce long-term air quality impacts with regional effects, but no mitigation exist that would reduce these impacts to a less than significant level. No new significant impacts regarding air quality will occur as a result of the revised project.

Based on the analysis above, the proposed project does not affect air quality impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

Greenhouse Gas Emissions

The proposed Delta Cove project has been redesigned from the previously approved project (The Preserve) in an effort to promote sustainability, preserve existing wetland areas, increase park and open space, increase site walkability/bicycle travel, community orientation, and generally improve land uses. Based on the analysis completed for the proposed project, Delta Cove would reduce GHG emissions in a manner consistent with mandates of AB 32 and the Early Climate Protection Actions listed in the City of Stockton Settlement Agreement. By incorporating State emission reduction measures and project-level mitigation, the proposed project will reduce GHG emissions by approximately 34% from business-as-usual conditions, which exceeds the City required 28.7 percent reduction of GHG emissions. Please see Appendix C for the complete Delta Cove Global Climate Change memorandum and analysis.

4. BIOLOGICAL RESOURCES

- Would the project:

- a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?				X

ENVIRONMENTAL SETTING

Delta Cove is a highly altered environment and natural communities have been largely displaced. The site has historically been used for agricultural crop production. Generally, agricultural lands do not provide high quality habitat for resident wildlife species. Biological Resources issues related to development of the project site were addressed in the previous EIR (see section 4.4). Potentially significant environmental effects were identified and mitigation measures were listed to reduce impacts to a less-than significant level.

ENVIRONMENTAL IMPACTS

The previously certified Preserve EIR found biological resource impacts associated with the project to be less-than-significant with incorporation of mitigation measures. The revised project will preserve approximately 7.56 acres of wetland habitat that the approved project would have impacted. Preservation of these wetland areas will reduce impacts regarding wetlands or other regulated waters. As a result of the redesign, the applicant will no longer have to process Section 404 permit applications with the U.S. Army Corps of Engineers due to the avoidance of water of the U.S. The revised project design has reallocated the land use within the site to better utilize the site and its existing resources. As a result, no additional biological resource impacts will result from the addition of 264 residential units, 16,000 square feet of commercial, construction of the pedestrian/bicycle bridge over Mosher Slough, and other minor changes in land use since the location of the project and the existing habitat on the site will not change. As proposed, the new pedestrian/bicycle bridge will extend in a clear span from the top of levee in Delta Cove to the top of levee in the Sanctuary project. Neither biological resources nor wetlands are affected by this improvement. Further, impacts to wildlife species that utilize these wetlands will be reduced under the revised project as elements of the wetland enhancement may create new habitat for native wildlife. No new mitigation is required.

Based on the analysis above, the proposed project does not affect biological resource impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

5. CULTURAL RESOURCES

- Would the project:

- a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?**
- b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**
- c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**
- d. Disturb any human remains, including those interred outside of formal cemeteries?**

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a.				X
b.				X
c.				X
d.				X

ENVIRONMENTAL SETTING

Cultural Resources issues related to development of the project site were addressed in the previous EIR (see section 4.13). Based on a technical cultural resources study, no cultural resources were found onsite or within the extension corridor of Trinity Parkway/Hammer Lane in the Shima Tract. Consultation with the Native American Heritage Commission representatives and the San Joaquin County Historical Society did not indicate the presence of archaeologically sensitive resources. Potentially significant environmental effects were identified and mitigation measures were listed to reduce impacts to a less-than significant level.

ENVIRONMENTAL IMPACTS

The previously certified Preserve EIR found cultural resource impacts associated with the project to be less-than-significant with incorporation of mitigation measures in the event cultural resources are found with the commencement of construction activities. The revised project will add 264 residential units, 16,000 square feet of commercial uses, a non-vehicular bridge, and revises the locations of certain approved land uses. The abutments for the new non-vehicular bridge will be placed on top of the existing levees in both the proposed project and the Sanctuary. These levees are not eligible for the National or California Register of Historic Places/Resources listing. The addition of these uses and the relocation of certain approved uses will not create new significant impacts, nor increase the severity of previously identified impacts since site cultural sensitivity and associated effects will not change. No new mitigation is required.

Based on the analysis above, the proposed project does not affect cultural resource impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

6. GEOLOGY AND SOILS
- Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
(2) Strong seismic groundshaking?				X
(3) Seismic-related ground failure, including liquefaction?				X
(4) Landslides?				X
b. Result in substantial soil erosion or the loss of topsoil?				X
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?				X
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?				X

ENVIRONMENTAL SETTING

The previous EIR contained a discussion of the regional and local geology and soils of the project area, including geologic hazards, soil erosion, and soil constraints (see section 4.1). The majority of lands surrounding the project site are now urbanized or planned for urban development.

ENVIRONMENTAL IMPACT

The previously certified Preserve EIR found geologic and soils impacts associated with the project to be less-than-significant with incorporation of mitigation measures. The revised project will add 264 residential units, 16,000 square feet of commercial uses, a pedestrian/bicycle bridge, and revises the locations of certain approved land uses. The addition of these uses and the relocation of certain approved uses will not create new significant impacts, nor increase the severity of previously identified impacts since site geology and associated effects will not change. Implementation of mitigation measures identified in the EIR will ensure that geology and soils impacts will remain less than significant. No additional geologic or soils impacts will result from the revised project. No new mitigation is required.

Based on the analysis above, the proposed project does not affect geology and soil impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

7. HAZARDS AND HAZARDOUS MATERIALS

- Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?				X
f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

ENVIRONMENTAL SETTING

The previous EIR indicated that there are no known hazardous materials issues on the project site (see section 4.14).

ENVIRONMENTAL IMPACTS

The previously certified Preserve EIR found hazardous materials impacts associated with the project to be less-than-significant with incorporation of mitigation measures. The revised project will add 264 new residential units, 16,000 square feet of commercial uses, a pedestrian/bicycle bridge, as well as other minor changes. These revisions will not create any new hazardous materials impacts or increase the severity of impacts found in the previous EIR as the project location will not change and proposed land uses will not involve the handling of hazardous materials. The limited amount of commercial uses proposed within the Commercial Neighborhood designation, are not associated with creating hazardous wastes, or storing unusual quantities of hazardous materials on-site. Therefore, no additional hazardous materials impacts will result from the revised project. No new mitigation is required.

Based on the analysis above, the proposed project does not affect hazards and hazardous materials impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

8. HYDROLOGY AND WATER QUALITY

- Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?				X
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?				X
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?				X
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?				X
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f. Otherwise substantially degrade water quality?				X
g. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures that would impede or redirect floodflows?				X
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j. Contribute to inundation by seiche, tsunami, or mudflow?				X

ENVIRONMENTAL SETTING

The previous EIR contained a discussion of water quality, site drainage, and flood hazards in the project area (see section 4.3). The EIR found that the project site has recently been moved out of the 100-year floodplain due to perimeter levee improvements, and that site drainage consists of agricultural ditches that run throughout the property and connect to Mosher Slough. Water quality is presently influenced by upstream flows and agricultural runoff.

ENVIRONMENTAL IMPACT

The previously certified Preserve EIR found hydrological and water quality impacts associated with the project to be less-than-significant with incorporation of mitigation measures. Although the revised project will preserve existing wetland features, no additional hydrologic or water quality impacts will result from the revised project as the stormwater basin's project feature will be expanded north of Otto Drive and the project site will remain out of the 100-year floodplain. Additionally, the increase in residential units and commercial uses will not significantly increase the amount of stormwater runoff from the project as the redesign utilizes a similar impact/footprint area as the approved project and therefore does not significantly increase the amount of impervious lot area or substantially alter drainage patterns compared to the approved project. The proposed non-vehicular bridge over Mosher Slough will be a clear span bridge, with no direct impacts to water resources. The City will consult with the U.S. Coast Guard, the San Joaquin County Flood Control District, the Army Corps of Engineers, and Reclamation District No. 2126 during design and construction of the bridge to ensure impacts to hydrology and project levees will be minimal. No new mitigation is required.

Based on the analysis above, the proposed project does not affect hydrology and water quality impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

9. LAND USE AND PLANNING
 - Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
d. Result in land use/operational conflicts between existing and proposed on-site or off-site land uses?			X	

ENVIRONMENTAL SETTING

Land use impacts were evaluated in the previously certified EIR (see section 4.6). The project site is currently within the jurisdiction of City of Stockton which recently approved a General Plan Amendment and rezoning of the project site (as previously described in section 6 of this Environmental Information and Initial Study Form) in connection with the certification of the EIR. Currently, the site is designated for low-density residential, medium-density residential, open space, and public facilities. Lands to the west and south of the project site have recently been approved for residential and commercial uses. The area north of the project site includes the existing Spanos Park West and Westlake Villages developments and the area east of the site includes the existing Twin Creeks residential development.

ENVIRONMENTAL IMPACTS

The project proposes to redesign land uses within Delta Cove. The revised project will slightly increase density, however the intensity of the land uses studied in the previous EIR will not increase to the extent as to cause new significant land use impacts (refer to "General Information/Project Description"). Modifications include realigning the westerly end of Otto Drive slightly to the north, incorporating approximately 16,000 square feet of Commercial Neighborhood uses, moving the proposed school site to a more centrally located lot, constructing a bicycle/pedestrian bridge over Mosher Slough, improving community orientation, and increasing residential units by 264 units.

The proposed project will not conflict with the existing General Plan designation or zoning of the project site. The proposed General Plan Amendment and rezoning for the revised project, which include a change from Low Density Residential to 12.75 acres of High Density Residential and 8.31 acres of Commercial Neighborhood, are minor variations from the adopted designations. Impacts and mitigation measures analyzed in the previous EIR are still valid in relation to the revised project. Impacts associated with land use and planning will be less than significant with project implementation.

Based on the analysis above, the proposed project does not affect land use and planning impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: Less than significant.

Mitigation Measures: None required.

10. MINERAL RESOURCES

- Would the project:

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a general plan, specific plan, or other land use plan?

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
			X
			X

ENVIRONMENTAL SETTING

The proposed project site is located within the Stockton City Limits in an area designated for residential uses by the Stockton General Plan. The soils on the site are characterized as clayey/silty sandy and do not represent known mineral resources.

ENVIRONMENTAL IMPACTS

The Notice of Preparation and Initial Study prepared for the approved project found no impacts to mineral resources, and therefore the previous EIR did not address the presence or absence of mineral resources within the Delta Cove area. The proposed project site is located within the City of Stockton in an area characterized as clayey and silty sandy soils and do not represent a mineral resource. There are no state-designated Mineral Resource Zones located in the project vicinity. The revised project will add 264 residential units, a pedestrian/bicycle bridge, and up to 16,000 square feet of commercial uses and revises the locations of certain approved land uses. The addition of these uses and the relocation of certain approved uses will not create new significant impacts, nor increase the severity of previously identified impacts since the presence of mineral resources on the site and associated effects will not change.

Based on the analysis above, the proposed project does not affect mineral resources impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No Impact.

Mitigation Measures: None required.

11. NOISE

- Would the project:

- a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?
- b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?
- c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?
- f. Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
	X		
			X
			X
			X
			X
			X

ENVIRONMENTAL SETTING

A Revised Traffic Noise Modeling Memo was prepared for revised project and is included as Appendix A.

The Previous EIR analyzed noise impacts for Delta Cove and presented mitigation measures to reduce impacts (see section 4.5). All noise related impacts were less than significant with incorporation of mitigation measures.

ENVIRONMENTAL IMPACTS

As indicated in the previous EIR, all off-site roadways within the project vicinity would experience traffic noise level increases of less than 3 dBA under with-the-project conditions compared to those without the project. This increase in noise levels would not be perceptible by the human ear in an outdoor environment. Noise modeling found that project-related traffic noise impacts of the redesigned land use plan on off-site sensitive receptors would be less than those described in the EIR. No new significant traffic noise impact would occur on off-site, noise-sensitive land uses. No new mitigation measures for off-site land uses would be required.

The revised project on-site land uses include office and commercial mixed uses, residences, parks, a new pedestrian bridge, and a school. The pedestrian bridge will not result in new traffic noise sources, and therefore, will not result in any new noise impacts. A reduction in daily vehicle trips (see traffic memo in Appendix B) and the addition of roundabouts on Otto Drive (and an associated reduction in speed limit), will result in reduced noise levels when compared to the approved project. Based on the revised traffic noise modeling shown in the memo (Appendix A), cumulative plus project traffic noise levels could potentially result in noise impacts to the proposed land uses along Trinity Parkway and Otto Drive. In order to reduce traffic noise levels to acceptable levels at proposed residential outdoor active use areas, one of two noise reduction features should be incorporated into the project design. One noise reduction feature is a required setback. The distances from the roadway centerline for each of the modeled roadway segments at which exterior traffic noise levels would be reduced to below 65 dBA CNEL are listed below. Four of the modeled segments on Otto Drive would exceed 65 dBA CNEL at the nearest proposed residential outdoor active use areas. By incorporating the following setbacks into the project design, exterior traffic noise levels would be reduced to below 65 dBA CNEL at the nearest proposed residential private outdoor active use areas:

- Otto Drive from Trinity Parkway to Street 1, a setback of 69 feet from the centerline;
- Otto Drive from Street 1 to Street 2, a setback of 63 feet from the centerline;
- Otto Drive from Street 2 to Street 3, a setback of 61 feet from the centerline; and
- Otto Drive from Street 3 to Street 4, a setback of 60 feet from the centerline.

Another noise reduction feature that would reduce traffic noise impacts on outdoor private active use areas is a sound wall. A 6 foot high sound wall located along the proposed residential property lines adjoining Otto Drive would result in an approximate 6 dBA decrease in traffic noise levels. This would reduce traffic noise levels at the nearest residential outdoor private active use areas to below 65 dBA CNEL. Therefore, for any residential property with outdoor private active use areas located at distances less than the above recommended setbacks, a 6 foot high sound wall would be required to reduce exterior traffic noise levels to below 65 dBA CNEL.

Based on new noise levels, Mitigation Measure NOI-2 presented in the previous EIR should be revised as shown below. It should be noted that traffic noise impacts are in fact reduced under the revised project when compared to the approved project and mitigation measure NOI-2 requires less mitigation than presented in the approved EIR. Implementation of this revised mitigation measure would ensure that potential noise impacts remained at a less than significant level.

Level of Significance: Less than significant with mitigation incorporated.

Mitigation Measures: The following mitigation measures shall be implemented for the proposed project:

Exterior Noise. The following mitigation measure is required to protect residential outdoor active use areas such as backyards, patios, and balconies from excessive traffic noise impacts:

-A sound barrier with a minimum height of six (6) feet shall be constructed along the proposed residential property lines adjoining Otto Drive for all residential properties with outdoor active use areas in the following locations:

-Within 69 feet of the centerline of Otto Drive from Trinity Parkway to Street 1, OR setback residential outdoor active use areas 69 feet from the centerline.

-Setbacks shall be required in the following locations:

-Otto Drive from Street 1 to Street 2, setback residential outdoor active use areas 63 feet from the centerline;

-Otto Drive from Street 2 to Street 3, setback residential outdoor active use areas 61 feet from the centerline; and

-Otto Drive from Street 3 to Street 4, setback residential outdoor active use areas 60 feet from the centerline.

