Draft Supplement to the Stoneridge Drive Specific Plan Amendment/ Staples Ranch EIR

EIR SCH 2006062053

THE CITY OF PLEASANTON

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Executive Summary

Introduction

This Environmental Impact Report supplement (SEIR) has been prepared by the City of Pleasanton, the lead agency under the California Environmental Quality Act (CEQA) for the Stoneridge Drive Specific Plan Amendment project. This SEIR is a supplement to the Final Environmental Impact Report for the Stoneridge Drive Specific Plan Amendment (EIR), which the City of Pleasanton certified on February 24, 2009.

This SEIR reevaluates some of the potential environmental effects of the Proposed Project considered in the EIR. It also evaluates the potential effects of a new alternative to the Proposed Project and reevaluates, as another alternative, the potential effects of a modified version of the Proposed Project that the City of Pleasanton approved on February 24, 2009. This SEIR was prompted by new information obtained since certification of the EIR, primarily in response to a lawsuit that challenged the City of Pleasanton's certification of the EIR, and by the City of Pleasanton's interest in considering a new short-term circulation plan that differs from that of the Proposed Project.

In accordance with CEQA guidelines, this SEIR is designed to inform public decision-makers, responsible or interested agencies, and the general public of the potential environmental effects of the two alternatives and the Proposed Project in light of new information.

This SEIR supplements the EIR and would be certified in conjunction with the EIR. This SEIR determines whether the new information and the alternatives it reviews result in environmental impacts that are different from those already considered in the EIR. This analytical approach is consistent with the EIR supplement provisions of Sections 15162 and 15163 of the State CEQA Guidelines. This framework provides the public an opportunity to review and comment on changes to a project after certification of an EIR. This framework requires only the supplemental information to be circulated, and allows comments to be limited to that supplemental information, so that the entire EIR is not re-opened. State CEQA Guidelines Section 15163(b), (c), (d).

Project Description

The Proposed Project evaluated in the EIR assumed modification of the land uses of the Stoneridge Drive Specific Plan for the 124-acre Staples Ranch project site from 100 acres of retail and service commercial uses and a 17-acre community park to a 46-acre senior continuing care community, a 37-acre auto mall, an 11-acre retail/commercial center, a 5-acre neighborhood park, and a 17-acre community park (Stoneridge Drive Specific Plan Amendment). The EIR also assessed the effects of a four-rink ice-skating center in the community park, together with the other Proposed Project land uses, as a project alternative (Ice Center Alternative).

This SEIR reevaluates the Proposed Project to determine whether:

1) Updated surveys for the California tiger salamander, the California red-egged frog, the western pond turtle, and the San Joaquin spearscale result in different impacts than described in the EIR;

2) Updated analysis of potential impacts to the environment resulting from the production of greenhouse gas (GHG) emissions are different from those described in the EIR; and

3) The Proposed Project's contribution to cumulative biological resources impacts, cumulative noise impacts, and cumulative impacts in conjunction with nearby quarry operations are different from those described in the EIR.

This SEIR also evaluates potential changes in the environment caused by the development and operation of a new alternative and the project approved by the City of Pleasanton on February 24, 2009. Both the new alternative and the approved project contemplate the addition of a four-rink ice-skating center to the Proposed Project in the same manner as the Ice Center Alternative. Of greater significance, both also consider new short-term Stoneridge Drive circulation plans that differ from those of the Proposed Project.

Under the Proposed Project, four lanes of Stoneridge Drive would not be extended through Staples Ranch to El Charro Road until some point in the future, after full buildout of the Staples Ranch Project. Over the short term, a single two-lane bridge would extend over the Arroyo Mocho, and two lanes of Stoneridge Drive would provide access to the westerly portion of Staples Ranch. The eastern portion of the property would be accessed via a four-lane road connecting to El Charro Road, and no through-traffic would be permitted between the two portions of the property, other than emergency vehicles and possibly buses.

The Stoneridge Drive Specific Plan Amendment for Staples Ranch adopted by the Pleasanton City Council on February 24, 2009 included a full four-lane extension of Stoneridge Drive to El Charro Road concurrent with development of the Staples Ranch site, as originally contemplated by the Stoneridge Drive Specific Plan. The City Council also adopted the Ice Center Alternative, including the four-rink ice-skating center as part of the Staples Ranch land uses. The City of Pleasanton made these decisions after certifying the EIR and determining that it adequately assessed the impacts of the Four-Lane Concurrent Extension and the Ice Center Alternative. This SEIR reevaluates this approved project as the "Four-Lane Concurrent Extension Alternative."

The second alternative evaluated in this SEIR is the same as the Four-Lane Concurrent Extension Alternative, with the single exception that it would limit the number of traffic lanes over the Arroyo Mocho to two lanes instead of four lanes, but would restripe the bridges to four lanes total at some point in the future. The SEIR identifies this alternative as the "Two-Lane Constrained Extension Alternative."

Summary of Environmental Impacts

New Significant Impacts of the Proposed Project. Table ES-1 below summarizes the new significant impacts of the Proposed Project that are not identified in the EIR.

Table ES-1
Summary of New Proposed Project Impacts and Mitigation/Improvement Measures

New Significant Impact	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
S-BIO-1 Significant loss of habitat for San Joaquin spearscale, a CNPS List 1B species.	S	S-BIO-1.1 *Preserve off-site San Joaquin spearscale habitat*. Prior to issuance of the first grading permit for all or a portion of the Staples Ranch Site or the Stoneridge Drive bridge, the Alameda County Surplus Property Authority (ACSPA) shall permanently preserve a minimum of 1.77 acres of San Joaquin spearscale habitat in Alameda County by either purchasing 1.77 acres worth of credits from the Springtown Natural Community Preserve in the City of Livermore or by permanently protecting 1.77 acres of other spearscale habitat in Alameda County through the use of a conservation easement or other similar method.	LTS
S-AQ-1. GHG emissions constituting a cumulatively considerable contribution to the significant cumulative impact of global climate change.	S	EIR MMs VQ-3.1; VQ-3.3; VQ-3.4; AQ-3.1; TR-9.1; TR-9.2; GP BMPs, design components.	SU
S-NO-1. Cumulatively considerable noise increase along Stoneridge Drive.	S	EIR MM NO-4.1. S-NO-1.1 *Repave Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement*. Stoneridge Drive between Kamp Drive and Trevor Parkway shall be repaved with noise-attenuating pavement prior to the completion of the Stoneridge Drive extension to El Charro Road.	SU

New Significant Impact	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
S-TR-1. Increase of traffic to Southbound Santa Rita Road south of I-580 segment by more than 3 percent.	S	S-TR-1.1. Implementation of EIR MM TR-1.4. and payment of the Tri-Valley Transportation Development fees to fund improvements to State Route 84 and High-Occupancy Vehicle (HOV) lanes on I-580 and I-680. Improvements to parallel corridors will provide alternative routes and additional capacity to reduce local traffic impacts.	SU

Impact S-TR-1. was overlooked during review of technical studies during preparation of the EIR. It is a new impact by analytical error rather than by changed circumstances, a changed project, or new information, and should have been identified in the EIR.

New Significant Impacts of the Four-Lane Concurrent Extension Alternative and Two-Lane Constrained Alternative. Table ES-2 below summarizes the new significant impacts of the Four-Lane Concurrent Extension Alternative and the Two-Lane Constrained Extension Alternative that are not identified in the EIR.

Table ES-2
Summary of Impacts and Mitigation/Improvement Measures of Four-Lane Concurrent Extension Alternative and Two-Lane Constrained Extension Alternative

New Significant Impact	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
S-BIO-1. Significant loss of habitat for San Joaquin spearscale, a CNPS List 1B species.*	S	S-BIO-1.1. *Preserve off-site San Joaquin spearscale habitat*. Prior to issuance of the first grading permit for all or a portion of the Staples Ranch Site or the Stoneridge Drive bridge, the Alameda County Surplus Property Authority (ACSPA) shall permanently preserve a minimum of 1.77 acres of San Joaquin spearscale habitat in Alameda County by either purchasing 1.77 acres worth of credits from the Springtown Natural Community Preserve in the City of Livermore or by permanently protecting 1.77 acres of other spearscale habitat in Alameda County through the use of a conservation easement or other similar method.	LTS

New Significant Impact	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
S-AQ-1. GHG emissions constituting a cumulatively considerable contribution to the significant cumulative impact of global climate change.*	S	EIR MMs VQ-3.1; VQ-3.3; VQ-3.4; AQ-3.1; TR-9.1; TR-9.2; GP BMPs , design components.	SU
S-NO-2. Significant noise increase along Stoneridge Drive.	S	EIR MM NO-4.1. S-NO-1.1. *Repave Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement*. Stoneridge Drive between Kamp Drive and Trevor Parkway shall be repaved with noise-attenuating pavement prior to the completion of the Stoneridge Drive extension to El Charro Road.	SU
S-NO-1. Cumulatively considerable noise increase along Stoneridge Drive. *	S	EIR MM NO-4.1. S-NO-1.1. *Repave Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement*. Stoneridge Drive between Kamp Drive and Trevor Parkway shall be repaved with noise-attenuating pavement prior to the completion of the Stoneridge Drive extension to El Charro Road.	SU
S-TR-2. Unacceptable levels of service at Pleasanton Intersection #32 – Santa Rita Road/ Stoneridge Drive. **	S	S-TR-2.1. *Improve Santa Rita Road at Stoneridge Drive (#32).* To reduce project-related AM and PM impacts to this intersection, the following lane configurations and modifications are recommended: Restripe one of the Stoneridge Drive eastbound right lanes to an eastbound through lane only. Restripe one of the Stoneridge Drive eastbound right-turn lanes to a free right turn and construct a northbound Santa Rita Road lane to prove a separate right-turn lane to Stoneridge Drive. The City of Pleasanton shall change cycle length to 130 and 120 seconds for AM and PM respectively. This mitigation would improve Am and PM operations from LOS F to LOS D. **	LTS

New Significant Impact	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
S-TR-3. The Four-Lane Concurrent Extension Alternative** would result in an unacceptable level of service at the intersection of Dublin Blvd. at Fallon Road in the AM Peak Hour	S	EIR MM TR-2.1., TR-2.3.	SU
S-TR-4. The Four-Lane Concurrent Extension Alternative** would exceed the standards established by the County Congestion Management Agency for designated roads or highways at the following segments: (S) • Stoneridge Drive east of Santa Rita Road • Stanley Blvd. east of Valley Avenue • SR-84 between Stanley Blvd. and Vineyard Avenue • SR-84 near Little Valley Road** • I-580 between Airway Blvd. and Isabel Ave.	S	S-TR-4.1. *Mitigation for CMP Impacts: Payment of Regional Tri-Valley Transportation Development Fees*. Payment of the Tri-Valley Transportation Development fees to fund improvements to State Route 84, and High-Occupancy Vehicle (HOV) lanes on I-580 and I-680. Improvements to parallel corridors will provide alternative routes and additional capacity to reduce local traffic impacts.	SU

* Same as Proposed Project as reevaluated by SEIR.
** Not an impact of the Two-Lane Constrained Extension Alternative.

Analysis of Alternatives

The Four-Lane Concurrent Extension Alternative and the Two-Lane Constrained Extension Alternative focus on alternative configurations of Stoneridge Drive that differ from those of the Proposed Project. Unlike the Proposed Project, both new alternatives also included construction of an ice center. The SEIR determines that the Two-Lane Constrained Extension is environmentally superior to the Four-Lane Concurrent Extension Alternative because it results in fewer traffic and noise impacts. The Two-Lane Constrained Extension Alternative generates fewer significant traffic impacts than the Proposed Project. However, at the non-cumulative level, noise impacts to existing residences and sensitive receptors along Stoneridge Drive are significant and unavoidable under the Two-Lane Constrained Extension Alternative but less-than-significant under the Proposed Project after mitigation. For the same reasons stated in the EIR with regard to the Proposed Project, the Open Space Alternative still remains environmentally superior to all other alternatives.

S-1. INTRODUCTION

On February 24, 2009, the City of Pleasanton certified the Stoneridge Drive Specific Plan Amendment/Staples Ranch Environmental Impact Report (EIR), which evaluated the environmental impacts of modifying the land use and circulation plans for the 124-acre Staples Ranch portion of the City's Stoneridge Drive Specific Plan.

The Proposed Project evaluated in the EIR modified the Staples Ranch land uses from 100 acres of retail and service commercial uses and a 17-acre community park to a 46-acre senior continuing care community, a 37-acre auto mall, an 11-acre retail/ commercial center, a 5-acre neighborhood park, and a 17-cre community park (Stoneridge Drive Specific Plan Amendment). The EIR also assessed the effects of a four-rink ice-skating center in the community park, together with the other Proposed Project land uses, as a project alternative (Ice Center Alternative).

While the original Specific Plan required that Stoneridge Drive be extended to El Charro Road as part of any development of Staples Ranch, the Proposed Project evaluated in the EIR modified the Specific Plan circulation policies to not extend Stoneridge Drive to El Charro Road until some point in the future, after full buildout of the Staples Ranch Project. Instead, under the Proposed Project, Stoneridge Drive improvements within the Staples Ranch Project site would consist of a two-lane bridge over the Arroyo Mocho connected to a two-lane road segment that would provide access to the westerly portion of Staples Ranch. The eastern portion of the property would be accessed via a four-lane road connecting to El Charro Road, and no through-traffic would be permitted between the two portions of the property, other than emergency vehicles and possibly buses.

After certifying the EIR, the City of Pleasanton approved the Stoneridge Drive Specific Plan Amendment as contemplated by the Ice Center Alternative of the EIR, but without the modifications to Stoneridge Drive. Instead, the City retained the original Specific Plan circulation improvements for Stoneridge Drive, requiring the construction of two bridges and four lanes through the Staples Ranch Project at the same time as project buildout, as originally contemplated by the Stoneridge Drive Specific Plan (Four-Lane Concurrent Extension), rather than at some point in the future. The City of Pleasanton made these decisions after determining that the EIR adequately assessed the impacts of the Four-Lane Concurrent Extension and the addition of the ice-skating center.

A lawsuit challenging the City of Pleasanton's approval of the Staples Ranch Specific Plan amendment was filed on March 27, 2009. The lawsuit claimed, in part, that the City of Pleasanton should have recirculated the EIR with a new analysis of the impacts of the Four-Lane Concurrent Extension and that the EIR's analysis of biological resources, greenhouse gas (GHG) emissions, and cumulative quarry impacts were insufficient. This lawsuit settled in September 2009.

On June 2, 2009, the City of Pleasanton decided to assess whether it should further amend the Stoneridge Drive Specific Plan to adopt a short-term configuration of Stoneridge Drive that would differ from the Four-Lane Concurrent Extension by reducing

the total number of lanes by one in each direction across the Arroyo bridges (Two-Lane Constrained Extension). The Two-Lane Constrained Extension would still entail the full extension of Stoneridge Drive to El Charro Road as part of the development of Staples Ranch, but would stripe the travel lanes on the Arroyo bridges to one in each direction, instead of the two lanes in each direction under the Four-Lane Concurrent Extension. The striping could then be changed to a full four lanes over the Arroyo at such time as deemed necessary by the City, such as when other regional arterial roadways in Dublin and Livermore are extended and/or fully widened.

Program 1.6 of the Circulation Element of the Pleasanton General Plan 2005-2025 provides that the City of Pleasanton must reach an agreement with the City of Livermore, the City of Dublin, and Alameda County for a strategic approach and funding plan for relieving traffic congestion in the Tri-Valley before it opens the Stoneridge Drive extension to through-traffic.

Purpose and Scope

The City of Pleasanton has prepared this SEIR in response to the lawsuit and to assess the Two-Lane Constrained Extension.

Specifically, this SEIR evaluates the Proposed Project to determine whether:

1) Updated surveys for the California tiger salamander, the California red-legged frog, the western pond turtle, and the San Joaquin spearscale result in different impacts than described in the EIR;

2) Updated analysis of potential impacts to the environment resulting from the production of GHG emissions are different from those described in the EIR; and

3) The Proposed Project's contribution to cumulative biological resources impacts, cumulative noise impacts, and cumulative impacts in conjunction with nearby quarry operations are different from those described in the EIR.

This SEIR also evaluates whether:

1) The environmental effects of the Four-Lane Concurrent Extension alternative, which the Pleasanton City Council approved on February 24, 2009, are different from those of the Proposed Project; and

2) The environmental effects of the Two-Lane Constrained Extension alternative are different from those of the Proposed Project. This alternative is based on the alternate Stoneridge Drive configuration that the City of Pleasanton decided to assess on June 2, 2009.

Analytical Approach Under CEQA

The analytical approach used in this SEIR is consistent with the EIR supplement provisions of Sections 15162 and 15163 of the State CEQA Guidelines. This framework provides the public an opportunity to review and comment on changes to a project after certification of an EIR. This framework requires only the supplemental information to be circulated, and allows comments to be limited to that supplemental information, so that the entire EIR is not re-opened. State CEQA Guidelines Section 15163(b), (c), (d).

Except for certain limited exceptions (including but not limited to those listed above), this document does not, and need not, assess the relative cumulative impacts of the Four-Lane Concurrent Extension Alternative and the Two-Lane Constrained Extension Alternative; the cumulative impacts of both are, for the most part, the same as those of the Proposed Project and the Ice Center Alternative, the cumulative impacts of which have already been analyzed in the EIR.

Some of the levels of significance the EIR used to assess the environmental impacts of the development of Staples Ranch were derived from the goals, policies and programs of the City of Pleasanton's 1996 General Plan. On July 21, 2009, the Pleasanton City Council adopted a new General Plan (Pleasanton General Plan 2005-2025). The Pleasanton General Plan 2005-2025 creates a new noise significance threshold that was not considered in the EIR, specifically, Noise Element Program 1.3, which provides that an increase in exterior noise levels of more than 4 dB is considered significant. All other significance thresholds of the EIR are unchanged by the Pleasanton General Plan 2005-2025. This SEIR applies the new 4 dB threshold.

Public Review

This SEIR will be circulated for public comment for a period of 45 days. Readers are invited to submit written comments on the adequacy of this document. The City of Pleasanton requests that reviewers limit their comments to matters assessed in the SEIR, consistent with the provisions of State CEQA Guidelines Section 15163(c), (d).

Report Organization

This SEIR follows the organization and section sequencing of the EIR. It begins with this Introduction, followed by Background information provided as Section S-2. Section S-3 provides information updating the Biological Resources section of the EIR based primarily on updated survey information. Section S-4 updates the Other CEQA Considerations section of the EIR with three additions to the list of Significant Unavoidable Impacts relating to GHG emissions, noise, and transportation, and a discussion of Cumulative Impacts (greenhouse gas and global climate change, biological resources, and cumulative issues associated with nearby quarry uses). Section S-5 reevaluates the Four-Lane Concurrent Extension Alternative and evaluates the Two-lane Constrained Extension Alternative.

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S-2. BACKGROUND

In 1989, the City of Pleasanton adopted the Stoneridge Drive Specific Plan, which established the land uses, circulation improvements, and infrastructure requirements for a 293-acre area adjacent to the northeastern edge of the City. A major component of the Specific Plan was the extension of Stoneridge Drive eastwards to El Charro Road from Kamp Drive as a four-lane arterial roadway, within a six-lane right-of-way, consistent with the City's General Plan.

By 2006, all but 124 acres of the original 293-acre Specific Plan had been annexed and developed in accordance with the 1989 Specific Plan. The only remaining vacant property is the 124-acre Staples Ranch site. It is owned by the Alameda County Surplus Property Authority (ACSPA), the project proponent. The remainder of the original Specific Plan area has been developed with several hundred single-family residences, several neighborhood parks, a private school and Mohr Elementary School. Stoneridge Drive has been extended as a four-lane divided arterial eastward from Kamp Drive approximately one mile to Trevor Parkway, just south of a planned crossing of the Arroyo Mocho. The new subdivisions, located primarily on the south side of Stoneridge Drive, are shielded from the road with either a sound wall or are set back on the far side of a frontage road.

In April 2006, Pleasanton and ACSPA executed a Memorandum of Understanding (MOU) as a "roadmap" for amending the 1989 Stoneridge Drive Specific Plan's land use and infrastructure requirements for the Staples Ranch site. The MOU land use map indicated the site would be developed with an auto mall, a senior continuing care community, a retail/office commercial site, and a community park. To address concerns within the community about "cut-through traffic" using Stoneridge Drive, the MOU called for amending the 1989 Specific Plan so that Stoneridge Drive would no longer be required to be extended to El Charro Road as part of the development of the Staples Ranch site. Instead, the MOU called for Stoneridge Drive to be extended as a two-lane road from Trevor Parkway eastward over the Arroyo Mocho to access the senior continuing care community and the western portion of the community park, with a new four-lane road extending west from El Charro Road to serve the auto mall, the future commercial area and the eastern portion of the community park. No vehicular access (other than emergency vehicles and potentially buses) would be permitted between the two roads, but they would be designed to accommodate the full extension of Stoneridge Drive as a four-lane arterial when Pleasanton chose to do so in the future, as required by the City's General Plan.

In April 2008, the City of Pleasanton published a Draft Environmental Impact Report (DEIR) that assessed the potential environmental impacts of the proposed amendment to the Stoneridge Drive Specific Plan to accommodate the Staples Ranch project. The Proposed Project analyzed in the DEIR included the following components:

- Modification of the 1989 Specific Plan Land Use map for Staples Ranch from 100 acres of retail/service commercial and a 17-acre community park to an auto

mall on approximately 37 acres, a senior continuing care community on approximately 46 acres, a retail/commercial site on approximately 11 acres, a neighborhood park/storm water detention basin on approximately 5 acres, and a community park on 17 acres.

- Modification of the circulation discussion and figures to indicate that Stoneridge Drive would be extended from its present terminus at Trevor Drive as a two-lane road over the Arroyo Mocho to serve the community park, neighborhood park, and senior continuing care community. A new four-lane road (named "Auto Mall Place") would be extended westward from the proposed Jack London Boulevard/El Charro Road intersection to serve the auto mall and retail/commercial development, as well as provide potential access to the community park site. Vehicular access between Auto Mall Place and Stoneridge Drive would be limited to emergency vehicles and possibly buses, using a gated emergency vehicle access (EVA). While the ACSPA would dedicate the necessary right-of-way to Pleasanton for a full four-lane extension of Stoneridge Drive to El Charro Road, the City would have ultimate control on when the full extension would be constructed.

Figure S-2-1 illustrates the land use and circulation elements of the Proposed Project, and Figure S-2-2 illustrates the approximate alignment and cross section of the proposed two-lane Stoneridge Drive bridge over the Arroyo Mocho channel that would be constructed in conjunction with the Proposed Project. The ultimate extension of Stoneridge Drive to El Charro Road as a four-lane road, as called for by the Pleasanton General Plan, would require a second, adjacent two-lane bridge to be constructed in the future.

The DEIR also included an analysis of three alternatives to the Proposed Project. These included the 1989 Specific Plan land uses and circulation improvements for Staples Ranch (Existing Specific Plan Alternative), which included a full four-lane extension of Stoneridge Drive to El Charro Road. It also included the Ice Center Alternative, which had the same land uses and circulation improvements as the Proposed Project, with the addition of a four-rink 138,500-square-foot ice center on approximately eight acres of the community park site. The third alternative analyzed was an Open Space Alternative, which had the same land uses and circulation improvements as the Proposed Project, except the community park would be primarily open space and would not include any lighted sports fields, tennis courts, or similar features.

The EIR did not include an alternative that specifically examined the impacts of fully extending Stoneridge Drive as a four-lane road to El Charro Road as part of the initial development of Staples Ranch with the Proposed Project's land uses. However, the DEIR did analyze all of the environmental impacts associated with the four-lane extension under cumulative (future) Proposed Project conditions, consistent with the Pleasanton General Plan. In addition, the traffic study prepared for the DEIR included a specific analysis of the full four-lane extension under "existing plus approved" conditions for both the Proposed Project and the Ice Center Alternative.

Figure S-2-1

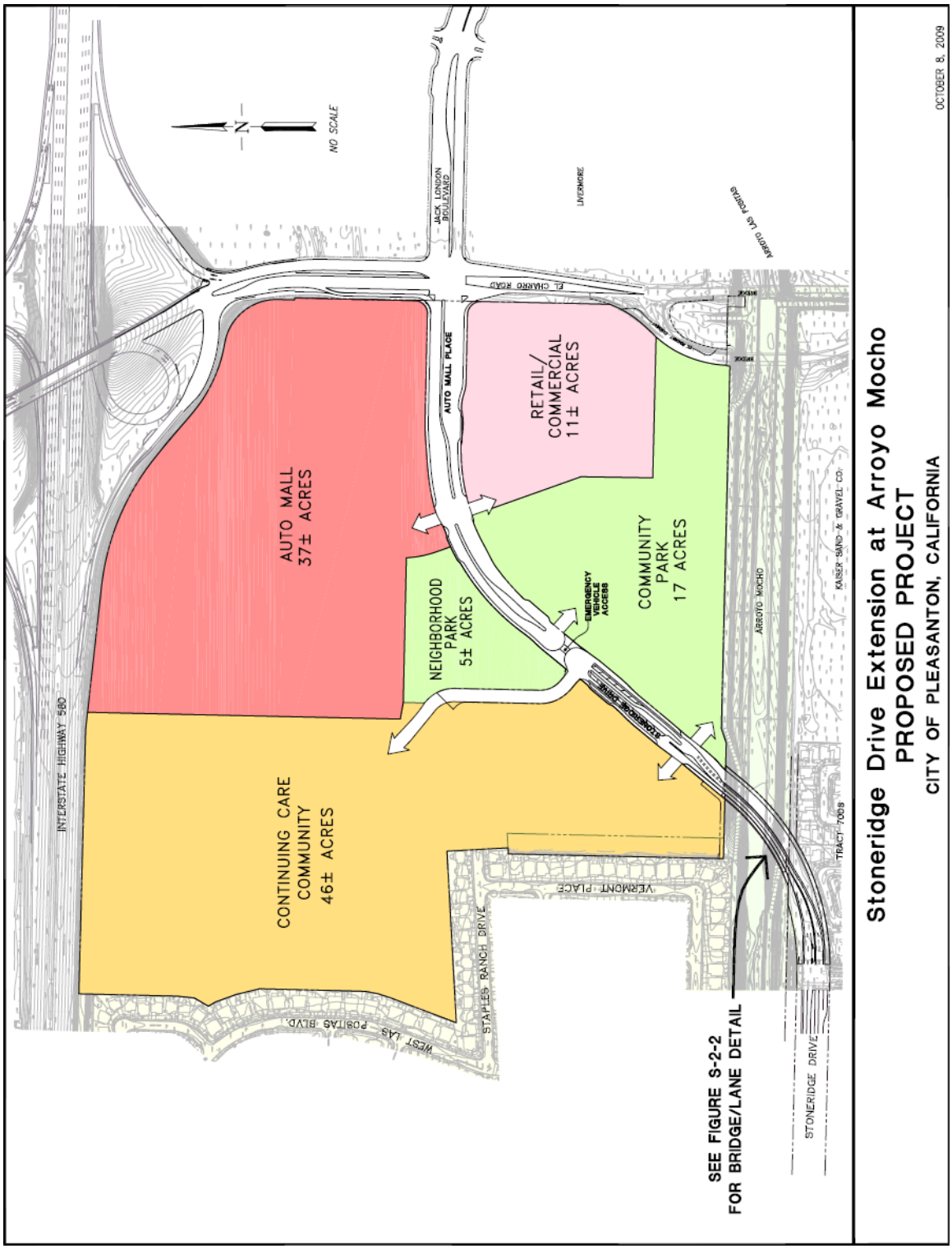
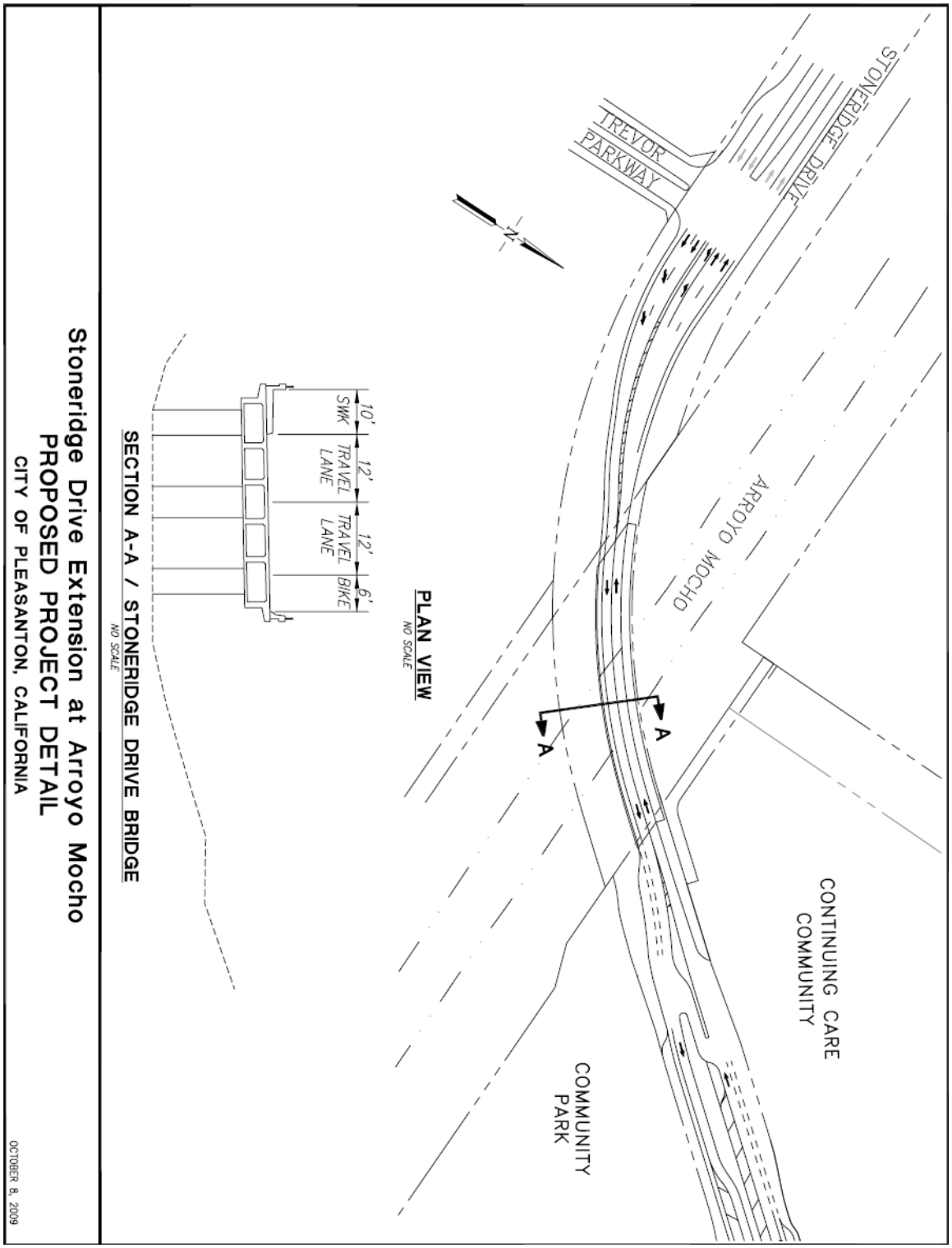

Stoneridge Drive Extension at Arroyo Mocho
PROPOSED PROJECT
CITY OF PLEASANTON, CALIFORNIA
OCTOBER 8, 2009
NO SCALE
N
INTERSTATE HIGHWAY 580
JACK LONDON BOULEVARD
LIVERMORE
ARROYO LAS POSITAS
EL CHARRO ROAD
AUTO MALL PLACE
AUTO MALL
37± ACRES
RETAIL/
COMMERCIAL
11± ACRES
NEIGHBORHOOD
PARK
5± ACRES
COMMUNITY
PARK
17 ACRES
EMERGENCY
VEHICLE
ACCESS
STONERIDGE DRIVE
ARROYO MOCHO
KAISER SAND & GRAVEL CO.
CONTINUING CARE
COMMUNITY
46± ACRES
VERMONT PLACE
STAPLES RANCH DRIVE
WEST LAS POSITAS BLVD.
TRACT 7009
SEE FIGURE S-2-2
FOR BRIDGE/LANE DETAIL
STONERIDGE DRIVE

Figure S-2-2


STONERIDGE DRIVE
TREVOR PARKWAY
N
ARROYO MOCHO
A
A
CONTINUING CARE COMMUNITY
COMMUNITY PARK
PLAN VIEW
NO SCALE
10'
SWK
12'
TRAVEL LANE
12'
TRAVEL LANE
6'
BIKE
SECTION A-A / STONERIDGE DRIVE BRIDGE
NO SCALE
Stoneridge Drive Extension at Arroyo Mocho
PROPOSED PROJECT DETAIL
CITY OF PLEASANTON, CALIFORNIA
OCTOBER 8, 2009

The City of Pleasanton published the Final Environmental Impact Report (FEIR) for the project in August 2008. In responding to comments from several agencies and jurisdictions, including Caltrans, Alameda County LAFCo, and the City of Dublin, the City included additional information to analyze the impacts of extending Stoneridge Drive as a four-lane road to El Charro Road as part of the initial development of Staples Ranch.

On February 24, 2009, the Pleasanton City Council certified the EIR and then adopted a Stoneridge Drive Specific Plan Amendment for Staples Ranch that included a full four-lane extension of Stoneridge Drive to El Charro Road concurrent with development of the Staples Ranch site, as originally contemplated by the Stoneridge Drive Specific Plan. The City Council also adopted the Ice Center Alternative, including the four-rink ice-skating center as part of the Staples Ranch land uses. The City of Pleasanton made these decisions after determining that the EIR adequately assessed the impacts of the Four-Lane Concurrent Extension and the Ice Center Alternative.