Interior Noise. To meet the City's 45 dBA CNEL interior noise standard, the following mitigation measures will be required:

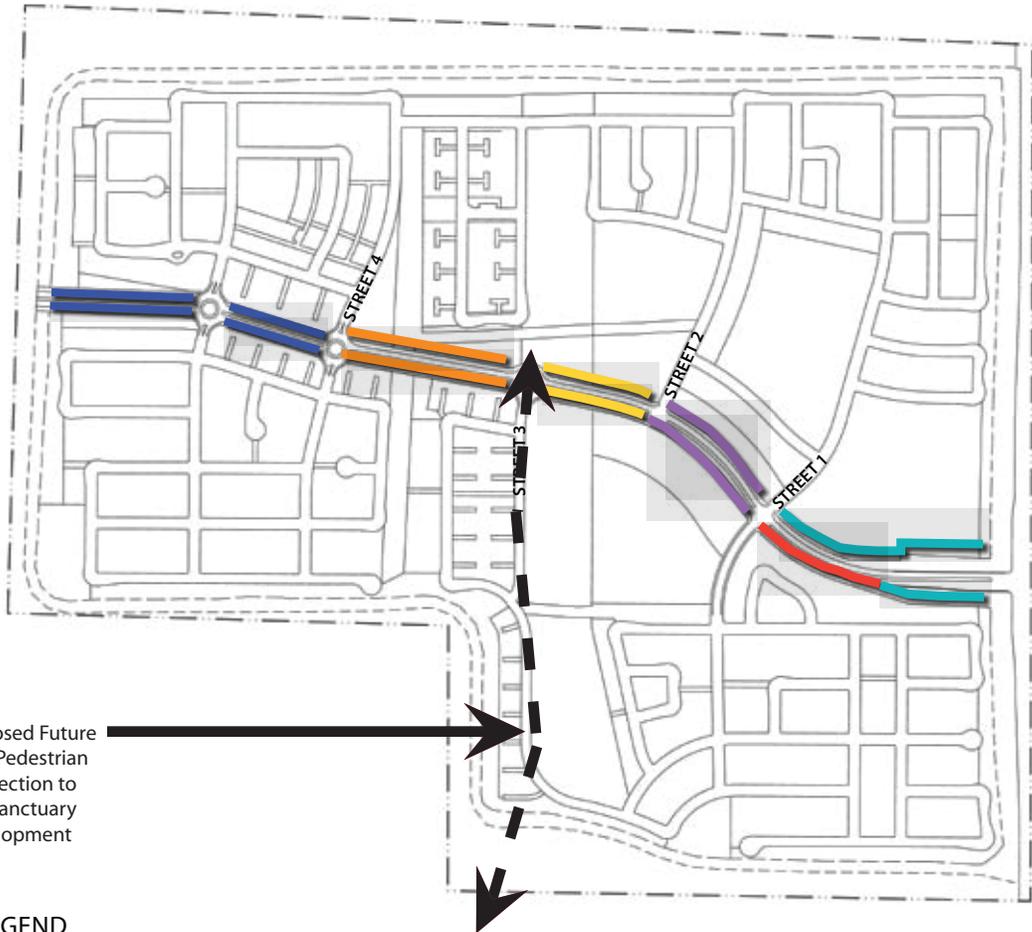
-To meet the City's 45 dBA CNEL interior noise standard, alternate fresh air supply systems, such as air-conditioning, and double-paned windows shall be installed in all residential, school, and office and commercial mixed-use units that have no intervening structures in the following areas:

-Within 101 feet of the centerline of Trinity Parkway, and

-Within 251 feet of the centerline of Otto Drive.

Figure 4 illustrates the anticipated placement of soundwalls for the revised project.

Based on the analysis above, the proposed project does not affect noise impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.



Proposed Future
Bike/Pedestrian
Connection to
The Sanctuary
Development

LEGEND

-  6 Foot High (Min.) Sound Wall Required for Residential Outdoor Active Use Areas within 69 Feet from the Center line of Otto Drive
-  6 Foot High (Min.) Sound Wall Required if the Setback is within 69 feet from the Centerline of Otto Drive (Less than 15 feet from right-of-way)
-  6 Foot High (Min.) Sound Wall Required if the Setback is within 63 feet from the Centerline of Otto Drive (Less than 9 feet from right-of-way)
-  6 Foot High (Min.) Sound Wall Required if the Setback is within 61 feet from the Centerline of Otto Drive (Less than 6 feet from right-of-way)
-  6 Foot High (Min.) Sound Wall Required if the Setback is within 60 feet from the Centerline of Otto Drive (Less than 3 feet from right-of-way)
-  No Sound Wall Required

LSA



FIGURE 4

12. POPULATION AND HOUSING

- Would the project:

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--------------------------------	--	------------------------------	-----------

- a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?
- b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?
- c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?

		X	
			X
			X

ENVIRONMENTAL SETTING

The previous EIR contained analysis of population and housing impacts associated with the Preserve (see section 4.8). The EIR found that the addition of 1,405 housing units, including approximately 4,366 residents, would not result in a significant impact regarding population growth since the growth was within the San Joaquin County Council of Government's project population growth for the City of Stockton and was included in the City's General Plan buildout area. No mitigation measures were necessary.

ENVIRONMENTAL IMPACTS

The revised project would increase the number of housing units within the development by 264 units. This increase would result in approximately 439 more residents (10% increase) living within Delta Cove. This increase in housing units and population continues to remain within the housing/population projections and is negligible when compared to the 2008 population of 289,927 in the City of Stockton. This impact is considered less than significant.

Based on the analysis above, the proposed project does not affect population and housing impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: Less than significant.

Mitigation Measures: None required.

13. PUBLIC SERVICES

- Would the project:

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--------------------------------	--	------------------------------	-----------

- a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

- (1) Fire protection?
- (2) Police protection?
- (3) Schools?
- (4) Parks?
- (5) Other public facilities?

		X	
		X	
		X	
			X
		X	

ENVIRONMENTAL SETTING

The previous EIR found that public service impacts regarding the Preserve development, including Parks and Recreation, Community Centers, Schools, Police Protection, Fire Protection, Library Services, Solid Waste, and Vector Control would be less than significant with mitigation measures incorporated (see section 4.9).

ENVIRONMENTAL IMPACTS

The previously certified Preserve EIR found public service impacts associated with the project to be less-than-significant with incorporation of mitigation measures. The revised project includes the addition of 264 residential units, a new pedestrian/bicycle bridge, and 16,000 square feet of commercial uses. These changes to the project will slightly increase the need for police and fire protection, library services, increased parkland, and would generate approximately 85 more students. Fire station facilities will not be located within the Delta Cove project site. Two proposed fire stations will be built; one within the Westlake Villages Development and one within the Sanctuary Development. When infrastructure development and construction begins, two fire department accesses will be developed and maintained to City of Stockton standards for the proposed project.

Mitigation measures listed in the previous EIR call for the payment of impact fees to reduce impacts regarding police and fire protection, library services, and school services. Implementation of these mitigation measures would ensure that the impacts associated with the revised project would remain at less than significant levels. The approved project dedicated 40.28 acres of parkland, while the revised project will dedicate 42.91 acres of parkland (see Figure 5 for overall park and open space areas). Therefore impacts related to parks and recreation will be reduced under the revised project. It should also be noted that the previously approved finance plan prevents the proposed changes from causing significant demands on public service operating costs. No additional public service impacts will result from the revised project. No new mitigation is required.

Should the owner, developer and/or successors-in-interest (ODS) and LUSD not be able to close a transaction for the conveyance of the proposed site to LUSD, the site may be rezoned to PF, Public Facilities, prior to submittal of the improvement plan on Phase 1 for compliance with the City’s 2035 General Plan.

Based on the analysis above, the proposed project does not affect public services impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: Less than significant.

Mitigation Measures: None required.

14. RECREATION

- Would the project:

- a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**
- b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
				X
				X

Issues associated with recreation have been address in the previous “Parks and Recreation” subsection of Section C.13 Public Services.

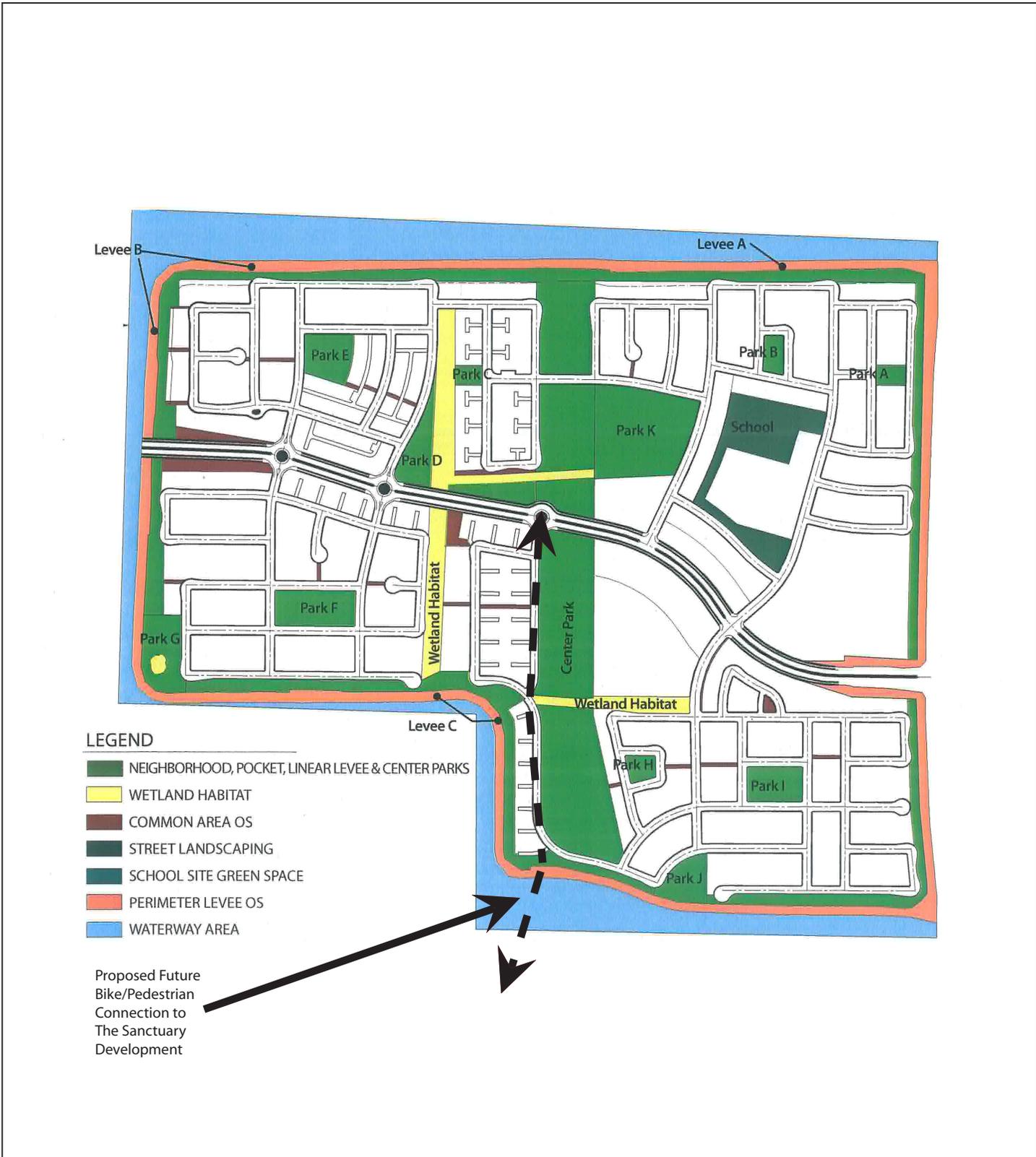


FIGURE 5

LSA



15. TRANSPORTATION/TRAFFIC

- Would the project:

Potentially Significant Impact Less than Significant with Mitigation Incorporated Less-than-Significant Impact No Impact

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?				X
b. Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways?				X
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?				X
f. Result in inadequate parking capacity?				X
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

ENVIRONMENTAL SETTING

A Supplemental Traffic Analysis Memo was prepared for the proposed project and is presented in Appendix B.

The Previous EIR analyzed traffic impacts for the Preserve and presented mitigation measures to reduce impacts (see section 4.7). Several transportation impacts were found to be significant and unavoidable despite mitigation.

ENVIRONMENTAL IMPACTS

Results of the Supplemental Transportation Impact Assessment show that the currently proposed project would generate slightly less traffic than the project evaluated in the previous EIR (13,240 daily trips versus 13,080 daily trips). This reduction in daily trips can be attributed to the following:

- The approved EIR analysis was conducted assuming 1,405 housing units (including 1,309 single-family homes and 96 condominiums). The higher trip generation was used to provide a conservative assessment of project impacts and allow for flexibility in development of the final site plan.
- The currently proposed project reduces the number of single family homes by approximately 174 units (over what was analyzed for the approved EIR) and increases the number of condominiums/apartments up to 340 units. Condominiums/apartments generate about half the traffic of a traditional single family home, so each single family home could be replaced by up to two condominiums/apartments without an increase in trip generation.
- The analysis conducted in the approved EIR did assume internalization of many of the school trips, which is also currently assumed. As the proposed commercial would be designed to be community serving, many of the trips would be internal to the project site.
- The approved EIR analysis did not take credit for transit usage.

Mitigation measures identified in the approved EIR would mitigate the off-site impacts of the proposed project. No new off-site impacts would occur with development of the revised project. The proposed pedestrian/bicycle bridge should also assist in reducing vehicular trips for persons crossing between Delta Cove and the Sanctuary project.

Based on the analysis above, the proposed project does not affect transportation and traffic impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: No impact.

Mitigation Measures: None required.

16. UTILITIES AND SERVICE SYSTEMS

- Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?			X	
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g. Comply with federal, state, and local statutes and regulations related to solid waste?				X

ENVIRONMENTAL SETTING

Utilities and Service Systems issues related to development of the project site were addressed in the previous EIR (see section 4.11). Utilities analyzed in the document include Wastewater, Electricity, Natural Gas, and Communication Services.

ENVIRONMENTAL IMPACT

The previously certified Preserve EIR found utilities and service systems impacts associated with the approved project to be less-than-significant with incorporation of mitigation measures. The revised project will add 264 residential units, a pedestrian/bicycle bridge, as well as 16,000 square feet of commercial uses. These additional uses will slightly increase the amount of wastewater produced and consumption of water. The approved project was projected to require approximately 637,119 gallons of water per day, while the proposed project will require approximately 699,211 gallons per day. An amended Water Supply Assessment (WSA) for this project is required to be submitted to the Municipal Utilities Department for review and approval. The previous WSA report shall be updated to reflect the increase in demand and be the document of record for future reference. No additional or increased impacts regarding water consumption are expected to occur. The approved project was also projected to produce approximately 443,202 gallons per day of wastewater, while the proposed project will produce approximately 475,077 gallons per day. The City of Stockton Municipal Utilities District will be consulted concerning their sanitary sewer system and its ability to manage the additional wastewater. However, the increased amount of wastewater associated with the proposed project is minor, and payment of impact fees indicated in the approved EIR will mitigate any potential impacts.

The proposed project will also increase demand for electricity, natural gas, and communication services. PG&E had indicated that they will be able to meet the addition of the proposed project's dry utility service demands. A comment letter (see Appendix D) was received from PG&E which outlines all applicable regulations and requirements that the proposed project must comply with. The applicant will comply with the regulations and consult with PG&E early in the development process.

It is anticipated that natural gas and communication service providers will be able to meet the minor increase in demand for utility services. Implementation of mitigation measures listed in the utilities and service systems section will ensure that no new significant impacts result from the revised project. No new mitigation is required.

Based on the analysis above, the proposed project does not affect utilities and service systems impacts by introducing more severe significant environmental impacts, entirely new significant environmental impact not studied in the certified EIR, or make alternatives or mitigation measures previously found to be infeasible now feasible.

Level of Significance: Less than Significant.

Mitigation Measures: None required.