A lawsuit challenging the City of Pleasanton's approval of the Staples Ranch Specific Plan Amendment was filed on March 7, 2009. The lawsuit claimed, in part, that the City of Pleasanton should have recirculated the EIR with a new analysis of the impacts of the Four--Lane Concurrent Extension and that the EIR's analysis of biological resources, greenhouse gas (GHG) emissions, and cumulative quarry impacts were insufficient. This lawsuit settled in September 2009.

On June 2, 2009, the City of Pleasanton decided to assess whether it should further amend the Stoneridge Drive Specific Plan to adopt a short-term configuration of Stoneridge Drive that would differ from the Four-Lane Concurrent Extension by reducing the number of lanes across the Arroyo bridges. This Two-Lane Constrained Extension would still entail the full extension of Stoneridge Drive to El Charro Road as part of the development of Staples Ranch but would stripe (temporarily) the travel lanes on the Arroyo bridges to one lane in each direction, instead of the two lanes in each direction under the Four-Lane Concurrent Extension. To facilitate this reassessment, the City of Pleasanton has prepared this SEIR to assess and compare the effects of the Two-Lane Constrained Extension Alternative against the Proposed Project. The SEIR also assesses the Four-Lane Concurrent Extension Alternative against the Proposed Project and updates the GHG emissions, quarry-related, and sensitive plant and animal species impact analyses of the EIR in response to the lawsuit.

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S-3. ENVIRONMENTAL ANALYSIS

The original EIR included an analysis of the Proposed Project's potential environmental impacts on a wide variety of environmental topics, including Aesthetics and Visual Quality, Air Quality, Biological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Agricultural Resources, Noise, Population, Employment, and Housing, Transportation, and Water Supply.

The following section of the SEIR supplements and updates the EIR discussion of special status plant and animal species that could be impacted by the Proposed Project (DEIR pages 3.3-5 – 3.3-9).

S-3.1. SUPPLEMENTAL BIOLOGICAL RESOURCES ANALYSIS

Setting

The EIR concluded that three special status animal species (California red-legged frog, California tiger salamander, and western pond turtle) and one special status plant species (San Joaquin spearscale) could potentially be impacted by the Proposed Project. These conclusions were based on biological assessments and surveys conducted in 2005-2007. To address concerns raised during the EIR review process and by the lawsuit, additional surveys were conducted in 2009 for the California red-legged frog, western pond turtle, and San Joaquin spearscale. In addition, updated survey results for the California tiger salamander are now available. Updated survey results for each of these species are discussed in detail below.

California Tiger Salamander (CTS). As noted in the EIR (DEIR pages 3.3-19 – 3.3-20), the California tiger salamander (CTS) is a federally listed Threatened Species and is a California Species of Special Concern. It is most commonly associated with vernal pools in annual grassland habitat, and there have been several recorded occurrences of the species within five miles of Staples Ranch. Protocol-level surveys for CTS have been conducted both on Staples Ranch and in adjacent areas and have not detected the species. Two years of protocol-level surveys within the El Charro Specific Plan area in Livermore, just east of El Charro Road, resulted in no captures or observations of CTS. At the time the Staples Ranch DEIR was published, one year of protocol-level surveys had been completed on Staples Ranch, and a second year of surveys was nearing completion. Because the surveys were not complete, the EIR included Mitigation Measures BIO-3.1 (complete ongoing CTS surveys and comply with USFWS mitigation measures) and BIO-3.2 (provide construction monitoring for CTS if surveys identify CTS on Staples Ranch) to ensure that potential impacts to CTS were reduced to less-than-significant levels.

The Staples Ranch protocol-level CTS surveys were completed in accordance with United States Fish and Wildlife Service (USFWS) protocol in 2008. The surveys consisted of installing approximately 9,500 linear feet of drift fencing in and along the perimeter of the Staples Ranch property so that any CTS traversing the property would be directed into buckets placed along the fence. After each rainfall, the buckets were checked for CTS or other animals. The surveys were conducted throughout the rainy seasons of 2006-2007 and 2007-2008. No CTS were observed in any of the surveys.

These results indicate that CTS do not utilize the Staples Ranch property. These results have been transmitted to the USFWS.

California Red-legged Frog (CRLF). As noted in the EIR (DEIR pages 3.3-17 – 3.3-19), the CRLF is federally listed as a Threatened Species. It is typically found in slow-flowing portions of perennial streams, ephemeral streams, and hillside seeps. The frog is known to occur in the Arroyo Las Positas upstream of the Project Area (in the vicinity of the Livermore Municipal Golf course) and in several of the drainages north of I-580.

The EIR noted that a number of factors make the presence of this species on the Staples Ranch site very unlikely. The property is vegetated with non-native annual grassland habitat and agricultural lands and generally does not provide suitable cover or forage for the frogs to live or breed. In addition, the adjacent Arroyo Mocho channel represents low-quality aquatic CRLF habitat because of the presence of non-native aquatic predators, such as bullfrogs and non-native fish species. Also, barriers to migration limit the potential for colonization from nearby wetland habitats into the Staples Ranch site, including the I-580 freeway to the north, subdivisions to the west, and agricultural fields to the east. Furthermore, surveys of the Arroyo Mocho and Arroyo Las Positas on and adjacent to the Staples Ranch site in 1993 and in 2002, prior to the Arroyo Mocho Realignment project, as well as monitoring during construction in 2003-2004, did not find any CRLF within or upstream of the Project Area.

To provide an update on the status of CRLF in the Arroyo Mocho adjacent to Staples Ranch, especially in the vicinity of the proposed Stoneridge Drive bridge crossing, protocol-level field surveys for CRLF were conducted in June and July 2009. As specified by the USFWS, protocol-level surveys for CRLF require eight field surveys to be conducted, including six breeding-season surveys (two day and four nocturnal surveys) between January and June, and two non-breeding-season surveys (one day and one nocturnal) between July and September. The six breeding-season surveys were conducted in June-2009 and the two non-breeding-season surveys were conducted in early July 2009. In each survey, a pair of biologists walked the channel on foot, scanning for and listening for frogs. At night, headlamps were used for detecting amphibian eyeshine.

No CRLF were observed during the 2009 protocol-level field surveys. However, several bullfrogs, as well as other potential non-native aquatic CRLF predators, including Common Carp and red swamp crayfish, were observed.

Western Pond Turtle. As noted in the EIR (DEIR pages 3.3-8 and 3.3-20 – 3..3-21), the western pond turtle is a California Species of Special Concern. The species had previously been observed in 1993 and 2002 in the reach of Arroyo Las Positas that traversed Staples Ranch prior to completion of the Arroyo Realignment Project in 2003. These surveys did not find turtles in the reach of the Arroyo Mocho adjacent to Staples Ranch, most likely because this reach was at that time an ephemeral stream. An individual turtle was removed from the Arroyo Realignment project area during construction and relocated to an upstream location in Livermore. Because the Arroyo Mocho Realignment Project resulted in the confluence with the Arroyo Las Positas being moved upstream to El Charro Road, the reach of the Arroyo Mocho adjacent to Staples

Ranch is now a perennial stream, and turtle habitat enhancements such as basking logs and rocks were included as part of the Realignment project.

The EIR concluded that, because the creek is now a perennial stream with suitable habitat, western pond turtles could be found within the Arroyo Mocho channel or in upland habitats within the Arroyo Mocho corridor, but that chain link fencing along the Arroyo Mocho corridor prohibits the migration of the turtles into the adjacent Staples Ranch site itself. Because Stoneridge Drive bridge construction activities could impact individual turtles if they entered into the construction zone, the EIR included Mitigation Measures BIO-4.1 (conduct preconstruction surveys for western pond turtles) and BIO-4.2 (provide exclusion fencing for western pond turtles) to ensure that potential impacts to these turtles as a result of bridge construction are reduced to a less-than-significant level.

To ascertain the current status of western pond turtles within the Arroyo Mocho channel corridor adjacent to Staples Ranch, WRA conducted three separate field surveys for the turtle in June and July 2009. Pairs of biologist walked the banks of the creek looking for basking turtles and backwaters of the creek were also searched, but no western pond turtles were observed. Turtles in this portion of the Arroyo Mocho have also never been observed by the restoration ecologist monitoring the channel restoration plantings since completion of the Arroyo Realignment project in 2004.

San Joaquin Spearscale. As discussed in the EIR (DEIR pages 3.3-9, 3.3-16 – 3.3-17) a number of rare plant surveys of the Staples Ranch property have been conducted over the years and, while the site contains suitable habitat for several special-status plants, only one species, San Joaquin spearscale (*Atriplex joaquiniana*), has been found on-site.

San Joaquin spearscale (*Atriplex joaquiniana*) is a small, annual herb in the Chenopodiaceae family that blooms in mid- to late summer. It typically occurs in more alkaline habitats within grasslands, meadows, and seasonal wetlands. Although not a Federal- or State-listed species, the plant is classified by the California Native Plant Society (CNPS) as a List 1B species (rare, threatened or endangered in California) and is, therefore, considered a sensitive species under CEQA. According to the California Natural Diversity Database (CNDDB), there are over a dozen records of San Joaquin spearscale populations in eastern Alameda County, primarily north of I-580.

A population of San Joaquin spearscale was found on Staples Ranch during plant surveys conducted in the 1990s. In October 1995, Alameda County was authorized to construct the arroyo realignment project under a Clean Water Act Section 404 permit (No. 20564S) issued by the U.S. Army of Engineers. The realignment project, which was constructed in 2003, relocated the Arroyo Las Positas flood control channel so that the flood waters that normally would have flowed through the Arroyo Las Positas channel were directed to the adjacent Arroyo Mocho, which was significantly deepened and widened. The project also included restoration of riparian habitat along the newly widened and deepened Arroyo Mocho channel and banks as mitigation for impacts of the project. Because large amounts of fill material would be generated by the Arroyo Mocho excavations that were proposed to be spread over Staples Ranch, part of the Wetland Mitigation and Monitoring Plan approved with the Corps permit included mitigating impacts to the Staples Ranch population of San Joaquin spearscale by collecting seed from the Staples Ranch population and distributing them on the newly excavated northern

upper bank of the adjacent Arroyo Mocho channel. While the spearscale seeds were distributed along the Arroyo bank in conformance with the Wetland Mitigation and Monitoring Plan, fill materials were not immediately spread over the Staples Ranch property but were instead stockpiled in several large mounds in anticipation of spreading the materials at a later date, in conjunction with the development of the property.

Rare plant surveys were conducted on the Staples Ranch property and adjoining Arroyo Mocho in October 2005 and June 2006. San Joaquin spearscale was observed and mapped, using GIS, primarily in the northwest portion of Staples Ranch and along the north bank of the adjacent Arroyo Mocho channel. The plants on Staples Ranch were remnants of the original population that was partially impacted during the permitted Arroyo realignment project. Staples Ranch population estimates during the June 2006 survey were 1,250 plants, covering about half an acre. Approximately 10 additional spearscale individuals were observed and mapped in two isolated occurrences in the central southern portion of the Staples Ranch property during the October 2005 survey. These plants were at the base of one of the large piles of fill that was deposited on-site during the Arroyo realignment project. However, spearscale plants were not observed at these two isolated locations during the June 2006 site visit.

Over 10,000 spearscale plants were found along the north upper bank of the Arroyo Mocho during the same surveys, in the area where seed had been distributed in accordance with the Wetland Mitigation and Monitoring Plan, although they were dispersed over a smaller area. The plants in the Arroyo Mocho mitigation area were extremely densely clustered, sometimes as many as 20 individuals per square foot. This is in contrast to the distribution of spearscale on Staples Ranch, which rarely had more than one plant per square meter.

In June 2009, surveys for San Joaquin spearscale were again conducted on the Staples Ranch property and the adjacent Arroyo Mocho so that spearscale concentrations and locations could be compared over time. The site was generally unchanged from previous site visits except that the grass on the Staples Ranch property had not been cut for several years because of the presence of drift fences set up as part of protocol California tiger salamander survey work conducted in 2006-2008. Previously, much of Staples Ranch had dry land farmed for hay. As a result, a number of weed species, specifically black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), brome grasses (*Bromus* sp.), and yellow start thistle (*Centaurea solstitialis*) dominate upland portions of the site.

Figure S-3.3-1 illustrates where spearscale were observed in June 2009, and overlays this with previous observations made in October 2005 and June 2006. San Joaquin spearscale was observed and mapped in the majority of the same areas as in previous survey work; however, population numbers on both the Staples Ranch property and adjacent Arroyo Mocho mitigation area were significantly lower in 2009. Approximately 273 spearscale plants were observed in the northwest portion of Staples Ranch. No plants were seen in the two isolated occurrences where they were observed in October 2005, adjacent to the large dirt stockpile located in the south-central portion of the property. Approximately 1,746 spearscale individuals were observed on the northern bank of the adjacent Arroyo Mocho, including approximately 120 plants in the western portion of the Arroyo Mocho, where they were not previously observed.

Figure S-3.3-1

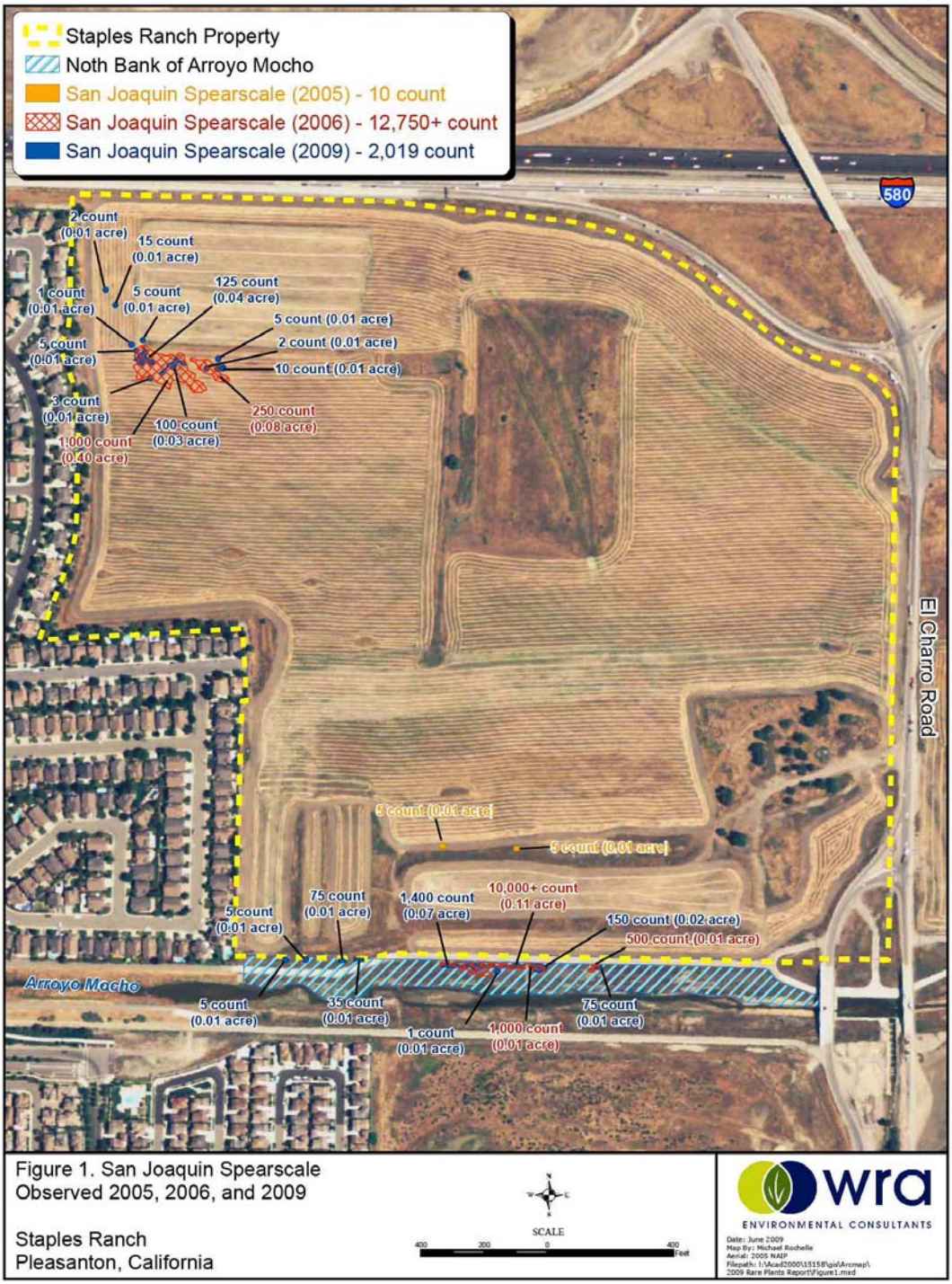

Figure 1. San Joaquin Spearscale
Observed 2005, 2006, and 2009

Staples Ranch
Pleasanton, California

Since spearscale is an annual plant that grows anew from seed each year, annual variation in population sizes and exact locations are normal. The lower population numbers observed in both Staples Ranch and the adjacent Arroyo Mocho in 2009 in comparison to 2006 could be due to a number of reasons such as rainfall patterns, competition from other nearby plants, poor seed set from the previous year, etc. For instance, 2006 was an exceptionally wet spring, while the last several years have had less-than-normal rainfall.

Given the wide variability in the number of annual plants from year to year, areas with potential to support spearscale for both Staples Ranch and the adjacent Arroyo Mocho channel were also mapped during the 2009 survey. San Joaquin spearscale has specific habitat requirements that only exist in a few locations on-site. Specifically the plants are typically associated with alkaline soils with low plant cover. The main populations observed on the Staples Ranch property are found within an alkaline depression dominated by the low-growing non-native annual grass Mediterranean barley (*Hordeum marinum*). Other associated plants include common spikeweed (*Centromadia pungens* ssp. *pungens*) and alkali heath (*Frankenia saligna*). Also notable was the lack of wild rye (*Lolium multiflorum*) and wild oat (*Avena* sp.) from the areas that supported spearscale, while these species are dominant on the remainder of Staples Ranch. Based on these characteristics, which were quite distinct in the field, areas that had the potential to support San Joaquin spearscale on the Staples Ranch property were mapped using GPS (Figure S-3.3-2). These habitat areas on Staples Ranch total 1.70 acres and correlate with all spearscale observations in the northwestern portion of the property made in 2006 and 2009, as well as some adjoining additional area.

The two small isolated areas in the south-central portion of the property adjacent to the large pile of fill material were not mapped as potential San Joaquin habitat. While a small number of plants (ten in total) were observed in these locations in October 2005, they were not observed in subsequent surveys in June 2006 or June 2009, nor were the other plant species associated with San Joaquin spearscale in the northwest portion of Staples observed in these locations. It is not surprising that no further observations of spearscale have been made, given the conditions in these specific areas. These areas were never planted with hay or mowed since they were at the toe of the slope of the large pile of excavated soil. Weeds have overtaken the area, leaving little room for native plants to thrive. Soil sloughing off the pile may have also covered the original locations, further reducing the suitability of the area for supporting spearscale. Therefore, these isolated areas are no longer considered potential spearscale habitat due to existing conditions.

Areas with the potential to support San Joaquin spearscale were also mapped along the northern bank of the Arroyo Mocho, based on their observed locations in 2006 and 2009. The habitat in this area is slightly different than the habitat found on Staples Ranch, however, in that the plants thrive on a 2.5:1 channel slope instead of an alkali depression. One common aspect of all of the areas that support spearscale along the north bank of the Arroyo Mocho is that they have distinctive white, alkaline soils, possibly where long-buried lenses of these soils were uncovered as a result of the Arroyo channel

Figure S-3.3-2

Figure 2. San Joaquin Spearscale Habitat Impacted by Proposed Project

Staples Ranch
Pleasanton, California

excavation, and support very little other plant cover. Therefore, all such areas along the Arroyo Mocho channel adjacent to Staples Ranch were mapped as potential San Joaquin spearscale habitat, as also shown in Figure S-3.3-2. The area mapped as San Joaquin spearscale habitat within the Arroyo Mocho channel totals 0.27 acres. Approximately 0.07 acres of this habitat is located in the area along the western portion of the Arroyo Mocho, in the vicinity of the planned Stoneridge Drive bridges where the existing access road dips down the bank.

Environmental Analysis

The following section updates and supplements the EIR discussion (DEIR pages 3.3-16 – 3.3-26) of potential impacts on biological resources as a result of the Proposed Project, and mitigation measures to reduce identified impacts.

San Joaquin Spearscale

S-BIO-1. The Proposed Project would result in a loss of habitat for San Joaquin spearscale, a CNPS List 1B species (S).

The EIR concluded that there would be no significant impact on San Joaquin spearscale as a result of the development of Staples Ranch because loss of the Staples Ranch population had already been fully and successfully mitigated for in the Arroyo Mocho mitigation area, where over 10,000 spearscale plants were observed in 2006.

Nonetheless, for the purposes of this SEIR, loss of potential spearscale habitat as a result of the Proposed Project is considered a significant impact requiring mitigation.

Because development of the Staples Ranch property requires spreading of fill over the entire site (as was originally contemplated under the Arroyo project), approximately 1.70 acres of spearscale habitat currently occupied by approximately 273 plants on Staples Ranch would be lost. The EIR concluded that there would be no significant impact on San Joaquin spearscale as a result of the development of Staples Ranch because this loss of the Staples Ranch population had already been fully and successfully mitigated in the Arroyo Mocho mitigation area, where over 10,000 spearscale plants were observed in 2006. However, although the permit for the Arroyo realignment project mitigated for permanent impacts to the entire spearscale population within the Staples Ranch property, not all of the original Staples Ranch population or habitat was impacted because fill material was not distributed throughout the site as originally planned. This SEIR treats impacts to the existing habitat on Staples Ranch that was unaffected by the fill as a new impact.

The Proposed Project also includes the ultimate construction of two adjacent bridges over the western portion of the Arroyo Mocho so that Stoneridge Drive can be extended from its current eastern terminus at Trevor Parkway to access the Staples Ranch property. The June 2009 survey found approximately 0.07 acres of spearscale habitat currently occupied by approximately 120 plants along the north bank of Arroyo Mocho channel in

the vicinity of the planned Stoneridge Drive bridges, which is likely to be impacted by bridge construction. This impact was not considered by the EIR because no spearscale plants were identified in the area where bridge construction would occur until after the EIR was certified in February 2009.

In all, the Proposed Project would result in the loss of 1.70 acres of San Joaquin spearscale habitat on the Staples Ranch property, as well as an additional 0.07 acres of spearscale habitat on the north bank of the Arroyo Mocho, for a total of 1.77 acres (Figure S-3.3-2). While plant numbers can vary widely from year to year, these areas contained a total of 393 plants in June 2009. The loss of 1.77 acres of San Joaquin spearscale habitat is considered a significant impact.

Mitigation Measures. The preferred methods for mitigating for the loss of sensitive plant populations, in order of preference, are avoidance, on-site mitigation and off-site mitigation. Modifying the Proposed Project to avoid the remaining spearscale on Staples Ranch is not considered feasible because the need to fill much of the site to create positive drainage for sewers and storm water would result in small, unmanageable areas containing spearscale that would likely still be impacted by changes in drainage. Similarly, because the road right-of-way on the south side of the Arroyo Mocho is fixed, the alignment of the Stoneridge Drive bridge cannot be changed to avoid the small area containing spearscale along the westernmost north bank of the Arroyo Mocho. On-site mitigation, by relocating the existing spearscale population to another portion of Staples Ranch, such as the proposed community park site, is also not considered feasible because the alkaline soils necessary for the plants to thrive are found only in the northwest portion of Staples Ranch. Therefore, off-site mitigation for loss of habitat is considered to be the most feasible mitigation method.

Because of the large yearly fluctuation in population numbers, mitigation for loss of spearscale on Staples Ranch should be based on loss of suitable habitat, rather than the number of individual plants in any given year. Acceptable off-site mitigation for the loss of spearscale habitat as a result of the Proposed Project would be for the project proponents to cause the permanent preservation of similar San Joaquin spearscale habitat in Alameda County. This could be accomplished either by purchasing credits from an existing mitigation bank, such as the Springtown Natural Community Preserve in the City of Livermore, or by permanently protecting other spearscale habitat in Alameda County that contains the plant, through the use of a conservation easement or other similar method.

The following mitigation measure would reduce potential impacts to San Joaquin spearscale to a less-than significant level (LTS).

S-BIO-1.1 *Preserve off-site San Joaquin spearscale habitat.* Prior to issuance of the first grading permit for all or a portion of the Staples Ranch Site or the Stoneridge Drive bridge, the Alameda County Surplus Property Authority (ACSPA) shall permanently preserve a minimum of 1.77 acres of San Joaquin spearscale habitat in Alameda County by either purchasing 1.77 acres worth of credits from the Springtown Natural Community Preserve in the City of Livermore or by permanently protecting 1.77 acres of other spearscale habitat in Alameda County through the use of a conservation easement or other similar method.

<u>California Red-Legged Frog</u>

S-BIO-2. The Proposed Project could affect California red-legged frog (PS).

Potential California red-legged frog habitat in the vicinity of Staples Ranch is restricted to the adjacent Arroyo Mocho channel. Potential impacts to red-legged frogs as a result of the development of the Proposed Project would be limited to the area within the Arroyo Mocho channel that would be impacted by construction of the Stoneridge Drive Bridge.

Based on the negative 2009 protocol-survey results, as well as the previous surveys conducted in 1993 and 2002, California red-legged frog are not currently present in the Arroyo Mocho channel adjacent to the Staples Ranch property.

However, the proximity of recorded occurrences in the Arroyo Las Positas drainage upstream in Livermore makes it possible that individual frogs could disperse along the Arroyo Mocho channel in the vicinity of the Stoneridge Drive bridge construction area and, therefore, could potentially be affected by the Proposed Project as a result of bridge construction. EIR Mitigation Measures BIO-2.1 (conduct preconstruction surveys for California red-legged frog in the bridge construction area); BIO-2.2 (restrict construction activities within 100 feet of Arroyo Mocho aquatic habitat to the dry season); BIO-2.3 (conduct construction monitoring for California red-legged frog); and BIO-2.4 (conduct worker environmental awareness program) will reduce these potential impacts on individual red-legged frogs to a less-than-significant level (LTS).

<u>California Tiger Salamander</u>

S-BIO-3. The Proposed Project could affect California tiger salamanders (LTS).

Two--year protocol surveys for California tiger salamanders were completed in 2008 and the negative results transmitted to the US Fish and Wildlife Service. Based on these surveys, it can be concluded that California tiger salamanders do not utilize the Staples Ranch property and, therefore, will not be affected by the development of the Proposed Project. EIR Mitigation Measures BIO-3.1 (complete California tiger salamander surveys) and BIO-3.2 (provide construction monitoring for California tiger salamanders if surveys identify California tiger salamanders on the Staples Ranch property) are, therefore, no longer required.

<u>Western Pond Turtle</u>

S-BIO-4. The Proposed Project could affect western pond turtle or their habitat (PS).

Potential western pond turtle habitat in the vicinity of Staples Ranch is restricted to the adjacent Arroyo Mocho flood control channel. Potential impacts to western pond turtle as a result of the development of the Proposed Project would be limited to the area within the Arroyo Mocho channel that would be impacted by construction of the Stoneridge Drive Bridge.

Surveys for the turtles in 2009 indicated that while the Arroyo Mocho creek corridor provides suitable habitat for WPT, no turtles currently reside in the Arroyo Mocho adjacent to Staples Ranch. It is possible that turtles resident in the Arroyo Las Positas upstream of the Realignment Project may not yet have dispersed downstream into the newly restored Arroyo Mocho channel, even though the habitat is now suitable. EIR Mitigation Measures BIO-4.1 (conduct preconstruction surveys for western pond turtle) and BIO-4.2 (provide exclusion fencing for western pond turtle) will ensure that no individual turtles could potentially be affected by Stoneridge Drive bridge construction activities within the Arroyo Mocho channel. Potential impacts to the western pond turtle therefore will be reduced to a less-than-significant level (LTS)

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S-4. OTHER CEQA CONSIDERATIONS

Most EIRs, including the EIR, address several topics required by CEQA in a chapter titled "Other CEQA Considerations" or some similar title. These CEQA requirements often include a discussion of Significant Unavoidable Environmental Effects, Growth Inducing Impacts, Cumulative Impacts, Effects Found Not to be Significant, and other topics.

This SEIR provides revised and additional information to the EIR discussion of Significant Unavoidable Environmental Effects and Cumulative Impacts of the Proposed Project. The discussion of Significant Unavoidable Environmental Effects includes the identification of the Proposed Project's cumulative GHG/global climate change impact as considerable and unavoidable, based on a more detailed analysis of the Proposed Project's estimated GHG emissions. In addition, it identifies a new cumulatively considerable and unavoidable contribution to a cumulatively significant noise impact as a result of a new noise significance threshold of the new Pleasanton General Plan 2005-2025. It also identifies one additional arterial roadway segment traffic intersection that cannot be mitigated to a less than significant level. Finally, this section of the SEIR updates the Proposed Project's contributions to cumulative biological impacts and cumulative noise impacts, and discusses the Proposed Project's contributions to cumulative impacts in conjunction with nearby quarry operations.

S-4.1. SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL EFFECTS

This section updates the Significant Unavoidable Environmental Effects discussion of the EIR by identifying significant and unavoidable impacts of the Proposed Project that were not identified in the EIR.

Air Quality

The EIR determined that the Proposed Project did not result in a cumulatively considerable contribution to the significant cumulative impact of global warming. However, the supplemental cumulative GHG/global climate change analysis of this SEIR determines that the Proposed Project would result in a cumulatively considerable and unavoidable contribution to the significant cumulative impact of global warming.

Noise

The EIR determined that a mitigation measure would reduce a significant cumulative noise impact along Stoneridge Drive to a less than significant level. However, the supplemental cumulative noise analysis of this SEIR determines that, under a new noise significance threshold of the Pleasanton General Plan 2005-2025, this impact remains a significant cumulative impact to which the Proposed Project contributes considerably.

Transportation

The EIR determined that the Proposed Project did not result in a significant impact to any freeway or arterial segments, based on an analysis of Alameda County Congestion Management Program roadway segments.

S-TR-1. Increase of traffic to southbound Santa Rita Road south of I-580 segment by more than three percent (S).

Table 3.9-14 of the DEIR incorrectly listed the "no project" condition for the Southbound Santa Rita (South of I-580) segment as having a V/C of 1.11, while the EIR Traffic Report (Table 41 of the 2008 Dowling Associates Stoneridge Drive Specific Plan Amendment—Staples Ranch Study [the Dowling Traffic Study"]) correctly shows that the Proposed Project (in the near term [2015 analysis]) would result in a significant impact to Southbound Santa Rita Road south of I-580 by increasing traffic by more than three percent in the AM from a V/C of 1.09 to a V/C of 1.13.

The following mitigation measure would reduce this impact:

S-TR-1.1 Implementation of the Santa Rita Road at Valley Avenue intersection improvement identified in the EIR as TR-1.4 and payment of the Tri-Valley Transportation Development fees to fund improvements to State Route 84, and High-Occupancy Vehicle (HOV) lanes on I-580 and I-680. Improvements to parallel corridors will provide alternative routes and additional capacity to reduce local traffic impacts.

While implementation of Mitigation Measure S-TR-1.1 will reduce this impact to the Southbound Santa Rita Road segment, there is no feasible mitigation measure to directly ensure that the impact to the segment will be less than significant after mitigation (SU).

S-4.2. CUMULATIVE IMPACTS

S-4.2.1. SUPPLEMENTAL CUMULATIVE GREENHOUSE GAS/ GLOBAL CLIMATE CHANGE ANALYSIS

This section updates and supplements the GHG discussion of the EIR (DEIR pages 3.2-4, 3.2-19 through 3.2-20 and 4-8 through 4-9). Although originally assessed in the project-specific and cumulative analyses of the EIR, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (California Air Pollution Control Officer's Association (CAPCOA), 2008). This SEIR, therefore, updates and supplements the EIR's project-specific and cumulative GHG analyses with a new cumulative analysis section.

The EIR concluded that the Proposed Project's contribution to regional GHG emissions would not be considerable. The EIR based this conclusion on estimated project emissions (which this SEIR converts from standard to metric tons), mitigation measures, project design features and statutory requirements. Since preparation of the EIR, there

have been numerous changes in the legal framework for GHG emissions, both as a new subject of regulation and as a new topic of CEQA practice. This section, therefore, updates and supplements the GHG discussion of the EIR by describing current global climate change conditions and recent developments regarding GHG emissions regulations and guidance documents, and by evaluating the potential impacts on global climate from the implementation of the Proposed Project in light of these changes.

Setting

Description of the Greenhouse Effect. Heat retention within the atmosphere is an essential process to sustain life on Earth. The natural process through which heat is retained in the troposphere is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a three-fold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb and emit this long-wave radiation into space and toward the Earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect. Without the greenhouse effect, the Earth's average temperature would be approximately -18 degrees Celsius (°C) (0° Fahrenheit [°F]) instead of its present 14 °C (57 °F) (National Climatic Data Center 2008). The most abundant GHGs are water vapor and carbon dioxide. Many other trace gases have greater ability to absorb and re-radiate long-wave radiation, but they are not as plentiful.

Primary Greenhouse Gases. Greenhouse gases include, but are not limited to, Carbon dioxide (CO_2), Methane (CH_4), Nitrous oxide (N_2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride**.**

Contributions to Greenhouse Gas Emissions

State of California. Based upon the 2004 GHG inventory data compiled by the California Air Resources Board (CARB) for the California 1990 greenhouse gas emissions inventory, California emitted emissions of 484 million metric tons of CO_2 equivalent ($MMTCO_2E$), including emissions resulting from out-of-state electrical generation (CARB 2007). California is estimated to be the second largest emitter of greenhouse gases in the country, and is the 12th to 16th largest emitter of greenhouse gasses worldwide.

A California Energy Commission (CEC) emissions inventory report placed CO_2 produced by fossil fuel combustion in California as the largest source of GHG emissions in 2004, accounting for 81 percent of the total GHG emissions (CEC 2006). CO_2 emissions from other sources contributed 2.8 percent of the total GHG emissions, methane emissions 5.7 percent, nitrous oxide emissions 6.8 percent, and the remaining 2.9 percent was composed of emissions of other gases comprised primarily of refrigerants and a small contribution of sulfur hexafluoride (SF6) used as insulating materials in electricity transmission and distribution (CEC 2006).

San Francisco Bay Area and Alameda County. In December 2008, the Bay Area Air Quality Management District (BAAQMD) published an inventory of GHG emissions in the Bay Area for the base year 2007. Total Bay Area GHG emissions in 2007 were estimated at 102.6 $MMTCO_2E$. Alameda County GHG emissions in 2007 were estimated at 17.7 $MMTCO_2E$. (BAAQMD 2008).

The primary contributors to GHG emissions in the San Francisco Bay Area and in Alameda County are transportation, industry, and electric power generation. These and other primary contributors to the GHG emissions of the San Francisco Bay Area and Alameda County are presented in Table S-4.2.1-1**,** GHG Sources in the San Francisco Bay Area and Alameda County.

Table S-4.2.1-1
GHG Sources in the San Francisco Bay Area and Alameda County
CO_2-Equivalent (Million Metric Tons/Year)

End-Use Sector	Alameda County	SF Bay Area
Industrial / Commercial	3.3	34.9
Residential Fuel Usage	1.3	6.8
Electricity / Co-Generation*	2.0	15.2
Off-Road Equipment	0.6	2.9
Transportation	10.4	41.6
Agriculture / Farming	0.1	1.1
Total	**17.7**	**102.6**

Notes: Includes Imported Electricity emissions of 7.1 $MMTCO_2E$
Source: BAAQMD, Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2007, 2008.

City of Pleasanton. Table 9.4 of the Pleasanton General Plan 2005-2025, reproduced below as Table S-4.2.1-2, Pleasanton GHG Emissions, Existing and Projected, lists estimated existing (2005) and projected General Plan buildout (2025) GHG emissions (Million Tons/Year) for the City of Pleasanton.

Table S-4.2.1-2
Pleasanton GHG Emissions, Existing and Projected

Emission Source	ExistingConditions (2005)		General Plan Buildout (2025)	
	(CO_2e in MT/Year)	% all CO_2e	(CO_2e in MT/Year)	% all CO_2e
Residential	0.277	21	0.319	16
Commercial/Office/R&D/Other	0.241	18	0.404	21
Industrial	0.043	3	0.082	4
Transportation	0.777	58	1.140	59
Total Annual Emissions	**1.338**	**100**	**1.940**	**100**

Notes: CO_2e = carbon dioxide, e = equivalent, CO_2e = carbon dioxide equivalent, MT = million tons
Source: City of Pleasanton General Plan 2005-2025, Table 9.4.

The increase in GHG emissions per year shown in the table represents the "business as usual" scenario. This increase does not take into account potential reductions that would result from the implementation of AB 32 or the General Plan's GHG emissions reduction programs and policies, which are summarized below.

Applicable Plans and Policies

Executive Order S-3-05. In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

Assembly Bill 32. In furtherance of the goals established in Executive Order S-3-05, the Legislature enacted Assembly Bill 32 (AB 32, Nuñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries with penalties for noncompliance. The first GHG emissions limit requires emissions reductions to 1990 levels by 2020.

AB 32 required CARB to adopt a scoping plan by January 2009 indicating how reductions in significant GHG sources would be achieved through regulations, market mechanisms, and other actions. CARB adopted the Climate Change Proposed Scoping Plan in December 2008. This plan contains an outline of the proposed State strategies to achieve the 2020 GHG emission limits. Under the Scoping Plan, approximately 85 percent of the State's emissions are subject to a cap-and-trade program where covered sectors are placed under a declining emissions cap. It is expected that emission reduction from this cap-and trade program will account for a large portion of the reductions required by AB 32.

Senate Bill 97. In August 2007, the legislature enacted SB 97 (Dutton), which directs the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of greenhouse gas emissions.

On January , 2009, OPR released its Preliminary Draft CEQA Guideline Amendments for Greenhouse Gas Emissions. Generally, the proposed Guidelines seek to apply CEQA's existing basic rules for impact analysis to the topic of GHG emissions. OPR's proposed amendments to the CEQA Guidelines would allow lead agencies to determine whether impacts are significant based on "compliance with plan" findings, to specify that projects may determine that their contribution to the cumulative impact of climate change is reduced to a less than significant level by compliance with climate action plans or statewide GHG mitigation plans.

OPR proposes a new Guideline to provide guidance on determining the significance of impacts resulting from a project's GHG emissions (proposed Guideline 5064.4). This guideline indicates that lead agencies have discretion to determine which type of methodology to use to evaluate GHG emissions, given that such methodologies are

evolving. OPR also proposes to amend the Guideline on mitigation measures (proposed Guideline 15126.4) to provide general guidance on mitigation of the impacts of a project's GHG emissions. The Preliminary Draft CEQA Guideline Amendments for Greenhouse Gas Emissions do not propose a particular threshold of significance to be applied in determining whether a project's contribution to global climate change is significant.

On July 3, 2009 the Natural Resources Agency began the formal rulemaking process for the adoption of Draft CEQA Guideline Amendments for Greenhouse Gas Emissions. The Natural Resources Agency issued a revised draft in response to comments on October 23, 2009, which is also subject to review and comment.

APCOA CEQA and Climate Change White Paper. The California Air Pollution Control Officers Association (CAPCOA) prepared a white paper on CEQA and climate change in January 2008. The white paper discusses three possible approaches to evaluating the significance of GHG emissions, although CAPCOA does not endorse any particular approach. The three alternative significance approaches are: (1) not establishing a significance threshold for GHG emissions; (2) setting the GHG emission threshold at zero; and (3) setting the GHG emission threshold at some non-zero level. The white paper evaluates the three approaches and examines more than a dozen different potential significance thresholds for GHG impacts. At the end of the white paper, CAPCOA provides a list of potential mitigation measures and discusses each in terms of its emissions reduction effectiveness, cost effectiveness, and technical and logistical feasibility. While programs are still being developed by CARB, the white paper provides public agencies with information to ensure that GHG emissions are, according to CAPCOA, "appropriately considered and addressed under CEQA."

BAAQMD Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance. BAAQMD is the primary agency responsible for comprehensive air pollution control in the San Francisco Bay Area Air Basin, including Alameda County. In April 2009, BAAQMD produced a Workshop Draft Options Report for CEQA Thresholds of Significance, which was subsequently revised and redistributed in October 2009 as the Revised Draft Options and Justification Report for CEQA Thresholds of Significance. The report includes proposed thresholds of significance for GHG emissions. The report determines that, after taking into account reductions in GHG emissions resulting from CARB's scoping measures, the AB 32 mandate of achieving 1990-equivalent levels of GHG emissions could be achieved within the San Francisco Bay Area Air Basin with regard to land-use-related emissions of "land-use-driven" emission sectors "(e.g., on-road passenger and heavy-duty motor vehicles, commercial and residential area sources [i.e., natural gas], electricity generation/consumption, and wastewater treatment), and water distribution/consumption" achieved an additional 2.3 percent reduction of forecasted "business as usual" 2020 emissions (BAAQMD 2009[c] at 42). The report recommends a "bright-line" significance threshold of 1,100 metric tons CO_2 equivalent ($MTCO_2E$) per year for land use projects in area where a qualified Climate Action Plan has not yet been adopted. The report determined this threshold by dividing the raw equivalent of the remaining required GHG reduction of 2.3 percent (approximately 1.6 million metric tons CO_2 equivalent - $MMTCO_2E$) by projected levels of development. The report also recommends that

mixed-use projects that exceed the 1,100 ($MTCO_2E$ threshold should still be considered to have a less-than-significant GHG impact if their overall efficiency is less than 4.6 $MMTCO_2E$ per year per service population (service population = project jobs + project residents). The April 2009 draft of the report also identified two alternate construction GHG emissions significance thresholds of either 35,250 $MTCO_2E$ over the duration of construction or 3,750 $MTCO_2E$ per year /10.3 $MTCO_2E$ tons per day. These construction thresholds were deleted from the October 2009 revised draft.

BAAQMD Draft Air Quality Guidelines. In September 2009, BAAQMD released a set of draft air quality guidelines to assist agencies with the CEQA evaluation of air quality impacts of projects and plans within the San Francisco Bay Area Air Basin. The draft guidelines propose a GHG emissions significance threshold based on the Revised Draft Options and Justification Report summarized above, as well as new and revised significance thresholds for other air quality environmental categories. As of the publication of this SEIR, the public comment period for the draft guidelines had been extended, and BAAQMD was in the process of substantially revising the draft guidelines. This SEIR does not apply the draft guidelines because BAAQMD has not yet adopted them, and they are likely to change substantially from the version released in September 2009.

Pleasanton General Plan 2005-2025. The City of Pleasanton adopted the Pleasanton General Plan 2005-2025 on July 21, 2009. The General Plan includes a significant and broad-based set of policies and programs that will serve to reduce GHG emissions below "business as usual" levels. They are contained in the Land Use, Circulation, Public Facilities, and Community Programs, Conservation and Open Space, Water, Air Quality and Climate Change, Energy, Community Character, and Subregional Elements of the General Plan. The programs address climate change and GHG emissions reduction through multiple approaches, including:

- A more efficient use of land and other resources;
- Measures that encourage alternative means of travel;
- Maintenance of the Urban Growth Boundary;
- The preservation of the City's urban forest;
- A pattern of urban development that facilitates pedestrian and bike access to parks, other public facilities, and neighborhood commercial uses;
- Water conservation;
- Preservation of air quality;
- Conservation of energy and the use of alternative technology to generate energy; and
- Subregional coordination of transit and subregional planning of trails for bikes and pedestrians.

Although at this time the City of Pleasanton is unable to quantify with any degree of specificity, the potential reduction in GHG emissions below "business as usual" levels that will be achieved as a result of its GHG emission reduction programs and policies, the General Plan calls for the preparation of a Climate Action Plan (CAP). The CAP will provide additional information regarding how these policies and others will assist the City of Pleasanton in meeting its targets. The CAP will set a target for

GHG production, consistent with AB 32, and will include specific targets for GHG emission reductions for emissions under the control of the City, will quantify the contributions of existing programs of the General Plan, and will discuss additional measures needed to achieve the City's targets, including exploring the relationship between jobs, available housing, vehicle miles traveled and greenhouse gas production. In the meantime, the General Plan requires development projects approved prior to adoption of the CAP to adhere to the best management practices (BMPs) for energy efficiency, vehicle trip reduction, transit and bicycle/pedestrian increases, recycling, and heat island treatments, as described in Table 4.2.1-3 below.

Table 4.2.1-3
Pleasanton General Plan 2005-2025 GHG BMPs

Pleasanton General Plan BMP
BMP #1: Single- and multi-family residential and commercial development to comply with the City of Pleasanton's *Green Building Ordinance.* As far as feasible, residential projects should incorporate: resource-efficient landscaping, energy-efficient hot water distribution systems; high-efficiency toilets and other low-flow plumbing fixtures; high-efficiency heating and cooling systems; pre-plumbing for solar water heating; installation of wiring conduit for future photovoltaic systems; installation of Energy Star appliances; and Green Points in the Community Design and Planning category.
BMP #2: Development shall incorporate energy efficient appliances and systems that meet Energy Star standards.
BMP #3: Where feasible, incorporate solar roofs (or other alternative energy measures) into commercial development sufficient to meet 12.5 percent of the building's annual energy usage. Residential development to be solar-ready, including proper solar orientation, electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water system, and space provided for solar hot water storage tank.
BMP #4: Require transit and bicycle/pedestrian connections in new development, where feasible.
BMP #5: For commercial/industrial projects, prepare and implement a voluntary Trip Reduction Plan, using the resources available through the City of Pleasanton's Transportation Systems Management program as described in Chapter 17.24 of the *Pleasanton Municipal Code.* Trip reduction goal of 15 percent within five years and 25 percent within 10 years, compared to "business as usual."
BMP # 6: Require priority facilities for alternative-fueled vehicles such as priority parking and parking facilities, where feasible.
BMP # 7: Development and demolition to comply with the City's *Construction and Demolition Debris Ordinance*.
BMP # 8: In new commercial and multifamily projects, include facilities to accommodate the commercial and/or community recycling of plastic, paper, green waste, and food waste.
BMP #9: Incorporate "heat island" treatments that include cool roofs, cool pavements, and strategically placed shade trees.

Source: Pleasanton General Plan 2005-2025.

Standard of Significance

It is generally the case that an individual project of any size is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. (CAPCOA 2008).

Accordingly, the City will address the Proposed Project's GHG emissions and their impact on global climate by considering whether the Proposed Project may result in a cumulatively considerable incremental contribution to the significant cumulative effect of GHG emissions on climate change.

To date, no local or state air quality agency has adopted significance criteria for GHG emissions. While AB 32 created a framework for the reduction of GHGs in California, the Act did not address the role of CEQA in achieving the goals of the Act. As noted earlier, in August 2007, the governor signed SB 97 into law, which requires the OPR to prepare State CEQA Guidelines for the mitigation of GHG emissions or the effects of greenhouse gas emissions. On October 23, 2009, the Resource Agency republished its proposed CEQA Guideline Amendments concerning climate change. These Proposed Amendments are currently under review, but the City has endeavored to develop the following significance criterion in light of the Proposed CEQA Guideline Amendments, the 2008 CAPCOA CEQA and Climate Change White Paper, and the 2009 BAAQMD Revised Draft Options and Justification Report.

In assessing whether GHG emissions from the Proposed Project are cumulatively considerable, the City will quantitatively consider whether the Proposed Project would result in more than 1,100 metric tons CO_2 equivalent ($MTCO_2E$) of GHG emissions per year from operations or more than 3,750 $MTCO_2E$ per year during construction. Operational emissions in excess of 1,100 $MTCO_2E$ per year will not be deemed significant if the project achieves a service population standard of 4.6 $MTCO_2E$ per year.

Methodology for Analysis

There currently is no single model that can estimate all of a project's direct and indirect GHG emissions. However, the 2008 CAPCOA white paper identifies the Urban Emissions Model (URBEMIS) as an appropriate tool for estimating the direct GHG emissions of development projects. Developed and approved for statewide use by CARB, URBEMIS summarizes criteria air pollutants and CO_2 emissions that would occur during construction and operation of new development. URBEMIS does not model emission factors for GHGs other than CO_2, except for methane (CH4) from mobile sources, which is converted to CO_2 equivalent. The 2008 CAPCOA white paper states that "this may not be a major problem because CO_2 is the most important GHG from land development projects. Although other GHGs have a higher global warming potential, a metric used to normalize other GHGs to CO_2E, they are emitted in far fewer quantities." As described above, CO_2 accounts for 81 percent of California's GHG emissions across all sectors (CAPCOA 2008; CEC 2006).

In addition, URBEMIS overstates emissions estimates in the categories it does consider. For example, URBEMIS assumes that a project creates entirely new emissions. Projects to a substantial extent "relocate" existing emissions from one area to another, such as when an existing business moves from one area to the other, with some incremental increase or decrease in emissions, depending on the particular situation. Models like URBEMIS, however, assume all emissions are new rather than "relocated", thereby overstating the impacts of a project. (Kostka, Zischke 2008, Section 20.84). URBEMIS also overestimates emissions by failing to account for "internalization" of trips between land uses, the concept that a residential trip and a commercial trip are quite possibly the same (CAPCOA, 2008).

Another limitation of URBEMIS is that it does not calculate indirect GHG emissions associated with wastewater treatment or the consumption of energy produced off-site. Indirect GHG emissions resulting from direct use of electricity generated by off-site utilities were therefore calculated in accordance with the standards of the California Climate Action Registry General Reporting Protocol (CCAR, 2009), which the 2008 CAPCOA white paper identifies as an appropriate tool for estimating the indirect GHG emissions of development projects. The protocol calculates CO_2E indirect emissions for CO_2, CH_4 and nitrous oxide. Inclusion of such calculations accounts for the incremental increase in energy production indirectly associated with project operation.

Indirect GHG emissions resulting from indirect use of electricity to deliver, treat, and distribute water and wastewater used by the Proposed Project were calculated in accordance with the standards of the California Energy Commission (CEC 2005; 2006) and the California Climate Action Registry General Reporting Protocol.

Impact Assessment

S-AQ-1. The Proposed Project would generate GHG emissions which constitute a cumulatively considerable contribution to the significant cumulative impact of global climate change. The Proposed Project's contribution to this cumulatively significant impact is considerable and unavoidable, and will remain so after application of feasible mitigation measures (SU).

Project Impacts. The Proposed Project would result in emissions of GHGs due to fuel combustion in motor vehicles, mobile construction equipment, and building heating and water systems associated with the Staples Ranch development. Building and motor vehicle air conditioning systems may also use HFCs (and HCFCs and CFCs to the extent that they have not been completely phased out at later dates), which may result in emissions through leaks. Other primary GHGs (perfluorocarbons and sulfur hexafluoride) are associated with specific industrial sources and are not expected to be associated with the Proposed Project.

Construction Impacts. As estimated by the URBEMIS 2007 model, construction of the Proposed Project would generate approximately 2,353 metric tons CO_2 equivalent of greenhouse gases. Since construction of the Proposed Project is likely to take several

years, annual GHG emissions as a result of construction will be lower. Because the total estimated amount of construction-related GHG emissions is below the significance threshold of 3,750 $MTCO_2E$ per year, and annual emissions resulting from a multi-year construction process will be less, GHG emissions due to construction of the Proposed Project are considered less-than-significant.

Operational Impacts. As described in the EIR in English tons and as indicated in Table S-4.2.1-4, Estimated Operational GHG Emissions, after conversion to metric tons, the URBEMIS 2007 estimated that the Proposed Project would generate approximately 31,401 metric tons of CO_2 per year from mobile sources (vehicular travel) and 3,283 metric tons of CO_2 per year from area sources, for a total of 34,684 metric tons per year. Table S-4.2.1-4 contains additional estimates of up to approximately 8,394 metric tons of GHG emissions indirectly caused by electricity used on-site as well as by electricity used to process water consumed by the Proposed Project.

Table S-4.2.1-4
Estimated Operational GHG Emissions for Proposed Project

Emissions Source	Proposed Project ($MTCO_2E$/year)
Direct Source Emissions	
Natural Gas	2,893.
Hearth	384.
Landscape	6.
Total Source Emissions	3,283.
Direct Mobile Emissions	
Retirement Community	8,554.
City park	443.
Retail Commercial Site	8,454.
Auto Mall Site	13,950.
Total Mobile Emissions	31,401.
Electricity Consumption Indirect Emissions	
Retirement Community	5,344.
Retail Commercial Site	1,287.
Auto Mall Site	1,561.
Total Electricity Consumption Indirect Emissions	8,192.
Water Processing Indirect Emissions	
Water Supply and Conveyance	79.
Water Treatment	4.
Water Distribution	48.
Wastewater Treatment	71.
Total Water Processing Indirect Emissions	202.
Total Emissions	**43,078.**

Source: PBS&J, 2007;. Conversion from English to metric tons by a factor of 0.907.

The increase in $MTCO_2E$ per year shown in the table represents the "business as usual" scenario. This increase does not take into account potential reductions that would result from the implementation of AB 32, the General Plan's GHG emissions reduction BMPs or design features and mitigation measures required of the Proposed Project.

Total Proposed Project emissions of 43,078 $MTCO_2E$ per year constitute, under "business as usual conditions," an increase of approximately four one-hundredths of one percent (0.042%) over total 2007 Bay Area GHG emissions, an increase of approximately two-tenths of one percent (0.24%) over total 2007 Alameda County GHG emissions, an increase of approximately three-point-two percent (3.2%) over total 2005 City of Pleasanton GHG emissions, and approximately seven-point-two percent (7.2%) of the total anticipated increase, over 2005 levels, in Citywide GHG emissions at projected General Plan buildout in 2025. Emissions of 43,078 $MTCO_2E$ per year are a cumulatively considerable contribution to a significant cumulative impact because they exceed the significance threshold of 1,100 $MTCO_2E$ per year.

Application of the 4.6 $MTCO_2E$ per-service-population-per-year standard for mixed-use projects does not change this conclusion. The Proposed Project will consist of a maximum of 1,585.5 jobs and approximately 960 residents based on an industry average of 1.2 residents per dwelling unit for similar continuing care projects. This translates to approximately 17 $MTCO_2E$ per service population per year, well in excess of the 4.6 $MTCO_2E$ standard.

Project Impacts After Application of GHG Reduction Measures. The following analysis assesses the degree to which reduction measures incorporated into the Proposed Project, mitigation measures required by the Proposed Project EIR, and the GHG reduction BMPs of the General Plan could reduce the Proposed Project's GHG emission levels below the 1,100 $MTCO_2E$ operational threshold by assessing the Proposed Project against the emissions reduction effectiveness estimates of relevant GHG mitigation measures listed in Table 16 of Appendix B of the CAPCOA white paper.

CAPCOA Potential Mitigation Measures. The following table, Table S-4.2.1-5, CAPCOA Potential Mitigation Measures, demonstrates that many of the GHG reduction mitigation measures of the EIR, Proposed Projects design features and General Plan GHG reduction BMPs correspond with potential GHG emissions reduction mitigation measures listed in Table 16 of Appendix B of the CAPCOA white paper. While the CAPCOA publication explains that calculating the amount of GHG emission reductions attributable to a given mitigation measure will require additional research, Table 16 of Appendix B of the CAPCOA white paper does identify potential ranges of GHG emissions reductions associated with each mitigation measure. Although they are rough estimates, they do help to gauge the relative GHG emissions reduction value of certain design elements of the Proposed Project and GHG-related mitigation measures of the EIR.

Table S-4.2.1-5
CAPCOA Potential Mitigation Measures

CAPCOA Mitigation Measure	Potential Emissions Reduction	Corresponding Project Provision
MM T-1: Bike Parking	0.65%	MM TR-9.1.
MM T-4: Proximity to Bike Path/Bike Lanes	0.65%	MM TR-9.1, BMP #4.
MM T-5: Pedestrian Network MM T-6: Pedestrian Barriers Minimized	1-10%	MM TR-9.1, BMP #4.
MM T-7: Bus Shelter for Existing/Planned Transit Service	0.25-2%	MM TR-9.2.
MM T-17: Preferential Parking for EVs/CNG Vehicles	Not Available/Low	BMP 6#.
MM T-13: Off-Street Parking	1-4%	No on-street parking proposed on Stoneridge Drive.
MM D-7: Affordable Housing Component	0.4-6%	Project will have an affordable housing component.
MM D-10: Suburban Mixed Use	3%	Project constitutes suburban mixed use under this MM because it has residential development, retail or office development and open space within one-quarter mile of each other.
MM D-15: LEED Certification	Not Available/Moderate	BMP #1: Project must comply with City of Pleasanton's Green Building Ordinance.
MM E-5: On-site Renewable Energy System	1-3%	BMP #3: solar roofs.
MM E-6: Exceed Title 24	1%	BMP #1: Project must comply with City of Pleasanton's Green Building Ordinance.
MM E-16: Energy Efficient Appliance Standards	Not Available/Low	MM VQ-3.1, MM VQ-3.3, MM VQ-3.4; MM AQ-3.1 ; BMP #1, BMP# 2.
MM E-13: Cool Roofs	Not Available/Low	BMP #9.
MM E-17, Green Building Materials	Not Available/Low	BMP #1: Project must comply with City of Pleasanton's Green Building Ordinance.
MM C-4: Recycle Demolished Construction Material	Not Available/Low	BMP #7: Project to comply with the City of Pleasanton's Construction and Demolition Ordinance.

Source: California Air Pollution Control Officers Association, 2008.

Office of Planning and Research GHG Reduction Measures. The following Table S-4.2.1-6, Office of Planning and Research GHG Reduction Measures, demonstrates the degree to which the Proposed Project, as mitigated by the EIR and subject to the General Plan GHG Reduction BMPs, complies with mitigation measures recommended by the OPR for lead agencies to consider in the development and approval of projects.

Table S-4.2.1-6
Office of Planning and Research GHG Reduction Measures

Suggested Mitigation Measures	Project Compliance
Land Use and Transportation	
1) Implement land use strategies to encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density development along transit corridors. Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems.	MM TR-9.1 requires on site pedestrian and bicycle facilities as well as pedestrian and bicycle access to Stoneridge drive and regional trails. MM AQ-3.1 and TR-9.2 require provision of shuttle services and bus turnouts. The Proposed Project will have an affordable housing component within a high density continuing community care center. The project will also include a nearby commercial center. The project includes a mix of residential, commercial and park uses within walking distance of less than one-quarter mile. By design, the continuing community care center has a GHG emissions advantage over other land use options because upon opening, approximately 10 percent of the residents will not drive, based on similar facilities. As time passes and residents age, up to 35 percent of individuals in similar facilities did not own a car. This would result in a daily trip reduction of up to approximately 4 percent for the entire Proposed Project, which in turn could reduce CO_2 emissions by up to approximately 1,160 metric tons per year, which is 3.3 percent of total project emissions.
2) Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings.	The Project's continuing community care component is high density.
3) Encourage new developments to integrate housing, civic and retail amenities (jobs, schools, parks, shopping opportunities) to help reduce VMT resulting from discretionary automobile trips.	The project includes housing (continuing community care center), retail amenities (commercial center) and civic amenities (community park, neighborhood park).

Suggested Mitigation Measures	Project Compliance
4) Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services.	The required operational emissions reduction plan of MM AQ-3.1 works towards these goals.
5) Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit.	MM AQ-3.1 and TR-9.2 require provision of shuttle services and bus turnouts. BMP #4.
6) Implement street improvements that are designed to relieve pressure on a region's most congested roadways and intersections.	Traffic mitigation measures will help meet this objective.
7) Limit idling time for commercial vehicles, including delivery and construction vehicles.	Not a part of proposed project.
Urban Forestry	
8) Plant trees and vegetation near structures to shade buildings and reduce energy requirements for heating/cooling.	The Proposed Project will include over 2,000 new trees.
9) Preserve or replace on-site trees (that are removed due to development) as a means of providing carbon storage.	Project vegetation, especially trees, will be significantly increased over existing condition (see 8, above). Landscaping will be water efficient and utilize water conservancy technology.
Green Buildings	
10) Encourage public and private construction of LEED Leadership in Energy and Environmental Design) certified (or equivalent) buildings.	Project must meet City's green building ordinance. BMP #1.
Energy Conservation Policies and Actions	
11) Recognize and promote energy saving measures beyond Title 24 requirements for residential and commercial projects.	Project must meet City's green building ordinance. BMP #1.
12) Where feasible, include in new buildings facilities to support the use of low/zero carbon-fueled vehicles, such as the charging of electric vehicles from green electricity sources.	Not a part of proposed project.
13) Educate the public, schools, other jurisdictions, professional associations, business and industry about reducing GHG emissions.	N/A
14) Replace traffic lights, streetlights, and other electrical uses to energy efficient bulbs and appliances.	MM VQ-3.1 and VQ-3.4 require energy efficient lighting; MM AQ-3.1 requires energy-saving appliances.
15) Purchase Energy Star equipment and appliances for public agency use.	MM AQ-3.1 requires energy-saving appliances.
16) Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.	BMP #3
17) Execute an Energy Savings Performance Contract with a private entity to retrofit public buildings. This type of contract allows the private entity to fund all energy improvements in exchange for a share of the energy savings over a period of time.	N/A

Suggested Mitigation Measures	Project Compliance
18) Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices.	N/A
19) Retrofit municipal water and wastewater systems with energy efficient motors, pumps and other equipment, and recover wastewater treatment methane for energy production.	N/A
20) Convert landfill gas into energy sources for use in fueling vehicles, operating equipment, and heating buildings	N/A
21) Purchase government vehicles and buses that use alternatives fuels or technology, such as electric hybrids, biodiesel, and ethanol. Where feasible, require fleet vehicles to be low emission vehicles. Promote the use of these vehicles in the general community.	MM AQ-3.1 suggests using less polluting paratransit shuttles and loaner cars at the continuing care community.
22) Offer government incentives to private businesses for developing buildings with energy and water efficient features and recycled materials. The incentives can include expedited plan checks and reduced permit fees.	N/A
23) Offer rebates and low-interest loans to residents that make energy saving improvements on their homes.	N/A
24) Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.	MM TR-9.1 requires on site pedestrian and bicycle facilities as well as pedestrian and bicycle access to Stoneridge Drive and regional trails. BMP #4.
Programs to Reduce Vehicle Miles Traveled	
25) Offer government employees financial incentives to carpool, use public transportation, or use other modes of travel for daily commutes.	N/A
26) Encourage large businesses to develop commute trip reduction plans that encourage employees who commute alone to consider alternative transportation modes.	MM AQ-3.1 requires a transportation system management plan. BMP #5
27) Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.	MM TR-9.2 requires bus and paratransit services. BMP #4.
28) Create an online ridesharing program that matches potential Carpoolers immediately through email.	Not a part of the proposed project.
29) Develop a Safe Routes to School program that allows and promotes bicycling and walking to school.	N/A
Programs to Reduce Solid Waste	
30) Create incentives to increase recycling and reduce generation of solid waste by residential users.	BMP #8.
31) Implement a Construction and Demolition Waste Recycling Ordinance to reduce the solid waste created by new development.	BMP #7. The project will be required to comply with the City of Pleasanton's Construction and Demolition Ordinance.
32) Add residential/commercial food waste collection to existing greenwaste collection programs.	BMP #8.

Source: Office of Planning and Research, 2008.

Tables S-4.2.1-5 and S-4.2.1-6 illustrate that the Proposed Project, as mitigated by the EIR and subject to the General Plan GHG Reduction BMPs, would comply with most of the relevant GHG reduction measures recommended by CAPCOA and the OPR for lead agencies to consider in the development and approval of projects. Adding up the estimates for potential emissions reductions listed in Table S-4.2.1-5 above suggests that the GHG-related mitigation measures of the EIR, GHG reduction BMPs of the General Plan, and design features of the Proposed Project could potentially reduce Proposed Project GHG emissions by at least nine percent, assuming the most conservative estimate of potential emission reduction within a possible range of up to 30 percent. An additional emissions reduction of up to 3.3 percent is also possible as aging continuing community care residents reduce their automobile use.

However, applying all feasible mitigation measures described above will not achieve the 97.5 percent reduction required to reduce the Proposed Project's GHG emissions from 43,078 $MTCO_2E$ per year to 1,100 $MTCO_2E$ per year, nor will they reduce the Proposed Project's mixed-use service population standard below 4.6 $MTCO_2E$. Therefore, the Proposed Project's contribution to this cumulatively significant impact is considerable and unavoidable, and will remain so after application of feasible mitigation measures (SU).

S-4.2.2. SUPPLEMENTAL CUMULATIVE BIOLOGICAL RESOURCES ANALYSIS

This section updates and supplements the cumulative biological impacts discussion of the EIR. The loss of 1.77 acres of San Joaquin spearscale habitat constitutes a cumulatively considerable impact on San Joaquin spearscale when considered in conjunction with other past, present and foreseeable development projects in the vicinity of the Proposed Project, such as the El Charro Specific Plan, Dublin Ranch, and Fallon Village. Mitigation Measure S-BIO-1 will render the Proposed Project's cumulative impact on San Joaquin spearscale less than cumulatively considerable by fully compensating for the impact on a 1:1 basis. The Proposed Project's contribution to this cumulatively significant impact will be less than considerable (LTS).

S-4.2.3. SUPPLEMENTAL CUMULATIVE NOISE ANALYSIS

The following analysis updates and supplements the cumulative noise impacts discussion of the EIR. As stated on page 4-16 of the EIR, implementation of the Proposed Project and other cumulative projects would increase noise levels by 11.5 dB, compared to existing, and 1.5 dB, compared to cumulative baseline, along the Stoneridge Drive extension at the existing residential neighborhood north of the proposed Arroyo Mocho bridges. The EIR determined that this increase was a significant cumulative impact because it caused noise at this neighborhood to exceed the City of Pleasanton's residential noise standard of 60 dB CNEL. The EIR concluded, however, that implementation of Mitigation Measure NO-4.1 (construct Stoneridge Drive extension with noise-attenuating pavement) would reduce the cumulative impact to a less than significant level.

S-NO-1. Cumulatively Considerable Noise Increase Along Stoneridge Drive. (S)

Significant impacts to existing noise levels were considered in the EIR (see page 4-16 of the EIR). Since certification of the EIR, however, the City has adopted a new General Plan, the Pleasanton General Plan 2005-2025, and a new Program in the 2005-2025 Pleasanton General Plan states that an increase in exterior noise levels of more than 4 dB is considered significant.

The 11.5 dB cumulative noise increase identified by the EIR along the Stoneridge Drive extension at the existing residential neighborhood north of the proposed Arroyo Mocho bridges is a significant cumulative impact under the new 4 dB significance threshold.