ENVIRONMENTAL ISSUE:	Adequately Addressed by Earlier Analysis	Earlier Mitigation/Findings/ Monitoring Incorporated	Not Applicable
1. AESTHETICS	X	X	
2. AGRICULTURAL RESOURCES	X	X	
3. AIR QUALITY	X	X	
4. BIOLOGICAL RESOURCES	X	X	
5. CULTURAL RESOURCES	X	X	
6. GEOLOGY AND SOILS	X	X	
7. HAZARDS AND HAZARDOUS MATERIALS	X	X	
8. HYDROLOGY AND WATER QUALITY	X	X	
9. LAND USE AND PLANNING	X	X	
10. MINERAL RESOURCES	X	X	
11. NOISE	X	X	
12. POPULATION AND HOUSING	X	X	
13. PUBLIC SERVICES	X	X	
14. RECREATION	X	X	
15. TRANSPORTATION/TRAFFIC	X	X	
16. UTILITIES AND SERVICE SYSTEMS	X	X	
17. MANDATORY FINDINGS OF SIGNIFICANCE	X	X	

E. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

[Completed by Lead Agency or Authorized Consultant - -Check (X), as applicable]:

The environmental factors checked below would potentially be affected by this project (i.e., the project would involve at least one impact that is a "Potentially Significant Impact"), as indicated in the preceding Checklist (Section C) and the Earlier Analysis (Section D):

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

F. OTHER REFERENCES AND PERSONS CONSULTED
(Completed by Lead Agency or Authorized Consultant):

References Cited:

Persons Consulted:

David Nelson. A.G. Spanos Companies
Karen Garrett. A.G. Spanos Companies
Robert Lee. William Hezmalhalch Architects, Inc
Cathy Baranger. William Hezmalhalch Architects, Inc
David Gates. Gates & Associates
Kevin Lange. Mid-Valley Engineering
Mike Josselyn. WRA
Fehr & Peers, 2009. Supplemental Traffic Analysis Memo
LSA Associates, Inc., 2009. Revised Traffic Noise Modeling Memo

G. DETERMINATION

[Completed by Lead Agency - -Check (X), as applicable]:

On the basis of this initial evaluation and on substantial evidence in light of the whole record before the Lead Agency:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, however, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent (see attached Mitigation Agreement). A MITIGATED NEGATIVE DECLARATION or an ADDENDUM to a MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the changes to the previously approved project or new information which was not known or could not have been known until after an EIR was certified are not substantial thereby requiring major revisions to the EIR because of the involvement of new significant environmental effects or substantially more severe significant effects or previously identified significant impacts; or, that mitigation measures or alternatives previously found to be infeasible are now feasible, and an ADDENDUM to an EIR is required.
- I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" but at least one effect: (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or MITIGATED NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or MITIGATED NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required. Specifically, the environmental documentation for the proposed project is provided by the following document(s):

(Pursuant to the State and City Guidelines for Implementation of CEQA, the determination of the Community Development Director may be appealed to the City Planning Commission by submitting a written appeal with the applicable fee to the Community Development Department within ten (10) calendar days following this date of the determination.)

MICHAEL NIBLOCK, DIRECTOR

By: _____
(Signature of Planner)

Date: _____
(Date of Determination)

(Name and Title of Planner – Typed or Printed)

APPENDIX A – NOISE ANALYSIS



LSA ASSOCIATES, INC.
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FRESNO, CALIFORNIA 93711

559-499-1210 TEL
559-499-1211 FAX

BERKELEY
CARLSBAD
FORT COLLINS
IRVINE

PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN

SAN LUIS OBISPO
SEATTLE
S. SAN FRANCISCO

MEMORANDUM

DATE: May 4, 2009

TO: City of Stockton, California

FROM: Phil Ault, LSA Associates, Inc.

SUBJECT: Revised Traffic Noise Modeling For The Preserve Master Development Plan EIR

This memo has been prepared as a revision to The Preserve Master Development Plan EIR to summarize the revised traffic noise modeling results. The project applicant has proposed to redesign the land use plan. The redesign does not involve increasing either the density or intensity of the land uses studied in the certified EIR to the extent as to cause entirely new significant environmental effects or increase the intensity of existing significant environmental effects. Modifications include realigning the westerly end of Otto Drive slightly to the north, incorporating approximately 15,000 square feet of Village Mixed Uses (office and neighborhood commercial), preserving and enhancing existing wetland features on the site, moving the proposed school site to a more centrally located lot, providing additional transit opportunities, enhancing pedestrian and bicycle circulation, and improving community orientation. (See EIR addendum for a complete description and site plans for the revised project.)

This revision will address the traffic noise impacts of the proposed project redesign. This analysis is based on the revised buildout peak hour traffic forecasts provided by Fehr & Peers.¹ Except for the changes analyzed in this revision, the noise analysis presented in the certified EIR is incorporated by this reference into this revised noise analysis.

Off-Site Traffic Noise Impact

As indicated in the EIR, all off-site roadways within the project vicinity would experience traffic noise level increases of less than 3 dBA under with the project conditions compared to those without the project. This increase in noise levels would not be perceptible by the human ear in an outdoor environment.

Table 1 shows the modeled traffic noise level results for the revised cumulative year 2035 traffic conditions with the project. The revised traffic modeling included the following three roadway segments impacting off-site receptors that were previously modeled in the EIR:

- Trinity Parkway – north of Otto Drive;
- Trinity Parkway – south of Otto Drive; and
- Otto Drive – Mariners Drive to Trinity Parkway.

¹ Fehr & Peers, Transportation Consultants, 2009. Supplemental Traffic Analysis. May

Table 1: Revised 2035 Plus Project Traffic Noise Levels

Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 Feet from Outermost Lane
Trinity Parkway - North of Otto Drive	30,500	65	131	278	68.9
Trinity Parkway - South of Otto Drive	18,700	< 50 ¹	96	201	66.8
Otto Drive - Mariners Drive to Trinity Parkway	42,700	< 50	80	165	65.5
Otto Drive - Trinity Parkway to Street 1 ²	33,500	< 50	69	141	64.4
Otto Drive - Street 1 to Street 2	28,300	< 50	63	127	63.7
Otto Drive - Street 2 to Street 3	26,500	< 50	61	121	63.4
Otto Drive - Street 3 to Street 4	25,700	< 50	60	119	63.3
Otto Drive - Street 4 to Street 5	22,700	< 50	< 50	110	62.7
Otto Drive - West of Street 5	21,400	< 50	< 50	106	62.5

Source: LSA Associates, Inc., May 2009.

¹ Traffic noise within 50 feet of roadway centerline requires site specific analysis.

² Street names of Street 1, 2, etc., are based on roadway name designations in the revised traffic modeling by Fehr & Peers.

The revised traffic noise levels for these three previously modeled roadway segments are 0.2 and 0.1 dBA lower respectively along these segments of Trinity Parkway, and 5.0 dBA lower along this segment of Otto Drive than those shown for the project in the EIR. This is a result of the revised lower projected average daily traffic volumes and lower planned speed limits on these roadway segments. Therefore, as these project-related traffic noise impacts on off-site sensitive receptors would be even less than those described in the EIR, no significant traffic noise impact would occur on off-site, noise-sensitive land uses. No mitigation measures for off-site, noise-sensitive land uses would be required.

On-Site Traffic Noise Impact

The revised project on-site land uses include office and commercial mixed uses, residences, parks, and a school. As shown in Table 1, the 2035 with project traffic noise levels on roadway segments adjacent to and within the project site would range from 62.5 dBA to 68.9 dBA CNEL at 50 feet from the centerline of the outermost travel lane.

Based on the revised traffic noise modeling results shown in Table 1, cumulative plus project traffic noise levels could potentially result in the following impacts to the proposed land uses along Trinity Parkway and Otto Drive.

Trinity Parkway. Traffic noise levels along Trinity Parkway adjacent to the project site would reach up to 68.9 dBA CNEL at 50 feet from the centerline of the outermost travel lane. Based on the City's land use compatibility standards for community noise environments, these noise levels are considered "conditionally acceptable" for new residential and school development, and "normally acceptable" for new neighborhood parks and office and commercial development.

As noted in Section 3.3, *Specific Project Description/Operational Characteristics* of the EIR, the City approved relocation of the existing dryland levee west of its current location to run between Trinity Parkway and The Preserve project site. The relocated levee will be 8 ½ to 9 feet in height and a

minimum of 50 feet wide at the base. This would be expected to provide a minimum of 10 dBA in noise reduction, reducing traffic noise levels at the nearest proposed sensitive land uses within the project site along Trinity Parkway to below 59 dBA CNEL. The City considers community environments with ambient noise levels between 55 dBA and 70 dBA CNEL as “conditionally acceptable” for new residential and school development. Thus, new construction of development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design; conventional construction, with closed windows and fresh air supply systems of air conditioning will normally suffice.

Based on the typical sound level reductions of buildings identified in Protective Noise Levels, Condensed Version of EPA Levels Document (November 1978, EPA-550/9-79-100), standard building construction would provide 24 dBA or more in noise reduction from exterior-to-interior with windows and doors closed. With windows and doors open, interior noise levels at residences bordering Trinity Parkway would exceed the interior noise standard of 45 dBA CNEL (i.e., 59 dBA - 12 dBA = 47 dBA). Therefore, an alternate fresh air supply system, such as air conditioning, would be required to ensure that windows can remain closed for a prolonged period of time in order to meet the interior noise standard of 45 dBA CNEL (i.e., 59 dBA - 24 dBA = 35 dBA).

At a distance of 101 feet from the centerline of Trinity Parkway, distance attenuation would provide more than 2 dBA in reduction of traffic noise levels compared to that at 74 feet from the centerline (which is equivalent to 50 feet from the centerline of the outermost travel lane). Thus, traffic noise levels at sensitive receptors located 101 feet or greater from the centerline of Trinity Parkway would be reduced to meet the interior noise standard of 45 dBA CNEL even with windows open (i.e., 59 dBA - 12 dBA - 2 dBA = 45 dBA).

Otto Drive. Cumulative (year 2035) plus project traffic noise levels within the project boundaries would reach up to 64.4 dBA CNEL at 50 feet from the centerline of the outermost travel lane of Otto Drive along the segment from Trinity Parkway to Street 1. Based on the City’s land use compatibility standards for community noise environments, these noise levels are considered “conditionally acceptable” for new residential and school development, and “normally acceptable” for new neighborhood parks and office and commercial development.

According to the revised site and roadway design plans, residential land uses could be located 29 feet from the centerline of the outermost travel lane of Otto Drive (or 54 feet from the roadway centerline). At this distance, traffic noise levels would range up to 67.1 dBA CNEL. This is still considered “conditionally acceptable” for new residential and school development, and “normally acceptable” for new neighborhood parks and office and commercial development.

It is also the City’s policy that new development of residential land uses will not be permitted in areas exposed to projected exterior noise levels from traffic noise sources exceeding 60 dBA CNEL. Where it is not possible to reduce exterior noise to 60 dBA CNEL or less by incorporating a practical application of the best available noise-reduction technology, an exterior noise level of up to 65 dBA CNEL will be allowed. Under no circumstances will interior noise levels be permitted to exceed 45 dBA CNEL with the windows and doors closed.

In order reduce traffic noise levels to below 65 dBA CNEL at proposed residential outdoor active use areas, one of two noise reduction features should be incorporated into the project design. One noise reduction feature is a required setback. Table 1 shows the distances from the roadway centerline for each of the modeled roadway segments at which exterior traffic noise levels would be reduce to

below 65 dBA CNEL. Thus, four of the modeled segments on Otto Drive would exceed 65 dBA CNEL at the nearest proposed residential outdoor active use areas. By incorporating the following setbacks into the project design, exterior traffic noise levels would be reduced to below 65 dBA CNEL at the nearest proposed residential outdoor active use areas:

- Otto Drive from Trinity Parkway to Street 1, a setback of 69 feet from the centerline;
- Otto Drive from Street 1 to Street 2, a setback of 63 feet from the centerline;
- Otto Drive from Street 2 to Street 3, a setback of 61 feet from the centerline; and
- Otto Drive from Street 3 to Street 4, a setback of 60 feet from the centerline.

Another noise reduction feature that would reduce traffic noise impacts on outdoor active use areas is a sound wall. A 6 foot high sound wall located along the proposed residential property lines adjoining Otto Drive would result in an approximate 6 dBA decrease in traffic noise levels. This would reduce traffic noise levels at the nearest residential outdoor active use areas to below 65 dBA CNEL. Therefore, for any residential property with outdoor active use areas located at distances less than the above recommended setbacks, a 6 foot high sound wall would be required to reduce exterior traffic noise levels to below 65 dBA CNEL.

All proposed residential development must also meet the interior noise standard of 45 dBA CNEL. With windows and doors open, interior noise levels from traffic noise sources at residences bordering Otto Drive would exceed the interior noise standard of 45 dBA CNEL (i.e., $67 \text{ dBA} - 12 \text{ dBA} = 55 \text{ dBA}$). Therefore, an alternate fresh air supply system, such as air conditioning, would be required to ensure that windows can remain closed for a prolonged period of time in order to meet the interior noise standard of 45 dBA CNEL (i.e., $67 \text{ dBA} - 24 \text{ dBA} = 43 \text{ dBA}$).

At a distance of 251 feet from the centerline of Otto Drive, distance attenuation would provide more than 10 dBA in reduction of traffic noise levels compared to that at 54 feet from the centerline. Thus, traffic noise levels at sensitive receptors located 251 feet or greater from the centerline of Otto Drive would be reduced to meet the interior noise standard of 45 dBA CNEL even with windows open (i.e., $67 \text{ dBA} - 12 \text{ dBA} - 10 \text{ dBA} = 45 \text{ dBA}$).

Mitigation Measures

Section 4.5 Noise of The Preserve Master Development Plan EIR includes Mitigation Measure NOI-2 for reducing on-site traffic noise impacts. This mitigation measure includes sound walls, fresh air supply systems, and window upgrades. However, based on the redesign of the project and the resulting revised traffic noise modeling, this mitigation measure should be amended as follows for the revised project.

Mitigation Measure NOI-2: The following mitigation measures shall be implemented for the proposed project:

Exterior Noise. The following mitigation measure is required to protect residential outdoor active use areas such as backyards, patios, and balconies from excessive traffic noise impacts:

- A sound barrier with a minimum height of six (6) feet shall be constructed along the proposed residential property lines adjoining Otto Drive for all residential properties with outdoor active use areas in the following locations:
 - Within 69 feet of the centerline of Otto Drive from Trinity Parkway to Street 1;

- o Within 63 feet of the centerline of Otto Drive from Street 1 to Street 2;
- o Within 61 feet of the centerline of Otto Drive from Street 2 to Street 3; and
- o Within 60 feet of the centerline of Otto Drive from Street 3 to Street 4.

Interior Noise. To meet the City's 45 dBA CNEL interior noise standard, the following mitigation measures will be required:

- To meet the City's 45 dBA CNEL interior noise standard, alternate fresh air supply systems, such as air-conditioning, shall be installed in all residential, school, and office and commercial mixed-use units that have no intervening structures in the following areas:
 - o Within 101 feet of the centerline of Trinity Parkway, and
 - o Within 251 feet of the centerline of Otto Drive.

Implementation of the above mitigation measure will ensure that on-site traffic noise impacts would be reduced to less-than-significant.

APPENDIX B – TRAFFIC ANALYSIS

MEMORANDUM

Date: July 29, 2010
To: Karen Garrett, AG Spanos
From: Kathrin Tellez
Subject: Delta Cove – Supplemental Traffic Analysis

WC05-2223

Fehr & Peers has prepared this memorandum detailing the results of the supplemental transportation assessment of Delta Cove. Delta Cove site is located south of Bear Creek, and west of Interstate 5 (I-5) and the Twin Creeks Estates Neighborhood, in Stockton, California. An extension of Otto Drive would bisect the project site. A full transportation impact analysis was included in the certified Environmental Impact Report (EIR) for the site. The EIR transportation analysis evaluated the development of 1,659 housing units (including 1,311 single-family homes and 348 condominiums), and 650-student elementary school¹. On-site and off-site impacts were identified and mitigation measures were developed. Since the approval of the project in December 2008, the site plan has been modified to provide a mixture of land uses, and to improve pedestrian and bicycle circulation.