A new supplemental noise study prepared by Charles M. Salter Associates confirms this conclusion and finds that it also applies to the existing segment of Stoneridge Drive to the west of Staples Ranch. This segment, and the surrounding residential development between Kamp Drive and Trevor Parkway, was developed as part of the original 1989 Stoneridge Drive Specific Plan, which called for the full extension of Stoneridge Drive to El Charro Road as a four-lane arterial and contained guidelines for sound walls and setbacks to shield new residential development from anticipated traffic noise. Consequently, the predominantly single-family residential developments along this portion of Stoneridge Drive generally do not face the road and back yards or side yards closest to Stoneridge Drive are shielded by sound walls. Between Guzman Way and Trevor Parkway, some homes face an unwalled portion of Stoneridge Drive, but are set back from Stoneridge Drive on the south side of Snowdrop Circle. Backyards of these homes are shielded from Stoneridge Drive by the homes themselves. Homes along the north side of the Arroyo Mocho are largely shielded by a large berm along the north side of Stoneridge Drive. However, several homes along Vermont Place on the north side of the Mocho, nearest to the planned Stoneridge Drive bridges over the channel, are unshielded by the berm and have backyards with open fencing that would be exposed to bridge traffic noise. While homes on the south side of the bridge crossing are located much closer to the bridge crossing, they are shielded by an existing sound wall.

The Pleasanton General Plan lists two existing “sensitive receptors” along this portion of Stoneridge Drive that could particularly be impacted by cumulative traffic noise. Hacienda School, a private school on the north side of Stoneridge Drive near Newton Drive, is set back from the roadway and is also located significantly below the elevation of Stoneridge Drive. Mohr Elementary School is located to the south of Stoneridge Drive but is largely screened from the roadway by several rows of homes.

To ascertain cumulative noise impacts to existing residences and sensitive receptors along Stoneridge Drive west of Staples Ranch, Charles M. Salter Associates first quantified the existing noise environment by measuring ambient noise levels at three locations near Stoneridge Drive over a 48-hour period as well as two short-term 15-minute noise measurements. Future noise levels as a result of full extension of Stoneridge Drive were then calculated, using a computer noise model, for various

locations along and near Stoneridge Drive. The model used predicted Year 2030 average peak-hour traffic levels provided by the City of Pleasanton, as well as the locations and heights of existing sound walls and distances from the roadway to calculate expected cumulative noise levels in back yards of existing residences and the building facades of the two sensitive receptors. Table S-4.2.3.1-1 summarizes the results.

Table S-4.2.3.1-1
Proposed Project
2030 Cumulative Conditions Stoneridge Drive Noise Levels (L_{dn} dB)

Receiver	Existing Noise Level	2030 Noise Level	Increase Over Existing
Sensitive Receptors [1]			
Hacienda School	52	56	4
Mohr Elementary School	49	53	4
Residences [2]			
North of Stoneridge, East of Kamp	56*	61	5
South of Stoneridge, East of Kamp	56*	61	5
South of Stoneridge, East of Guzman	54*	61	7
Snow Drop Circle	49*	51	2
Vermont Place, North of Bridge	52	60	8
Chocolate Street, South of Bridge	52*	62	10

Source: Charles M. Salter Associates, 2009
* Estimated based on nearby ambient noise measurement
[1] Calculated at building façade
[2] Calculated in backyard

As shown in Table S-4.2.3.1-1, future cumulative noise levels at all locations will increase. The anticipated cumulative noise increase over existing levels is considered significant (i.e., more than L_{dn} 4 dB increase, per Program 1.3 of the Noise Element of the Pleasanton General Plan 2005-2025) at all locations except the Snowdrop Circle Residences' backyards, where the increase would be only L_{dn} 2 dB, and the Hacienda School and Mohr Elementary School, where the increase would be only L_{dn} 4 dB. Furthermore, at all residential locations, except Snowdrop Circle and Vermont Place, future predicted noise levels under the Proposed Project would exceed the City's "Normally Acceptable" single-family residential noise level of L_{dn} 60 dB. The Pleasanton General Plan 2005-2025, however, also recognizes that L_{dn} 60 dB is a "goal" which cannot necessarily be reached in all residential areas within the realm of economic or aesthetic feasibility. With windows closed, interior noise levels at these locations would not be expected to exceed L_{dn} 45 dB, based on a typical façade noise reduction of 25 to 30 dB afforded by typical single-family home construction.

A 3 dB reduction in traffic noise levels anticipated to result from implementation of Mitigation Measure NO-4.1 (construct Stoneridge Drive extension with noise-attenuating pavement) would reduce the calculated cumulative noise levels for residences closest to

the bridge (Vermont Place residence and Chocolate Street residence) to at or below the L_{dn} 60 dB threshold.

Similarly, repaving the existing portion of Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement would result in a reduction of anticipated noise levels at all measured locations along Stoneridge Drive to approximately L_{dn} 60 dB or below.

The following mitigation measure would ensure that future noise levels due to traffic along this portion of Stoneridge Drive would not exceed an L_{dn} of approximately 60 dB:

S-NO-1.1 *Repave Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement*. Stoneridge Drive between Kamp Drive and Trevor Parkway shall be repaved with noise-attenuating pavement prior to the completion of the Stoneridge Drive extension to El Charro Road.

However, while the utilization of noise-attenuating pavement on the existing and new portions of Stoneridge Drive would result in all residential uses and sensitive receptors in the area meeting an L_{dn} of approximately 60 dB or below for single-family residential development, in two locations it would not reduce the overall increase in ambient noise levels to less than 5 dB above existing noise levels, resulting in a noticeable increase in ambient traffic noise for area residents under cumulative conditions. In addition, it is estimated that future airport-related noise could add up to 1-2 dB to projected ambient noise levels for residences by the planned bridge crossings. This cumulative noise impact, therefore, remains significant.

As indicated in the EIR, the Proposed Project contributed 1.5 dB of the total cumulative noise impact of 11.5 dB to the existing residential neighborhood north of the proposed Arroyo Mocho bridges. A similar contribution is likely with regard to the residential neighborhoods on either side of Stoneridge Drive to the west of Staples Ranch. This constitutes a considerable and unavoidable contribution to the significant cumulative noise impact (SU).

S-4.2.4. SUPPLEMENTAL CUMULATIVE QUARRY ANALYSIS

The following analysis supplements the cumulative impacts analysis of Section 4.5 of the EIR to address concerns raised over the potential cumulative impacts of the Proposed Project in conjunction with the quarry operations located to the south of the Staples Ranch site and the other cumulative projects considered in the EIR.

Description of Quarry Operations

South of Staples Ranch, and extending south of Stanley Boulevard, are several thousand acres separating Livermore and Pleasanton in unincorporated Alameda County that have been mined for over 50 years for aggregate resources. This quarry area currently consists of a mix of vacant, active, and former and reclaimed quarry lands, including a number of

former quarry pits now used for water storage. Much of the approximately 1,000-acre area north of Stanley Boulevard and west of El Charro Road consists of lakes that were formerly mined by Kaiser (now Hanson Aggregates), but are now in the process of being transferred to Zone 7 for flood control and water storage purposes. Approximately 300 acres of this area have been designated by Pleasanton for future development. While most of this potential future development area is located near Stanley Boulevard, approximately 30 acres are located just south of Staples Ranch and the Arroyo Mocho channel. To date, no formal application has been made to the City for the development of any of these former quarry lands, and, while the General Plan calls for the preparation of an "East Pleasanton Specific Plan" prior to the annexation and development of this area, no such specific plan is currently under preparation. Because environmental review of the East Pleasanton Specific Plan has not yet begun, it is not yet a probable future project requiring inclusion in the cumulative analysis of the Proposed Project. Nonetheless, the conceptual "placeholder" assumptions of the Pleasanton General Plan 2005-2025 for the East Pleasanton Specific Plan were included in cumulative baseline assumptions of the Dowling Traffic Study prepared for the EIR.

In 2003, Rhodes & Jamieson applied to Alameda County for permits to mine three parcels totaling 212 acres, including a 103-acre parcel located east of El Charro Road, just south of Livermore's El Charro Specific Plan area (SMP-38 parcel). The proposal for the SMP-38 parcel included an application for a mining permit and a reclamation plan for an aggregate quarry pit mine, the closest edge of which would be approximately 2,000 feet from the southeasterly Staples Ranch property line. This mining proposal is not a probable future project requiring inclusion in the cumulative analysis of the Proposed Project because environmental review of this proposal ceased in 2005 after the permitting application was withdrawn and before preparation of the Staples Ranch EIR began.

To the southeast of Staples Ranch, between El Charro Road and Isabel Avenue in Livermore, Vulcan Materials Company has active sand and gravel quarry operations on several hundred acres, as well as an aggregate processing plant located just north of Stanley Boulevard. These active quarry operations and the processing plant are located over 1.5 miles from the southeast corner of Staples Ranch and are neither visible nor audible from the property. Additional active quarry lands are located south of Stanley Boulevard, even farther from Staples Ranch. These active quarries operate under permits from Alameda County that do not expire until 2030 and are anticipated to continue operation at least until that date.

Aggregate currently being mined in the quarry area is transported to the Vulcan plant just north of Stanley Boulevard for processing, where it is then loaded on trucks for hauling to delivery points throughout the Bay Area via El Charro Road and I-580. El Charro Road is currently a private two-lane road from Freisman Road, just south of I-580, to the Vulcan aggregate processing plant near Stanley Boulevard. While quarry truck traffic using El Charro Road will vary with economic conditions and the need for aggregate resources, traffic counts conducted in October 2006 indicated that daily vehicle counts on El Charro Road averaged approximately 4,000 vehicles per day, with trucks accounting

for a majority of the traffic. The Dowling Traffic Study prepared for the EIR used these counts to establish baseline "existing conditions" along El Charro Road.

As discussed in the EIR, a 2007 Cooperation Agreement executed by Pleasanton, Livermore, Alameda County, Alameda County Surplus Property Authority, and Vulcan Materials describes improvements to the northern 1,000 feet of El Charro Road to make it available for public use while safely maintaining its current function as a quarry haul road. The Agreement specifies that this section of El Charro Road will be re-constructed as a public six-lane divided road with turn lanes north of the planned Jack London Boulevard/Stoneridge Drive/El Charro Road signalized intersection, prior to opening any development either on Staples Ranch or within Livermore's El Charro Specific Plan area. These improvements, which were reviewed and approved by all the parties, have been designed to safely accommodate the existing heavy truck use on El Charro Road while permitting anticipated public vehicular access as planned for in both Livermore and Pleasanton's General Plans, including the full extension of both Jack London Boulevard and Stoneridge Drive and buildout of both Staples Ranch and Livermore's El Charro Specific Plan.

Because of Vulcan Materials' concern that development adjacent to El Charro Road could result in nuisance claims against the quarries or quarry truck operators, the Cooperation Agreement also requires that Staples Ranch and El Charro Specific Plan owners and developers record a property deed rider and provide a written disclosure statement to each potential tenant or purchaser of property acknowledging the presence of active and operating quarries and processing facilities in the vicinity and that these operations may result in airborne particulate matter, bright lights, noise and vibration, unattractive visual appearance, and heavy truck traffic on El Charro Road and adjacent streets and roadways within and outside the quarries.

Visual Quality

The closest active quarry operation and processing plant are located over 1.5 miles to the southeast of the Staples Ranch site and are not visible from Staples Ranch. Furthermore, Alameda County permit conditions require shielding of light sources associated with the processing plant. Nonetheless, quarry operations, in combination with the development of Dublin Ranch, Fallon Village, and the El Charro Specific Plan, would create a cumulatively significant impact to the area's visual character by converting a largely natural setting to more urban uses. As stated in the EIR, the Proposed Project's contribution to this significant impact would be cumulatively considerable. The cumulative visual effect and the Proposed Project's contribution to it remain significant and unavoidable, as explained in the EIR, even after considering the cumulative contribution of existing quarry operations.

Air Quality

Potential exposure to dust or other air emissions from the quarry operations to the southeast of Staples Ranch do not alter the cumulative air quality impact conclusions of the EIR. The closest active gravel mining operation and processing plant are over 1.5 miles to the southeast of Staples Ranch. In addition, the predominant wind direction in the vicinity is from the west and northwest, making the quarry operations generally downwind of Staples Ranch. As stated in the EIR, the cumulative construction emissions contribution of the Proposed Project will be less than cumulatively considerable as a result of implementation of the dust attenuation measures of Mitigation Measure AQ-2.1. This and the fact that the quarry operations are located far from the Proposed Project, and such operations are subject to similar attenuation requirements, prevent a combined significant cumulative effect, even when considered in conjunction with the foreseeable cumulative projects described in the EIR. Moreover, the air emissions of the existing quarry operations, in conjunction with the Proposed Project and other foreseeable development projects such as Dublin Ranch, Fallon Village, and the El Charro Specific Plan, would not alter the conclusion of the EIR that the Proposed Project will not make a cumulatively considerable contribution to a significant and unavoidable cumulative regional air emissions impact, particularly since the quarry operations are already part of baseline existing conditions. Finally, the contribution of the existing quarry operations to cumulative carbon monoxide effects at local intersections were assumed in the EIR because the existing quarry operations are part of baseline existing conditions.

Biological Resources

As assessed in the EIR and this SEIR, the cumulative contribution of the Proposed Project to cumulative biological resources impacts will be less than cumulatively considerable after mitigation. That analysis applies equally to existing quarry operations. In addition, the location of existing quarry operations over 1.5 miles away from Staples Ranch substantially reduces the likelihood of its impacts rendering those of the Proposed Project cumulatively considerable.

Hazards and Hazardous Materials

The Proposed Project would use El Charro Road as a major access point to Staples Ranch from I-580. El Charro Road is currently a privately owned two-lane road that provides the major freeway access point to the gravel quarries to the south and, therefore, carries a heavy volume of quarry trucks. As discussed in the EIR for the Proposed Project, potential hazards from mixing quarry trucks and passenger traffic from the Staples Ranch development and Livermore's El Charro Specific Plan development east of El Charro Road will be significantly reduced through the implementation of the 2007 Pre-Development Cooperation Agreement regarding the design and construction of El Charro Road improvements. The El Charro Road design called for in the Pre-Development Cooperation Agreement – which will be constructed prior to occupancy of any Staples Ranch development – has been designed to accommodate traffic levels that assumed the full development of Staples Ranch, with an Ice Center, including the full

extension of Stoneridge Drive to El Charro Road. Therefore, no cumulatively considerable increased cumulative hazards are anticipated as a result of mixing quarry trucks and cars on El Charro Road as a result of the Proposed Project. In addition, because Stoneridge Drive is not a City-designated truck route, through trucks (including quarry traffic) would be prohibited from using Stoneridge Drive through Staples Ranch.

Hydrology and Water Quality

As stated in the EIR, the Proposed Project's potential contribution to cumulative water quality impacts would not be cumulatively considerable. This analysis applies equally to the existing quarry operations. The existing quarry operations are also subject to aggregate mining hydrology and water quality regulations, such as the National Pollutant Discharge Elimination System (NPDES) General Permit for aggregate mining. As such, the effects of the existing quarry operations are unlikely to render the Proposed Project's contribution cumulatively considerable through synergistic effects.

Land Use and Agricultural Resources

The EIR determined that the Proposed Project would not contribute to land use and agricultural resources impacts on a cumulative basis. The existing quarry operations do not change the EIR's conclusion. In addition, the active quarry operations and the processing plant are too far away to present a land use conflict, being over 1.5 miles from Staples Ranch.

Noise/Vibration

The Proposed Project's location over 1.5 miles away from the existing quarry operations and processing plant prevents the operational and construction noise and vibrations from the two projects from combining in a cumulatively considerable manner, even when taking into account the potential cumulative contributions of other cumulative projects that are much closer to the Proposed Project, such as the El Charro Specific Plan. The only potential cumulative noise contribution may occur from the combination of quarry traffic along El Charro Road with traffic from Staples Ranch and the El Charro Road Specific Plan development. However, because the quarry is part of the existing conditions baseline and, therefore, part of the baseline of the traffic study upon which the EIR's noise study was based, the Quarry's potential cumulative traffic noise contribution has already been accounted for in the EIR. It should be noted that Stoneridge Drive is not a City-designated truck route and through trucks (including quarry traffic) would be prohibited from using Stoneridge Drive through Staples Ranch.

Population, Employment, and Housing

The cumulative population, employment, and housing contribution of the quarry located to the south of the Proposed Project is part of the existing conditions upon which ABAG bases its regional growth forecasts and, therefore, is accounted for in the EIR's analysis

of the Proposed Project's potential contribution to cumulative population, employment, and housing impacts.

Transportation

The quarry is part of the existing conditions baseline and is part of the existing conditions baseline of the Dowling Traffic Study. The quarry's potential cumulative transportation contribution has already been accounted for in the EIR.

Water Supply

Because the quarry is part of the existing conditions baseline, its water demand is included in Zone 7's annual review of sustainable water supply. The potential cumulative water supply impacts of the existing quarry therefore have been accounted for in the EIR, which relies on Zone 7's annual review of sustainable water supply to assess potential cumulative water supply impacts. Similarly, because the quarry is part of the existing conditions baseline, its potential cumulative contribution to water treatment capacity impacts is already accounted for in Zone 7's forecasts for future water treatment demand, which the EIR relies upon to assess potential cumulative impacts to water treatment demand. Implementation of Mitigation Measure WS-1.1 (verify water supply prior to tentative map approval) of the EIR will help ensure an adequate water supply.

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S-5. NEW ALTERNATIVES

This section provides an analysis of the Four-Lane Concurrent Alternative, and the Two-Lane Constrained Extension. The Four-Lane Concurrent Alternative is essentially the alternative approved by the City Council on February 24, 2009. Although its impacts were evaluated in the original EIR, it is included in the SEIR because it was not presented as a specific alternative in that document. The Two-Lane Constrained Extension is the Four-Lane Concurrent Alternative but with a striping plan that temporarily limits the traffic lanes on the Arroyo bridges to one lane in each direction until other regional traffic improvements are made. This alternative is included in the SEIR because it has emerged as a potential option since the preparation and certification of the EIR. This section includes an analysis of each alternative and their impacts relative to the Proposed Project with regard to Visual Quality, Air Quality, Biological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Agricultural Resources, Noise, Population, Employment, and Housing, Transportation, and Water Supply.

S-5.1. Alternative 1: Four-Lane Concurrent Extension

Description

The Four-Lane Concurrent Extension Alternative includes the same land uses as the Proposed Project, as well as an ice center within the Community Park site. Unlike the Proposed Project, the Four-Lane Concurrent Extension Alternative would maintain the 1989 Stoneridge Drive Specific Plan policy of requiring the full four-lane extension of Stoneridge Drive through the Project Site from Trevor Drive to El Charro Road as part of the development of Staples Ranch, instead of at some time in the future. The Four-Lane Concurrent Extension Alternative would also require construction of a second two-lane bridge over the Arroyo Mocho concurrently with the development of Staples Ranch, instead of delaying its construction until some point in the future, as contemplated by the Proposed Project.

Under the Four-Lane Concurrent Extension Alternative, the Proposed Project's gated emergency vehicle access separating Stoneridge Drive from "Auto Mall Place" would be eliminated, and four lanes of Stoneridge Drive would be constructed through Staples Ranch to El Charro Road. Vehicular, bus, emergency vehicle, and pedestrian and bike traffic would travel freely in either direction. Access to the Staples Ranch development, including the Community Park/Ice Center, would be unrestricted and could come either from I-580 via El Charro Road or from Santa Rita Road in Pleasanton via the existing portion of Stoneridge Drive. Traffic signals would be installed at the intersection formed by the entrance to the auto mall and commercial site, as well as at the intersection serving the community park and senior continuing care facility. As required by the El Charro Road Pre-Development and Cooperation Agreement executed by the City of Pleasanton, the ACSPA, the City of Livermore, and Vulcan Materials in September 2007, the El Charro Road/Stoneridge Drive intersection would be signalized and constructed with a southbound free right-turn lane from El Charro Road to Stoneridge Drive as well as three left-turn lanes from Stoneridge Drive east to northbound El Charro Road. In addition, the

currently unsignalized intersections at Newton Way, Guzman Parkway, and Trevor Parkway would be signalized as part of the Staples Ranch circulation improvements.

Land uses under the Four-Lane Concurrent Extension Alternative would include the following components:

- Auto Mall on approximately 37.2 acres
- Senior Continuing Care Community on approximately 46.1 acres
- Commercial Development on approximately 11.3 acres
- Community Park on 17 acres, including an 8-acre ice center
- Neighborhood Park, including a storm water detention basin, on approximately 5 acres

Figure S-5.1-1 illustrates the land use and circulation elements of the Four-Lane Concurrent Extension Alternative. While the Stoneridge Drive bridges over the Arroyo Mocho channel have not been fully designed, Figure S-5.1-2 illustrates their approximate alignment and cross-section. Each bridge would be approximately 40 feet wide and separated from each other by approximately 12 feet. Each bridge would accommodate two lanes of traffic, as well as a bike lane and raised sidewalk.

Like the Proposed Project, due to the width of the Arroyo channel and the curving alignment over the channel, the length of the bridges will require that they span the channel in three sections, with two sets of piers located approximately 45 feet on either side of the centerline of the Arroyo. Unlike the Proposed Project, where only one of the bridges would be built as part of the Staples Ranch development and the second bridge constructed only when Stoneridge Drive is fully extended to El Charro Road, under the Four-Lane Concurrent Extension Alternative, both bridges would be constructed at once as part of the Staples Ranch development.

Figure S-5.1-1

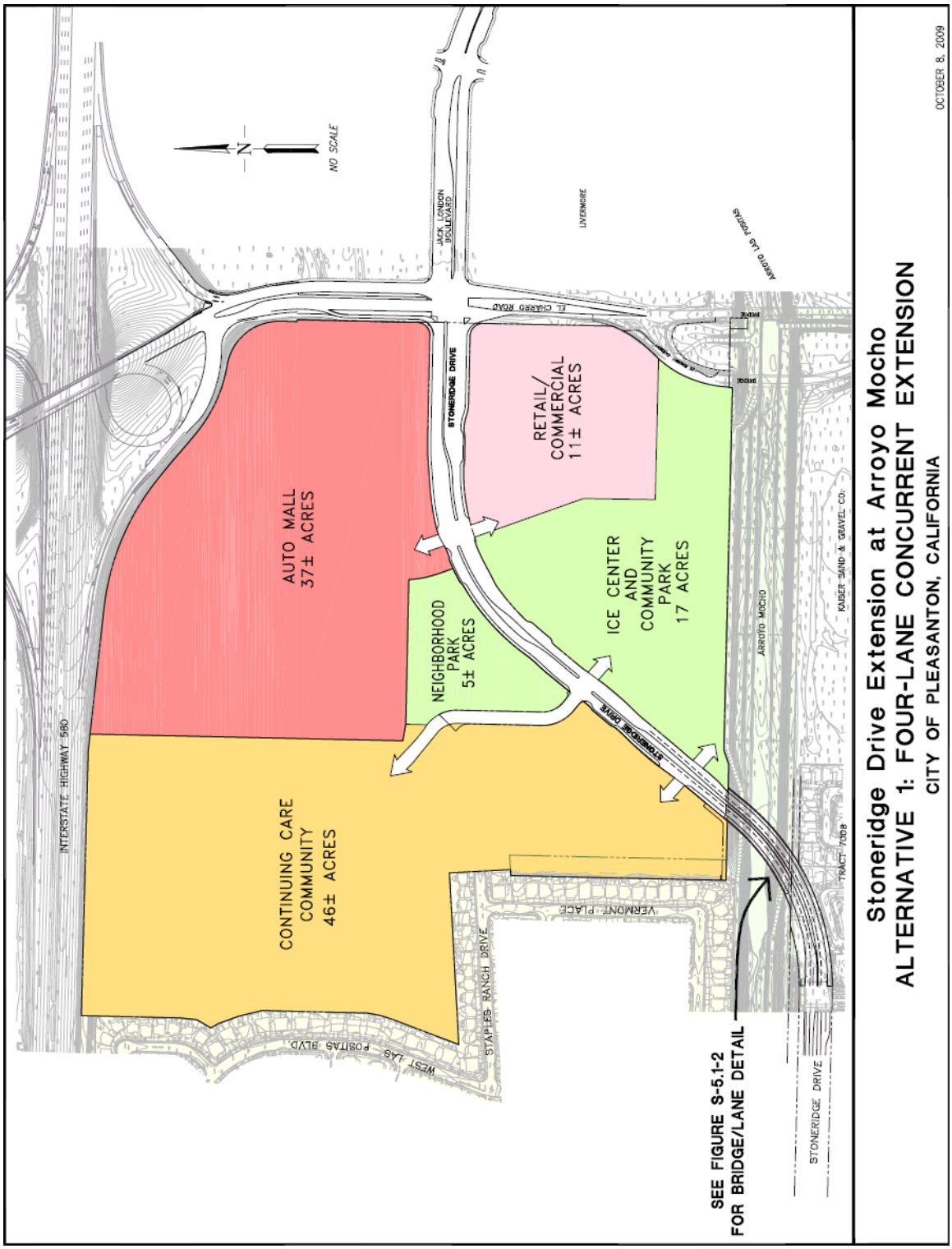
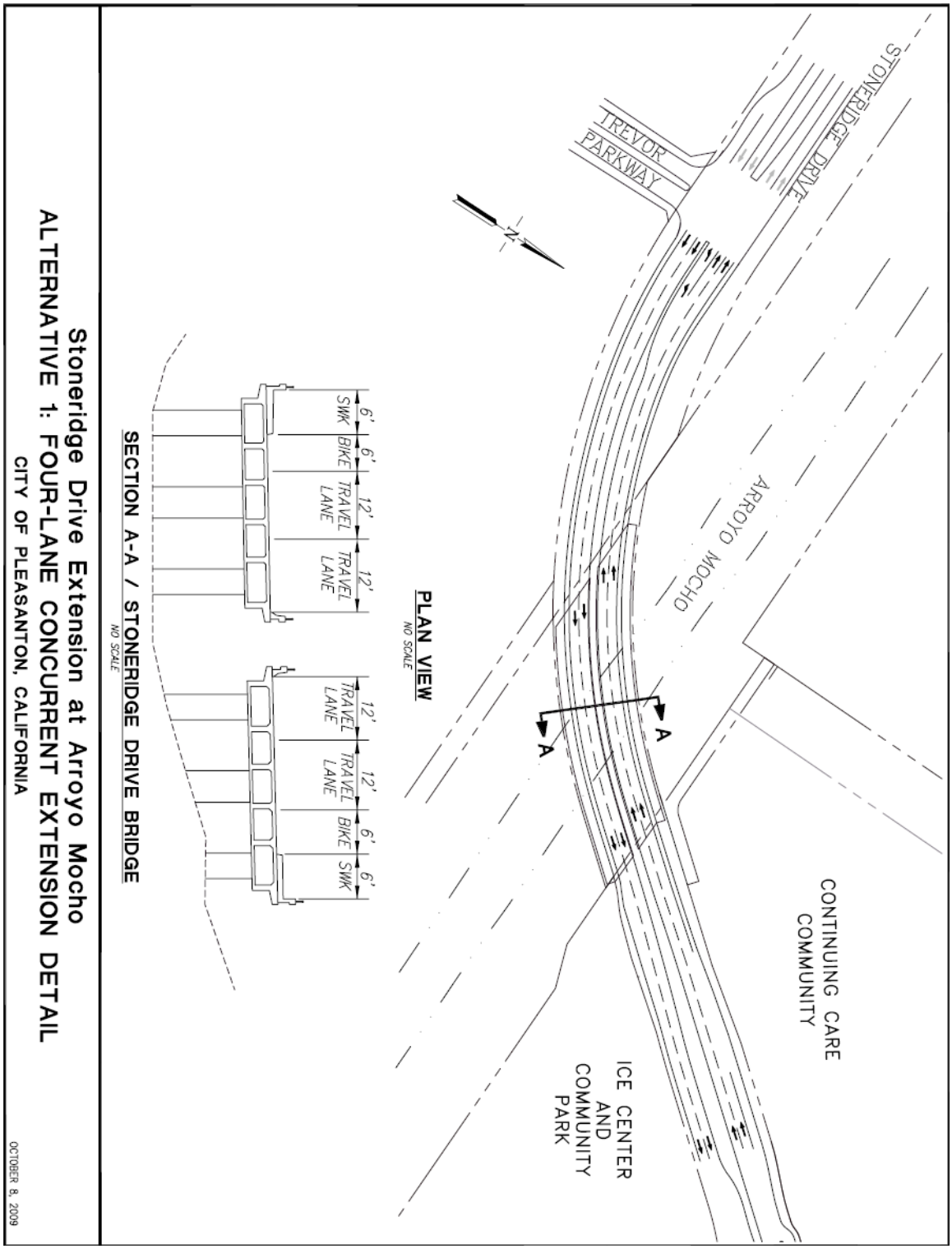

Stoneridge Drive Extension at Arroyo Mocho
ALTERNATIVE 1: FOUR-LANE CONCURRENT EXTENSION
CITY OF PLEASANTON, CALIFORNIA
OCTOBER 8, 2009
NO SCALE
N
AUTO MALL
37± ACRES
RETAIL/
COMMERCIAL
11± ACRES
NEIGHBORHOOD
PARK
5± ACRES
ICE CENTER
AND
COMMUNITY
PARK
17 ACRES
CONTINUING CARE
COMMUNITY
46± ACRES
STONERIDGE DRIVE
EL CHARRO ROAD
JACK LONDON BOULEVARD
LIVERMORE
ARROYO LAS POSITAS
ARROYO MOCHO
KAISER SAND & GRAVEL CO.
TRACT 7008
VERMONT PLACE
STAPLES RANCH DRIVE
WEST LAS POSITAS BLVD
INTERSTATE HIGHWAY 580
SEE FIGURE S-5.1-2
FOR BRIDGE/LANE DETAIL

Figure S-5.1-2


STONERIDGE DRIVE
TREVOR PARKWAY
N
ARROYO MOCHO
A
A
CONTINUING CARE COMMUNITY
ICE CENTER AND COMMUNITY PARK
PLAN VIEW
NO SCALE
6' SWK
6' BIKE
12' TRAVEL LANE
12' TRAVEL LANE
12' TRAVEL LANE
12' TRAVEL LANE
6' BIKE
6' SWK
SECTION A-A / STONERIDGE DRIVE BRIDGE
NO SCALE
Stoneridge Drive Extension at Arroyo Mocho
ALTERNATIVE 1: FOUR-LANE CONCURRENT EXTENSION DETAIL
CITY OF PLEASANTON, CALIFORNIA
OCTOBER 8, 2009

IMPACT ASSESSMENT

Visual Quality

Scenic Resources. Visually, the immediate construction of all four lanes of Stoneridge Drive and the inclusion of the ice center under the Four-Lane Concurrent Extension Alternative would result in additional building structures and pavement, and less landscaped open space, than the Proposed Project.

The Four-Lane Concurrent Extension Alternative would be more intensely developed than the Proposed Project because it would include an ice center building and related parking in the Community Park site. While the Four-Lane Concurrent Extension Alternative would result in a full four-lane extension of Stoneridge Drive through Staples Ranch as well as a second two-lane bridge over the Arroyo Mocho channel, these roadway improvements would be the same as would occur under the Proposed Project, only they would occur at an earlier date. The earlier addition of a second bridge adjacent to the bridge in the Proposed Project will not appreciably alter the visual character of the project site, particularly when the second bridge is, functionally, a widening of the first bridge.

These differences between the Four-Lane Concurrent Extension Alternative and the Proposed Project would not change the conclusion under the Proposed Project that impacts to scenic vistas and scenic resources would be less than significant, given that there are no scenic vistas in the vicinity of the Project Area that could be significantly affected and that the I-580 corridor is not officially designated as a Scenic Highway.

Visual Character. Land uses under the Four-Lane Concurrent Extension Alternative would be the same in density, height, and scale of development as the Ice Center Alternative, which the EIR deemed to be similar to that of the Proposed Project. As discussed under the Ice Center Alternative analysis, the addition of the ice center to the Project Site would create a more enclosed visual environment on the Staples Ranch site and would reduce views from the interior of the site to areas beyond. These alterations from the Proposed Project would not, however, rise to the level of new significant visual impacts.

Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would change the existing visual character of the site from undeveloped to urbanized. The resulting loss of open space is considered a significant impact. As discussed in Impact VQ-2 for the Proposed Project, no measures are available to reduce this impact; therefore, the Four-Lane Concurrent Extension Alternative, like the Proposed Project, would result in a significant unavoidable impact to visual character.

Light and Glare. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would result in new sources of light and glare on the Staples Ranch site. As discussed in the EIR's analysis of the Ice Center Alternative, the ice center would involve additional lighting for the building, parking and circulation areas, and signage within the

Community Park site. Whether this would generate more or less light and glare than the Proposed Project would depend on whether the Community Park would be developed under the Proposed Project with lighted outdoor sports facilities. The Four-Lane Concurrent Extension Alternative would not require any additional appreciable increase in street lighting over the Proposed Project.

For the same reasons stated in the EIR's analysis of the Proposed Project and the Ice Center Alternative, implementation of Mitigation Measures VQ-3.1 (prepare lighting plans), VQ-3.2 (minimize auto mall light and glare impacts), VQ-3.3 (commercial lighting operations timing) and VQ-3.4 (park lighting plans and specifications) identified for the Proposed Project would also reduce potential light and glare impacts resulting from development under the Four-Lane Concurrent Extension Alternative to less than significant levels.

Air Quality

Air Quality Plans. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would not conflict with applicable regional air quality plans because the regional air quality plans are based on the more intensive 1989 Stoneridge Drive Specific Plan land uses and circulation system. The 1989 Stoneridge Drive Specific Plan assumes the four-lane extension of Stoneridge Drive to El Charro Road as part of the project as well as more intensive land uses that would generate approximately 1.5 times as many trips as the Four-Lane Concurrent Extension Alternative. The Four-Lane Concurrent Extension Alternative would, therefore, result in emissions at levels below the baseline assumed by the adopted air quality plans.

Construction Emissions. The Four-Lane Concurrent Extension Alternative would result in air emissions during construction similar to those that would be produced under the Proposed Project. The potential for such emissions could be somewhat greater because of construction of the ice center, but implementation of Mitigation Measure AQ-2.1 (implement construction dust measures) identified for the Proposed Project would reduce construction emission impacts to less-than-significant levels, similar to the Proposed Project.

Operational Emissions. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would exceed the BAAQMD threshold of 80 pounds/day for ROG, NOx, and PM10 emissions and, therefore, would result in significant air pollution emissions. Because the Four-Lane Concurrent Extension Alternative includes an ice center within the Community Park site, it would generate approximately 3,300 additional daily trips in comparison to the Proposed Project. The addition of the ice center would also result in additional stationary source emissions associated with cooling and other mechanical equipment in comparison with the Proposed Project.

The concurrent extension of Stoneridge Drive as part of the Staples Ranch development under the Four-Lane Concurrent Extension Alternative would result in changes in local traffic patterns that would reduce the absolute number of vehicle miles traveled (VMT)

contributing to regional emissions relative to the Proposed Project. Table S-5.1-1 below compares VMT associated with the Proposed Project to the Four-Lane Concurrent Extension Alternative, both on a project and regional level. On a project level, Staples Ranch development under the Four-Lane Concurrent Extension Alternative would generate approximately 500 fewer VMT during the AM peak hour, and 1,300 fewer VMT during the PM peak hour, as would be expected due to the more direct travel path between Pleasanton and Staples Ranch with the Stoneridge Drive connection, for a net reduction of approximately 1,800 fewer VMTs during peak hours. On a regional basis, the Four-Lane Concurrent Extension Alternative would result in a decrease of approximately 4,500 VMT compared to the Proposed Project during the AM peak, and would result in an increase of approximately 500 VMT during the PM peak, for a net reduction of approximately 4,000 VMT during peak hours.

Table S-5.1-1
Comparison of Total Vehicle Miles Traveled (VMT) Under 2015 Conditions

2015 VMT	Staples Ranch AM Peak Hour	Staples Ranch PM Peak Hour	Tri-Valley AM Peak Hour	Tri-Valley PM Hour
Proposed Project	4,827 miles	7,950 miles	1,017,684 miles	969,065 miles
Four-Lane Alternative	4,340 miles	6,672 miles	1,013,153 miles	969,561 miles

Source: City of Pleasanton, 2009.

Although Mitigation Measure AQ-3.1 (develop and implement plan to reduce operational air emissions) would result in a reduction of operational air emissions, like the Proposed Project, no mitigation measures would be sufficient to reduce the Four-Lane Concurrent Extension Alternative's emissions of ROG, NOx, and PM10 to a less-than-significant level. Therefore, like the Proposed Project, development of the Four-Lane Concurrent Extension Alternative would also result in a significant and unavoidable impact to air quality.

Localized Carbon Monoxide Emissions. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would result in project-related traffic at intersections that would be operating at LOS D or worse and would have the potential to generate carbon monoxide (CO) hot spots. Future CO concentrations at selected locations under the Four-Lane Concurrent Extension Alternative are presented in Table S-5.1-2, below. This table is a reproduction of Table 5-9 of the EIR, which assessed the localized CO emissions of the Ice Center Alternative with full extension of Stoneridge Drive. As shown in the table, CO concentrations at these receptors would not exceed the Federal and State one-hour and eight-hour ambient air quality standards for CO. Because the localized CO concentrations around these congested intersections would not violate CO standards, impacts at these and other less congested roadway intersections would not be significant under the Four-Lane Concurrent Extension Alternative, similar to the Proposed Project.

Table S-5.1-2
Carbon Monoxide Concentrations at Selected Locations under Four-Lane Concurrent Extension Alternative (2015)

Intersection	One-Hour Average CO (ppm) [a]			Eight-Hour Average CO (ppm) [a]		
	Existing	Future Baseline (2015) [b]	Future w/Project (2015)	Existing	Future Baseline (2015) [b]	Future w/Project (2015)
Hopyard Road at Stoneridge Drive	5.3	4.2	4.3	3.7	3.0	3.0
Santa Rita Road at Valley Avenue	5.4	4.2	4.2	3.8	2.9	2.9
Santa Rita Road at Stoneridge Drive	4.9	4.3	4.1	3.5	3.0	2.9
El Charro Road at Stoneridge Drive/ Jack London Boulevard	NA	4.1	4.0	NA	2.9	2.8
There are no violations of ambient CO standards at receptor locations 25 feet from the intersection. Reception locations farther away would be exposed to even lower CO concentrations.						
CO Background: One-Hour Average – 3.4 ppm; Eight-Hour Average – 2.4 ppm			Ambient CO Standards: One-Hour Average – Federal: 35 ppm; State 20 ppm; Eight-Hour Average – Federal and State: 9 ppm			

Source: PBS&J, 2007.
Notes: [a] Calculations reflect CO levels at 25 feet from roadway.
[b] Future baseline CO level calculations utilize existing plus approved with Stoneridge Drive Extension traffic volumes and CO emission factors in the year 2015.

Under cumulative conditions, the Four-Lane Concurrent Alternative is the same as the Proposed Project except for the addition of an ice center. As indicated in Table 4.1 of the EIR, predicted CO concentrations at congested intersections under cumulative conditions that assume the Proposed Project would be approximately 10 percent of the Federal one-hour standard, 18 percent of the State one-hour standard and 30 percent of the Federal and State eight-hour standard. Additional CO concentrations created by the Ice Center (which increases Proposed Project trip generation by approximately 16 percent) would not substantially increase cumulative CO concentrations above those analyzed under Proposed Project cumulative conditions and would not increase concentrations to 100 percent of (i.e., exceed) the Federal and State standards. This impact, therefore, remains less-than-significant under the Four-Lane Concurrent Extension Alternative.

Exposure to Toxic Air Contaminants (TACs). The Four-Lane Concurrent Extension Alternative would result in the same land use development pattern as the Proposed Project, with the addition of the ice center in the Community Park. Therefore, the Four-Lane Concurrent Extension Alternative would result in the same potential exposure of the proposed senior continuing care community to TACs from the adjacent freeway as the Proposed Project. Implementation of Mitigation Measure AQ-5.1 would reduce this potential air quality/health impact to a less than significant level for the Four-Lane Concurrent Extension Alternative for the same reasons as the Proposed Project.

Like the Proposed Project, potential exposure of on- and off-site residents and nearby schools as a result of the Four-Lane Concurrent Extension Alternative would be less than significant. A concurrent extension of a four-lane Stoneridge Drive to El Charro Road

would be far below CARB's screening threshold of 100,000 vehicles per day for high-traffic roadways.

Diesel emissions are the primary source of TACs from vehicles, and trucks represent the large majority of diesel vehicles. The Four-Lane Concurrent Extension Alternative could result in lower potential TAC exposure to existing residents and schools along Stoneridge Drive than the Proposed Project because delivery truck traffic to the senior continuing care community could arrive from El Charro Road, instead of having to arrive only from Santa Rita Road under the Proposed Project. Stoneridge Drive is not a designated truck route, and the City of Pleasanton requires that all trucks over three tons making local deliveries use the most direct feasible route from the freeway, which, in this case, would be via El Charro Road.

Exposure to Off-Site Air Emissions. Exposure from Livermore Airport operations would be less-than-significant for the same reasons as described in the EIR for the Proposed Project because the addition of the ice center and earlier extension of all four lanes of Stoneridge Drive would not alter the analysis. Potential exposure to dust or other air emissions from the quarry operations to the south of Staples Ranch would, like the Proposed Project, be less than significant because the closest active gravel mining operation is approximately a mile to the southeast of Staples Ranch, and the closest aggregate processing plant is over a mile away, just north of Stanley Boulevard.

Exposure to Odors. The Four-Lane Concurrent Extension Alternative would develop similar land uses to the Proposed Project and the Ice Center Alternative, and would not introduce new sources of odor. Odor impacts, therefore, would, like the Ice Center Alternative, be less than significant.

Greenhouse Gas (GHG) Emissions. Development under the Four-Lane Concurrent Extension Alternative would generate GHG emissions similar to the Proposed Project, in both the short term and the long run. The ice center would generate additional emissions resulting from construction of the ice center, additional mobile source emissions from ice center traffic, and potentially generate additional stationary source emissions associated with cooling and other mechanical equipment associated with the ice center operations.

As estimated by the URBEMIS 2007 model, construction of the ice center would generate approximately 312 metric tons of CO_2 equivalent emissions in addition to the 2,354 metric tons of CO_2 equivalent estimated for construction of the Proposed Project. Because the total estimated amount of construction-related GHG is below the significance threshold of 3,750 $MTCO_2E$ per year, and annual emissions resulting from a multi-year construction process will be less, GHG emissions due to construction of the Four-Lane Concurrent Alternative are not considered to be cumulatively considerable.

Table S-5.1-3 below presents estimates of the direct and indirect operational GHG emissions caused by the ice center.

Table S-5.1-3
Estimated Ice Center Operational GHG Emissions

Emissions Source	Ice Center (CO_2 MT/year)
Direct Source Emissions	
Natural Gas	183
Hearth	0
Landscape	0.23
Total Source Emissions	184
Direct Mobile Emissions	3,855
Electricity Consumption Indirect Emissions	518
Water Processing Indirect Emissions	
Water Supply and Conveyance	0.23
Water Treatment	0.01
Water Distribution	0.14
Wastewater Treatment	0.21
Total Water Processing Indirect Emissions	0.58
Total Emissions	**4,558**

Source: PBS&J, 2007; Alameda County 2009. Conversion from English to metric tons by a factor of 0.907

The increase shown in the table of approximately 4,558 $MTCO_2$ per year over the Proposed Project represents the "business as usual" scenario. This increase does not take into account potential reductions that would result from the implementation of AB 32, the General Plan's GHG emissions reduction BMPs, or design features and mitigation measures required of the Four-Lane Concurrent Extension Alternative.

The Four-Lane Concurrent Extension Alternative would generate a total of 47,636 $MTCO_2$ per year, an increase of approximately nine-point-six percent (9.6%) more GHG emissions than the Proposed Project as a result the ice center. The Four-Lane Concurrent Extension Alternative will align with the same CAPCOA mitigation measures, OPR mitigation measures and General Plan GHG emissions reduction BMPs as the Proposed Project to potentially reduce its GHG emissions by at least nine percent. However, applying all feasible mitigation measures will not achieve the 97.7-percent reduction required to reduce the Four-Lane Concurrent Extension Alternative's GHG emissions from 47,636 $MTCO_2E$ per year to 1,100 $MTCO_2E$ per year.

Application of the 4.6 $MTCO_2E$ per-service-population-per-year standard for mixed-use projects does not change this conclusion. The ice center will add 29 jobs to the 1,585.5 job total and 960 residents total for the Proposed Project. This translates to approximately 18.5 $MTCO_2E$ per service population per year based on total annual GHG emissions of 47, 636 $MTCO_2E$, well is excess of the 4.6 $MTCO_2E$ standard.

Applying all feasible mitigation measures will not achieve the reduction required to meet the 4.6 $MTCO_2E$ standard.

Therefore, the Four-Lane Concurrent Extension Alternative's contribution to this cumulatively significant impact is considerable and unavoidable, and will remain so after application of feasible mitigation measures (SU).

Biological Resources

Sensitive Plants and Wildlife Species. Like the Proposed Project, development as a result of the Four-Lane Concurrent Extension Alternative could affect an existing population of San Joaquin spearscale, a CNPS List 1B plant species**.** As discussed in the Supplemental Biological Resources Analysis above, development of the Staples Ranch property would result in the elimination of 1.70 acres of suitable spearscale habitat, and construction of the Stoneridge Drive bridge would potentially impact an additional 0.07 acres of spearscale habitat located on the north bank of the Arroyo Mocho. While the Proposed Project would only require the immediate construction of a two-lane bridge over the Arroyo Mocho, ultimately a second two-lane bridge would be required when Stoneridge Drive is fully extended in the future, resulting in the same potential impact to the Arroyo Mocho spearscale habitat as the Four-Lane Concurrent Extension Alternative, which would require the immediate construction of both two-lane Stoneridge Drive bridges. Therefore, impacts as a result of the Four-Lane Concurrent Extension Alternative to the San Joaquin spearscale would be the same as the Proposed Project, and Mitigation Measure S-BIO-1 (preserve off-site San Joaquin spearscale habitat) would reduce these impacts to a less-than-significant level.

As discussed in the Supplemental Biological Resources Analysis, protocol surveys for California tiger salamander have been completed for the Staples Ranch property, and determined that this species would not be impacted by Staples Ranch development. The addition of an ice center and earlier construction of a second bridge under the Four-Lane Concurrent Extension Alternative does not alter the factual basis for this conclusion, which remains the same.

2009 surveys in the Arroyo Mocho channel for California red-legged frog and western pond turtle in the vicinity of the Stoneridge Drive bridge crossing and adjacent to the remainder of Staples Ranch indicated that neither of these species is currently present in this portion of the Arroyo Mocho. However, because it is possible that individuals could disperse through the bridge construction area, implementation of Mitigation Measures BIO-2.1 (conduct preconstruction surveys for California red-legged frogs), BIO-2.2 (implement ground-disturbance restrictions), BIO-2.3 (conduct construction monitoring for California red-legged frogs), BIO-2.4 (conduct WEAP training), BIO-4.1 (conduct preconstruction surveys for western pond turtles) and BIO-4.2 (provide exclusion fencing for western pond turtles) would reduce any potential impact to individuals of these species as a result of bridge construction to a less-than-significant level.

It should be noted that the Four-Lane Concurrent Extension Alternative is likely to have less potential impact on individual western pond turtles and California red-legged frogs within the Arroyo Mocho channel as a result of construction of the Stoneridge Drive bridges than the Proposed Project because, under the Four-Lane Concurrent Extension Alternative, all bridge construction activities would be conducted at once, rather than constructing first one bridge, then re-entering the creek channel in the future to construct the second bridge, as would be required under the Proposed Project. This significant temporal spreading of construction activities to two separate construction seasons would represent an increased chance for individual turtles and/or frogs to be affected by the Proposed Project in comparison to the Four-Lane Concurrent Extension Alternative.

Other Biological Species and Habitats. The Four-Lane Concurrent Extension Alternative, like the Proposed Project, would result in the disturbance of much of the surface of the Staples Ranch property and would, therefore, pose the same potential impacts to nesting birds, wildlife movement, and to jurisdictional waters of the State and the US, and would also share the same potential conflicts with provisions of the City of Pleasanton tree preservation policies and ordinances. Mitigation Measures BIO-5.1 (conduct nesting bird surveys), BIO-7.1 (provide compensation for impacts to jurisdictional waters), BIO-8.1 (minimize lighting spillover), BIO-8.2 (incorporate wildlife habitat into park plans) and BIO-9.1 and 9.2 (conduct tree appraisal and provide tree replacement) would, like the Proposed Project, mitigate these potential impacts to less-than-significant levels.

Because bridge construction would be completed in one phase under the Four-Lane Concurrent Extension Alternative, rather than having two separate bridge construction projects, as under the Proposed Project, impacts to riparian vegetation in the Arroyo Mocho as a result of the Stoneridge Drive bridge construction is likely to be less under the Four-Lane Concurrent Extension Alternative than under the Proposed Project. Under the Proposed Project, a significant time delay prior to constructing the second Stoneridge Drive bridge would result in additional impacts to riparian vegetation because the vegetation would have had time to recover and mature following completion of the first bridge. Like the Proposed Project, implementation of Mitigation Measures BIO-6.1 (obtain streambed alteration agreement) BIO-6.2 (erect exclusion fencing) and BIO-6.3 (replace removed vegetation) would mitigate potential impacts to Arroyo Mocho riparian habitat as a result of bridge construction for the Four-Lane Concurrent Extension Alternative to less-than-significant levels.

Hazards and Hazardous Materials

Hazardous Materials and Waste Generation and Accidental Releases. Similar to the Proposed Project, development under the Four-Lane Concurrent Extension Alternative would have the potential for accidental releases of hazardous materials and waste from construction, operations, and routine transport that could result in contamination of soil or groundwater and pose a threat to the public and environment. As with the Proposed Project, compliance with Federal, State and local use, storage, and transport regulations, including hazardous materials business plans, would reduce the risk of accidental release

of hazardous materials to a less-than-significant impact. In addition, the full extension of Stoneridge Drive through Staples Ranch would allow emergency vehicles to have a lower response time in the event of an accident because there would be no EVA gates to negotiate along the Stoneridge Drive right-of-way.

PG&E Gas Line. Like the Proposed Project, development of the Four-Lane Concurrent Extension Alternative would result in construction activities in the vicinity of the underground PG&E natural gas pipeline along the northern edge of the Staples Ranch site by I-580, which could potentially result in an accidental rupture of the line. As with the Proposed Project, this potential impact would be reduced to less-than-significant levels through implementation of Mitigation Measure HZ-2.1 (prevent disruption of on-site utilities).

Hazards Related to Livermore Municipal Airport. As with the Proposed Project, the presence of the Livermore Airport would not present a safety hazard for people residing or working in the Project Area under the Four-Lane Concurrent Extension Alternative and, with implementation of Mitigation Measures VQ-3.1 through 3.4, also would not create new light and glare hazards to aircraft utilizing the Livermore Municipal Airport.

Under the Four-Lane Concurrent Extension Alternative, an ice center in the community park would be within Caltrans' recommended safety zones (Zones 4 and 6); however, as discussed with the Proposed Project, these safety zones have not been adopted by the Alameda County Land Use Commission (ALUC) and are based on nationwide data for similar sized airport facilities. As discussed in the EIR's evaluation of the Ice Center Alternative, safety statistics specific to the Livermore Airport were evaluated and indicated that safety risks at the proposed ice center site would be less than significant.

In addition, recent data generated since preparation of the EIR estimates annual Livermore Municipal Airport operations in 2013 that are less than half the number of annual flights projected by the EIR for 2011 (188,400 and 420,000 flights, respectively), thereby further reducing the likelihood of safety hazards (LSA, 2009).

Hydrology and Water Quality

Construction. Because the pattern of land disturbance on the Staples Ranch property would essentially be the same, construction of the Four-Lane Concurrent Extension Alternative would have essentially the same effects as construction of the Proposed Project and, with implementation of standard construction SWPPP BMPs, would result in less-than-significant water quality impacts. Impacts to water quality resulting from construction of the Stoneridge Drive bridges over the Arroyo Mocho would likely be less under the Four-Lane Concurrent Extension Alternative than under the Proposed Project because both Stoneridge bridges would be constructed at the same time. This would limit construction impacts to the Arroyo Mocho channel to one occurrence, instead of two separate bridge construction projects that would be required under the Proposed Project. Like the Proposed Project, regulatory requirements for bridge construction would reduce

the water quality impacts of the Four-Lane Concurrent Extension Alternative to less-than-significant levels.

Stormwater Runoff and Quality. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would increase the amount of runoff and associated pollutants following completion of development due to an increase in the amount of impervious surface on the Staples Ranch site. The inclusion of the ice center within the Community Park would add approximately eight acres of additional impervious surface, compared to the Proposed Project. However, in regard to Stoneridge Drive, due to the Proposed Project's transition and turn lane requirements, the concurrent full extension of Stoneridge Drive as a four-lane road through Staples Ranch under the Four-Lane Concurrent Extension Alternative would only add a minimal amount (less than an acre) of impervious surface in comparison to the Proposed Project in the short-term and would result in the same amount of impervious road surface in the long-term. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative includes a storm water detention basin within the Neighborhood Park that would mitigate potential hydro-modification impacts to the Arroyo.

Potential pollutant loads as result of the development of the Four-Lane Concurrent Extension Alternative therefore would be substantially the same as those of the Ice Center Alternative, which the EIR determined would have a potentially substantial increase in pollutant loads compared to the Proposed Project, but the impacts of which would also be reduced to a less-than-significant level through implementation of Mitigation Measure HY-1.1 (require Water Quality Management Plans with targeted pollutant removal rates to ensure implementation of Municipal NPDES permit BMPs) and HY-1.2 (require Integrated Pest Management Plans and Pesticide Management Programs to reduce landscaping pollutant runoff). The potential impacts to storm water quality resulting from the Four-Lane Concurrent Extension Alternative would be less than significant after implementation of these measures.

Groundwater Supplies and Recharge. Similar to the Proposed Project, the Four-Lane Concurrent Extension Alternative would not substantially reduce potential groundwater recharge because the Staples Ranch site is not an important groundwater recharge area and runoff would continue to flow into the Arroyo Mocho channel where it could continue to contribute to regional groundwater recharge. Also like the Proposed Project, the Four-Lane Concurrent Extension Alternative does not include any on-site wells and, therefore, would not directly impact groundwater supplies.

Erosion and Sedimentation. Potential impacts on erosion and sediment transport associated with operation of the Four-Lane Concurrent Extension Alternative would be essentially the same as for the Proposed Project. An increased amount of impervious surfaces as a result of the ice center development and, to a lesser extent in the short-term, the four-lane extension of Stoneridge Drive could cause greater peak-flow rates if storm water is discharged directly to the Arroyo Mocho, contributing to increased downstream off-site bed and bank erosion and sedimentation of streams and channels. However, the proposed storm water basin within the Neighborhood Park is planned to be sized to

accommodate the peak-flow rates that would be generated by full buildout of Staples Ranch, including the ice center and full extension of Stoneridge Drive. Moreover, as with the Proposed Project, it is anticipated that some stormwater runoff from the bridge and on paved trails/maintenance roads along the Arroyo Mocho may be directed into the Arroyo Mocho. The drainage areas will be designed to meet all applicable stormwater treatment, hydromodification, Zone 7, and other applicable regional, State, or Federal requirements. Therefore, as with the Proposed Project, implementation of Mitigation Measure HY-3.1 (require maintenance of the detention basin) and Mitigation Measure HY-1.1 (implement water quality management plans), would reduce potential impacts of erosion and sedimentation of the Four-Lane Concurrent Extension Alternative to less-than-significant levels.

Flood Hazards. Potential hazards resulting from flooding would be the same for the Four-Lane Concurrent Extension as the Proposed Project in that the Staples Ranch site is currently within FEMA's 100-year flood zone. As with the Proposed Project, implementation of Mitigation Measures HY-4.1 (requiring FEMA flood hazard map revisions) and HY-4.2 (requiring implementation of the Livermore flood protection improvements) would reduce potential flood hazard impacts to less-than-significant levels.

Land Use and Agricultural Resources

Physical Division of a Community. Like the Proposed Project, the development of Staples Ranch under the Four-Lane Concurrent Extension Alternative would not physically divide an established community. Because the Four-Lane Concurrent Extension Alternative includes the full extension of Stoneridge Drive to El Charro Road as part of the project, it would increase overall connectivity between Pleasanton and the surrounding area at an earlier date than the Proposed Project.

Annexation Policies. The Four-Lane Concurrent Extension Alternative would be consistent with County, LAFCo, and City policies regarding annexation of the Project Area into the City for the same reasons stated in the EIR for the Proposed Project. In addition, LAFCo may consider the Four-Lane Concurrent Extension Alternative to be a more desirable alternative than the Proposed Project because it would include the full extension of Stoneridge Drive to El Charro Road as part of the development of Staples Ranch. As expressed in LAFCo's July 18, 2008 letter to the City of Pleasanton, full extension of Stoneridge Drive would be more consistent with regional growth goals and policies regarding the timely construction of roadway arterials in the Tri-Valley area.

Land Use Compatibility. The Four-Lane Concurrent Extension Alternative would have the same land use compatibility impacts with existing and proposed uses surrounding the Staples Ranch site as the Proposed Project. The closest active quarry operation is approximately 1.5 miles to the southeast and is neither visible nor audible from Staples Ranch.

An ice center on the community park site would be compatible with the planning goals and policies of the City represented in the conceptual Staples Ranch Park Master Plan for the Community Park adopted by the City Council on June 10, 2008, which contemplates the development of an ice center. Land use compatibility impacts of the Four-Lane Concurrent Extension Alternative, like the Proposed Project, are, therefore, considered less-than-significant.

Density. The Pleasanton General Plan 2005-2025 land use designations of the Staples Ranch site are the same as those of the 1996 General Plan. With the exception of the ice center, the Four-Lane Concurrent Extension Alternative would present the same potential impacts to allowable land use densities as the Proposed Project and Mitigation Measure LU-4.1 (require additional amenities of commercial projects that exceed a floor area ratio [FAR] of 0.35) would reduce potential conflicts to less than significant levels. With the inclusion of the ice center, the community park site would have an FAR of approximately 0.19. While the Pleasanton General Plan does not provide a maximum FAR for park sites, the ice center use would still be well below an FAR of 0.35 if it were to be considered a commercial use. Therefore, no additional potential impacts to allowable land use densities would result from the inclusion of the ice center in the land use plan for the Four-Lane Concurrent Extension Alternative.

Airport Land Use Policy Plan. Like the Proposed Project, land uses under the Four-Lane Concurrent Extension Alternative would not conflict with policies of the adopted Alameda County Airport Land Use Plan. Mitigation Measures LU-5.1 (require airport disclosures, deed riders and noise complaint procedures for the senior continuing care community) and LU-5.2 (require a deed rider or avigation easement for other uses) would reduce potential complaint conflicts with the Livermore Municipal Airport to less-than-significant levels.

Conversion of Farmland. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would not permanently convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as defined by the California Resources Agency, to non-agricultural uses. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative also would not conflict with existing agricultural zoning or LAFCo policies regarding annexation or development of Prime Agricultural Land, given that Staples Ranch has been planned for urban development since 1989.

Noise

Staples Ranch Development Noise Exposure. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative includes a senior continuing care community, auto mall, commercial center, and community and neighborhood parks that would be subject to traffic noise from the adjacent I-580 freeway, El Charro Road, and Stoneridge Drive, as well as aircraft operations associated with the nearby Livermore Municipal Airport.

Because the Four-Lane Concurrent Extension Alternative has the same proposed land uses adjacent to the freeway, noise impacts associated with the freeway would be the same as under the Proposed Project. Similarly, noise impacts associated with Livermore airport operations would be the same.

Like the Proposed Project, traffic volumes (and the resultant noise impacts) on El Charro Road, south of the Stoneridge Drive intersection, will remain essentially the same under the Four-Lane Concurrent Extension Alternative, because this portion of El Charro Road will remain a private road, utilized primarily by quarry trucks hauling aggregate from the quarry operations to the south. Noise exposure to the adjacent retail/commercial site and community park would therefore be the same as the Proposed Project. Like the Proposed Project, Staples Ranch development under the Four-Lane Concurrent Extension Alternative would be unaffected by noise from aggregate quarry operations to the south, because the nearest operating quarry and aggregate plant are located approximately 1.5 miles away and are inaudible from Staples Ranch.

While traffic volumes on El Charro Road, north of the Stoneridge Drive intersection, will increase under the Four-Lane Concurrent Extension Alternative relative to the Proposed Project, the auto mall site, as a commercial use, is relatively less sensitive to traffic noise than other land uses. As noted in the noise analysis for the Proposed Project (DEIR, page 3.7-25), the auto mall, due to its proximity to the I-580 freeway and El Charro Road, would approach or exceed the City's land use compatibility standard of L_{dn} 70 dB for commercial uses, and may require incorporation of additional noise insulation features into some or all of the auto mall buildings to meet City interior noise standards.

With the full extension of Stoneridge Drive to El Charro Road, the Four-Lane Concurrent Extension Alternative will result in significantly higher traffic volumes on Stoneridge Drive within Staples Ranch, relative to the Proposed Project, especially the segment between the Arroyo Mocho bridges and the intersection formed by the entrance to the senior continuing care community and the community park. Under the Proposed Project, traffic on this segment under "Existing + Approved" conditions would, in the near term, be limited to vehicles accessing the senior community or western portion of the park, while under the Four-Lane Concurrent Extension Alternative, traffic associated with the commercial uses on Staples Ranch, as well as traffic generated by other parts of Pleasanton, would utilize this portion of Stoneridge Drive. As a result, areas within the senior continuing care community and parks adjacent to this portion of Stoneridge Drive would experience higher noise levels under the Four-Lane Concurrent Extension Alternative at an earlier time than under the Proposed Project.

The projected distances from Stoneridge Drive that would be affected by traffic noise are shown in Table S-5.1-4 below. Using Year 2015 average peak-hour traffic volumes provided by the City of Pleasanton, Charles M. Salter Associates calculated the distance from the centerline of the future alignment of Stoneridge Drive to the L_{dn} 60 and 65 dB noise contours that would result from the full extension of the roadway under the Four-Lane Concurrent Extension Alternative. As shown in Table S--5.1-4, these distances would be significantly reduced with the implementation of Mitigation Measure NO-4.1 (construct Stoneridge Drive extension with noise-attenuating pavement).

Table S-5.1-4
Four-Lane Concurrent Extension Alternative
Staples Ranch Noise Contours From Stoneridge Drive Traffic

	Distance to Noise Contour [1]	
Stoneridge Drive	Ldn 65 dB	Ldn 60 dB
Standard Pavement	118 feet	255 feet
Noise-Attenuating Pavement	78 feet	159 feet

Source: Charles M. Salter Associates, 2009.
[1] Distances are from centerline of roadway, assuming no obstructions.

The senior continuing care community will include a health care facility located just north of Stoneridge Drive. The proposed health care facility, if located within the L_{dn} 60 dB contour, would be considered a "Conditionally Acceptable" land use under the City's noise compatibility guidelines.

Noise mitigation measures for the Proposed Project would also reduce noise impacts to Staples Ranch development from traffic and aircraft under the Four-Lane Concurrent Extension Alternative to less-than-significant levels. Like the Proposed Project, Mitigation Measure NO-1.1 (provide noise reduction features in residential and commercial structures to meet City noise standards), will require the preparation of project-specific noise analyses for the auto mall, retail/commercial site, and senior continuing care facility, including the health care facility, to demonstrate that all structures will meet the City's interior noise level standard prior to issuance of building permits. Mitigation Measures NO-1.2 (provide noise reduction features to meet single-event noise level standards), and NO-1.3 (provide exterior noise reduction features along I-580), will similarly reduce potential traffic and aircraft noise impacts to the senior continuing care community to less-than-significant levels. Similarly, Mitigation Measure NO-1.4 (limit Community Park uses within the L_{dn} 65 dB noise contour) would also reduce potential noise impacts to park users from traffic and aircraft under the Four-Lane Concurrent Extension Alternative to less-than significant levels.

On-Site Noise Sources. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would introduce new noise sources to the project vicinity. For the same reasons described in the EIR's analysis of the Proposed Project, landscaping and truck delivery noise impacts to adjacent neighborhoods would be less-than-significant, as would potential mechanical noise from maintenance and building equipment associated with the senior continuing care community and commercial uses. As discussed under the Ice Center Alternative, the inclusion of the ice center within the community park under this Alternative may require large-scale mechanical equipment associated with the ice center's operation; however, noise from such equipment would be attenuated by the ice center's location on the opposite side of the project site from the continuing care community development and would be subject to sound attenuation and compliance with the City's noise standards. Like the Proposed Project, Mitigation Measure NO-1.5 (limit car wash noise levels to 60 dB) would reduce potential impacts of the auto mall's car washes on the adjacent senior continuing care community to a less-than-significant level.

Construction Noise. Like the Proposed Project, construction of the Staples Ranch project under the Four-Lane Concurrent Extension Alternative would result in temporary noise and vibration impacts to adjacent residential areas. Implementation of Mitigation Measure NO-3.1 (implement construction best management practices) would reduce impacts associated with general construction noise to less-than-significant levels, similar to the Proposed Project. Like the Proposed Project, construction of the Four-Lane Concurrent Extension Alternative could also require pile driving for construction of the Stoneridge Drive bridges, although this Alternative would have the advantage of limiting all bridge construction to one period, rather than two separate bridge construction projects, potentially separated by a number of years, that would be required under the Proposed Project. Pile-driving noise impacts associated with the simultaneous construction of a second bridge across Arroyo Mocho would also be mitigated to a less-than-significant level by Mitigation Measure NO-2.1 because it requires compliance with the same peak particle velocity standard regardless of whether one or two bridges are constructed at any given time. Thus, as with the Proposed Project, Mitigation Measures NO-2.1 (reduce potential pile driving vibration effects) and NO-2.2 (provide early notice) would reduce potential pile driving impacts associated with bridge construction to a less-than-significant level.

Ambient Noise Levels

S-NO-2. Significant Noise Increase Along Stoneridge Drive (S)

Unlike the Proposed Project, the Four-Lane Concurrent Extension Alternative would result in an immediate and significant increase in vehicular traffic levels on Stoneridge Drive between Santa Rita Road and Staples Ranch as a result of the full extension of Stoneridge Drive through Staples Ranch to El Charro Road. As a result, traffic noise levels for existing development along Stoneridge Drive would increase significantly at an earlier point in time than under the Proposed Project.

The existing segment of Stoneridge Drive to the west of Staples Ranch and the surrounding residential development between Kamp Drive and Trevor Parkway were developed as part of the original 1989 Stoneridge Drive Specific Plan, which called for the full extension of Stoneridge Drive to El Charro Road as a four-lane arterial and contained guidelines for sound walls and setbacks to shield new residential development from anticipated traffic noise. Consequently, the predominantly single-family residential developments along this portion of Stoneridge Drive generally do not face the road and back yards or side yards closest to Stoneridge Drive are shielded by sound walls. Between Guzman Way and Trevor Parkway, some homes face an unwalled portion of Stoneridge Drive, but are set back from Stoneridge Drive on the south side of Snowdrop Circle. Backyards of these homes are shielded from Stoneridge Drive by the homes themselves. Homes along the north side of the Arroyo Mocho are largely shielded by a large berm along the north side of Stoneridge Drive. However, several homes along Vermont Place on the north side of the Mocho, nearest to the planned Stoneridge Drive bridges over the channel, are unshielded by the berm and have backyards with open

fencing that would be exposed to bridge traffic noise. While homes on the south side of the bridge crossing are located much closer to the bridge crossing, they are shielded by an existing sound wall.