Results of the supplemental transportation impact assessment show that the currently proposed project would generate traffic at similar levels to the project evaluated in the EIR. Therefore, no new off-site transportation impacts would occur with development under the modified plan. Additionally, alternative, yet equally effective, mitigation measures have been identified for the Otto Drive/Trinity Parkway intersection. This memorandum is presented in four sections, Project Description, Trip Generation, Analysis, and Conclusions.

PROJECT DESCRIPTION

The project site is approximately 359 acres bound by Bear Creek to the north, Mosher Slough to the west and south, and the future Trinity Parkway to the east. Regional access to the site would be provided from Otto Drive, connecting to Trinity Parkway. A new interchange at I-5 is proposed from Otto Drive. Trinity Parkway would ultimately connect Eight Mile Road to Hammer Lane, and March Lane. Otto Drive would also connect to Regatta Lane in the west. Traffic control on Otto Drive is proposed to be provided by a mixture of traffic signals and two-lane roundabouts.

As currently envisioned, the site would be developed with 1,165 single-family homes, 280 apartment units, 40 condominiums, 60 live/work lofts (total work space includes 16,000 square feet of office and 2,500 square feet of retail or approximately 310 square feet of work space per unit), a neighborhood retail center with approximately 15,000 square feet of commercial uses (for the purposes of this analysis, it was assumed that approximately 12,000 square feet of retail, and 3,000 square feet of office would be developed), and a 650 student elementary school. A

¹ The project approved for the site would provide 1,308 single family homes, 96 condominiums, and a 650 student elementary school.

community garden is also proposed. A bicycle path would encircle the site, on the levee and Trinity Parkway. Otto Drive would be designated a Class III bicycle route, with on-street and off-street bicycle accommodations. Transit stops will also be provided on Otto Drive and Trinity Parkway. No resident would need to walk more than 1/2-mile to a transit stop, and most residents would be located within a 1/4-mile walk of a transit stop. Pedestrian trails and paths are provided throughout the development to minimize walking distances between residential uses and the mixed-use village center, schools, transit stops, parks and other amenities proposed for the site.

TRIP GENERATION

Project trip generation for the proposed project site was calculated using the same methodologies presented in the EIR and are based on standard Institute of Transportation Engineers (ITE) generation rates, as presented in *Trip Generation* (8th Edition), 2008. As shown in Table 1, the proposed project is expected to generate up to 13,080 daily, 1,159 AM and 1,250 PM peak hour trips. This level of trip generation was compared to the EIR analysis.

TABLE 1 DELTA COVE UPDATED PROJECT TRIP GENERATION								
Number of Units	Component	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
1,165	Single-family ¹	9,950	206	619	825	604	354	958
280	Apartments ²	1,820	28	113	141	112	60	172
40	Condominiums ³	230	3	15	18	14	7	21
12,000	Specialty Retail ⁴	530	6	4	10	15	18	33
Less Pass-by	50.0% ⁵	-270	-3	-3	-6	-9	-9	-18
3,000	Office ⁶	30	4	1	5	1	3	4
60	Live/Work Units ⁷	440	18	25	43	14	25	39
273 ⁸	Students ⁹	350	68	55	123	20	21	41
TOTAL		13,080	331	828	1,159	770	480	1,250
EIR Analysis Trip Generation		13,240	308	854	1,162	806	468	1,274
Difference		-160	23	-26	-3	-35	11	-24
Notes:								
1. Trip generation based on ITE rates for Single Family Home (Land Use 210): Daily Rate: $\text{Ln}(T) = 0.92 \text{Ln}(D) + 2.71$ AM Peak Hour Rate: $T = 0.70(D) + 9.74$ (inbound = 25%, outbound = 75%) PM Peak Hour Rate: $\text{Ln}(T) = 0.90 \text{Ln}(D) + 0.51$ (inbound = 63%, outbound = 37%)								

<p>Where: T = trip ends, and D = Dwelling Units</p> <p>2. Trip generation based on ITE rates for Apartments (Land Use 220): Daily Rate: T = 6.06 (D) + 123.56 AM Peak Hour Rate: T= 0.49 (D) + 3.73 (inbound = 20%, outbound = 80%) PM Peak Hour Rate T= 0.55 (D) + 17.65 (inbound = 65%, outbound = 35%)</p> <p>Where: T = trip ends, and D = Dwelling Units</p> <p>3. Trip generation based on ITE rates for Condominiums (Land Use 230): Daily Rate: T = 5.81 (D) AM Peak Hour Rate: T= 0.44 (D) (inbound = 17%, outbound = 83%) PM Peak Hour Rate T= 0.52 (D) (inbound = 67%, outbound = 33%)</p> <p>Where: T = trip ends, and D = Dwelling Units</p> <p>4. Trip generation based on ITE rates for Specialty Retail (Land Use 814): Daily Rate: T = 44.32 (X) AM Peak Hour Rate: T= 1.00 (X) (inbound = 61%, outbound = 39%) PM Peak Hour Rate T= 2.71 (X) (inbound = 44%, outbound = 56%)</p> <p>Where: T = trip ends, and X = 1,000 Square Feet</p> <p>5. Pass-by Trips based on information contained in ITE's <i>Trip Generation Handbook</i>, 2004, presented for Daily/AM Peak Hour/PM Peak Hour.</p> <p>6. Trip generation based on ITE rates for Office (Land Use 710): Daily Rate: T = 11.01 (X) AM Peak Hour Rate: T= 1.55 (X) (inbound = 88%, outbound = 12%) PM Peak Hour Rate T= 1.49 (X) (inbound = 17%, outbound = 83%)</p> <p>Where: T = trip ends, and X = 1,000 Square Feet</p> <p>7. Trip generation based on trip generation counts over a three day period at the Phoenix live/work lofts in Oakland, which range in size from 1,000 to 2,000 square feet: Daily Rate: T = 7.33 (D) AM Peak Hour Rate: T= 0.71 (D) (inbound = 42%, outbound = 58%) PM Peak Hour Rate T= 0.65 (X) (inbound = 36%, outbound = 64%)</p> <p>Where: T = trip ends, and D = Dwelling Units</p> <p>8. Based on information provided by the Lodi Unified School District, an estimated 0.31 elementary school students would be generated per single-family home, and 0.05 elementary school students would be generated per condominium or apartment unit. This results in approximately 377 elementary school students residing in Delta Cove. The number of students expected to come from within the project were subtracted from the total number of students, as it is anticipated that these students would bicycle or walk to school, or be dropped off by a parent on their way to work. The residential trip generation was not reduced to account for student drop-off/pick-up, as it was assumed that this trip would be part of another trip destined outside Delta Cove.</p> <p>9. Trip generation based on ITE rates for Elementary School (Land Use 520): Daily Rate: T = 1.29 (S) AM Peak Hour Rate: T= 0.45 (S) (inbound = 55%, outbound = 45%) PM Peak Hour Rate: T= 0.15 (S) (inbound = 49%, outbound = 51%)</p> <p>Where: T = trip ends, and S = number of students</p> <p>Source: Fehr & Peers Associates, 2009.</p>

On a daily basis, the Proposed Project is expected to generate less traffic than the approved project. On a peak hour basis, the Proposed Project is also expected to generate less traffic overall than the approved project, although there would be slightly more inbound traffic and less outbound traffic during the AM peak hour, and slightly less inbound traffic and more outbound traffic during the PM peak hour as the approved project. The added project traffic would occur in the non-peak direction of travel and the reduced project traffic would occur in the peak direction of travel, resulting in more efficient intersection operations close to the project site and a negligible affect on intersections far from the site.

As the project contains a mixture of uses, bicycle and pedestrian accommodations, and would be well served by future transit service, not all the trips generated by the site would be automobile trips. However, to present a conservative estimate of potential project trips, no trip discounts were applied to account for the interaction between uses (except between the residential and educational component of the project). It is likely that given the planned level of transit service to the site by 2035, at least 2 to 6 percent of residents commute trips would be made via transit, resulting in lower trip generation projections that presented in Table 1.

As there is no guarantee that the school site would be purchased by the School District and be developed as a school, the potential trip generation of the project site was evaluated with the underlying zoning of the school site (low density residential) permitting approximately 96 additional residential units.

TABLE 2 DELTA COVE UPDATED PROJECT TRIP GENERATION – NO SCHOOL								
Number of Units	Component	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
1,261	Single-family units	10,710	223	669	892	648	380	1,028
280	Apartments	1,820	28	113	141	112	60	172
40	Condominiums	230	3	15	18	14	7	21
12,000	Specialty Retail	530	6	4	10	15	18	33
Less Pass-by	50.0%	-270	-3	-3	-6	-9	-9	-18
3,000	Office	30	4	1	5	1	3	4
60	Live/Work Units	440	18	25	43	14	25	39
TOTAL		13,490	280	823	1,103	794	485	1,279
EIR Analysis Trip Generation		13,240	308	854	1,162	806	468	1,274
Difference		250	-28	-31	-59	-11	16	5

Source: Fehr & Peers Associates, 2009.

This assessment shows that without development of a school on the site, the proposed project is expected to generate up to 13,490 daily, 1,103 AM and 1,279 PM peak hour trips. This level of trip generation is slightly higher on a daily basis, but less during the AM peak hour and generally the same during the PM peak hour as the level of trip generation evaluated in the EIR. Therefore, construction of single family homes on the school site would have less of an impact during the AM peak hour and a similar impact during the PM peak hour as the project analyzed in the EIR.

Based on the level of trip generation for the revised Project, the off-site impacts are expected to be the same as disclosed in the Environmental Impact Report for the project and no new off-site analysis is recommended. However, the operations of the internal site intersections were evaluated due to changes in the proposed traffic control, as the revised land plan would also alter where vehicle trips are loaded onto the roadway network.

ANALYSIS

This section describes analysis methods, traffic forecasts, and results.

Traffic Forecasts

Updated traffic forecasts reflecting the proposed Project were developed for intersections on Otto Drive from Mariners Drive to Mosher Slough based on the trip generation discussed above and the trip distribution presented in the EIR for the 2035 General Plan buildout condition. The forecasts are shown on Figure 1, with the recommended lane configuration and traffic control at each of the study intersections. Recommended turn pocket storage lengths are also shown on Figure 1. Daily traffic volumes on the roadways within the site are also shown on Figure 1.

Analysis Methods

Due to the two-lane roundabout intersections, a micro-simulation tool, VISSIM, was selected to evaluate the roundabout operations. Synchro was used to evaluate the signalized intersections as this was the analysis tool used for the analysis presented in the EIR. VISSIM is a microscopic, behavior-based multi-purpose traffic simulation program. This software models each individual vehicle through the system, including transit vehicles, and bicycles, and can also model the effects of pedestrian traffic on the roadway system. Other factors considered on the analysis include lane geometry, parking maneuvers, signal phasing and timing, pedestrian crossing times, and peak hour factors.

Analysis Results

For this assessment, intersection levels of service and travel speed were calculated, as presented in Tables 3 and 4, respectively. As presented in Table 3, the internal intersections are projected to operate at overall acceptable service levels during both peak hours. The Otto Drive/Trinity Parkway and Otto Drive/Mariners Drive intersection are projected to operate at LOS D during both peak hours with the Proposed Project at General Plan buildout with the recommended lane configurations and traffic control shown on Figure 1.

The average peak hour travel speed on Otto Drive is expected to range between 15 and 23 miles per hour. The roundabout traffic control and signal operations would meter the flow of traffic through the development, providing for moderate travel speed through the development.

**TABLE 3
 PEAK HOUR INTERSECTION LEVELS OF SERVICE
 2035 WITH PROJECT WITH RECOMMENDED INTERSECTION CONFIGURATION**

Intersection		Control ¹	Peak Hour	Delay ^{2,3}	LOS
1.	Otto Drive/Street 5	Roundabout	AM	3 (17)	A (C)
			PM	3 (35)	A (D)
2.	Otto Drive/Street 4	Roundabout	AM	3 (25)	A (C)
			PM	5 (39)	A (E)
3.	Otto Drive/Street 3	Roundabout	AM	4 (32)	A (D)
			PM	6 (11)	A (B)
4.	Otto Drive/Street 2	Signal	AM	14	B
			PM	6	A
5.	Otto Drive/Street 1	Signal	AM	27	C
			PM	18	B
6.	Otto Drive/Trinity Parkway	Signal	AM	47	D
			PM	49	D
7.	Otto Drive/Mariners Drive	Signal	AM	15	B
			PM	39	D

Notes:
¹ Signal = Signalized intersection; roundabout = roundabout-controlled intersection.
² Signalized intersection average control delay (in seconds per vehicle) and LOS calculated using the 2000HCM method.
³ Roundabout-controlled intersection LOS is based on average delay per vehicle (in seconds) according to the 2000 HCM, the worse case movement delays are presented in parenthesis.
 Source: Fehr & Peers, 2009.

**TABLE 4
 PEAK HOUR TRAVEL SPEED**

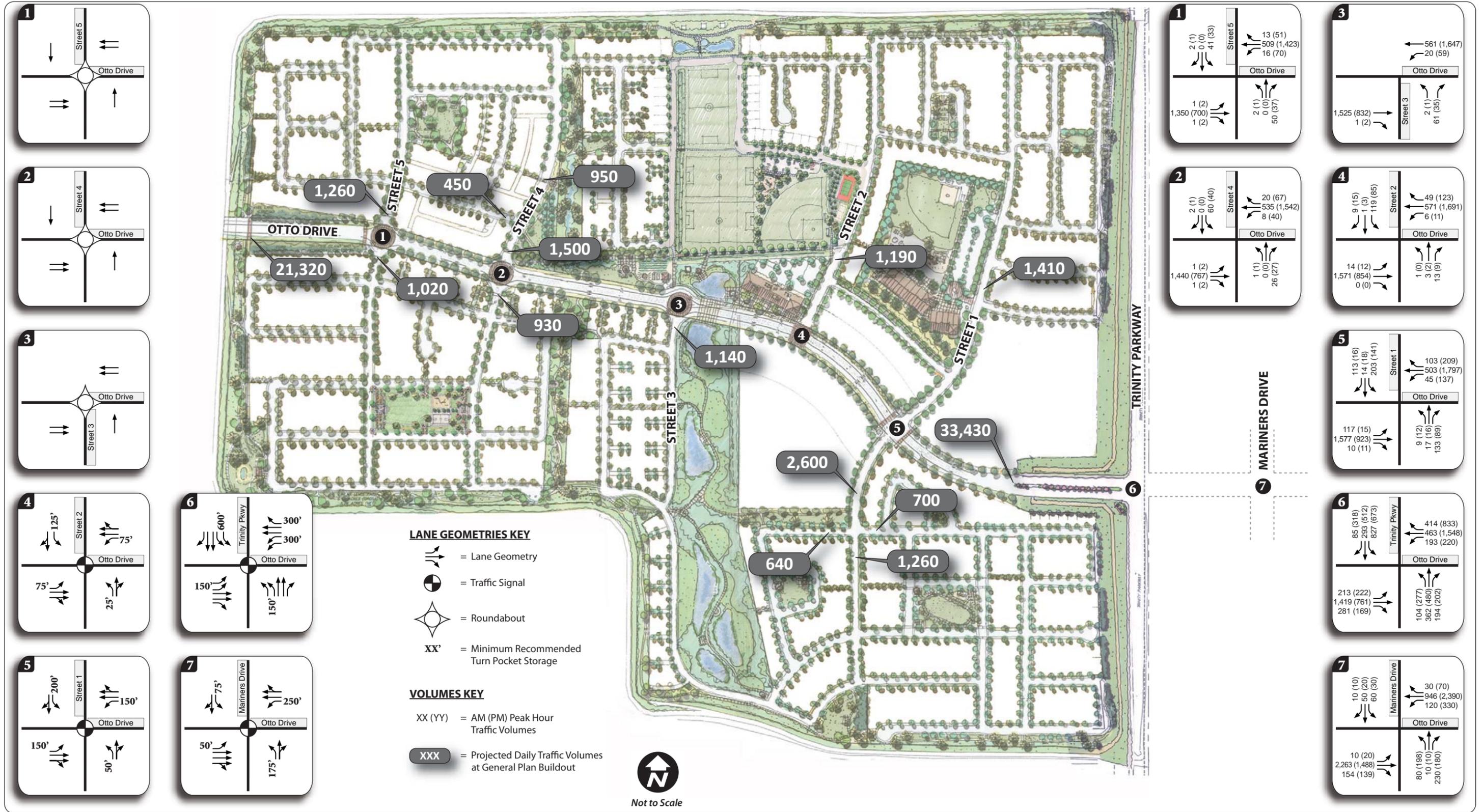
Segment	Peak Hour	Average Speed (in miles per hour)
Mosher Slough to Trinity Parkway (eastbound)	AM	15
	PM	20
Trinity Parkway to Mosher Slough (westbound)	AM	23
	PM	16

Source: Fehr & Peers, 2009.

CONCLUSIONS

Results of this supplemental transportation impact assessment show that the currently proposed project would generate slightly less traffic than the project evaluated in the EIR, and the mitigation measures identified in the EIR would mitigate the off-site impacts of the Proposed Project. Therefore, no new off-site impacts would occur with development of the modified plan, and no additional analysis is recommended.

This completes our assessment of Delta Cove. Please call if you have any questions.



APPENDIX C – GLOBAL CLIMATE CHANGE MEMORANDUM



LSA ASSOCIATES, INC.
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BERKELEY
CARLSBAD
FORT COLLINS

IRVINE
PALM SPRINGS
POINT RICHMOND

RIVERSIDE
ROCKLIN
SAN LUIS OBISPO
S. SAN FRANCISCO

MEMORANDUM

DATE: August 25, 2010
TO: City of Stockton
FROM: Jason Paukovits, LSA Associates, Inc.
SUBJECT: Delta Cove Global Climate Change

This memorandum describes how the Delta Cove project, previously known as the Preserve, will address global climate issues noted as a result of the Memorandum of Agreement (Agreement) entered into in September 2008 by and among the City of Stockton (City), Edmund G. Brown Jr., Attorney General of California, on behalf of the People of the State of California (Attorney General), and the Sierra Club.

The Agreement contains actions for the City to take to achieve reductions in greenhouse gas (GHG) emissions, including the adoption of a Climate Action Plan (CAP). Until such time as the CAP is adopted, the Agreement also contains “Early Climate Protection Actions” that shall be met prior to the approval of development projects. Further, the City of Stockton City Council adopted an interim GHG reduction target of 28.7 percent from the 2020 “business-as-usual” (BAU) model. This interim target is based on the Statewide reductions necessary to meet the goal of Assembly Bill (AB) 32 to reduce GHG emissions to 1990 levels by the year 2020.

In December of 2008, the Stockton City Council certified the Environmental Impact Report (EIR) for the Preserve Planned Development. In an effort to promote sustainability, preserve existing wetland areas, increase park and open space, increase site walkability and community orientation, and generally improve land uses, the applicant has proposed to redesign the land use plan for the development, now known as Delta Cove. The Delta Cove project will address the Early Climate Protection Actions that are included in the Agreement, as well as meet a 28.7 percent GHG emission reduction target. This memorandum also documents the revised Delta Cove project’s business-as-usual GHG emissions and mitigated GHG emissions by incorporating State emission reduction measures and project-level mitigation consistent with the goals of the Agreement.

EARLY CLIMATE PROTECTION ACTIONS

The Agreement contains provisions for Early Climate Protection Actions “to reduce greenhouse gas emissions through reducing commuting distances, supporting transit, increasing the use of alternative vehicle fuels, increasing efficient use of energy, and minimizing air pollution...until such time as the City formally adopts the Climate Action Plan.” The following discussion reproduces specific provisions in the Agreement and identifies the means and methods by which the Delta Cove project satisfies each provision.

a) *City Staff shall:*

- 1) *Formulate proposed measures necessary for the project to meet any applicable GHG reduction targets;*

The Revised Draft Environmental Impact Report for the Preserve included nine mitigation measures (MM), GCC-1 through GCC-9, to reduce GHG emissions associated with the project.¹ These measures and their associated benefits are discussed throughout this memorandum.

- 2) *Assess the project's VMT [Vehicle Miles Traveled] and formulate proposed measures that would reduce the project's VMT;*

Delta Cove is located within a developed region of North Stockton. Delta Cove will include mixed residential densities, sidewalks, benches and other amenities to make walking feasible. Streets and trails are linked throughout the community and key streets are speed controlled in order to promote safety. Delta Cove also benefits from its close proximity to Spanos Park West which provides a variety of commercial shopping and employment opportunities.

The mitigation measures from EIR Section 4.15 Global Climate Change would reduce VMT associated with the Delta Cove project, particularly:²

- ***Mitigation Measure GCC-3 (Land Use)***. MM GCC-3 requires sidewalks and pedestrian paths throughout as much of the project as possible that connect to open space areas, parks, and schools to encourage walking and bicycling, install mid-block paths to facilitate pedestrian movement through long blocks and cul-de-sacs, and provide access to all neighborhoods and amenities within the proposed project and enhances comfort and safety for pedestrians by offering ample lighting, planted medians, tree-lined streets, crosswalks and wide sidewalks;
- ***Mitigation Measure GCC-8 (Transportation System Management)***. MM GCC-8 requires the owner, developer and/or successors-in-interest (ODS) of the commercial and industrial land uses to form a Transportation Management Association or join an existing association to (1) provide bicycle enhancing infrastructure that includes bikeways/paths connecting to a bikeway system, and (2) promote ride sharing programs by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides;
- ***Mitigation Measure GCC-9 (Trip Reduction)***. GCC-9 requires the ODS address an overall reduction in project-related VMT, including traffic calming measures as part of the proposed project design and maintaining vehicle speeds within the project at a level that provides maximum safety for residents. The proposed project shall include pedestrian sidewalks and pathways separate from vehicle paths, which are easy to navigate and designed to facilitate pedestrian movement. The bicycle circulation system

¹ LSA Associates, Inc., 2008. Selected Sections. Revised Draft Environmental Impact Report. The Preserve, Stockton, California. SCH#2006092063. August.

² Summaries of the relevant mitigation measures are presented here. Exact language of the measures is available in the Revised Draft EIR, as well provided later in this document.

should be planned to act as a regional circulation system connecting the proposed project to Stockton's roadway/bikeway system and incorporate bicycle lanes and routes into the street system. The Delta Cove project should include a through roadway connecting adjacent developments so as to permit transit circulation between developments and encourage public transportation by incorporating bus turnouts, shelters, and walkways into the design. The highest density land use should be located at or within ¼ mile of a transit stop, which would result in a further overall reduction in daily trips and VMT.

Delta Cove is designed to accommodate multiple forms of transportation. A vehicular and non-vehicular circulation plan will encourage bicycle and pedestrian travel, as well as alternatives to the automobile, through a comprehensive transit system. Bus stops could be used for fixed-route public bus service, private commuter bus service or a shuttle system connection from Delta Cove to other parts of the City of Stockton. The Delta Cove development recognizes the importance of incorporating transit into the development as a component for the reduction of VMT. As indicated in MM GCC-9, Delta Cove will invest in infrastructure that will facilitate the expansion of San Joaquin Regional Transit District (SJRTD) to service the development.

A pedestrian/bicycle trail system provides access between important destinations within the project area, such as the residential neighborhoods, public facilities and parks. The pedestrian/bicycle circulation system is planned to link to areas outside Delta Cove, including Spanos Park West, the Paradise Point Marina and Oak Grove Regional Park to the north. Delta Cove provides a diverse range of residential housing opportunities, recreational facilities and natural areas for future residents.

Using standard Institute of Transportation Engineers (ITE) trip generation rates, as presented in *Trip Generation* (8th Edition), Delta Cove is expected to generate up to 13,080 daily vehicle trips.³ Therefore, Delta Cove would generate less traffic than the approved project described in the EIR, which was estimated at 13,240 trips.⁴

As the project contains a mixture of uses, bicycle and pedestrian accommodations, and will be well served by future transit service, not all the trips generated by the site would be automobile trips. The standard ITE methodology does not account for all vehicle trip reductions that would occur based on the layout and mixed-use design of Delta Cove, including the pedestrian, bicycle and transit amenities. The US Environmental Protection Agency (EPA) sponsored a national study, which is currently under review by the Institute of Transportation Engineers (ITE), of the trip generation characteristics of multi-use sites. Travel survey data was gathered from 239 mixed-use developments in six major metropolitan regions. The findings indicate that the amount of external traffic generated by a mixed-use development is affected by a wide variety of factors, each factor related to the one of the following characteristics:

- Density
- Diversity
- Design

³ Fehr & Peers, 2009. Memorandum. Delta Cove – Supplemental Traffic Analysis. November 5.

⁴ Ibid

- Destinations,
- Development scale
- Demographics
- Distance to transit

The transportation engineer for the project, Fehr & Peers, also used a mixed-use model, which predicts the trip reduction as a function of the characteristics above to estimate daily vehicle trips for Delta Cove. Approximately 7.5 percent of the external trips are expected to occur via walking, biking or transit.⁵ This accounts for (i) residents of the adjacent Twin Creeks neighborhood or the future Sanctuary development potentially walking or biking to the school, or retail/office uses located within the site, and (ii) future Delta Cove residents walking or biking to adjacent developments, as well as taking transit.

In addition to the external non-motorized trips, approximately 17 percent of trips are expected to remain internal to the site, including school trips, and trips to the neighborhood retail center by residents.⁶ While some of these trips may be vehicle trips, the site has been designed to encourage non-motorized travel to uses within the site. Using the mixed-use model, Fehr & Peers estimates the trip generation for Delta Cove to be 11,630 vehicle trips per day.⁷ The mixed-use trip generation model shows that the overall external project trip generation would be 10 to 12 percent lower than using standard trip generation tools.

As the project has been modified to include a more diverse mixture of uses, including some office and retail uses, and the non-motorized transportation system for the site has been improved, the project has the potential to generate fewer vehicle trips and the vehicle trips generated could be of shorter length. Based on these factors, Fehr & Peers estimates the Delta Cove project would generate approximately 119,300 VMT per day compared to 133,700 VMT for the approved project.⁸ Delta Cove with its mixture of uses and variety of housing types generates approximately 10 percent fewer VMT than the previously approved project.

As demonstrated above, Delta Cove includes project design features and mitigation measures that would reduce project trips and VMT. Delta Cove is consistent with the Agreement.

- 3) *Assess the transit, especially BRT [Bus Rapid Transit], needs of the project and identify the project's proposed fair share of the cost of meeting such needs;*

Delta Cove incorporates transit-oriented design into its master plan as a means to encourage increased transit ridership. Most residents of the proposed Delta Cove project would be located within a ¼-mile walk of a transit stop and no resident would need to walk more than ½-mile to a transit stop. Two transit routes with a total of 68 buses per day would serve the

⁵ Fehr & Peers, 2009. Delta Cove – Mixed-Use Trip Generation and Vehicle Miles of Travel Assessment. December 22.

⁶ Ibid.

⁷ Ibid.

⁸ This model used to estimate VMT (not vehicle trips) was the City of Stockton travel demand model, which does not contain a transit mode share component. Therefore, the resulting VMT estimates could be further reduced to better reflect potential transit use for future site residents.

site (based on existing schedules for bus lines in the study area). In addition, the site is adjacent to the BRT route proposed by SJRTD as part of its long-term plan to service North Stockton.

According to SJRTD, a small number of survey respondents, approximately 2 percent, currently use public transportation for their daily commute.⁹ Fehr & Peers estimates that approximately 2.75 percent, or 134 people per day from Delta Cove, would use transit for their daily commute¹⁰. This demonstrates that a need for public transit is anticipated within this development. Consistent with SJRTD routes, bus stops are proposed on Otto Drive and Trinity Parkway and the majority of the project site would be within a 5-minute (i.e., ¼-mile) walk of a transit stop. As required by MM GCC-9, the developer would construct transit pull-outs to SJRTD standards and provide other transit amenities, including transit shelters. Delta Cove would fund its “fair share” costs of meeting future transit needs through the funding and implementation of the required mitigation measures and through existing taxes imposed on the development.

- 4) *Assess whether project densities support transit, and, if not, identify proposed increases in project density that would support transit service, including BRT service;*

Stockton displays overall moderate level of transit demand potential, with an overall City average of 2 percent transit ridership. Delta Cove densities support transit ridership at a higher level (2.75 percent) than the overall City of Stockton average.¹¹ Determining whether a project’s design supports transit ridership is more complicated than simply estimating housing densities. As indicated in recent SJRTD reports¹², more detailed tools can identify residential areas with a high propensity to use transit. As discussed earlier, the mixed-use model used by Fehr & Peers to estimate trip reduction and transit ridership for Delta Cove considers density, diversity, design, destinations, development scale, demographics, and distance to transit as variables that affect traffic generation.

- 5) *Assess the project’s estimated energy consumption, and identify proposed measures to ensure that the project conserves energy and uses energy efficiently;*

Based upon consumption factors from the Energy Information Administration of the U.S. Department of Energy (US DOE), Delta Cove would require 11,970 megawatt hours of electricity and 69 million standard cubic feet of natural gas per year over existing conditions. PG&E has indicated that its existing systems have the capacity to accommodate these increases.¹³ Furthermore, it is anticipated that through the implementation of the 2008 Building Energy Efficiency Standards, due to take effect on January 1, 2010, as well as the energy efficiency measures listed in Mitigation Measures GCC-1 and GCC-2 (Building Construction

⁹ San Joaquin Regional Transit District, 2009. 2009 Comprehensive Operational Analysis. Survey Analysis. August.

¹⁰ Delta Cove proposes 1,545 residential units and would house approximately 4,805 people, based on an average household size of 3.11 people per housing unit as reported in the 2000 Census.

¹¹ Fehr & Peers, 2009. Delta Cove – Mixed-Use Trip Generation and Vehicle Miles of Travel Assessment. December 22.

¹² San Joaquin Regional Transit District, 2009. 2009 Comprehensive Operational Analysis. Market Assessment. August.

¹³ LSA Associates, Inc., 2007. Environmental Impact Report. The Preserve, Stockton, California. SCH#2006092063. November.

& Energy Conservation)¹⁴, Delta Cove will consume significantly less energy and, as a result, generate significantly fewer GHG emissions than the level predicted by the US DOE factors.

- 6) *Formulate proposed measures to ensure that the project is consistent with a balance of growth between land within Greater Downtown Stockton and existing City limits, and land outside the existing City limits;*

Delta Cove is located within the existing City limits. Accordingly, development of Delta Cove will help achieve an Agreement goal of constructing 14,000 new housing units within the City limits.

- 7) *Formulate proposed measures to ensure that City services and infrastructure are in place or will be in place prior to the issuance of new entitlements for the project or will be available at the time of development; and*

The EIR concluded that there would be adequate capacity to serve the minor increases in demand for utility services generated by the Preserve.¹⁵ The Addendum prepared for the revised Delta Cove project reaffirmed this conclusion.¹⁶

Consistent with the findings in the certified EIR, domestic water will be provided to Delta Cove by the City of Stockton's Water Utility Department in accordance with the Water Supply Assessment and as provided for in the adopted 2035 General Plan. Delta Cove will be served by the Stockton sewerage system. The City of Stockton Municipal Utilities District has indicated that its existing systems have the capacity to accommodate these increases. Implementation of the following mitigation measures that were listed in the utilities and service systems section of the EIR¹⁷ will ensure that no significant impacts will result from the Delta Cove project.