The Pleasanton General Plan lists two existing "sensitive receptors" along this portion of Stoneridge Drive that could particularly be impacted by traffic noise. Hacienda School, a private school on the north side of Stoneridge Drive near Newton Drive, is set back from the roadway and is also located significantly below the elevation of Stoneridge Drive. Mohr Elementary School is located to the south of Stoneridge Drive but is largely screened from the roadway by several rows of homes.

To ascertain noise impacts to existing residences and sensitive receptors along Stoneridge Drive west of Staples Ranch that would result from the full extension of the road under the Four-Lane Concurrent Extension Alternative, Charles M. Salter Associates first quantified the existing noise environment by measuring ambient noise levels at three locations near Stoneridge Drive over a 48-hour period as well as two short-term 15-minute noise measurements. Future noise levels as a result of the Four-Lane Concurrent Extension Alternative were then calculated, using a computer noise model, for various locations along and near Stoneridge Drive. The model used predicted Year 2015 average peak-hour traffic levels provided by the City of Pleasanton, as well as the locations and heights of existing sound walls and distances from the roadway to calculate expected noise levels in back yards of existing residences and the building façades of the two sensitive receptors. Table S-5.1-5 summarizes the results.

Table S-5.1-5
Four-Lane Concurrent Extension Alternative
Existing and Year 2015 Stoneridge Drive Noise Levels (L_{dn} dB)

Receiver	Existing Noise Level	2015 Noise Level	Increase Over Existing
Sensitive Receptors [1]			
Hacienda School	52	57	5
Mohr Elementary School	49	55	6
Residences [2]			
North of Stoneridge, East of Kamp	56*	63	7
South of Stoneridge, East of Kamp	56*	62	6
South of Stoneridge, East of Guzman	54*	62	8
Snow Drop Circle	49*	51	2
Vermont Place, North of Bridge	52	61	9
Chocolate Street, South of Bridge	52*	63	11

Source: Charles M. Salter Associates, 2009
* Estimated based on nearby ambient noise measurement
[1] Calculated at building facade
[2] Calculated in backyard

As shown in Table S-5.1-5, future noise levels at all locations will increase as a result of the Four-Lane Concurrent Extension Alternative. The anticipated noise increase over existing levels is considered significant (i.e., more than L_{dn} 4 dB increase, per Program 1.3 of the Noise Element of the Pleasanton General Plan 2005-2025) at all locations except the Snowdrop Circle Residences' backyards, where the increase would be only L_{dn} 2 dB. Furthermore, at all of the residential locations, except Snowdrop Circle, future predicted noise levels under this Alternative would exceed the City's "Normally Acceptable" single-family residential noise level of L_{dn} 60 dB for backyard areas. The Pleasanton General Plan 2005-2025, however, also recognizes that L_{dn} 60 dB is a "goal" which cannot necessarily be reached in all residential areas within the realm of economic or aesthetic feasibility. With windows closed, interior noise levels at these locations would not be expected to exceed L_{dn} 45 dB, based on a typical façade noise reduction of 25 to 30 dB afforded by typical single-family home construction.

Noise level increases at the two existing sensitive receptors due to the Four-Lane Concurrent Extension Alternative would be significant (L_{dn} 5-6 dB), but the future noise levels at these location would not exceed the City's "Normally Acceptable" criterion of L_{dn} 60 dB for schools.

A 3 dB reduction in traffic noise levels anticipated to result from implementation of Mitigation Measure NO-4.1 (construct Stoneridge Drive extension with noise-attenuating pavement) would reduce the calculated future noise levels for residences closest to the bridge (Vermont Place residence and Chocolate Street residence) to approximately L_{dn} 60 dB or below.

Similarly, repaving the existing portion of Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement would result in a reduction of anticipated noise levels at all measured locations along Stoneridge Drive to approximately L_{dn} 60 dB or below.

The following mitigation measure would ensure that future noise levels due to traffic along this portion of Stoneridge Drive would not exceed an L_{dn} of approximately 60 dB.

S-NO-1.1 *Repave Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement*. Stoneridge Drive between Kamp Drive and Trevor Parkway shall be repaved with noise-attenuating pavement prior to the completion of the Stoneridge Drive extension to El Charro Road.

However, while the utilization of noise-attenuating pavement on the existing and new portions of Stoneridge Drive would result in all residential uses and sensitive receptors in the area meeting an L_{dn} of approximately 60 dB or below for single-family residential development, in several locations it would not reduce the overall increase in ambient noise levels to 4 dB above existing noise levels, resulting in a noticeable increase in ambient traffic noise for area residents as a result of the Four-Lane Concurrent Extension Alternative. In addition, it is estimated that future airport-related noise could add up to

1-2 dB to projected ambient noise levels for residences by the planned bridge crossings. Therefore, this is considered a significant and unavoidable impact of this Alternative (SU).

***S-NO-1. Cumulatively Considerable Noise Increase Along Stoneridge Drive* (SU)**

Under cumulative conditions, the Four-Lane Concurrent Extension Alternative would have essentially the same cumulatively considerable contribution to a significant cumulative noise impact as the Proposed Project, which also assumes the full extension of Stoneridge Drive by 2030 (SU).

Population, Employment, and Housing

Growth Forecasts and Jobs/Housing. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would not displace any people or existing housing. Because Staples Ranch has been previously planned for urban development under the 1989 Stoneridge Drive Specific Plan – which anticipated more intensive uses of the Project Site than the Four-Lane Concurrent Extension Alternative – it is already accounted for in growth forecasts for the City. While the Four-Lane Concurrent Extension Alternative would include the ice center with approximately 29 more jobs than the 1,585.5 jobs anticipated for the Proposed Project (See EIR, pages 3.8-11; 5-33), this would not significantly impact the City's job/housing ratio.

Transportation

Potential traffic impacts under the Four-Lane Concurrent Extension Alternative as well as the Proposed Project were analyzed in the Dowling Traffic Study. The following section summarizes the findings of that report.

Roadway Network. Under the Four-Lane Concurrent Extension Alternative, the analysis assumes the same roadway network as under the Proposed Project, as described in Section 3.9 (Transportation) of the DEIR, with the exception of Stoneridge Drive, which is assumed to extend from its current terminus at Trevor Parkway to El Charro Road as a four-lane arterial with the development of the Staples Ranch site under Existing + Approved conditions. As noted in the Four-Lane Concurrent Extension Alternative Description above, the Four-Lane Concurrent Extension Alternative includes a southbound free right turn lane from El Charro Road to Stoneridge Drive, as well as three left-turn lanes from Stoneridge Drive east to northbound El Charro Road. The new Stoneridge Drive intersections within Staples Ranch, at the entrances to the auto mall and senior continuing care community, would be signalized, as would the currently unsignalized intersections at Trevor Parkway, Guzman Parkway, and Newton Way to the west.

Staples Ranch Trip Generation. Because the Four-Lane Concurrent Extension Alternative includes an ice center in the community park, it would generate an additional 3,328 daily trips, an additional 77 trips during the AM peak hour, and 349 additional trips during the PM peak hour, when compared to the Proposed Project. Trip generation

estimates for the ice center were developed based on trip generation rates from a similar ice facility of comparable size. Table S-5.1-6 below shows Staples Ranch trip generation for the Four-Lane Concurrent Extension Alternative in the AM and PM peak hours, as well as on a daily basis.

Table S-5.1-6
Staples Ranch Trip Generation
Four-Lane Concurrent Extension Alternative

			Project-Generated Trips						
			AM Peak Hour			PM Peak Hour			Daily
Land Use	**Amount**		**In**	**Out**	**Total**	**In**	**Out**	**Total**	
Senior Community	800	DU	29	35	64	54	34	88	2,200
Auto Mall	331	KSF	502	176	678	341	533	874	11,035
Retail	175	KSF	110	70	180	315	341	656	7,500
Park	17	Acres	17	17	34	34	34	68	300
Ice Center	138	KSF	41	36	77	175	175	349	3,328
TOTAL			699	334	1033	919	1117	2035	24,363

Source: Dowling Associates, 2008.

It should be noted that the trip generation totals shown in Table S-5.1-6 above are conservative in that they overstate the total retail trips by approximately 2,350 trips because this site is limited to 120,000 square feet of retail uses, rather than the 175,000 square feet used for modeling purposes. The retail trips have also not been reduced for pass-by or internal trips.

Intersection Level of Service. As documented in the 2008 Dowling Traffic Study, the Pleasanton Traffic Model was used to analyze level of service (LOS) and delay for over sixty intersections in Pleasanton and Dublin under "Existing plus Approved" conditions for the Proposed Project as well as the Four-Lane Concurrent Extension Alternative. Intersections in Livermore that could potentially be affected by Staples Ranch development were also analyzed, using that City's model. Table S-5.1-7 below summarizes the comparison of intersections in Pleasanton, Dublin, and Livermore that would function at LOS E or F under either the Proposed Project or the Four-Lane Concurrent Extension Alternative.

Table S-5.1-7
Intersection LOS Comparison
No Project, Proposed Project, and Four-Lane Concurrent Extension Alternative

Intersection	AM Peak Hour						PM Peak Hour					
	No Project		Proposed Project		Four-Lane Extension		No Project		Proposed Project		Four-Lane Extension	
Pleasanton Model Intersections	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
Hopyard/I-580 EB off	C	21	C	21	C	22	D	54	E	59	D	52
Hopyard/Owens	D	47	D	48	D	48	F	330	F	333	F	343
Hopyard/Stoneridge	D	46	D	46	D	48	F	102	F	102	E	70
Hacienda/Owens	C	25	C	25	C	26	D	48	D	51	D	45
Santa Rita/I-580 EB off/ Pimlico	D	42	D	42	C	26	D	38	D	40	C	28
W. Las Positas/Stoneridge	C	29	C	30	C	34	C	31	C	32	D	50
Santa Rita/Stoneridge	D	49	D	50	F	83	D	35	D	37	F	98
Santa Rita/Valley	C	35	C	35	D	36	E	67	E	69	F	88
El Charro/Stanley [1]	--	--	--	--	--	--	--	--	--	--	--	--
First/Ray [3]	D	46	D	46	D	40	F	81	F	81	E	80
First/Kottinger [3]	C	34	C	34	D	53	C	33	C	34	D	43
Main/Ray [3]	F	161	F	162	F	163	F	83	F	94	E	63
Main/St. John [3]	B	16	B	18	B	14	E	58	E	76	F	105
First/Bernal [3]	D	48	D	48	E	60	D	45	D	45	E	77
El Charro/I-580 EB	B	16	F	110	D	54	A	9	C	22	B	11
El Charro/Freisman [2]	--	--	--	--	--	--	--	--	--	--	--	--
El Charro/Stoneridge	D	44	C	22	C	20	B	15	C	27	C	24
El Charro/El Charro	--	--	--	--	--	--	--	--	--	--	--	--
Fallon/I-580 WB ramps	A	5	A	5	B	11	A	5	A	6	A	8
Fallon/Dublin [4]	D	36	D	37	E	57	F	116	F	177	F	153
Tassajara/Central [4]	D	47	D	48	D	47	D	50	D	51	D	51
Livermore Intersections	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
Isabel/Kitty Hawk/Airway [5]	D	55	D	55	D	47	--	--	--	--	--	--
Murrieta/E. Jack London	E	58	E	59	E	68	F	113	F	116	F	137
Murrieta/East Stanley [6]	--	--	--	--	--	--	--	--	--	--	--	--
Dublin Intersections [7]	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
Dublin/Dougherty	C	0.7	C	0.7	C	0.7	D	0.9	D	0.9	D	0.9

Source: Dowling Associates, 2008.

Notes: Shaded cells indicate intersection operates at below corresponding City's LOS standards.

[1] *Future intersection which does not exist under Existing + Approved Conditions.*

[2] *Intersection to be closed in future, therefore no Existing + Approved Conditions LOS presented.*

[3] *Intersection located in the Pleasanton CBD and exempt from LOS standards.*

[4] *Intersection located with City of Dublin, but adjacent to City of Pleasanton.*

[5] *Permitted to exceed Livermore LOS standards per Policy P4 of Goal CIR-4.1 of Livermore General Plan.*

[6] *No level of service provided under Existing + Approved Conditions.*

[7] *LOS calculated by V/C ratio per approved City of Dublin's CCTA methodology.*

Table S-5.1-7 indicates that the Four-Lane Concurrent Extension Alternative would result in the following intersections that would operate below acceptable levels of service under Existing plus Approved Conditions:

Hopyard / Owens (City of Pleasanton)
Hopyard / Stoneridge (City of Pleasanton)
Santa Rita / Stoneridge (City of Pleasanton)
Santa Rita / Valley (City of Pleasanton)
Fallon / Dublin (City of Dublin – in Pleasanton Model)
Murrieta / East Jack London (City of Livermore)

This does not include four intersections in Downtown Pleasanton that would operate at or below LOS but that are exempt (under General Plan policies) from level-of-service standards.

Table S-5.1-7 also indicates that, compared to the Proposed Project, the Four-Lane Concurrent Extension Alternative would result in six intersections operating below acceptable levels of service (one fewer than the Proposed Project). Five of the intersections are the same, but under the Proposed Project, the Hopyard/I-580 EB off-ramp intersection has an LOS of E (unacceptable) in the PM peak hour, while under the Four-Lane Concurrent Extension Alternative, this intersection operates at an acceptable LOS of D in the PM peak hour. Similarly, the intersection of El Charro at I-580 eastbound offramp operates at LOS F under the Proposed Project but operates at an acceptable level of service under the Four-Lane Concurrent Extension Alternative. However, under the Four-Lane Concurrent Extension Alternative, the Santa Rita/Stoneridge intersection has an LOS of F (unacceptable) in the AM and PM peak hours, while under the Proposed Project, this intersection operates at an acceptable LOS of D in both the AM and PM peak hours.

As with the Proposed Project, the Dowling Traffic Study also proposed intersection improvements that would mitigate unacceptable level-of-service conditions. Mitigation Measures TR-1.2 (improve Hopyard/Owens intersection), TR-1.3 (improve Hopyard/Stoneridge intersection) and TR-1.4 (improve Santa Rita/Valley intersection) that were proposed for the Proposed Project, and all of which are included in the City's Traffic Development Fee program, would also reduce the traffic impacts of the Four-Lane Concurrent Extension Alternative at these intersections to a less-than-significant level, as indicated in Table-37 of the Dowling Traffic Study.

Mitigation measures TR-1.2, TR-1.3 and TR-1.4 differ in certain minor respects from the corresponding mitigation measures recommended in Table 37 of the Dowling Traffic Study. This SEIR adjusts TR-1.2, TR-1.3 and TR-1.4 to ensure that each fully reflects the mitigation measures recommended by the Dowling Traffic Study, as follows:

- Mitigation Measure TR-1.2: No adjustment required; lane improvements adopted to mitigate impacts instead of changing cycle length.

- Mitigation Measure TR-1.3: Adjust signal retiming requirement to specify required cycle length of 100 seconds in the PM. Require eastbound free right turn.

- Mitigation Measure TR-1.4: Increase cycle length from 120 seconds to 130 seconds.

S-TR-2. The Four-Lane Concurrent Extension Alternative would increase traffic and contribute to unacceptable levels of service at Pleasanton Intersection # 32 – Santa Rita/Stoneridge.

The significant impact to the Santa Rita/Stoneridge Drive intersection and its requisite mitigation was identified in Table 37 of the Dowling Traffic Study as well as in the DEIR's analysis of the Existing Specific Plan Alternative. The SEIR adopts a mitigation measure (S-TR-2.1) as recommended in Table 37 of the Dowling Traffic Study as follows:

S-TR-2.1 *Improve Santa Rita Road at Stoneridge Drive (#32).* To reduce project-related AM and PM impacts to this intersection, the following lane configurations and modifications are recommended:

- Restripe one of the Stoneridge Drive eastbound right lanes to an eastbound through lane only
- Restripe one of the Stoneridge Drive eastbound right-turn lanes to a free right turn
- Construct a northbound Santa Rita Road lane to provide a separate right-urn lane to Stoneridge Drive

The City of Pleasanton shall change cycle lengths to 130 and 120 seconds for AM and PM, respectively. This mitigation would improve AM and PM operations from LOS F to LOS D.

Implementation of Mitigation Measure S-TR-2.1 would improve both AM and PM LOS from F to D and reduce the impact at the Santa Rita Road/Stoneridge Drive intersection to less-than-significant levels.

S-TR-3. *The Four-Lane Concurrent Extension Alternative would result in an unacceptable Level of Service at the intersection of Dublin at Fallon in the AM Peak Hour.*

The intersection of Fallon Road at Dublin Boulevard has an unacceptable level of service in the PM peak under the Proposed Project, but the intersection has an unacceptable level of service in both the AM and PM peak under the Four-Lane Concurrent Extension Alternative. Mitigation Measure TR-2.1 (improve Fallon Road at Dublin Boulevard) identified in the EIR would improve both the AM and PM peak hour levels of service to an acceptable level.

As indicated in the Dowling Traffic Study and in the EIR, Mitigation Measures TR-2.1 (improve Fallon Road at Dublin Boulevard) and TR-2.2 (improve Murrieta Boulevard/ East Jack London Boulevard), in conjunction with TR-2.3 (seek an interagency cooperative agreement) would, as with the Proposed Project, reduce the traffic impacts resulting from the Four-Lane Concurrent Extension Alternative to the Fallon Road/Dublin Boulevard intersection and the Murrieta Boulevard/East Jack London Boulevard intersection to less-than-significant levels. However, as described in the EIR, these intersection impacts occurring outside the City of Pleasanton's jurisdiction remain significant and unavoidable because it is uncertain whether the interagency cooperative agreement proposed in Mitigation Measure TR-2.3 can be reached and because the City of Pleasanton has no authority to approve mitigations in other jurisdictions. Furthermore, it should be noted that the City of Dublin has indicated that Mitigation Measure TR-2.1 for the Fallon Road/Dublin Boulevard intersection is infeasible, thereby confirming that impacts to this intersection from either the Proposed Project or the Four-Lane Concurrent Extension Alternative are significant and unavoidable. With regard to the Four-Lane Concurrent Extension Alternative, the unacceptable level of service at the Fallon Road/Dublin Boulevard intersection in the AM peak hour constitutes a new significant and unavoidable impact relative to the Proposed Project (SU).

Table S-5.1-8 below summarizes the effect of the above mitigation measures on intersections significantly impacted by the Four-Lane Concurrent Extension Alternative.

Table S-5.1-8
Level of Service Before and After Recommended Mitigations
Four-Lane Concurrent Extension Alternative

Intersection	Before Mitigation				After Mitigation			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Hopyard / Owens	--	--	F	343	--	--	D	51
Stoneridge / Hopyard	--	--	E	70	--	--	D	38
Stoneridge/Santa Rita	F	83	F	98	D	53	D	54
Santa Rita / Valley	--	--	F	88	--	--	D	54
Fallon / Dublin	E	57	F	153	C	25	D	44
Murrieta/E. Jack London	E	60	F	120	D	36	C	32

Source: Dowling Associates, 2008.
Note: LOS shown only for peak hours that failed to meet Pleasanton, Dublin, or Livermore LOS standards under unmitigated conditions.

Stoneridge Drive Intersections. The EIR states that full extension of Stoneridge Drive may result in a need for off-site safety improvements, such as potential signalization, to minor intersections along Stoneridge Drive east of the Santa Rita Road intersection (Draft EIR, pages 3.9-1, 4-18, 4-19; Final EIR, page 3-24). The City of Pleasanton does not require CEQA analysis of impacts to these intersections because they are minor intersections; the LOS D standard of significance for the City of Pleasanton applies only

to major intersections, such as those City of Pleasanton intersections separately analyzed in the EIR. Nonetheless, in light of concerns raised during litigation and prior hearings regarding the development of the Staples Ranch site, the City of Pleasanton traffic engineer used the Pleasanton Traffic Model to estimate the level of service for the Four-Lane Concurrent Extension Alternative under "existing + approved" conditions for the three currently unsignalized intersections on Stoneridge Drive between Kamp Drive and Staples Ranch, as well as for the two future Staples Ranch intersections formed by Stoneridge Drive and the entrance to the auto mall and the continuing care community. As noted in the Four-Lane Concurrent Extension Alternative Description above, all of these intersections would be signalized as part of the improvements constructed under the Four-Lane Concurrent Extension Alternative. The results of this analysis are shown in Table S-5.1-9 below, which indicates that all of these signalized intersections will operate at acceptable levels of service under the Four-Lane Concurrent Extension Alternative.

Table S-5.1-9
Stoneridge Drive Intersection LOS
Existing + Approved Conditions
Four-Lane Concurrent Extension Alternative

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Newton/Stoneridge	B	19	B	18
Guzman/Stoneridge	B	14	B	16
Trevor/Stoneridge	B	20	B	16
Continuing Care/Stoneridge	B	17	C	29
Auto Mall/Stoneridge	D	37	D	54

Source: City of Pleasanton, 2009

The transportation subsection of the cumulative analysis section of the EIR states that: "Cumulative impacts to intersections along Stoneridge Drive including signal warrants, pedestrian, and bicycle impacts associated with the extension of Stoneridge Drive are not fully addressed in this section. These impacts would be addressed during a separate detailed environmental review for the extension of Stoneridge Drive."

The City of Pleasanton traffic engineer also used the Pleasanton Traffic Model to estimate the level of service for the Four-Lane Concurrent Extension Alternative under "cumulative plus project" conditions based on the same cumulative development assumptions as the EIR. The results of this analysis are shown in Table S-5.1-10 below, which indicates that all of these signalized intersections will operate at acceptable levels of service when the Four-Lane Concurrent Extension Alternative is assumed under cumulative conditions.

Table S-5.1-10
Stoneridge Drive Intersection LOS
Cumulative Plus Project Conditions
Four-Lane Concurrent Extension Alternative

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Newton/Stoneridge	C	26	C	31
Guzman/Stoneridge	B	19	B	15
Trevor/Stoneridge	C	21	B	14
Continuing Care/Stoneridge	B	18	C	24
Auto Mall/Stoneridge	D	35	D	39

Source: City of Pleasanton, 2009.

Potential pedestrian, and bicycle impacts associated with the extension of Stoneridge Drive under the Four-Lane Concurrent Extension Alternative are addressed under the "Increased Hazards" subsection below, the results of which analysis do not change under cumulative conditions.

Freeway and Arterial Level of Service. The Alameda County Congestion Management Agency requires a CMP analysis only if a project will change land use designations that will result in a net increase of more than 100 vehicle trips over the current land use designations for the area in question. Because the Proposed Project and the Four-Lane Concurrent Extension Alternative will result in a substantial decrease in the total number of vehicle trips in comparison to the existing Specific Plan land use designations for Staples Ranch, the City of Pleasanton is not required to conduct an analysis of impacts to CMP roadways for either the Proposed Project or the Four-Lane Concurrent Extension Alternative. However, the City has chosen to conduct a CMP analysis for the Proposed Project and the Four-Lane Concurrent Extension Alternative to illustrate the potential effects of extending (or not extending) Stoneridge Drive on the regional roadway system.

A CMP analysis of the Four-Lane Concurrent Extension was conducted for Year 2015 (near term) to compare the impacts of the Four-Lane Concurrent Extension Alternative to area freeways and major arterials with No Project and the Proposed Project, essentially illustrating the differential impact of extending Stoneridge Drive as a four-lane arterial with the development of Staples Ranch. Impacts to freeways and major arterials are considered significant if the addition of the Four-Lane Concurrent Extension Alternative-related traffic would result in an LOS of F, except where the roadway link is already at LOS F under No Project conditions. At these locations, the impacts of the Four-Lane Concurrent Extension Alternative are considered significant if the contribution of project-related traffic is more than three percent of the total traffic.

S-TR-4. The Four-Lane Concurrent Extension Alternative would exceed the standards established by the County congestion management agency for designated roads or highways at the following segments: **(S)**

- Stoneridge Drive east of Santa Rita Road
- Stanley Boulevard east of Valley Avenue
- SR-84 between Stanley Boulevard and Vineyard Avenue
- SR-84 near Little Valley Road
- I-580 between Airway Boulevard and Isabel Avenue

Tables Table S-5.1-11 and Table S-5.1-12 below illustrate the results of the CMP analysis for the AM and PM peak hours, comparing the No Project, Proposed Project, and the Four-Lane Concurrent Extension Alternative for 23 roadway segments in the Tri-Valley area. The analysis indicates that the Four-Lane Concurrent Extension would result in one arterial segment (Stoneridge Drive east of Santa Rita Road) changing from an acceptable LOS D under the No Project and Proposed Project scenarios to an unacceptable LOS F for both AM and PM hours. A second arterial segment (Stanley Boulevard east of Valley Avenue) will also increase by just over three percent as a result of changed traffic patterns with the full extension of Stoneridge Drive. In addition, traffic on three highway segments (SR-84 between Stanley Boulevard and Vineyard Avenue; SR-84 near Little Valley Road in the AM peak hour; and I-580 between Airway Boulevard and Isabel Avenue in the PM peak hour) would increase by just over three percent as a result of changed traffic patterns with the full extension of Stoneridge Drive. On the other hand, four roadway segments, including West Las Positas Boulevard west of Santa Rita Road, Santa Rita Road south of I-580, Hopyard Road between I-580 and Owens Drive, and I-580 between Santa Rita Road and El Charro Road would all improve from an unacceptable LOS F to an acceptable LOS of D or E as a result of the Four-Lane Concurrent Extension Alternative, in comparison to either the No Project or the Proposed Project scenarios.

S-TR-4.1 *Mitigation for CMP Impacts: Payment of Regional Tri-Valley Transportation Development Fees.* Payment of the Tri-Valley Transportation Development fees to fund improvements to State Route 84, and High-Occupancy Vehicle (HOV) lanes on I-580 and I-680. Improvements to parallel corridors will provide alternative routes and additional capacity to reduce local traffic impacts.

While implementation of Mitigation Measure S-TR-1.1 will reduce this impact, there is no feasible mitigation measure to ensure that these roadway segments in particular will not remain significantly impacted. This impact is, therefore, significant and unavoidable (SU).

Table S-5.1-11
CMP Impact Analysis – Near Term 2015 AM Peak Hour

Link Location	Northbound/Eastbound						Southbound/Westbound					
	Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		Four-Lane Extension Alternative With Stoneridge Extension		Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		Four-Lane Extension Alternative With Stoneridge Extension	
Interstate/State Highways	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
I-580 (Betn. Santa Rita & El Charro)	B	0.36	B	0.39	B	0.37	F	1.26	F	1.28	F	1.25
I-680 (Betn. Stoneridge & W. L. Positas)	B	0.50	B	0.50	B	0.50	F	1.23	F	1.23	F	1.25
SR-84 (Betn. Portola & I-580)	A	0.17	A	0.17	A	0.16	A	0.07	A	0.07	A	0.05
SR-84 (Betn. I-580 & Jack London)	C	0.58	C	0.58	C	0.59	D	0.76	D	0.76	D	0.72
SR-84 (Betn. Jack London & Stanley)	E	0.95	E	0.97	E	0.90	F	1.17	F	1.17	F	1.20
SR-84 (Betn. Stanley & Vineyard)	F	1.10	F	1.11	F	1.06	F	1.16	F	1.16	F	1.20
SR-84 (Near Little Valley)	E	0.78	E	0.78	E	0.79	F	1.24	F	1.24	F	1.28
I-580 (Betn. El Charro & Airway)	B	0.42	B	0.42	B	0.42	F	1.19	F	1.20	F	1.20
I-580 (Betn. Airway & Isabel	B	0.38	B	0.38	B	0.38	F	1.31	F	1.31	F	1.30
I-580 (Betn. Isabel & Portola)	B	0.47	B	0.47	B	0.48	F	1.39	F	1.39	F	1.38
I-580 (Betn. Portola & N.Livermore)	B	0.47	B	0.47	B	0.48	F	1.39	F	1.39	F	1.38
I-580 (Betn. N.Livermore & First)	B	0.44	B	0.45	B	0.45	F	1.27	F	1.27	F	1.27
I-580 (Betn. First & South Vasco)	B	0.47	B	0.47	B	0.47	F	1.06	F	1.06	F	1.08
I-580 (Betn. S.Vasco & Greenville)	B	0.38	B	0.38	B	0.38	F	1.27	F	1.27	F	1.30
Arterials												
Dougherty (Betn. Dublin & I-580)	E	0.81	E	0.81	D	0.78	F	1.13	F	1.14	F	1.14
Dublin (East of Tassajara)	B	0.00	B	0.00	B	0.00	F	1.06	F	1.08	F	1.05
Hopyard (Betn. I-580 & Owens)	F	1.03	F	1.04	F	1.05	F	1.10	F	1.10	F	1.07
W. Las Positas (West of Santa Rita)	D	0.45	D	0.46	D	0.47	F	1.07	F	1.07	D	0.79
Santa Rita (South of I-580)	D	0.32	D	0.38	D	0.27	F	1.09	F	1.13	D	0.69
Stanley (East of Valley)	D	0.23	D	0.23	D	0.23	F	1.45	F	1.45	F	1.50
Stoneridge (East of Santa Rita)	D	0.24	D	0.25	D	0.36	D	0.44	D	0.45	F	1.23
Sunol (North of I-680)	D	0.24	D	0.24	D	0.25	D	0.44	D	0.44	D	0.46
Tassajara (North of Dublin)	B	0.15	B	0.15	B	0.16	B	0.26	B	0.26	B	0.22

Source: Dowling Associates, 2008.

Table S-5.1-12
CMP Impact Analysis – Near Term 2015 PM Peak Hour

Link Location	Northbound/Eastbound						Southbound/Westbound					
	Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		Four-Lane Extension Alternative With Stoneridge Extension		Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		Four-Lane Extension Alternative With Stoneridge Extension	
Interstate/State Highways	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
I-580 (Betn. Santa Rita & El Charro)	F	1.02	F	1.04	E	0.98	C	0.58	C	0.63	C	0.58
I-680 (Betn. Stoneridge & W. L. Positas)	F	1.01	F	1.01	F	1.02	B	0.55	C	0.55	C	0.55
SR-84 (Betn. Portola & I-580)	A	0.17	A	0.18	A	0.27	A	0.13	A	0.13	A	0.12
SR-84 (Betn. I-580 & Jack London)	B	0.49	B	0.49	B	0.49	C	0.65	C	0.66	C	0.68
SR-84 (Betn. Jack London & Stanley)	E	0.91	E	0.92	E	0.94	E	0.86	E	0.87	E	0.88
SR-84 (Betn. Stanley & Vineyard)	E	0.92	E	0.92	E	0.95	E	0.91	E	0.92	E	0.80
SR-84 (Near Little Valley)	E	0.96	E	0.96	E	0.98	E	0.80	E	0.80	E	0.80
I-580 (Betn. El Charro & Airway)	F	1.00	F	1.01	F	1.03	B	0.43	B	0.44	B	0.44
I-580 (Betn. Airway & Isabel)	F	1.04	F	1.05	F	1.08	B	0.45	B	0.46	B	0.46
I-580 (Betn. Isabel & Portola)	F	1.16	F	1.16	F	1.18	B	0.50	B	0.51	B	0.52
I-580 (Betn. Portola & N.Livermore)	F	1.14	F	1.15	F	1.16	B	0.50	B	0.51	B	0.52
I-580 (Betn. N.Livermore & First.)	F	1.00	F	1.00	F	1.01	B	0.42	B	0.42	B	0.42
I-580 (Betn. First & South Vasco.)	E	0.97	E	0.97	E	0.99	B	0.38	B	0.38	B	0.38
I-580 (Betn. S. Vasco & Greenville)	D	0.86	D	0.86	D	0.86	B	0.44	B	0.44	B	0.43
Arterials												
Dougherty (Betn. Dublin and I-580)	F	1.12	F	1.13	F	1.12	D	0.76	D	0.77	D	0.79
Dublin Blvd. (East of Tassajara Rd.)	B	0.73	B	0.75	B	0.44	B	0.00	B	0.00	B	0.00
Hopyard Rd. (Betn. I-580 & Owens Dr.)	F	1.05	F	1.06	E	0.91	F	1.04	F	1.05	F	1.04
W. Las Positas (West of Santa Rita Rd.)	E	0.85	E	0.86	E	0.87	D	0.60	D	0.61	D	0.52
Santa Rita Rd. (South of I-580)	E	0.81	E	0.86	D	0.65	D	0.38	D	0.45	D	0.31
Stanley Blvd. (East of Valley Blvd.)	F	1.24	F	1.24	F	1.25	D	0.28	D	0.28	D	0.28
Stoneridge (East of Santa Rita Rd.)	D	0.41	D	0.43	F	1.24	D	0.28	D	0.29	D	0.37
Sunol Blvd. (North of I-680)	D	0.71	D	0.71	D	0.61	D	0.25	D	0.25	D	0.26
Tassajara Rd. (North of Dublin Blvd.)	B	0.21	B	0.21	B	0.22	B	0.20	B	0.20	B	0.20

Source: Dowling Associates, 2008.

Under cumulative conditions, the Four-Lane Concurrent Alternative is the same as the Ice Center Alternative of the EIR. The cumulative traffic impacts of the Ice Center Alternative, and therefore the Four-Lane Concurrent Extension Alternative, are analyzed in Section 5.3 of the EIR (DEIR, pages 5-38 – 5-42).

Future BART Extension. The Four-Lane Concurrent Extension Alternative has the same land uses (the auto mall and senior continuing care community) adjacent to I-580 as under the Proposed Project. Therefore, potential conflicts with a future extension of BART to Livermore along I-580 would be the same as under the Proposed Project, and Mitigation Measure TR-5.1 (maintain adequate I-580 frontage setbacks) would reduce this potential impact to less than significant levels.

Increased Hazards. The Four-Lane Concurrent Extension Alternative, like the Proposed Project, would use El Charro Road as a major access point to Staples Ranch from I-580. El Charro Road is currently a privately owned two-lane road that provides the major freeway access point to the gravel quarries to the south and, therefore, carries a heavy volume of quarry trucks. As discussed in the DEIR for the Proposed Project, potential hazards from mixing quarry trucks and passenger traffic from the Staples Ranch development and Livermore's El Charro Specific Plan development east of El Charro Road will be significantly reduced through the implementation of the 2007 Pre-Development Cooperation Agreement regarding the design and construction of El Charro Road improvements. While the Four-Lane Concurrent Extension Alternative would result in additional vehicular traffic using El Charro Road within an earlier timeframe than under the Proposed Project, the El Charro Road design called for in the Pre-Development Cooperation Agreement – which will be constructed prior to occupancy of any Staples Ranch development – has been designed to accommodate traffic levels that assumed the full development of Staples Ranch, with an Ice Center, including the full extension of Stoneridge Drive to El Charro Road. In addition, because Stoneridge Drive is not a City-designated truck route, through trucks (including quarry traffic) would be prohibited from using Stoneridge Drive through Staples Ranch. Therefore, like the Proposed Project, no increased hazards are anticipated as a result of mixing quarry trucks and cars on El Charro Road as a result of the Four-Lane Concurrent Extension Alternative.

While the Four-Lane Concurrent Extension Alternative would result in an immediate and significant increase in the volume of traffic along the existing section of Stoneridge Drive between Santa Rita Road and El Charro Road, it is not anticipated that this will result in a significant increase in hazards for pedestrians or others in comparison to the Proposed Project. In both the Proposed Project and the Four-Lane Concurrent Extension, Stoneridge Drive is designed to have sidewalks on both sides of the street, separated from the curb by landscape plantings. As noted in the Four-Lane Concurrent Extension Alternative Description above, the currently unsignalized intersections at Newton Way, Guzman Parkway, and Trevor Parkway would be signalized as part of the Staples Ranch circulation improvements. The signalization at these locations will provide safe and controlled crossing points for pedestrians and vehicles. These signals will be equipped with bicycle detection to allow for safe crossings for bicycles in the bike lanes.

Separated sidewalks are also planned along either side of Stoneridge Drive through Staples Ranch as well as on the Arroyo Mocho bridges, and controlled crossing points for pedestrians will be provided by the new signalized intersections at the auto mall and senior continuing care community entrances.

While the immediate higher traffic volumes on Stoneridge Drive that would result from the Four-Lane Concurrent Extension Alternative could pose relatively more risk for bicyclists sharing the road, six-foot wide bike lanes will be included along the entire section of Stoneridge Drive to provide separation between bicycles and motor vehicles eliminating the need to share a lane. Additionally, the traffic signal intersections will include bike lanes and bicycle detection that will allow for separation of bicycles and vehicles through the entire length of the extension. These bike lanes along Stoneridge Drive will provide the same level of protection to bicyclists as on other similar – or higher volume – roadways in the City. Therefore, no additional hazards to pedestrians or bicyclists are anticipated as a result of the Four-Lane Concurrent Extension Alternative in comparison to the Proposed Project.

Emergency Vehicle Access. The Four-Lane Concurrent Extension Alternative would eliminate the Proposed Project's gated emergency vehicle access along the Stoneridge Drive right-of-way, which would benefit emergency vehicle response times. Because the Four-Lane Concurrent Extension Alternative would have the same land uses as the Proposed Project (with the addition of an ice center in the Community Park), Mitigation Measure TR-7.1 (requiring each development to include a minimum of two points of EVA access) would also reduce any potential impacts resulting from inadequate emergency access to Staples Ranch developments to a less than significant level.

Parking Capacity. For the same reasons described in the EIR with regard to the Proposed Project, no conflicts resulting from inadequate parking capacity within Staples Ranch developments is anticipated as a result of the Four-Lane Concurrent Extension Alternative. The Four-Lane Concurrent Extension Alternative will also have the added benefit of ensuring that Community Park users will not have parking options "split" by a gated EVA-only buffer between users arriving via I-580 and El Charro Road and users arriving via Santa Rita and Stoneridge Drive. Under the Four-Lane Concurrent Extension Alternative, Community Park users will have access to all parking spaces within the park and for the ice center, preventing the potential for users from Pleasanton finding all parking areas full and then having to drive via I-580 to access parking areas only accessible from the east.

Alternative Transportation. As noted under the Proposed Project, there are limited existing pedestrian, bicycle, and transit facilities in the project vicinity. Like the Proposed Project, the Four-Lane Concurrent Extension Alternative would provide bike lanes and sidewalks along the Stoneridge Drive right-of-way, as well as bus stops on Stoneridge Drive that can be used by Wheels if bus service along Stoneridge is provided. Because the Four-Lane Concurrent Extension Alternative removes the Proposed Project's gated EVA along the Stoneridge Drive right-of-way, through bus service along Stoneridge Drive may be more likely to happen under the Four-Lane Concurrent Extension Alternative than under the Proposed Project. Implementation of Mitigation Measures TR-9.1 (provide acceptable bicycle and pedestrian access) and TR-9.2 (provide adequate bus and paratransit access) will ensure, like the Proposed Project, that the Four-Lane Concurrent Extension Alternative would not conflict with adopted alternative transportation programs, thereby reducing potential impacts to a less than significant level.

Truck Traffic. Under the Four-Lane Concurrent Extension Alternative, there would be truck trips associated with project construction, as well as deliveries to project developments during the life of the project, similar to the Proposed Project. Like the analysis for the Proposed Project, project truck trips have been assumed in the traffic analysis and no significant impacts are expected beyond those identified in the intersection LOS impact analyses. Because Stoneridge Drive is not a City-designated truck route, through trucks (including quarry traffic) would be prohibited from using Stoneridge Drive through the Staples Ranch site.

Indeed, a possible benefit of the Four-Lane Concurrent Extension Alternative over the Proposed Project would be that all truck deliveries, including those to the senior continuing care community, could be routed directly off I-580 via El Charro Road, thereby avoiding use of the portion of Stoneridge Drive east of Santa Rita Road that passes through residential neighborhoods. This could include construction traffic associated with later phases of the senior community, which, under the Proposed Project, would instead be forced to use Santa Rita Road and Stoneridge Drive.

Program 1.6 of the Circulation Element. Program 1.6 of the Circulation Element of the Pleasanton General Plan 2005-2025 provides that the City of Pleasanton must reach an agreement with the City of Livermore, the City of Dublin, and Alameda County for a strategic approach and funding plan for relieving traffic congestion in the Tri-Valley before it opens the Stoneridge Drive extension to through-traffic.

Water Supply

Because the Four-Lane Concurrent Extension Alternative would include an ice center, overall water demand would be the same as the Ice Center Alternative. As depicted in Table 5-19 of the EIR, the Water Supply Assessment prepared for the project determined that the Ice Center Alternative would demand approximately 349 acre-feet per year, one more acre-foot than that of the Proposed Project. The Water Supply Assessment determined that the City of Pleasanton, through an agreement with Zone 7, has sufficient water supply to serve the project site now, at buildout, and out to 2030. Like the Ice Center Alternative, the impact of the Four-Lane Concurrent Extension Alternative on water treatment and distribution systems would be slightly greater than the Proposed Project, but would still result in less-than-significant impacts. Implementation of WS-1.1 (verify water supply prior to tentative map approval) will help ensure an adequate water supply.

The Four-Lane Concurrent Extension Alternative would have the same effect under cumulative conditions as the Proposed Project because the addition of one acre-foot per year for the ice center (a two-tenths-of-one-percent increase (0.2%) over the Proposed Project) will not alter the conclusion of the cumulative water supply analysis of the EIR.

S-5.2. Alternative 2: Two-Lane Constrained Extension

Description

The Two-Lane Constrained Extension Alternative is a variant of the Four-Lane Concurrent Extension Alternative described above. Like the Four-Lane Concurrent Extension Alternative, it would include the same Staples Ranch land uses as the Proposed Project, as well as including an ice center within the Community Park site. Like the Four-Lane Concurrent Extension Alternative, the Two-Lane Constrained Extension Alternative would extend Stoneridge Drive from Trevor Drive to El Charro Road as part of the development of Staples Ranch, instead of at some time in the future. It would also require construction of the same second bridge over the Arroyo Mocho concurrently with the development of Staples Ranch. However, the Two-Lane Constrained Extension Alternative would differ from the Four-Lane Concurrent Extension Alternative by striping temporarily the traffic lanes so that only one traffic lane would cross each bridge, one in each direction.

The purpose of the Two-Lane Constrained Extension Alternative's traffic lane reduction at the bridge would be to discourage through-traffic using Stoneridge Drive until such time as the full four-lane extension of Jack London Boulevard to El Charro Road in Livermore and the full four-lane extension of Dublin Boulevard in Dublin east to North Canyons Parkway in Livermore are completed. Once these other local improvements are constructed, the bridges on Stoneridge Drive would be marked to allow two lanes over each bridge (a total of two in each direction).

Like the Four-Lane Concurrent Extension Alternative, the Two-Lane Constrained Extension Alternative would eliminate the Proposed Project's gated Emergency Vehicle Access separating Stoneridge Drive from Auto Mall Place, and Stoneridge Drive would be constructed to a full four lanes (with the exception of the temporary striping of the bridges). Vehicular, bus, emergency vehicle, pedestrian, and bike traffic would travel freely in either direction. Access to Stoneridge Drive development, including the Community Park/Ice Center, would be unrestricted and could come either from I-580 via El Charro Road, or from Santa Rita Road in Pleasanton via the existing portion of Stoneridge Drive. Traffic signals would be installed at the intersection formed by the entrance to the auto mall and commercial site, as well as at the intersection serving the community park and senior continuing care facility. As required by the El Charro Road Pre-Development and Cooperation Agreement executed by the City of Pleasanton, the ACSPA, the City of Livermore, and Vulcan Materials in September 2007, the El Charro Road/Stoneridge Drive intersection will be signalized and constructed with a southbound free right-turn lane from El Charro Road to Stoneridge Drive as well as three left-turn lanes from Stoneridge Drive east to northbound El Charro Road. In addition, the currently unsignalized intersections at Newton Way, Guzman Parkway, and Trevor Parkway would be signalized as part of the Staples Ranch circulation improvements.

Land uses under the Two-Lane Constrained Extension Alternative would, like the Four-Lane Concurrent Extension, include the following components:

- Auto Mall on approximately 37.2 acres
- Senior Continuing Care Community on approximately 46.1 acres
- Commercial Development on approximately 11.3 acres
- Community Park, including an 8-acre ice center, on 17 acres
- Neighborhood Park, including a storm water detention basin, on approximately 5 acres

Figure S-5.2-1 illustrates the land use and circulation elements of the Two-Lane Constrained Extension Alternative. While the Stoneridge Drive bridges over the Arroyo Mocho channel have not been fully designed, Figure S-5.2-2 illustrates their approximate alignment and cross-section. Each bridge would be approximately 40 feet wide and separated from each other by approximately 12 feet. While each bridge would be designed to ultimately accommodate two lanes of traffic, as well as a bike lane and raised sidewalk, under the Two-Lane Constrained Extension Alternative, the two outer traffic lanes would be striped out, effectively narrowing Stoneridge Drive to only two traffic lanes to create a deterrent against traffic with non-Pleasanton trip ends (cut-through traffic) from using the roadway during peak hours.

Like the Proposed Project, due to the width of the Arroyo channel and the curving alignment over the channel, the length of the bridges will require that they span the channel in three sections, with two sets of piers located approximately 45 feet on either side of the centerline of the Arroyo. Unlike the Proposed Project, where only one of the bridges would be built as part of the Staples Ranch development and the second bridge constructed only when Stoneridge Drive is fully extended to El Charro Road, under the Two-Lane Constrained Extension Alternative, both bridges would be constructed at once as part of the Staples Ranch development.

Figure S-5.2-1

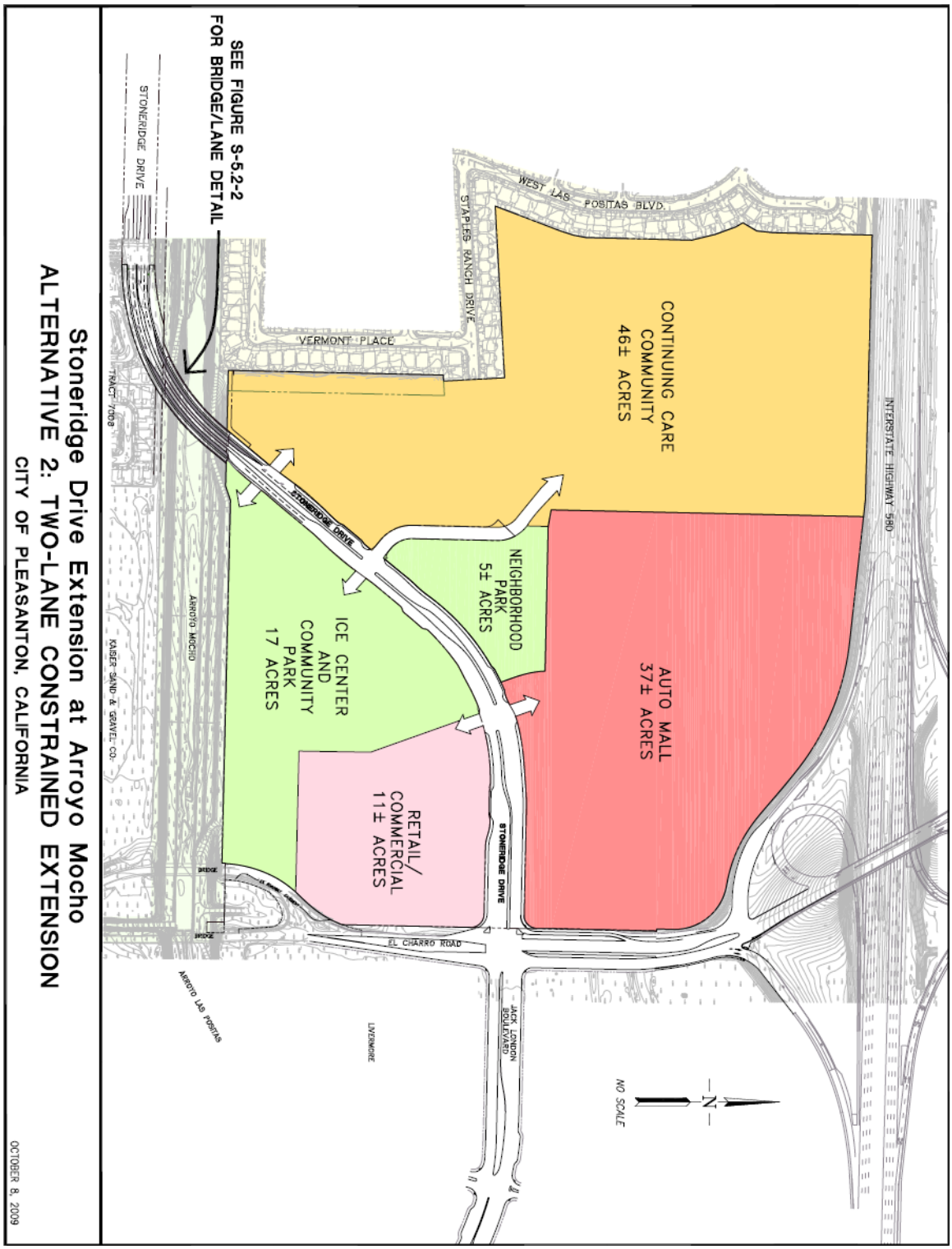
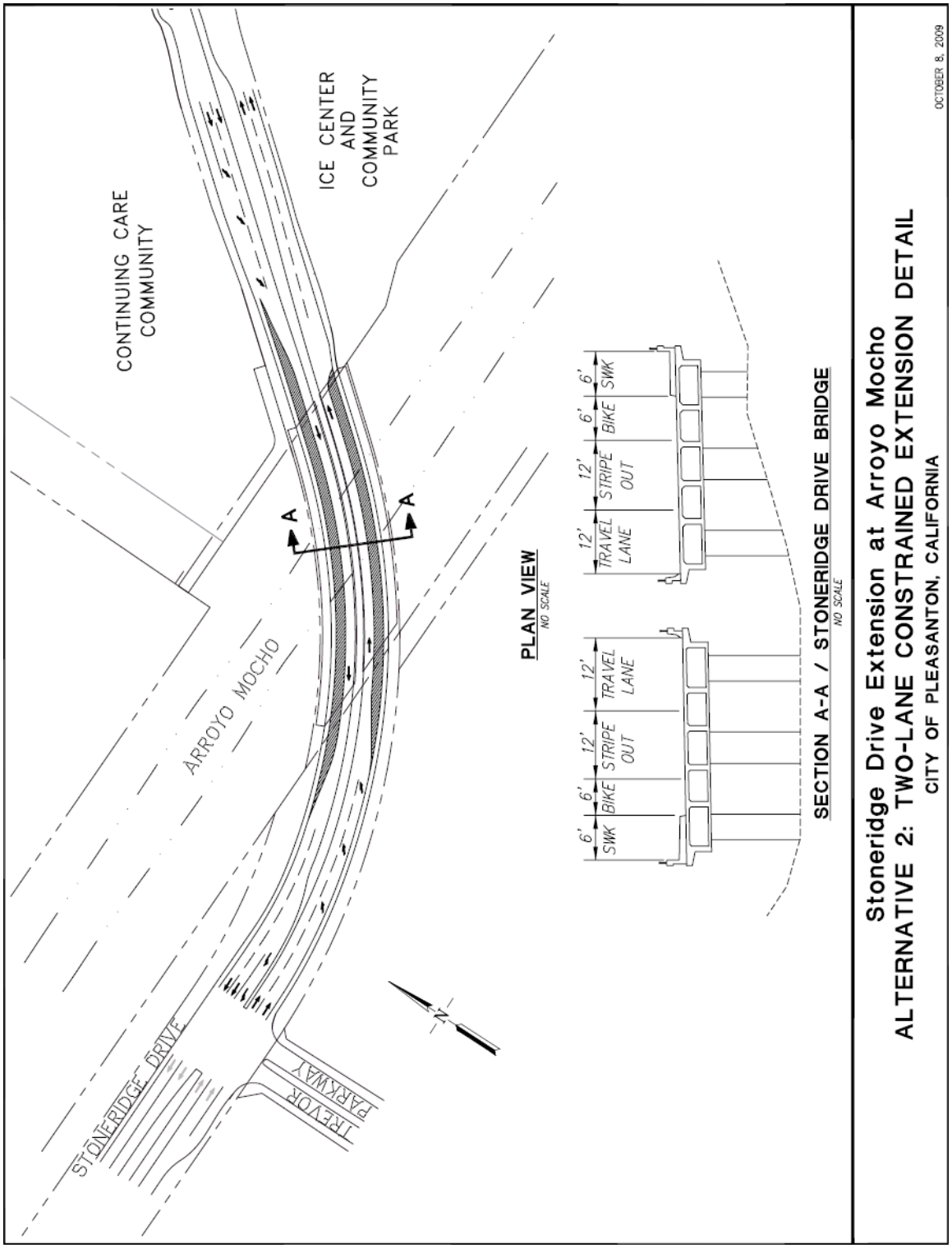

INTERSTATE HIGHWAY 580
CONTINUING CARE COMMUNITY 46± ACRES
AUTO MALL 37± ACRES
NEIGHBORHOOD PARK 5± ACRES
ICE CENTER AND COMMUNITY PARK 17 ACRES
RETAIL/ COMMERCIAL 11± ACRES
WEST LAS POSITAS BLVD.
STAPLES RANCH DRIVE
VERMONT PLACE
STONERIDGE DRIVE
EL CHARRO ROAD
JACK LONDON BOULEVARD
LIVERMORE
ARROYO LAS POSITAS
ARROYO MOCHO
KAISER SAND & GRAVEL CO.
TRACT 7008
BRIDGE
SEE FIGURE S-5.2-2 FOR BRIDGE/LANE DETAIL
NO SCALE
N
Stoneridge Drive Extension at Arroyo Mocho
ALTERNATIVE 2: TWO-LANE CONSTRAINED EXTENSION
CITY OF PLEASANTON, CALIFORNIA
OCTOBER 8, 2009

Figure S-5.2-2


CONTINUING CARE COMMUNITY
ICE CENTER AND COMMUNITY PARK
ARROYO MOCHO
STONERIDGE DRIVE
TREVOR PARKWAY
A
A
N
PLAN VIEW
NO SCALE
6' SWK
6' BIKE
12' STRIPE OUT
12' TRAVEL LANE
12' TRAVEL LANE
12' STRIPE OUT
6' BIKE
6' SWK
SECTION A-A / STONERIDGE DRIVE BRIDGE
NO SCALE
Stoneridge Drive Extension at Arroyo Mocho
ALTERNATIVE 2: TWO-LANE CONSTRAINED EXTENSION DETAIL
CITY OF PLEASANTON, CALIFORNIA
OCTOBER 8, 2009

IMPACT ASSESSMENT

Visual Quality

Scenic Resources. Visually, the immediate construction of all four lanes of Stoneridge Drive and the inclusion of the ice center under the Two-Lane Constrained Extension Alternative would result in additional building structures and pavement, and less landscaped open space, than the Proposed Project.

The Two-Lane Constrained Extension Alternative would be more intensely developed than the Proposed Project because it would include an ice center building and related parking in the Community Park site. While the Two-Lane Constrained Extension Alternative would result in a full four-lane extension of Stoneridge Drive through Staples Ranch, as well as a second two-lane bridge over the Arroyo Mocho channel, these roadway improvements would be the same as would occur under the Proposed Project, only they would occur at an earlier date. The earlier addition of a second bridge adjacent to the bridge in the Proposed Project will not appreciably alter the visual character of the project site, particularly when the second bridge is, functionally, a widening of the first bridge.

These differences between the Two-Lane Constrained Extension Alternative and the Proposed Project would not change the conclusion under the Proposed Project that impacts to scenic vistas and scenic resources would be less-than-significant, given that there are no scenic vistas in the vicinity of the Project Area that could be significantly affected and that the I-580 corridor is not officially designated as a Scenic Highway.

Visual Character. Land uses under the Two-Lane Constrained Extension Alternative would be the same in density, height, and scale of development as the Ice Center Alternative, which the EIR deemed to be similar to that of the Proposed Project. As discussed under the Ice Center Alternative analysis, the addition of the ice center to the Project Site would create a more enclosed visual environment on the Staples Ranch site and would reduce views from the interior of the site to areas beyond. These alterations from the Proposed Project would not, however, rise to the level of new significant visual impacts.

Like the Proposed Project, the Two-Lane Constrained Extension Alternative would change the existing visual character of the site from undeveloped to urbanized. The resulting loss of open space is considered a significant impact. As discussed in Impact VQ-2 for the Proposed Project, no measures are available to reduce this impact; therefore, the Two-Lane Constrained Extension Alternative, like the Proposed Project, would result in a significant unavoidable impact to visual character.

Light and Glare. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would result in new sources of light and glare on the Staples Ranch site. As discussed in the EIR's analysis of the Ice Center Alternative, the ice center would involve additional lighting for the building, parking and circulation areas, and signage within the

Community Park site. Whether this would generate more or less light and glare than the Proposed Project would depend on whether the Community Park would be developed under the Proposed Project with lighted outdoor sports facilities. The Two-Lane Constrained Extension Alternative would not require any additional appreciable increase in street lighting over the Proposed Project.

For the same reasons stated in the EIR's analysis of the Proposed Project and the Ice Center Alternative, implementation of Mitigation Measures VQ-3.1 (prepare lighting plans), VQ-3.2 (minimize auto mall light and glare impacts), VQ-3.3 (commercial lighting operations timing) and VQ-3.4 (park lighting plans and specifications) identified for the Proposed Project would also reduce potential light and glare impacts resulting from development under the Two-Lane Constrained Extension Alternative to less than significant levels.

Air Quality

Air Quality Plans. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would not conflict with applicable regional air quality plans because the regional air quality plans are based on the more intensive 1989 Stoneridge Drive Specific Plan land uses and circulation system. The 1989 Stoneridge Drive Specific Plan assumes the four-lane extension of Stoneridge Drive to El Charro Road as part of the project. as well as more intensive land uses that would generate approximately 1.5 times as many trips as the Two-Lane Constrained Extension Alternative. The Two-Lane Constrained Extension Alternative would therefore result in emissions at levels below the baseline assumed by the adopted air quality plans.

Construction Emissions. The Two-Lane Constrained Extension Alternative would result in air emissions during construction similar to those that would be produced under the Proposed Project. The potential for such emissions could be somewhat greater because of construction of the ice center, but implementation of Mitigation Measure AQ-2.1 (implement construction dust measures) identified for the Proposed Project would reduce construction emission impacts to less-than-significant levels, similar to the Proposed Project.

Operational Emissions. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would exceed the BAAQMD threshold of 80 pounds/day for ROG, NOx, and PM10 emissions and, therefore, would result in significant air pollution emissions. Because the Two-Lane Constrained Extension Alternative includes an ice center within the Community Park site, it would generate approximately 3,300 additional daily trips in comparison to the Proposed Project. The addition of the ice center would also result in additional stationary source emissions associated with cooling and other mechanical equipment in comparison with the Proposed Project.

The concurrent extension of Stoneridge Drive as part of the Staples Ranch development under the Two-Lane Constrained Extension Alternative would result in changes in local traffic patterns that would reduce the absolute number of vehicle miles traveled (VMT)

contributing to regional emissions relative to the Proposed Project. Table S-5.2-1 below compares VMT associated with the Proposed Project to the Two-Lane Constrained Extension Alternative, both on a project and regional level. On a project level, Staples Ranch development under the Two-Lane Constrained Extension Alternative would generate approximately 500 fewer VMT during the AM peak hour, and 1,200 fewer VMT during the PM peak hour, as would be expected due to the more direct travel path between Pleasanton and Staples Ranch with the Stoneridge Drive connection, for a total reduction of approximately 1,700 VMT. On a regional basis, the Two-Lane Constrained Extension Alternative would result in a decrease of approximately 700 VMT compared to the Proposed Project during the AM peak, and would result in a decrease of approximately 2,500 VMT during the PM peak, for a total reduction of approximately 3,200 VMT.

Table S-5.2-1
Comparison of Total Vehicle Miles Traveled (VMT) Under 2015 Conditions

2015 VMT	Staples Ranch AM Peak Hour	Staples Ranch PM Peak Hour	Tri-Valley AM Peak Hour	Tri-Valley PM Hour
Proposed Project	4,827 miles	7,950 miles	1,017,684 miles	969,065 miles
Two-Lane Constrained Alternative	4,339 miles	6,766 miles	1,016,986 miles	966,470 miles

Source: City of Pleasanton, 2009.

Although Mitigation Measure AQ-3.1 (develop and implement plan to reduce operational air emissions) would result in a reduction of operational air emissions, like the Proposed Project, no mitigation measures would be sufficient to reduce the Two-Lane Constrained Extension Alternative's emissions of ROG, NOx, and PM10 to a less-than-significant level. Therefore, like the Proposed Project, development of the Two-Lane Constrained Extension Alternative would also result in a significant and unavoidable impact to air quality.

Under cumulative conditions, the Two-Lane Constrained Extension Alternative is the same as the Proposed Project except for the addition of an ice center. As indicated in Table 4.1 of the EIR, predicted CO concentrations at congested intersections under cumulative conditions that assume the Proposed Project would be approximately ten percent of the Federal one-hour standard, 18 percent of the State one-hour standard, and 30 percent of the Federal and State eight-hour standard. Additional CO concentrations created by the Ice Center (which increases Proposed Project trip generation by approximately 16 percent) would not substantially increase cumulative CO concentrations above those analyzed under Proposed Project cumulative conditions and would not increase concentrations to 100 percent of (i.e., exceed) the Federal and State standards. This impact, therefore, remains less-than-significant under the Two-Lane Constrained Extension Alternative.

Localized Carbon Monoxide Emissions. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would result in project-related traffic at intersections that would be operating at LOS D or worse and would have the potential to generate CO hot spots. However, as with the Proposed Project, future CO concentrations are not expected to exceed the Federal and State one-hour and eight-hour ambient air quality standards for CO as vehicles become cleaner in the future. As indicated above in Table S-5.1-2 above, the localized carbon monoxide emissions of the Two-Lane Constrained Extension Alternative would be less-than-significant. The localized carbon monoxide emissions of the Two-Lane Constrained Extension Alternative will also be less-than-significant because a comparison of Table S-5.1-7 and Table S-5.2-6 of this SEIR indicate that delays at the same intersections will be shorter under the Two-Lane Constrained Extension Alternative, thereby resulting in fewer localized CO emissions.

Exposure to Toxic Air Contaminants (TACs). The Two-Lane Constrained Extension Alternative would result in the same land use development pattern as the Proposed Project, with the addition of the ice center in the Community Park. Therefore, the Two-Lane Constrained Extension Alternative would result in the same potential exposure of the proposed senior continuing care community to TACs from the adjacent freeway as the Proposed Project. Implementation of Mitigation Measure AQ-5.1 would reduce this potential air quality/health impact to a less than significant level for the Two-Lane Constrained Extension Alternative for the same reasons as the Proposed Project.

Like the Proposed Project, potential exposure of on- and off-site residents and nearby schools as a result of the Two-Lane Constrained Extension Alternative would be less-than-significant. A concurrent extension of Stoneridge Drive to El Charro Road that is constrained at the bridges over the Arroyo would result in traffic volumes on Stoneridge Drive far below CARB's screening threshold of 100,000 vehicles per day for high-traffic roadways.

Diesel emissions are the primary source of TACs from vehicles, and trucks represent the large majority of diesel vehicles. The Two-Lane Constrained Extension Alternative could result in lower potential TAC exposure to existing residents and schools along Stoneridge Drive than the Proposed Project because delivery truck traffic to the senior continuing care community could arrive from El Charro Road, instead of having to arrive only via Santa Rita Road under the Proposed Project. Stoneridge Drive is not a designated truck route, and the City of Pleasanton requires that all trucks over three tons making local deliveries use the most direct feasible route from the freeway, which, with the Two-Lane Constrained Extension Alternative, would be via El Charro Road.

Exposure to Off-Site Air Emissions. For the Two-Lane Constrained Extension Alternative, exposure from Livermore Airport operations would be less-than-significant for the same reasons as described in the EIR for the Proposed Project because the addition of the ice center and earlier extension of Stoneridge Drive would not alter the analysis. Potential exposure to dust or other air emissions from the quarry operations to the south of Staples Ranch would, like the Proposed Project, be less-than-significant because the closest active gravel mining operation is approximately a mile to the

southeast of Staples Ranch, and the closest aggregate processing plant is over a mile away, just north of Stanley Boulevard.

Exposure to Odors. The Two-Lane Constrained Extension Alternative would develop similar land uses to the Proposed Project and the Ice Center Alternative and would not introduce new sources of odor. Odor impacts, therefore, like the Proposed Project and the Ice Center Alternative, would be less-than-significant.

Greenhouse Gas (GHG) Emissions. Development under the Two-Lane Constrained Extension Alternative would generate GHG emissions similar to the Proposed Project, in both the short term and the long run. The ice center would generate additional emissions resulting from construction of the ice center, additional mobile source emissions from ice center traffic, and potentially generate additional stationary source emissions associated with cooling and other mechanical equipment associated with the ice center operations.

As estimated by the URBEMIS 2007 model, construction of the ice center would generate approximately 312 metric tons of CO_2 equivalent emissions in addition to the 2,354 metric tons of CO_2 equivalent estimated for construction of the Proposed Project. Because the total estimated amount of construction-related GHG is below the significance threshold of 3,750 $MTCO_2E$ per year, and annual emissions resulting from a multi-year construction process will be less, GHG emissions due to construction of the Four-Lane Concurrent Alternative are not considered to be cumulatively considerable.

Table S-5.2-2 below presents estimates of the direct and indirect operational GHG emissions caused by the ice center.

Table S-5.2-2
Estimated Ice Center Operational GHG Emissions

Emissions Source	Ice Center (CO_2 MT/year)
Direct Source Emissions	
Natural Gas	183
Hearth	0
Landscape	0.23
Total Source Emissions	184
Direct Mobile Emissions	3,855
Electricity Consumption Indirect Emissions	518
Water Processing Indirect Emissions	
Water Supply and Conveyance	0.23
Water Treatment	0.01
Water Distribution	0.14
Wastewater Treatment	0.21
Total Water Processing Indirect Emissions	0.58
Total Emissions	**4,558**

Source: PBS&J, 2007; Alameda County 2009. Conversion from English to metric tons by a factor of 0.907

The increase shown in the table of approximately 4,558 $MTCO_2$ per year over the Proposed Project represents the "business as usual" scenario. This increase does not take into account potential reductions that would result from the implementation of AB 32, the General Plan's GHG emissions reduction BMPs, or design features and mitigation measures required of the Two-Lane Constrained Extension Alternative.