Mitigation Measure WSA-1a: *Prior to issuance of building permits, the applicant shall pay all applicable connection fees and/or capital improvement fees required by City ordinance to fund the necessary improvements to the domestic water supply.*

Mitigation Measure WSA-1b: *Prior to issuance of building permits, the applicant shall provide evidence to the Director of Municipal Utilities at the City of Stockton of compliance with plumbing, metering, and other water conservation measures in effect, including any provisions outlined included in the City's Urban Water Management Plan, 2005 Update.*

Mitigation Measure WSA-1c: *Prior to approval of improvement plans for each development unit, the applicant will perform a water system analysis, acceptable to the Director of*

¹⁴ LSA Associates, Inc., 2008. Selected Sections. Revised Draft Environmental Impact Report. The Preserve, Stockton, California. SCH#2006092063. August.

¹⁵ LSA Associates, Inc., 2007. Environmental Impact Report. The Preserve, Stockton, California. SCH#2006092063. November.

¹⁶ LSA Associates, Inc., 2009. City of Stockton. The Preserve Redesign. Draft Addendum/Initial Study to Previously Certified EIR File No. 11-05. July.

¹⁷ LSA Associates, Inc., 2007. Environmental Impact Report. The Preserve, Stockton, California. SCH#2006092063. November.

Municipal Utilities, demonstrating that the water system improvements are sufficient to meet the City of Stockton service standards.

Mitigation Measure WSA-1d: *The City-wide Water Master Plan may be required to be amended and approved by the Stockton City Council, if the subject project is approved prior to the adoption of utility master plans for the 2035 General Plan Project.*

Mitigation Measure WW-1a: *Prior to issuance of building permits, the owners, developers, and/or successors-in-interest shall pay the applicable sewer connection fees required for improvements to the City's Regional Wastewater Collection Facilities. The Community Development Department will ensure that sewer connection fees are paid in conjunction with building permit issuance.*

Mitigation Measure WW-1b: *The City-wide Sanitary Sewer Master Plan may be required to be amended and approved by the Stockton City Council, if the subject project is approved prior to the adoption of utility master plans for the 2035 General Plan Project.*

Mitigation Measure WW-2: *Prior to issuance of building permits, the applicant shall pay the applicable Sewer Connection Fees required for Improvements to the City's Wastewater Collection Systems. The City of Stockton will include the mitigation measures as stated above as a condition of approval for the applicable tentative maps, subdivision improvement plans, and building permits. The Department of Community Development will ensure that connection fees are paid in conjunction with building permit issuance. The Departments of Community Development and Public Works shall verify that all conditions of approval appear on the actual building plans and that compliance with the conditions is checked in the field during construction and operation, as appropriate.*

Mitigation Measure EG-1: *As feasible, the applicant should install energy reducing fixtures and implement energy reducing measures to decrease the amount of energy used.*

Therefore, Delta Cove will incorporate measures that ensure City services and infrastructure will be available at the time of development.

- 8) *Formulate proposed measures to ensure that the project is configured to allow the entire development to be internally accessible by all modes of transportation.*

See responses to (2) and (3).

GREENHOUSE GAS EMISSIONS

California's major initiative for reducing greenhouse gas (GHG) emissions is outlined in Assembly Bill 32 (AB 32), the "Global Warming Solutions Act." AB 32 calls for an ambitious reduction in California's carbon footprint by requiring, on a statewide basis, the reduction of GHG emissions to 1990 levels from business-as-usual (BAU) emission levels projected for 2020. AB 32 requires the Air Resources Board (ARB) to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. In December 2008, ARB approved a Scoping Plan which includes estimates of the State's projected BAU 2020 emissions

of 596 million metric tons (MMT) of CO₂ equivalent (MMT CO₂eq¹⁸), compared with estimated 1990 emissions of 427 MMT CO₂eq; this equates to approximately a 28 percent reduction in emissions.¹⁹ The City of Stockton, as part of its efforts to develop a Climate Action Plan, adopted an interim GHG reduction target of 28.7 percent from projected 2020 BAU emissions.²⁰

The Scoping Plan also lays the framework for reducing GHG emissions to 1990 levels. The Scoping Plan includes both a cap-and-trade program as well as sector-specific reduction targets.

Approximately 77 percent of the reduction target will be achieved through Federal and State initiatives.²¹ The remaining 23 percent of the reduction target is anticipated to be achieved by local actions.²² The following section provides the Delta Cove project's BAU GHG emissions and mitigated GHG emissions by incorporating State emission reduction measures and project-level mitigation consistent with the goals of the Agreement.

Business-As-Usual GHG Emissions

Development associated with the project would generate GHG emissions, predominantly carbon dioxide (CO₂). While emissions of other GHGs, such as methane (CH₄), are important with respect to global climate change, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO₂.

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. Construction activities, such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew will produce combustion emissions from various sources. During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and nitrous oxide (N₂O). Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. Precise construction timelines are not known, and a development timeline calculator was used to estimate the timeline of each of the individual construction phases.²³ Using the URBEMIS (urban emissions) 2007 model, it is estimated that the total project construction emissions would be approximately 15,680 metric tons of CO₂. The EIR for the approved project includes mitigation measures²⁴ that would reduce these GHG emissions.

At this time, neither the State nor the San Joaquin Valley Air Pollution Control District have adopted policies or recommended performance measures to address specific GHG emission reductions related

¹⁸ GHG emissions are typically measured in terms of pounds or tons of "CO₂ equivalents" (CO₂eq).

¹⁹ California Air Resources Board. 2008. *Climate Change Scoping Plan: a framework for change*. December.

²⁰ City of Stockton, 2009. City Council Resolution No. 09-0299. September 1.

²¹ Niblock, Michael M., 2009. Adoption of Interim Community Greenhouse Gas Emission Reduction Target for the City of Stockton. September 1.

²² Ibid.

²³ San Joaquin Valley Air Pollution Control District, 2008. Development Timeline Calculator. Available at <http://www.valleyair.org/ISR/ISRResources.htm>. While the calculator was developed for the Indirect Source Review program in the San Joaquin Valley, it is not location-specific and is applicable to projects located in other areas. Outputs are designed to be used in URBEMIS 2007.

²⁴ LSA Associates, Inc., 2008. Selected Sections. Revised Draft Environmental Impact Report. The Preserve, Stockton, California. SCH#2006092063. August.

to construction. While some discussion has focused on implementing best performance standards, there is not an approved approach for calculating emission reductions associated with construction-related GHG emissions. Therefore, construction-related GHG emissions are not included in the analysis to reach the emission reduction goal of 28.7 percent.

URBEMIS 2007 was used to estimate the total project CO₂ emissions related to vehicle trips; CH₄ and N₂O emissions were estimated using trip generation data and EPA emission factors. Consumption of electricity and natural gas were estimated based on data provided by the Energy Information Administration.²⁵ PG&E will provide electricity and natural gas service to Delta Cove; therefore, PG&E emission factors were used to estimate total CO₂ emissions related to electricity and natural gas usage. Emission factors for CH₄ and N₂O from ARB's Local Government Operations Protocol were used for calculating CH₄, and N₂O emissions related to electricity use.

Water-related energy use consumes 19 percent of California's electricity every year. Nearly 70 percent of the state's total stream runoff is north of Sacramento, but 80 percent of the water demand is south of Sacramento.²⁶ Energy use and related GHG emissions are based on water supply and conveyance, water treatment, water distribution, and wastewater treatment. Each element of the water use cycle has unique energy intensities (kilowatt hours [kWh]/million gallons). Recognizing that the actual energy intensity in each component of the water use cycle will vary by utility, the CEC assumes that approximately 4,000 kWh per million gallons are consumed for water that is supplied, treated, consumed, treated again, and disposed of in Northern California.

To determine the net GHG emissions from landfilling of solid waste, total CO₂eq emissions from CH₄ generation, carbon storage (treated as negative emissions), and transportation CO₂ emissions were estimated using emission factors from the U.S. Environmental Protection Agency document "Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks" dated September 2006. URBEMIS 2007 was used to estimate CO₂ emissions related to other area sources, including hearth emissions and landscape equipment emissions. GHG emissions for BAU conditions were estimated for the proposed Delta Cove project and are presented in Table 2.

As shown in Table 1, the BAU project would generate up to 27,045 metric tons of CO₂eq per year of new emissions in 2020. Motor vehicle emissions are the largest source of GHG emissions at approximately 67 percent of the total project emissions. Energy use, including electricity and natural gas, are the next largest category at a combined 24 percent of CO₂eq emissions. Solid waste generation and disposal comprises 4 percent of the total. Other area sources, including hearth emissions and landscape equipment emissions, are the remaining source of GHG emissions comprising approximately 5 percent of the total.

²⁵ Energy Information Administration, 2009. 2003 Commercial Building Energy Consumption Survey. www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html

²⁶ California Energy Commission. 2005. California's Water – Energy Relationship. Final Staff Report. Prepared in Support of the 2005 Integrated Energy Policy Report Proceeding. November. CEC-700-2005-011-CF.

Table 1. Delta Cove BAU GHG Emissions

Emission Source	Emissions (Metric Tons Per Year)				Percent of Total
	CO ₂	CH ₄	N ₂ O	CO ₂ eq	
Vehicles	18,200	0.490	1.600	18,689	67
Electricity Production	2,262	0.147	0.055	2,282	8
Water-Related Electricity	212	0.013	0.005	214	1
Natural Gas Combustion	3,705	0.072	0.069	3,727	15
Solid Waste	--	--	--	939	4
Other Area Sources	1,194	--	--	1,194	5
Total Annual Emissions	25,573	0.720	1.729	27,045	100

Note: Column totals may vary slightly due to independent rounding of input data.

-- Estimates not available for this pollutant and/or category.

Source: LSA Associates, Inc., July 2010.

Emission Reduction Goal

According to the City of Stockton, a project proposed for approval should demonstrate a 28.7 percent reduction in greenhouse gas emissions from the 2020 BAU estimates. For the Delta Cove project, this reduction target equates to approximately 7,762 metric tons of CO₂eq. The reduction target can be met through a combination of State measures, as well as project-specific mitigation. The emission reductions also include project redesign from the project as approved which includes the addition of commercial uses, improved community orientation, and enhanced bicycle, pedestrian, and transit accommodations. Not all of the State measures would result in representative reductions to the project-related GHG emissions (e.g., reductions in Industrial Sources). The following section provides a summary of relevant State and project mitigation measures, along with the anticipated emission benefits.

State Measures. State measures include reductions assumed as part of the Adopted Scoping Plan, including light-duty vehicle GHG standards (“Pavley standards”), low carbon fuel standard, and energy efficiency measures.

AB 1493 requires ARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. In setting these standards, the ARB considered cost effectiveness, technological feasibility, and economic impacts. ARB adopted the standards in September 2004. When fully phased-in, the near-term (2009 to 2012) standards would result in a reduction in GHG emissions of approximately 22 percent compared to the emissions from the 2002 fleet, while the midterm (2013 to 2016) standards would result in a reduction of approximately 30 percent. The period from 2009 to 2016 is known as “Pavley 1”; the period from 2017 to 2020 is “Pavley 2” and would require a 20 percent GHG reduction by 2020. Pavley 2 is a commitment made by the ARB to extend progress from Pavley 1 and to increase the greenhouse gas reduction requirement to 20 percent.

The Low Carbon Fuel Standard (LCFS) was included in a California Governor’s Executive Order that was promulgated in January 2007. This strategy addresses the type of fuel used in vehicles. Efficiency

standards affect the total amount of fuel used, whereas the low-carbon fuel standard seeks to reduce the carbon content of the fuel, therefore reducing GHG emissions even if total fuel consumption is not reduced. The Low-Carbon Fuel Standard has been approved by ARB as a discrete early action item under AB 32 and implementing regulations are currently under development.

Several additional State measures could reduce light-duty vehicle greenhouse gas emissions. ARB is pursuing a regulation to ensure that tires are properly inflated when vehicles are serviced. In addition, the California Energy Commission (CEC) and California Integrated Waste Management Board (CIWMB) are developing an efficient tire program, focusing on potential adoption of minimum fuel-efficient tire standards and on the development of consumer information requirements for replacing tires. ARB is also pursuing ways to reduce engine load via lower friction oil and reducing the need for air conditioner use.

Emission Benefits. Pavley would result in emissions reductions to approximately 19.7 percent of light-duty vehicle emissions.²⁷ Because regulations have not been finalized, for the purposes of this study it was reasonable to assume that the effects of the Low-Carbon Fuel Standard would be a 7.2 percent reduction in GHG emissions from fuel use by 2020.²⁸ Vehicle efficiency measures are estimated to reduce 4.5 MMT of Statewide CO₂eq emissions, which is approximately 2.8 percent of the on-road transportation emissions, in 2020.²⁹

The Renewable Portfolio Standard (RPS) will require the renewable energy portion of the retail electricity portfolio to be 33 percent in 2020. Based on Governor Schwarzenegger's call for a Statewide 33 percent RPS, the Scoping Plan anticipates that California will have 33 percent of its electricity provided by renewable resources by 2020, and includes the reduction of greenhouse gas emissions based on this level. Increased use of renewable resources will decrease California's reliance on fossil fuels and reduce emissions of greenhouse gases from the electricity use. The Scoping Plan also estimates that energy efficiency gains with periodic improvement in building and appliance energy standards and incentives will reach 10 to 15 percent for natural gas and electricity, respectively.³⁰

Emission Benefits. Approximately 12 percent of PG&E's energy is currently met with renewable resources, including wind, solar, geothermal, and small hydroelectric that are eligible sources under California's current RPS. For the purposes of calculating the reduction of greenhouse gas emissions in the Scoping Plan, ARB reduced GHG emissions by increasing the percentage of renewables in PG&E's electricity mix from the current level of 12 percent to the 33 percent goal. Increasing the use of renewable energy by 21 percent on a Statewide basis would result in a comparable reduction in electricity-related GHG emissions.

Methane emissions from landfills, generated when wastes decompose, account for 1 percent of California's greenhouse gas emissions. Greenhouse gas emissions can be substantially reduced by properly managing all materials to minimize the generation of waste, maximize the diversion from landfills, and manage them to their highest and best use. Capturing landfill methane results in

²⁷ Bay Area Air Quality Management District, 2009. California Environmental Quality Act Guidelines Update. Proposed Thresholds of Significance. December 7.

²⁸ Ibid.

²⁹ California Air Resources Board. 2008. *Climate Change Scoping Plan: a framework for change*. December.

³⁰ Bay Area Air Quality Management District, 2009. California Environmental Quality Act Guidelines Update. Proposed Thresholds of Significance. December 7.

greenhouse gas benefits; therefore, ARB is working closely with the California Integrated Waste Management Board to develop a Discrete Early Action measure for landfill methane control.

Emission Benefits. This measure would reduce 1 MMT of statewide CO₂eq in 2020, or approximately 12 percent of emissions, from recycling and solid waste disposal.³¹

Project-Related Mitigation Measures. As described in the EIR, the Delta Cove project would implement a number of mitigation measures (MM GCC-1 through MM GCC-9) to reduce greenhouse gas emissions. A summary of the mitigation measures and emission benefits is provided below.

Mitigation Measure GCC-1. *The owners, developers and/or successors-in-interest (ODS) shall be subject to and comply with the City's Green Building Ordinance which shall comply with the California Green Building Standards Code, Title 24, Part 11, California Code of Regulations (CALGreen), adopted August, 2010. Accordingly, the ODS shall adhere to the following standards:*

- a. *Utilize building insulation that exceeds Title 24 standards. Utilize high-performance windows that employ advanced technologies, such as protective coatings and improved frames, to retain heat during winter and prevent heat during summer.*

Emission Benefits. GHG reductions associated with this measure equal the amount that insulation exceeds Title 24 standards (the measure assumes exceedance of Title 24 standards [i.e., 2005 standards] in place at the time the EIR was developed). The extent to which Delta Cove building insulation would exceed Title 24 standards has not been determined at this time. Emission benefits would be equivalent to the degree which the project exceeds the Title 24 standards. To avoid possible double-counting associated with improvements in energy efficiency at the State level, specific emission benefits associated with this measure were not estimated. However, this measure would be anticipated to result in additional reductions from BAU emissions for Delta Cove.

- b. *Incorporate building techniques that ensure tight building construction and efficient duct systems. Require the use of efficient heating and cooling equipment for all residential buildings.*

Emission Benefits. PG&E indicates that 10 to 30 percent of heated or cooled air is lost through leaky ducts.³² Efficient heating and cooling equipment and systems can result in GHG reductions associated with energy saving. However, specific emission benefits associated with this measure were not estimated, but would be anticipated to result in additional reductions from BAU emissions for Delta Cove.

- c. *Utilize efficient building products with standards the meet EnergyStarTM criteria. EnergyStarTM qualified homes may also be equipped with EnergyStarTM qualified products- lighting fixtures, compact fluorescent bulbs, ventilation fans, and appliances, such as refrigerators, dishwashers, and washing machines.*

³¹ California Air Resources Board. 2008. *Climate Change Scoping Plan: a framework for change*. December.

³² PG&E, 2007. Tech Brief. Duct Testing. Available at http://www.pge.com/includes/docs/pdfs/mybusiness/energysavingsrebates/rebatesincentives/duct_testing.pdf

Emission Benefits. While the use of EnergyStar™ rated products is beneficial for reduction in GHG emissions, the California Air Pollution Control Officers Association (CAPCOA) estimates that the overall benefits are low compared to other possible mitigation measures. Therefore, specific calculations were not performed for this mitigation measures. However, this measure would be anticipated to result in additional reductions from BAU emissions for Delta Cove.

- d. *Require the use of reflective, EnergyStar™ cool roofs on all building structures in the project.*

Emission Benefits. CAPCOA and the Sacramento Metropolitan Air Quality Management District (SMAQMD) have developed estimated emission reductions from other GHG emission reduction measures. Additional emission reductions of 0.5 to 1.0 percent are available based on use of EnergyStar™ compliant (highly reflective) and high emissivity roofing.³³ GHG reductions of 0.5 percent on energy-related emissions were assumed as a result of this measure.

Mitigation Measure GCC-2. *The owner, developer, and/or successor-in-interest (ODS) shall address the impacts from project-related emissions through the implementation of the following measures:*

- a. *File an application for each proposed tentative subdivision map or other final entitlements to the San Joaquin Valley Air Pollution Control District (APCD) for a permit pursuant to Rule 9510 indirect Source Rule (ISR), if applicable. The ODS shall incorporate emission reduction measures into the project and pay ISR fees as required by the APCD.*

Emission Benefits. The purpose of Rule 9510 is to achieve emission reductions from construction and use of development projects through project design features, on-site measures and off-site mitigation. While the rule was developed for criteria pollutants, such as ozone, compliance with the rule will also result in a reduction in GHG emissions. However, specific estimates of reductions are not available at this time and not included in the calculations.

- b. *Prohibit wood-burning fireplaces and wood stoves within the project.*

Emission Benefits: Emissions related to wood-burning fireplaces and stoves were calculated using URBEMIS 2007 and standard assumptions for the San Joaquin Valley. Emission reductions related to prohibition of all wood-burning devices were estimated using “Area Source Mitigation Measures” in URBEMIS, which results in a 98 percent reduction in area source CO₂ emissions from business-as-usual conditions.

Mitigation Measure GCC-3. *The owner, developer and/or successors-in-interest are required to implement the following measures regarding land use to reduce greenhouse gas emission impacts for the proposed project.*

³³ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

- a. *Provide sidewalks and pedestrian paths throughout as much of the project as possible and connect to open space areas, parks, and schools to encourage walking and bicycling.*

Emission Benefits. Emission reductions are based on intersection density, sidewalk completeness, and bike network completeness and can range from 0 to 9 percent of motor vehicle GHG emissions. Fehr & Peers estimates that 4.75 percent of all trips for Delta Cove would occur via pedestrian and bicycle use (For our calculations we assume the net change of bicycle and pedestrian trips from the previously approved project to the proposed redesign project). Revised trip reduction estimates from the mixed-use model compared to the standard ITE trip generation rates were used to calculate motor vehicle emissions for the mitigated motor vehicle emissions for Delta Cove.³⁴

- b. *Mid-block paths shall be installed to facilitate pedestrian movement through long blocks and cul-de-sacs.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- c. *To the extent practicable, the comprehensive the bicycle circulation system shall provide access to all neighborhoods and amenities within the proposed project and enhances comfort and safety for pedestrians by offering ample lighting, planted medians, tree lined streets, crosswalks and wide sidewalks.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

Mitigation Measure GCC-4. *The owner, developer, and/or successors-in-interest are required to implement the following measures regarding public services to reduce greenhouse gas emission impacts for the proposed project.*

- a. *A non-potable source of water (e.g., reclaimed) shall be utilized for landscape irrigation in public spaces.*

Emission Benefits. The use of reclaimed, or non-potable, water reduces the energy demand related to supplying Delta Cove, as potable water requires higher electricity demand for conveyance and treatment. However, the Water Supply Assessment for Delta Cove provided separate potable and non-potable water consumption estimates. Therefore, GHG emission reductions were not estimated for this mitigation measure.

- b. *Provide transit-enhancing infrastructure that includes bus shelters, benches, street lighting, route signs and displays and bus turn-outs.*

³⁴ Bike and pedestrian mitigation measures in URBEMIS 2007 were used to achieve the 4.75 percent reduction in trip generation rates.

Emission Benefits. CAPCOA estimates that transit-enhancing infrastructure improvements can have a high level of effectiveness and reduce overall GHG emissions by 1 to 2 percent.³⁵ Fehr & Peers estimates that 2.75 percent of all trips for Delta Cove would occur via transit (For our calculations we assume the net change of transit trips from the previously approved project to the proposed redesign project). Revised trip reduction estimates from the mixed-use model compared to the standard ITE trip generation rates were used to calculate motor vehicle emissions for the mitigated motor vehicle emissions for Delta Cove.³⁶

Mitigation Measure GCC-5. *The following measures shall be used to accomplish an overall reduction in residential energy consumption relative to the requirements of State of California Title 24:*

- a. *Energy-efficient design shall be provided for homes and buildings, including automated control systems for heating and air conditioning, lighting controls and energy-efficient lighting in buildings, increased insulation, and light-colored roof materials to reflect heat.*

Emission Benefits. Efficient heating and cooling equipment and systems can result in GHG reductions associated with energy saving. However, building-specific designs would be necessary to calculate specific emission benefits; therefore, GHG emissions reductions associated with this measure were not estimated.

- b. *Residences shall be constructed with energy efficient appliances and home systems such as Energy Star appliances, energy efficient (i.e., Low E2) windows, tightly sealed ducts, florescent or energy efficient light bulbs with motion sensors where practicable, backyard outlets for electrical mower and other yard equipment operations, R-6 duct insulation, radiant roof barrier sheathing, 14 Seasonal Energy Efficiency Ratio air conditioning and ventilation systems, air conditioning with Thermostatic Expansion Valve metering devices that help regulate flow of liquid refrigerant, 0.95 Annual Fuel Utilization Efficiency furnaces, and gas dryer stubs.*

Emission Benefits. Efficient heating and cooling equipment and systems can result in GHG reductions associated with energy saving. However, building-specific designs would be necessary to calculate specific emission benefits; therefore, GHG emissions reductions associated with this measure were not estimated.

- c. *Buildings and outdoor structures shall include green-building materials, such as low-emission concrete, recycled aggregate, recycled reinforcing, or waffle pods to be used in foundations; recycled plastics to be used in community structures such as fencing or playground equipment; wood flooring materials treated with low emission varnishes and floor board substrates to be made from low emission particleboard; compact fluorescent light bulbs in all buildings; and use of recycled building materials such as recycled aluminum for window frames or post-consumer plastic for piping.*

³⁵ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

³⁶ Transit mitigation measures in URBEMIS 2007 were used to achieve the 2.75 percent reduction in trip generation rates.

Emission Benefits. Use of Green Building Materials, as well as the reuse and reduction of construction waste as discussed in MM GCC-7, can reduce the environmental impacts associated with the extraction, transport, processing, fabrication, installation, reuse, recycling, and disposal of these building industry source materials. CAPCOA estimates improved efficiencies of up to 25 percent through the use of Green Building Materials.³⁷ However, specific emission benefits associated with this measure were not estimated, but would be anticipated to result in additional reductions from BAU emissions for Delta Cove.

- d. *Contractors shall minimize the production of waste and shall recycle construction-related waste where possible.*

Emission Benefits. While recycling construction and demolition waste is beneficial for reduction in GHG emissions, CAPCOA estimates that the overall benefits are low compared to other possible mitigation measures.³⁸ Therefore, to provide a more conservative analysis, the specific reductions associated with this mitigation measure were not included in this analysis.

- e. *Use locally made building materials for construction of the project and associated infrastructure to reduce truck trips.*

Emission Benefits. While the use of locally-made building materials is beneficial for reduction in GHG emissions, emission benefits would depend on the location of building material manufacture sites, which are not known at this time. Therefore, specific calculations were not performed for this mitigation measure.

- f. *Large canopy trees shall be carefully selected and located to protect buildings from energy-consuming environmental conditions and shade-paved areas. Trees shall be selected to shade 50% of paved areas within 15 years.*

Emission Benefits. Overall emission reductions from solar design could be approximately 1 percent of energy-related emissions. Shade and use of light-colored materials for at least 30 percent of the site's non-roof impervious surfaces, including parking lots, walkways, plazas, could reduce GHG emissions by up to 1 percent.³⁹ GHG reductions of 1.0 percent on energy-related emissions were assumed as a result of this measure.

- g. *Optimize building's thermal distribution by separating ventilation and thermal conditioning systems.*

³⁷ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

³⁸ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

³⁹ Sacramento Air Quality Management District, 2009. SMAQMD Draft GHG Measures.
<http://www.airquality.org/climatechange/index.shtml>.

Emission Benefits. Efficient heating and cooling equipment and systems can result in GHG reductions associated with energy saving. However, building-specific designs would be necessary to calculate specific emission benefits; therefore, GHG emissions reductions associated with this measure were not estimated.

- h. For pool and spa heating and maintenance, use solar heating and automatic covers.*

Emission Benefits. The use of solar heating for pools and spas systems can result in GHG reductions associated with energy saving. However, specific designs would be necessary to calculate specific emission benefits; therefore, GHG emissions reductions associated with this measure were not estimated.

- i. Design buildings to accommodate solar power systems; solar panels on homes, carports over parking areas; solar and tankless hot water heaters; and energy-efficient heating ventilation and air conditioning.*

Emission Benefits. This mitigation measure would provide building design to accommodate, at the option of the owner, onsite renewable energy systems, including solar power systems and solar and tankless hot water heaters. Solar Upgrades to solar water heaters (or non-conventional water heaters) can result in effective reductions in natural gas usage and associated GHG emissions; CAPCOA estimates a 20 to 70 percent reduction in energy needs.⁴⁰ Solar orientation can provide energy savings of 11 percent to 16.5 percent and reduce heating fuel consumption by up to 25 percent.⁴¹ These features would not necessarily be installed in every residential unit, and therefore, the emission benefits associated with this measure cannot be accurately estimated. However, this measure would be anticipated to result in additional reductions from BAU emissions for Delta Cove.

- j. Incorporate the principles of passive solar design shall be incorporated into building structures, including basic design principles are large south-facing windows with proper overhangs, as well as tile, brick, or other thermal mass material used in flooring or walls to store the sun's heat during the day and release it back into the building at night or when the temperature drops.*

Emission Benefits. Overall emission reductions from solar design could be approximately 0.5 percent of energy-related emissions. Building design includes features such as roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter. Solar design and orientation could reduce GHG emissions by 0.5 percent.⁴² GHG reductions of 0.5 percent on energy-related emissions were assumed as a result of this measure.

- k. Include energy-conserving features as options for home buyer. These include:*

⁴⁰ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

⁴¹ Sacramento Air Quality Management District, 2009. SMAQMD Draft GHG Measures.

<http://www.airquality.org/climatechange/index.shtml>.

⁴² Ibid.

- *increased energy efficiency;*
- *high-albedo (reflecting) roofing materials;*
- *cool paving;*
- *radiant heat barriers;*
- *installation of solar water-heating systems;*
- *low NOx-emitting or high-efficiency, energy-efficient water heaters;*
- *installation of clean-energy features that promote energy self-sufficiency (e.g., photovoltaic cells, solar thermal electricity systems);*
- *installation of programmable thermostats for all heating and cooling systems;*
- *awnings or other shading mechanisms for windows;*
- *porch, patio, and walkway overhangs;*
- *ceiling fans or whole-house fans;*
- *passive solar cooling and heating designs (e.g., natural convection, thermal flywheels);*
- *daylighting (natural lighting) systems such as skylights, light shelves, and interior transom windows;*
- *electrical outlets around the exterior of units to encourage the use of electric landscape maintenance equipment;*
- *use of low and no-VOC coatings and paints;*
- *natural gas fireplaces (instead of wood burning fireplaces or heaters) and natural gas lines (if available to the project area) in backyard or patio areas to encourage the use of gas barbecues;*
- *pre-wire units with high-speed modem connections/DSL and extra phone lines; and*
- *use of low or nonpolluting landscape maintenance equipment (e.g., electric lawn mowers, reel mowers, leaf vacuums, electric trimmers and edgers).*

Emission Benefits. This mitigation measure would provide building design to accommodate, at the option of the owner, a variety of energy conservation features in the residential buildings. These features would not necessarily be installed in every residential unit, and therefore, the emission benefits associated with this measure cannot be accurately estimated. However, this measure would be anticipated to result in additional reductions from BAU emissions for Delta Cove.

Mitigation Measure GCC-6: *The owner, developer and/or successors-in-interest are required to prepare a water conservation plan for the proposed project to the satisfaction of the Director of Municipal Utilities. The plan shall address of the following, as appropriate:*

- a. *Water-efficient landscapes shall be provided for all publicly landscaped areas, including parks, roadway medians and roadside landscaping.*

Emission Benefits. While the use of water-efficient landscapes and irrigation systems is beneficial for reduction in GHG emissions CAPCOA estimates that the overall benefits are low compared to other possible mitigation measures.⁴³ Emission benefits would depend on the specific landscaping, including the use of drought-resistant plant species, provided throughout the development. Therefore, specific calculations were not performed for this mitigation measures.

⁴³ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

- b. *Water-efficient irrigation systems and devices shall be required in all landscaped areas.*

Emission Benefits. While the use of water-efficient landscapes and irrigation systems is beneficial for reduction in GHG emissions, CAPCOA estimates that the overall benefits are low compared to other possible mitigation measures.⁴⁴ Emission benefits would depend on the specific landscaping, including the use of drought-resistant plant species and irrigation equipment, provided throughout the development. Therefore, specific calculations were not performed for this mitigation measures.

- c. *All buildings shall include water-efficient fixtures and appliances.*

Emission Benefits. Water conservation measures would decrease the estimated 699,211 gallons of water per day of water demand for Delta Cove, as well as associated energy use necessary for water supply and conveyance, water treatment, water distribution, and wastewater treatment. The National Association of Home Builders “Model Green Home Building Guidelines” estimates a reduction in mean per capita water usage of approximately 30 percent by incorporating water conservation measures into the project.⁴⁵ This reduction will reduce GHG emissions associated with water-related energy use.

Mitigation Measure GCC-7: The owner, developer and/or successors-in-interest are required to implement the following to reduce the solid waste impacts from the proposed project.

- a. *Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).*

Emission Benefits. While recycling construction and demolition waste is beneficial for reduction in GHG emissions, CAPCOA estimates that the overall benefits are low compared to other possible mitigation measures. Therefore, to provide a more conservative analysis, the specific reductions associated with MM GCC-7 were not included in this analysis.

- b. *Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.*

Emission Benefits. While recycling construction and demolition waste is beneficial for reduction in GHG emissions, CAPCOA estimates that the overall benefits are low compared to other possible mitigation measures. Therefore, to provide a more conservative analysis, the specific reductions associated with MM GCC-7 were not included in this analysis.

Mitigation Measure GCC-8: The owner, developer and/or successors-in-interest of the commercial and industrial land uses are required to form a Transportation Management Association or join and existing association to address the following:

- a. *Provide bicycle enhancing infrastructure that includes bikeways/paths connecting to a bikeway system.*

⁴⁴ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

⁴⁵ National Association of Home Builders, 2006. NAHB Model Green Home Building Guidelines.

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- b. *Promote ride sharing programs by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.*

Emission Benefits. Emission reductions related to transportation demand management programs, including parking for ridesharing, were calculated using “Operational Source Mitigation Measures” in URBEMIS 2007, which results in an overall 0.01 percent reduction in CO₂ emissions from business-as-usual conditions.

Mitigation Measure GCC-9. *The owner, developer, and/or successor-in-interest (ODS) shall address the following measures during the preparation of improvement plans to address an overall reduction in project-related vehicle miles traveled (VMT), including:*

Traffic Calming

- a. *Traffic calming measures shall be included as part of the proposed project design with the objective of improving the overall quality of life for neighborhood residents by reducing safety hazards and nuisance impacts resulting from speeding vehicles, careless drivers and cut-through traffic.*

Emission Benefits. CAPCOA estimates that a high potential for GHG emission reductions (i.e., 1 to 10 percent) from combined traffic calming measures, including, for example, marked crosswalks at intersections or roadways designed to reduce motor vehicle speeds.⁴⁶ SMAQMD estimates up to 1 percent for each individual traffic calming measure.⁴⁷ Project design features would include pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- b. *Vehicle speeds within the project should be maintained at a level that provides maximum safety for residents. Consistent with the City’s adopted Traffic Calming Guidelines, the project shall incorporate roundabouts, short block lengths, traffic circles, and high visibility crosswalks to reduce traffic speeds and enhance pedestrian safety.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

Pedestrian Sidewalks & Pathways

- a. *Sidewalks and bikeways shall be designed to separate pedestrian and bicycle pathways from vehicle paths.*

⁴⁶ California Air Pollution Control Officers Association, 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January.

⁴⁷ Sacramento Air Quality Management District, 2009. SMAQMD Draft GHG Measures. <http://www.airquality.org/climatechange/index.shtml>.

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- b. *Sidewalks and pedestrian pathways shall be easy to navigate and designed to facilitate pedestrian movement through the project and create a safe environment for all potential users from obstacles and automobiles.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- c. *Sidewalks shall be designed for high visibility (e.g., brightly painted, different color of concrete, etc.) when crossing parking lots, streets, and similar vehicle paths.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

Bicycle

- a. *The bicycle circulation system should be planned to act as a regional circulation system connecting the proposed project to Stockton's roadway/bikeway system.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- b. *Incorporate bicycle lanes and routes into the street system.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- c. *Incorporate bicycle-friendly intersections into street design.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

- d. *Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-3(a).

Transit

- a. *A through roadway should connect adjacent developments so as to permit transit circulation between developments.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-4(b).

- b. *Shielded openings in subdivisions sound walls should be provided to facilitate more direct pedestrian access to transit stops.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-4(b).

- c. *The project would encourage public transportation by incorporating bus turnouts, shelters, and walkways into the design. As detailed in the City of Stockton’s Traffic Calming Guidelines, the San Joaquin Regional Transit District (SJRTD) will review project site plans and identify potential bus stop locations.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-4(b).

- d. *Locate the highest density land use at or within ¼ mile of a transit stop.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-4(b).

- e. *Contact San Joaquin Regional Transit District (SJRTD) to identify appropriate location(s) for bus stops within the community*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-4(b).

- f. *Provide transit-enhancing infrastructure that includes bus shelters, benches, street lighting, route signs and displays and bus turn-outs.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-4(b).

- g. *Prior to approval of the Vesting Tentative Map, contact San Joaquin Regional Transit District (SJRTD) to identify appropriate location(s) for bus stops within the community.*

Emission Benefits. GHG emissions reductions associated with this mitigation measure were assumed as part of the calculations for MM GCC-4(b).

Table 2 shows the anticipated emissions reductions for the proposed Delta Cove project that were calculated based on implementation of State initiatives and project-related mitigation measures.

Table 2. Summary of Assumptions for Delta Cove GHG Emission Reductions

Measure Description	Percent Reduction	Description of Reduction in Emissions, Energy, or Vehicle Trips	Emission Reductions (metric tons)
State Measures			
Pavley	19.70	Reduction applies to light-duty vehicle emissions only.	2,589

Low Carbon Fuel Standard (LCFS)	7.20	Reduction applies to vehicle emissions.	1,213
Vehicle Efficiency Measures	2.00	Reduction applies to light-duty vehicle emissions only.	263
Renewable Portfolio Standard (RPS)	21.00	Reduction applies to electricity-related emissions only.	553
Landfill Methane Control	12.00	Reduction applies to solid waste-related emissions only.	132
Energy Efficiency Measures	15.70/9.50	Reduction applies to electricity and natural gas emissions, respectively.	769
State Measures Total			5,520
Project Measures			
GCC-1 (e) Cool Roof	0.50	Reduction applies to energy-related emissions only. This measure applies to all project buildings.	33
GCC-2 (b) Prohibit wood-burning fireplaces and stoves	N/A	Reduction calculated as part of URBEMIS 2007 model runs.	1,179
GCC-3 Pedestrian and Bicycle Facilities	4.75	Reduction in vehicle trips compared to BAU. Calculated as part of URBEMIS 2007 model runs.	1,840
GCC-4 Transit	2.75	Reduction in vehicle trips compared to BAU. Calculated as part of URBEMIS 2007 model runs.	Combined with GCC-3
GCC-5 (f) Shade Trees	1.00	Reduction applies to energy-related emissions only. This measure applies to all project buildings.	65
GCC-5 (j) Solar Design	0.50	Reduction applies to energy-related emissions only. This measure applies to all project buildings.	33
GCC-6 (c) Water Conservation	30.00	Reduction in water consumption (i.e., usage in gallons per day) for the project.	67
GCC-8 TDM	0.01	Reduction in vehicle-related emissions. Calculated as part of URBEMIS 2007 model runs.	Combined with GCC-3
Project Measures Total			3,217
Total Measure Emission Reductions			8,737

Source: LSA Associates, 2010.

Note: Measure emission reductions do not exactly match the difference between BAU project as approved and mitigated project emissions shown in Table 3, as the project was redesigned to incorporate additional land uses.

As shown in Table 3, the project would generate up to 18,825 metric tons of CO₂eq per year after accounting for federal, State and project GHG reduction measures, as well as redesign of the project. This equates to a GHG reduction of 8,220 metric tons of CO₂eq from BAU conditions (see Table 1), which exceeds the project specific reduction target of 7,762 metric tons of CO₂eq.

Table 3. Delta Cove Mitigated GHG Emissions

Emission Source	Emissions (Metric Tons Per Year)				Percent of Total
	CO ₂	CH ₄	N ₂ O	CO ₂ eq	
Vehicles	12,436	0.371	1.161	12,784	67
Electricity Production	1,653	0.105	0.040	1,667	8

Water-Related Electricity	146	0.0093	0.004	147	1
Natural Gas Combustion	3,368	0.070	0.067	3,390	19
Solid Waste	--	--	--	969	5
Other Area Sources	15	--	--	15	0
Total Annual Emissions	17,471	0.546	1.268	18,825	100

Note: Column totals may vary slightly due to independent rounding of input data.

-- Estimates not available for this pollutant and/or category.

Source: LSA Associates, Inc., June 2010.

In order to meet the 28.7 percent reduction goal, the mitigated GHG emissions for the proposed Delta Cove project must be equal to or less than 19,283 metric tons of CO₂eq. The combination of State and project-related mitigation measures would need to result in emission reductions of 7,762 metric tons of CO₂eq compared to BAU development. Table 4 shows a summary of estimated emission reductions.

Table 4. Summary of Estimated GHG Emission Reductions

	CO₂eq Emissions (Metric Tons per Year)
Projected Delta Cove BAU 2020 Emissions (from Table 2)	27,045
28.7 Percent Reduction	7,762
2020 GHG Emission Target	19,283
Mitigated Delta Cove 2020 GHG Emissions	18,825
Reduction Surplus	458

Source: LSA Associates, Inc., July 2010.

As shown in Table 4, the mitigated project emissions would be 18,825 metric tons of CO₂eq and would reduce GHG emissions by 458 metric tons more than would be required under the reduction goal. The State and project-related mitigation measures would be anticipated to reduce GHG emissions by at least 30 percent. Therefore, Delta Cove would achieve sufficient GHG emission reductions, as determined by the City, to support AB 32.

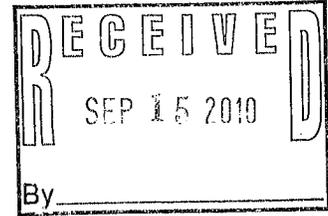
RESULTS SUMMARY

The proposed Delta Cove project has been redesigned in an effort to promote sustainability, preserve existing wetland areas, increase park and open space, increase site walkability, community orientation, and generally improve land uses. Based on the analysis completed for the proposed project, Delta Cove would reduce GHG emissions in a manner consistent with mandates of AB 32 and the Early Climate Protection Actions listed in the Agreement. By incorporating State emission reduction measures and project-level mitigation, the proposed project exceeds the required 28.7 percent reduction of GHG emissions from business-as-usual conditions.

APPENDIX D – PG&E COMMENT LETTER



Land Services, 4040 West Lane, Stockton, CA 95204



September 13, 2010

City of Stockton
c/o Community Development Dept.
Planning Division
425 N El Dorado St.
Stockton, CA 95202
Attn: Jenny Liaw

RE: Approval of Addendum/Initial Study to previously certified Final Environmental Impact Report (FEIR 11-05)
For: The Delta Cove Project
Loc: S/O Bear Creek, north and east of Mosher Slough, w/o I-5.

Dear Ms. Jenny Liaw,

Thank you for this opportunity to comment on this Approval of Addendum/Initial Study to previously certified Final Environmental Impact Report (FEIR 11-05).

PG&E has the following comments to offer:

Generally, PG&E owns and operates gas and electric facilities which are located within and adjacent to the proposed project. To promote the safe and reliable maintenance and operation of utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their project plans. Any proposed development plans should provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities.

The following is a brief description of Pacific Gas and Electric Company's (PG&E) facilities required to serve this project or proposed to be constructed through the project boundaries.

PG&E ELECTRIC SERVICE REQUIREMENTS

To serve the large amount of new electric demand created by the proposed Delta Cove Project an electric substation may need to be constructed within the project area, as well as all of the associated distribution feeders throughout the project. The following will be required as part of the overall project development:

- Within the electric transmission R/W, provisions will be made to allow for the installation of underground electric distribution lines as required.
- PG&E may need to tap into PG&E's existing Eight Mile Road - Stagg 230 (kV) electric transmission line located within the project boundary. This line generally runs in a north-south direction within the development area.
- A five acre (rectangular in shape) parcel may be required within the area adjacent to the existing Eight Mile Road - Staff 230 (kV) electric transmission line for the installation of an electric substation
- The electric substation site will require year-round, 24-hour, all-weather access. Moreover, roadway access to the site will need to accommodate very large trucks and cranes with a large turning radius.
- Along all roadways throughout the entire project, 15-foot-wide public utility easements will be required on both sides of each road for the installation of gas and electric distribution feeders along with other utilities as required.

PG&E GAS SERVICE REQUIREMENTS

- Distribution Feeder Mains and a Distribution Regulator Station. The Stations will require approximately 20-foot by 80-foot easements and the Feeder Mains will require approximately 25 foot wide easements. All Distribution Regulator Stations need *to be built above ground in this area.*
- Gas distribution mains and services.
- Above ground features include vertical pipeline markers as well as valve frame and covers which are at the ground surface level.
- All gas facilities will require 24-hour all-weather access for maintenance and operations.
- Along all roadways throughout the entire project, 15-foot-wide public utility easements will be required on both sides of each road for the installation of gas and electric distribution feeders along with other utilities as required.

Future analysis will also include studies indicating the need for any potential upgrades or additions to accommodate additional load on the gas system including facilities such as regulator stations, odorizer stations, valve lots, distribution and transmission lines.

The process of permit requirements for Utility Companies can add delays for development projects. Therefore we recommend the developer contact all of the utility companies to discuss the permit requirements of this development.

The developers will be responsible for the costs associated with the relocation of existing PG&E facilities to accommodate their proposed development. Because facilities relocation's require long lead times and are not always feasible, the developers should be encouraged to consult with PG&E as early in their planning stages as possible.

Relocations of PG&E's electric transmission and substation facilities (50,000 volts and above) could also require formal approval from the California Public Utilities Commission. If required, this approval process could take up to two years to complete. Proponents with development plans which could affect such electric transmission facilities should be referred to PG&E for additional information and assistance in the development of their project schedules.

Continued development consistent with City of Stockton's General Plans will have a cumulative impact on PG&E's gas and electric systems and may require on-site and off-site additions and improvements to the facilities which supply these services. Because utility facilities are operated as an integrated system, the presence of an existing gas or electric transmission or distribution facility does not necessarily mean the facility has capacity to connect new loads.

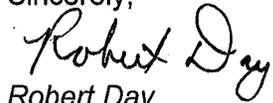
It is recommended that environmental documents for proposed development projects include adequate evaluation of cumulative impacts of utility systems, the utility facilities necessary to serve those developments and any potential environmental issues associated with extending utility service to the proposed project. This will assure the project's compliance with CEQA and reduce potential delays to the project schedule.

PG&E remains committed to working with the City of Stockton to provide timely, reliable and cost effective gas and electric service to the planned area. We would also appreciate being copied on future correspondence regarding this subject as this project develops.

The California Constitution vests in the California Public Utilities Commission (CPUC) exclusive power and sole authority with respect to the regulation of privately owned or investor owned public utilities such as PG&E. This exclusive power extends to all aspects of the location, design, construction, maintenance and operation of public utility facilities. Nevertheless, the CPUC has provisions for regulated utilities to work closely with local governments and give due consideration to their concerns. PG&E must balance our commitment to provide due consideration to local concerns with our obligation to provide the public with a safe, reliable, cost-effective energy supply in compliance with the rules and tariffs of the CPUC.

Again, thank you for the opportunity to make comments on this Delta Cove Project Approval of Addendum/Initial Study to previously certified Final Environmental Impact Report (FEIR 11-05). If you, the developer or anyone has any questions or concerns please contact me at (209) 942-1784.

Sincerely,



Robert Day

Land Agent

Land and Environmental Services

External: (209) 942-1784

Fax: (209) 942-1485

Bcc/via email:

Damon Thayer, Distribution Planning- PG&E

Allen Fong- Service Planning

Austin Hastings, CGT- PG&E

Tim Combs (ETM)- PG&E