The Two-Lane Constrained Extension Alternative would generate a total of 47,636 $MTCO_2$ per year, an increase of approximately nine-point-six percent (9.6%) more GHG emissions than the Proposed Project as a result the ice center. The Two-Lane Constrained Extension Alternative will align with the same CAPCOA mitigation measures, OPR mitigation measures, and General Plan GHG emissions reduction BMPs as the Proposed Project to potentially reduce its GHG emissions by at least nine percent. However, applying all feasible mitigation measures will not achieve the 97.7 percent reduction required to reduce the Two-Lane Constrained Extension Alternative's GHG emissions from 47,636 $MTCO_2E$ per year to 1,100 $MTCO_2E$ per year. Therefore, the Two-Lane Constrained Extension Alternative's contribution to this cumulatively significant impact is considerable and unavoidable, and will remain so after application of feasible mitigation measures (SU).

Application of the 4.6 $MTCO_2E$ per-service-population-per-year standard for mixed-use projects does not change this conclusion. The ice center will add 29 jobs to the 1,585.5 job total and 960 residents total for the Proposed Project. This translates to approximately 18.5 $MTCO_2E$ per service population per year based on total annual GHG emissions of 47,636 $MTCO_2E$, well in excess of the 4.6 $MTCO_2E$ standard. Applying all feasible mitigation measures will not achieve the reduction required to meet the 4.6 $MTCO_2E$ standard.

Biological Resources

Sensitive Plants and Wildlife Species. Like the Proposed Project, development as a result of the Two-Lane Constrained Extension Alternative could affect an existing population of San Joaquin spearscale, a CNPS List 1B plant species**.** As discussed in the Supplemental Biological Resources Analysis above, development of the Staples Ranch property would result in the elimination of 1.70 acres of suitable spearscale habitat, and construction of the Stoneridge Drive bridge would potentially impact an additional 0.07 acres of spearscale habitat located on the north bank of the Arroyo Mocho. While the Proposed Project would only require the immediate construction of a two-lane bridge over the Arroyo Mocho, ultimately a second two-lane bridge would be required when Stoneridge Drive is fully extended in the future, resulting in the same potential impact to the Arroyo Mocho spearscale habitat as the Two-Lane Constrained Extension Alternative, which would require the immediate construction of both Stoneridge Drive bridges. Therefore, impacts as a result of this Alternative to the San Joaquin spearscale would be the same as the Proposed Project, and Mitigation Measure S-BIO-1 (preserve off-site San Joaquin spearscale habitat) would reduce these impacts to a less-than-significant level.

As discussed in the Supplemental Biological Resources Analysis, protocol surveys for California tiger salamander have been completed for the Staples Ranch property, and have determined that this species would not be impacted by Staples Ranch development. The addition of an ice center and earlier construction of the second bridge under the Two-Lane Constrained Extension Alternative does not alter the factual basis for this conclusion, which remains the same.

2009 surveys in the Arroyo Mocho channel for California red-legged frog and western pond turtle in the vicinity of the Stoneridge Drive bridge crossing and adjacent to the remainder of Staples Ranch indicated that neither of these species is currently present in this portion of the Arroyo Mocho. However, because it is possible that individuals could disperse through the bridge construction area, implementation of Mitigation Measures BIO-2.1 (conduct preconstruction surveys for California red-legged frogs), BIO-2.2 (implement ground-disturbance restrictions), BIO-2.3 (conduct construction monitoring for California red-legged frogs), BIO-2.4 (conduct WEAP training), BIO-4.1 (conduct preconstruction surveys for western pond turtles) and BIO-4.2 (provide exclusion fencing for western pond turtles) would reduce any potential to impact individuals of these species as a result of bridge construction to a less-than-significant level.

It should be noted that the Two-Lane Constrained Extension Alternative is likely to have less potential impact on individual western pond turtles and California red-legged frogs within the Arroyo Mocho channel as a result of construction of the Stoneridge Drive bridges than the Proposed Project because, under the Two-Lane Constrained Extension Alternative, all bridge construction activities would be conducted at once, rather than constructing first one bridge, then re-entering the creek channel in the future to construct the second bridge, as would be required under the Proposed Project. This significant temporal spreading of construction activities to two separate construction seasons would represent an increased chance for individual turtles and/or frogs to be affected by the Proposed Project in comparison to the Two-Lane Constrained Extension Alternative.

Other Biological Species and Habitats. The Two-Lane Constrained Extension Alternative, like the Proposed Project, would result in the disturbance of much of the surface of the Staples Ranch property and would, therefore, pose the same potential impacts to nesting birds, wildlife movement, and to jurisdictional waters of the State and the US, and would also share the same potential conflicts with provisions of the City of Pleasanton tree preservation policies and ordinances. Mitigation Measures BIO-5.1 (conduct nesting bird surveys), BIO-7.1 (provide compensation for impacts to jurisdictional waters), BIO-8.1 (minimize lighting spillover), BIO-8.2 (incorporate wildlife habitat into park plans) and BIO-9.1 and 9.2 (conduct tree appraisal and provide tree replacement) would, like the Proposed Project, mitigate these potential impacts to less-than-significant levels.

Because bridge construction would be completed in one phase under the Two-Lane Constrained Extension Alternative, rather than having two separate bridge construction projects, as under the Proposed Project, impacts to riparian vegetation in the Arroyo

Mocho as a result of the Stoneridge Drive bridge construction is likely to be less under the Two-Lane Constrained Extension Alternative than under the Proposed Project. Under the Proposed Project, a significant time delay prior to constructing the second Stoneridge Drive bridge would result in additional impacts to riparian vegetation because the vegetation would have had time to recover and mature following completion of the first bridge. As with the Proposed Project, implementation of Mitigation Measures BIO-6.1 (obtain streambed alteration agreement) BIO-6.2 (erect exclusion fencing) and BIO-6.3 (replace removed vegetation) would mitigate potential impacts to Arroyo Mocho riparian habitat as a result of bridge construction for the Two-Lane Constrained Extension Alternative to a less than significant level.

Hazards and Hazardous Materials

Hazardous Materials and Waste Generation and Accidental Releases. Similar to the Proposed Project, development under the Two-Lane Constrained Extension Alternative would have the potential for accidental releases of hazardous materials and waste from construction, operations, and routine transport that could result in contamination of soil or groundwater and pose a threat to the public and environment. As with the Proposed Project, compliance with Federal, State, and local use, storage, and transport regulations, including hazardous materials business plans, would reduce the risk of accidental release of hazardous materials to a less-than-significant impact. In addition, the extension of Stoneridge Drive through Staples Ranch would allow emergency vehicles to have a lower response time in the event of an accident, because there would be no EVA gates to negotiate along the Stoneridge Drive right-of-way.

PG&E Gas Line. Like the Proposed Project, development of the Two-Lane Constrained Extension Alternative would result in construction activities in the vicinity of the underground PG&E natural gas pipeline along the northern edge of the Staples Ranch site by I-580, which could potentially result in an accidental rupture of the line. As with the Proposed Project, this potential impact would be reduced to less-than-significant levels through implementation of Mitigation Measure HZ-2.1 (prevent disruption of on-site utilities).

Hazards Related to Livermore Municipal Airport. As with the Proposed Project, the presence of the Livermore Airport would not present a safety hazard for people residing or working in the Project Area under the Two-Lane Constrained Extension Alternative and, with implementation of Mitigation Measures VQ-3.1 through 3.4, also would not create new light and glare hazards to aircraft utilizing the Livermore Municipal Airport.

Under the Two-Lane Constrained Extension Alternative, an ice center in the community park would be within Caltrans' recommended safety zones (Zones 4 and 6); however, as discussed with the Proposed Project, these safety zones have not been adopted by the Alameda County Land Use Commission (ALUC) and are based on nationwide data for similar sized airport facilities. As discussed in the EIR's evaluation of the Ice Center Alternative, safety statistics specific to the Livermore Airport were evaluated and indicated that safety risks at the proposed ice center site would be less than significant.

In addition, recent data generated since preparation of the EIR estimates annual Livermore Municipal Airport operations in 2013 that are less than half the number of annual flights projected by the EIR for 2011 (188,400 and 420,000 flights, respectively), thereby further reducing the likelihood of safety hazards (LSA, 2009).

Hydrology and Water Quality

Construction. Because the pattern of land disturbance on the Staples Ranch property would essentially be the same, construction of the Two-Lane Constrained Extension Alternative would have essentially the same effects as construction of the Proposed Project, and, with implementation of standard construction SWPPP BMPs, would result in less-than-significant water quality impacts. Impacts to water quality resulting from construction of the Stoneridge Drive bridges over the Arroyo Mocho would likely be less under the Two-Lane Constrained Extension Alternative than under the Proposed Project because both Stoneridge bridges would be constructed at the same time. This would limit construction impacts to the Arroyo Mocho channel to one occurrence, instead of two separate bridge construction projects that would be required under the Proposed Project. Like the Proposed Project, regulatory requirements for bridge construction would reduce the water quality impacts of the Two-Lane Constrained Extension Alternative to less-than-significant levels.

Stormwater Runoff and Quality. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would increase the amount of runoff and associated pollutants following completion of development due to an increase in the amount of impervious surface on the Staples Ranch site. The inclusion of the ice center within the Community Park would add approximately eight acres of additional impervious surface, compared to the Proposed Project. In regard to Stoneridge Drive, due to the Proposed Project's transition and turn lane requirements, the extension of Stoneridge Drive as a four-lane road through Staples Ranch under the Two-Lane Constrained Extension Alternative would only add a minimal amount (less than an acre) of impervious surface in comparison to the Proposed Project in the short-term, and would result in the same amount of impervious road surface in the long-term. Like the Proposed Project, the Two-Lane Constrained Extension Alternative includes a storm water detention basin within the Neighborhood Park that would mitigate potential hydro-modification impacts to the Arroyo.

Potential pollutant loads as result of the development of the Two-Lane Constrained Extension Alternative therefore would be substantially the same as those of the Ice Center Alternative, which the EIR determined would have a potentially substantial increase in pollutant loads compared to the Proposed Project, but the impacts of which would also be reduced to a less-than-significant level through implementation of Mitigation Measure HY-1.1 (require Water Quality Management Plans with targeted pollutant removal rates to ensure implementation of Municipal NPDES permit BMPs) and HY-1.2 (require Integrated Pest Management Plans and Pesticide Management Programs to reduce landscaping pollutant runoff). The potential impacts to storm water

quality resulting from the Two-Lane Constrained Extension Alternative would be less than significant after implementation of these measures.

Groundwater Supplies and Recharge. Similar to the Proposed Project, the Two-Lane Constrained Extension Alternative would not substantially reduce potential groundwater recharge because the Staples Ranch site is not an important groundwater recharge area and runoff would continue to flow into the Arroyo Mocho channel where it could continue to contribute to regional groundwater recharge. Also like the Proposed Project, the Two-Lane Constrained Extension Alternative does not include any on-site wells and therefore would not directly impact groundwater supplies.

Erosion and Sedimentation. Potential impacts on erosion and sediment transport associated with operation of the Two-Lane Constrained Extension Alternative would be essentially the same as for the Proposed Project. An increased amount of impervious surfaces as a result of the ice center development, and to a lesser extent in the short term, the extension of Stoneridge Drive, could cause greater peak flow rates if storm water is discharged directly to the Arroyo Mocho, contributing to increased downstream off-site bed and bank erosion and sedimentation of streams and channels. However, the proposed storm water basin within the Neighborhood Park is planned to be sized to accommodate the peak flow rates that would be generated by full buildout of Staples Ranch, including the ice center and full extension of Stoneridge Drive. Moreover, as with the Proposed Project, it is anticipated that some stormwater runoff from the bridge, and on paved trails/maintenance roads along the Arroyo Mocho may be directed into the Arroyo Mocho. The drainage areas will be designed to meet all applicable stormwater treatment, hydromodification, Zone 7, and other applicable regional, State, or Federal requirements. Therefore, as with the Proposed Project, implementation of Mitigation Measure HY-3.1 (require maintenance of the detention basin) and Mitigation Measure HY-1.1 (implement water quality management plans), would reduce potential impacts of erosion and sedimentation of the Two-Lane Constrained Extension Alternative to less-than-significant levels.

Flood Hazards. Potential hazards resulting from flooding would be the same for the Two-Lane Constrained Extension Alternative as the Proposed Project in that the Staples Ranch site is currently within FEMA's 100-year flood zone. As with the Proposed Project, implementation of Mitigation Measures HY-4.1 (requiring FEMA flood hazard map revisions) and HY-4.2 (requiring implementation of the Livermore flood protection improvements) would reduce potential flood hazard impacts to less-than-significant levels.

Land Use and Agricultural Resources

Physical Division of a Community. Like the Proposed Project, the development of Staples Ranch under the Two-Lane Constrained Extension Alternative would not physically divide an established community. Because the Two-Lane Constrained Extension Alternative includes an extension of Stoneridge Drive to El Charro Road as

part of the project, it would increase overall connectivity between Pleasanton and the surrounding area at an earlier date than the Proposed Project.

Annexation Policies. The Two-Lane Constrained Extension Alternative would be consistent with County, LAFCo, and City policies regarding annexation of the Project Area into the City for the same reasons stated in the EIR for the Proposed Project. In addition, LAFCo may consider the Two-Lane Constrained Extension Alternative to be a more desirable alternative than the Proposed Project because it would include the extension of Stoneridge Drive to El Charro Road as part of the development of Staples Ranch, and could also be consistent with other regional agreements on the timing of construction of roadway arterials. As expressed in LAFCo's July 18, 2008, letter to the City of Pleasanton, full extension of Stoneridge Drive would be more consistent with regional growth goals and policies regarding the timely construction of roadway arterials in the Tri-Valley area.

Land Use Compatibility. The Two-Lane Constrained Extension Alternative would have the same land use compatibility impacts with existing and proposed uses surrounding the Staples Ranch site as the Proposed Project. The closest active quarry operation is approximately 1.5 miles to the southeast and is neither visible nor audible from Staples Ranch.

An ice center on the community park site would be compatible with the planning goals and policies of the City represented in the conceptual Staples Ranch Park Master Plan for the Community Park adopted by the City Council on June 10, 2008, which contemplates the development of an ice center. Land use compatibility impacts of the Two-Lane Constrained Extension Alternative, like the Proposed Project, are therefore considered less-than-significant.

Density. The Pleasanton General Plan 2005-2025 land use designations of the Staples Ranch site are the same as those of the 1996 General Plan. With the exception of the ice center, the Two-Lane Constrained Extension Alternative would present the same potential impacts to allowable land use densities as the Proposed Project and Mitigation Measure LU-4.1 (require additional amenities of commercial projects that exceed an FAR of 0.35) would reduce potential conflicts to less than significant levels. With the inclusion of the ice center, the community park site would have an FAR of approximately 0.19. While the Pleasanton General Plan does not provide a maximum FAR for park sites, the ice center use would still be well below an FAR of 0.35 if it were to be considered a commercial use. Therefore, no additional potential impacts to allowable land use densities would result from the inclusion of the ice center in the land use plan for the Two-Lane Constrained Extension Alternative.

Airport Land Use Policy Plan. Like the Proposed Project, land uses under the Two-Lane Constrained Extension Alternative would not conflict with policies of the adopted Alameda County Airport Land Use Plan. Mitigation Measures LU-5.1 (require airport disclosures, deed riders and noise complaint procedures for the senior continuing care community) and LU-5.2 (require a deed rider or avigation easement for other uses)

would reduce potential complaint conflicts with the Livermore Municipal Airport to less-than-significant levels.

Conversion of Farmland. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would not permanently convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as defined by the California Resources Agency, to non-agricultural uses. Like the Proposed Project, the Two-Lane Constrained Extension Alternative also would not conflict with existing agricultural zoning or LAFCo policies regarding annexation or development of Prime Agricultural Land, given that Staples Ranch has been planned for urban development since 1989.

Noise

Staples Ranch Development Noise Exposure. Like the Proposed Project, the Two-Lane Constrained Extension Alternative includes a senior continuing care community, auto mall, commercial center and community and neighborhood parks that would be subject to traffic noise from the adjacent I-580 freeway, El Charro Road, and Stoneridge Drive, as well as aircraft operations associated with the nearby Livermore Municipal Airport.

Because the Two-Lane Constrained Extension Alternative has the same proposed land uses adjacent to the freeway, noise impacts associated with the freeway would be the same as under the Proposed Project. Similarly, noise impacts associated with Livermore airport operations would be the same.

Like the Proposed Project, traffic volumes (and the resultant noise impacts) on El Charro Road, south of the Stoneridge Drive intersection, will remain essentially the same under the Two-Lane Constrained Extension Alternative, because this portion of El Charro Road will remain a private road, utilized primarily by quarry trucks hauling aggregate from the quarry operations to the south. Noise exposure to the adjacent retail/commercial site and community park would, therefore, be the same as the Proposed Project. Like the Proposed Project, Staples Ranch development under the Two-Lane Constrained Extension Alternative would be unaffected by noise from aggregate quarry operations to the south, because the nearest operating quarry and aggregate plant are located approximately 1.5 miles away and are inaudible from Staples Ranch.

While traffic volumes on El Charro Road, north of the Stoneridge Drive intersection, will increase under the Two-Lane Constrained Extension Alternative relative to the Proposed Project, the auto mall site, as a commercial use, is relatively less sensitive to traffic noise than other land uses. As noted in the noise analysis for the Proposed Project (DEIR, page 3.7-25), the auto mall, due to its proximity to the I-580 freeway and El Charro Road, would approach or exceed the City's land use compatibility standard of L_{dn} 70 dB for commercial uses, and may require incorporation of additional noise insulation features into some or all of the auto mall buildings to meet City interior noise standards.

With the full extension of Stoneridge Drive to El Charro Road, the Two-Lane Constrained Extension Alternative will result in significantly higher traffic volumes on Stoneridge Drive within Staples Ranch, relative to the Proposed Project, especially the segment between the Arroyo Mocho bridges and the intersection formed by the entrance to the senior continuing care community and the community park. Under the Proposed Project, traffic on this segment under "Existing + Approved" conditions would, in the near term, be limited to vehicles accessing the senior community or western portion of the park, while under the Two-Lane Constrained Extension Alternative, traffic associated with the commercial uses on Staples Ranch, as well as traffic generated by other parts of Pleasanton, would utilize this portion of Stoneridge Drive. As a result, areas within the senior continuing care community and parks adjacent to this portion of Stoneridge Drive would experience higher noise levels under the Two-Lane Constrained Extension Alternative at an earlier time than under the Proposed Project.

The projected distances from Stoneridge Drive that would be affected by traffic noise are shown in Table S-5.2-3 below. Using Year 2015 average peak-hour traffic volumes provided by the City of Pleasanton, Charles M. Salter Associates calculated the distance from the centerline of the future alignment of Stoneridge Drive to the L_{dn} 60 and 65 dB noise contours that would result from the full extension of the roadway under the Two-Lane Constrained Extension Alternative. As shown in the Table, these distances would be significantly reduced with the implementation of Mitigation Measure NO-4.1 (construct Stoneridge Drive extension with noise-attenuating pavement).

Table S-5.2-3
Two-Lane Constrained Extension Alternative
Staples Ranch Noise Contours From Stoneridge Drive Traffic

	Distance to Noise Contour [1]	
Stoneridge Drive	L_{dn} 65 dB	L_{dn} 60 dB
Standard Pavement	101 feet	216 feet
Noise-Attenuating Pavement	68 feet	135 feet

Source: Charles M. Salter Associates, 2009.
[1] Distances are from centerline of roadway, assuming no obstructions.

The senior continuing care community will include a health care facility located just north of Stoneridge Drive. The proposed health care facility, if located within the L_{dn} 60 dB contour, would be considered a "Conditionally Acceptable" land use under the City's noise compatibility guidelines.

Noise mitigation measures for the Proposed Project would also reduce noise impacts to Staples Ranch development from traffic and aircraft under the Two-Lane Constrained Extension Alternative to less-than-significant levels. Like the Proposed Project, Mitigation Measure NO-1.1 (provide noise reduction features in residential and commercial structures to meet City noise standards), will require the preparation project-specific noise analyses for the auto mall, retail/commercial site and senior continuing care facility, including the health care facility, to demonstrate that all

structures will meet the City's interior noise level standard prior to issuance of building permits. Mitigation Measures NO-1.2 (provide noise reduction features to meet single-event noise level standards), and NO-1.3 (provide exterior noise reduction features along I-580), will similarly reduce potential traffic and aircraft noise impacts to the senior continuing care community to less-than-significant levels. Similarly, Mitigation Measure NO-1.4 (limit Community Park uses within the L_{dn} 65 dB noise contour) would also reduce potential noise impacts to park users from traffic and aircraft under the Two-Lane Constrained Extension Alternative to less-than-significant levels.

On-Site Noise Sources. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would introduce new noise sources to the project vicinity. For the same reasons described in the EIR's analysis of the Proposed Project, landscaping and truck delivery noise impacts to adjacent neighborhoods would be less-than-significant, as would potential mechanical noise from maintenance and building equipment associated with the senior continuing care community and commercial uses. As discussed under the Ice Center Alternative, the inclusion of the ice center within the community park under this Alternative may require large-scale mechanical equipment associated with the ice center's operation; however, noise from such equipment would be attenuated by the ice center's location on the opposite side of the Project Site from the continuing care community development and would be subject to sound attenuation and compliance with the City's noise standards. Like the Proposed Project, Mitigation Measure NO-1.5 (limit car wash noise levels to 60 dBA) would reduce potential impacts of the auto mall's car washes on the adjacent senior continuing care community to a less-than-significant level.

Construction Noise. Like the Proposed Project, construction of the Staples Ranch project under the Two-Lane Constrained Extension Alternative would result in temporary noise and vibration impacts to adjacent residential areas. Implementation of Mitigation Measure NO-3.1 (implement construction best management practices) would reduce impacts associated with general construction noise to less-than-significant levels, similar to the Proposed Project. Like the Proposed Project, construction of the Two-Lane Constrained Extension Alternative could also require pile-driving for construction of the Stoneridge Drive bridges, although this Alternative would have the advantage of limiting all bridge construction to one period, rather than two separate bridge construction projects, potentially separated by a number of years, that would be required under the Proposed Project. Pile-driving noise impacts associated with the simultaneous construction of a second bridge across Arroyo Mocho would also be mitigated to a less-than-significant level by Mitigation Measure NO-2.1 because it requires compliance with the same peak particle velocity standard regardless of whether one or two bridges are constructed at any given time. Thus, like the Proposed Project, Mitigation Measures NO-2.1 (reduce potential pile driving vibration effects) and NO-2.2 (provide early notice) would reduce potential pile-driving impacts associated with bridge construction to a less-than-significant level.

Ambient Noise Levels

S-NO-2. Significant Noise Increase Along Stoneridge Drive. (S)

Unlike the Proposed Project, the Two-Lane Constrained Extension Alternative would result in an immediate and significant increase in vehicular traffic levels on Stoneridge Drive between Santa Rita Road and Staples Ranch as a result of the full extension of Stoneridge Drive through Staples Ranch to El Charro Road. As a result, traffic noise levels for existing development along Stoneridge Drive would increase significantly, at an earlier point in time than under the Proposed Project.

The existing segment of Stoneridge Drive to the west of Staples Ranch and the surrounding residential development between Kamp Drive and Trevor Parkway were developed as part of the original 1989 Stoneridge Drive Specific Plan, which called for the full extension of Stoneridge Drive to El Charro Road as a four-lane arterial and contained guidelines for sound walls and setbacks to shield new residential development from anticipated traffic noise. Consequently, the predominantly single-family residential developments along this portion of Stoneridge Drive generally do not face the road, and back yards or side yards closest to Stoneridge Drive are shielded by sound walls. Between Guzman Way and Trevor Parkway, some homes face an unwalled portion of Stoneridge Drive, but are set back from Stoneridge Drive on the south side of Snowdrop Circle. Backyards of these homes are shielded from Stoneridge Drive by the homes themselves. Homes along the north side of the Arroyo Mocho are largely shielded by a large berm along the north side of Stoneridge Drive. However, several homes along Vermont Place on the north side of the Mocho, nearest to the planned Stoneridge Drive bridges over the channel, are unshielded by the berm and have backyards with open fencing that would be exposed to bridge traffic noise. While homes on the south side of the bridge crossing are located much closer to the bridge crossing, they are shielded by an existing sound wall.

There are two existing “sensitive receptors” along this portion of Stoneridge Drive that could particularly be impacted by traffic noise. Hacienda School, a private school on the north side of Stoneridge Drive near Newton Drive, is set back from the roadway and is also located significantly below the elevation of Stoneridge Drive. Mohr Elementary School is located to the south of Stoneridge Drive but is largely screened from the roadway by several rows of homes.

To ascertain noise impacts to existing residences and sensitive receptors along Stoneridge Drive west of Staples Ranch that would result from the full extension of the road under the Two-Lane Constrained Extension Alternative, Charles M. Salter Associates first quantified the existing noise environment by measuring ambient noise levels at three locations near Stoneridge Drive over a 48-hour period as well as two short-term 15-minute noise measurements. Future noise levels as a result of the Two-Lane Constrained Extension Alternative were then calculated, using a computer noise model, for various locations along and near Stoneridge Drive. The model used predicted Year 2015 average peak-hour traffic levels provided by the City of Pleasanton, as well as

the locations and heights of existing sound walls and distances from the roadway to calculate expected noise levels in back yards of existing residences and the building façades of the two sensitive receptors. Table S-5.2-4 summarizes the results.

Table S-5.2-4
Two-Lane Constrained Extension Alternative
Existing and Year 2015 Stoneridge Drive Noise Levels (L_{dn} dB)

Receiver	Existing Noise Level	2015 Noise Level	Increase Over Existing
Sensitive Receptors [1]			
Mohr Elementary School	49	54	5
Hacienda School	52	57	5
Residences [2]			
North of Stoneridge, East of Kamp	56*	62	6
South of Stoneridge, East of Kamp	56*	61	5
South of Stoneridge, East of Guzman	54*	61	7
Snow Drop Circle	49*	51	2
Vermont Place, North of Bridge	52	60	8
Chocolate Street, South of Bridge	52*	62	10

Source: Charles M. Salter Associates, 2009
* Estimated based on nearby ambient noise measurement
[1] Calculated at building façade
[2] Calculated in backyard

As shown in Table S-5.2-4, future noise levels at all locations will increase as a result of the Two-Lane Constrained Extension Alternative. The anticipated noise increase over existing levels is considered significant (i.e., more than L_{dn} 4 dB increase, per Program 1.3 of the Noise Element of the Pleasanton General Plan 2005-2025 at all locations except the Snowdrop Circle Residences' backyards, where the increase would be only L_{dn} 2 dB. Furthermore, at all of the residential locations, except Snowdrop Circle and Vermont Place, future predicted noise levels under this Alternative would exceed the City's "Normally Acceptable" single-family residential noise level of L_{dn} 60 dB for backyard areas. The Pleasanton General Plan 2005-2025 also recognizes, however, that L_{dn} 60 dB is a "goal" which cannot necessarily be reached in all residential areas within the realm of economic or aesthetic feasibility. With windows closed, interior noise levels at these locations would not be expected to exceed L_{dn} 45 dB, based on a typical façade noise reduction of 25 to 30 dB afforded by typical single-family home construction.

Noise level increases at the two existing sensitive receptors due to the Two-Lane Constrained Extension Alternative would be significant (5 dB), but the future noise levels at these location would not exceed the City's "Normally Acceptable" criterion of L_{dn} 60 dB for schools.

A 3 dB reduction in traffic noise levels anticipated to result from implementation of Mitigation Measure NO-4.1 (construct Stoneridge Drive extension with noise-attenuating pavement) would reduce the calculated future noise levels for residences closest to the bridge (Vermont Place residence and Chocolate Street residence) to below the L_{dn} 60 dB threshold.

Similarly, repaving the existing portion of Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement would achieve a reduction in traffic noise levels of 3 dB, which would result in a reduction of anticipated noise levels at all measured locations along Stoneridge Drive to approximately L_{dn} 60 dB or below. It is City policy to repave all major arterials with noise-attenuating pavement.

The following mitigation measure would ensure that future noise levels along this portion of Stoneridge Drive would not exceed an L_{dn} of approximately 60 dB:

S-NO-1.1 *Repave Stoneridge Drive between Kamp Drive and Trevor Parkway with noise-attenuating pavement*. Stoneridge Drive between Kamp Drive and Trevor Parkway shall be repaved with noise-attenuating pavement prior to the completion of the Stoneridge Drive extension to El Charro Road.

However, while the utilization of noise-attenuating pavement on the existing and new portions of Stoneridge Drive would result in all residential uses and sensitive receptors in the area meeting the an L_{dn} of approximately 60 dB or below for single-family residential development, in the two locations closest to the bridge crossing, it would not reduce the overall increase in ambient noise levels to 4 dB above existing noise levels, resulting in a noticeable increase in ambient traffic noise for these residents as a result of the Two-Lane Constrained Extension Alternative. In addition, it is estimated that future airport-related noise could add up to1–2 dB to projected ambient noise levels for residences by the planned bridge crossings. Therefore, this is considered a significant unavoidable impact of this Alternative (SU).

S-NO-1. Cumulatively Considerable Noise Increase Along Stoneridge Drive. (SU)

Under cumulative conditions, the Two-Lane Constrained Extension Alternative would have essentially the same cumulatively considerable contribution to a significant cumulative noise impact as the Proposed Project, which also assumes the full extension of Stoneridge Drive by 2030 (SU).

<u>Population, Employment, and Housing</u>

Growth Forecasts and Jobs/Housing. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would not displace any people or existing housing. Because Staples Ranch has been previously planned for urban development under the 1989 Stoneridge Drive Specific Plan – which anticipated more intensive uses of the Project Site than the Two-Lane Constrained Extension Alternative – it is already accounted for in growth forecasts for the City. While the Two-Lane Constrained

Extension Alternative would include the ice center with approximately 29 more jobs than the 1,585.5 jobs anticipated for the Proposed Project (See EIR, pages 3.8-11; 5-33), this would not significantly impact the City's job/housing ratio.

Transportation

The City of Pleasanton retained Dowling Associates to analyze the potential traffic impacts of the Two-Lane Constrained Extension Alternative in the same manner as the Proposed Project in the EIR.

Roadway Network. Under the Two-Lane Constrained Extension Alternative, the analysis assumes the same roadway network as under the Proposed Project, as described in Section 3.9 (Transportation) of the DEIR, with the exception of Stoneridge Drive, which is assumed to extend from its current terminus at Trevor Parkway to El Charro Road with the development of the Staples Ranch site under "Existing + Approved" conditions. Additionally, the pavement of the newly constructed bridges will be temporarily striped to limit the total combined lanes of the two bridges to two lanes: a single eastbound lane and a single westbound lane.

As noted in the Two-Lane Constrained Extension Alternative Description above, the Two--Lane Constrained Extension Alternative includes a southbound free right-turn lane from El Charro Road to Stoneridge Drive, as well as three left-turn lanes from Stoneridge Drive east to northbound El Charro Road. The new Stoneridge Drive intersections within Staples Ranch, at the entrances to the auto mall and senior continuing care community, would be signalized, as would the currently unsignalized intersections at Trevor Parkway, Guzman Parkway, and Newton Way to the west.

Staples Ranch Trip Generation. Because the Two-Lane Constrained Extension Alternative includes an ice center in the community park, it would generate an additional 3,228 daily trips, an additional 77 trips during the AM peak hour, and 349 additional trips during the PM peak hour, when compared to the Proposed Project. Trip generation estimates for the ice center were developed based on trip generation rates from a similar ice facility of comparable size. Table S-5.2-5 below shows Staples Ranch trip generation for the Two-Lane Constrained Extension Alternative in the AM and PM peak hours, as well as on a daily basis. As indicated below, the trips for the Two-Lane Constrained Extension Alternative do not differ from the number of trips with the Four-Lane Concurrent Extension Alternative.

Table S-5.2-5
Staples Ranch Trip Generation
Two-Lane Constrained Extension Alternative

			Project-Generated Trips						
			AM Peak Hour			PM Peak Hour			Daily
Land Use	**Amount**		**In**	**Out**	**Total**	**In**	**Out**	**Total**	
Senior Community	800	DU	29	35	64	54	34	88	2,200
Auto Mall	331	KSF	502	176	678	341	533	874	11,035
Retail	175	KSF	110	70	180	315	341	656	7,500
Park	17	Acres	17	17	34	34	34	68	300
Ice Center	138	KSF	41	36	77	175	175	349	3,328
TOTAL			699	334	1033	919	1117	2035	24,363

Source: Dowling Associates, 2008.

It should be noted that the trip generation totals shown in Table S-5.2-5 above are conservative in that they overstate the total retail trips by approximately 2,350 trips because this site is limited to 120,000 square feet of retail uses, rather than the 175,000 square feet used for modeling purposes. The retail trips have also not been reduced for pass-by or internal trips.

Intersection Level of Service. Dowling utilized the Pleasanton Traffic Model to analyze level of service (LOS) and delay for over sixty intersections in Pleasanton and Dublin under "Existing + Approved" conditions for the Proposed Project as well as for the Two-Lane Constrained Extension Alternative. Intersections in Livermore that could potentially be affected by Staples Ranch development were also analyzed, using Livermore's model. Table S-5.2-6 below summarizes the comparison of intersections in Pleasanton, Dublin, and Livermore that would function at LOS E or F under either the Proposed Project or the Two-Lane Constrained Extension Alternative.

Table S-5.2-6
Intersection LOS Comparison
No Project, Proposed Project, and Two-Lane Constrained Extension Alternative

Intersection	AM Peak Hour						PM Peak Hour					
	No Project		Proposed Project		Two-Lane Extension		No Project		Proposed Project		Two-Lane Extension	
Pleasanton Model Intersections	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
Hopyard/I-580 EB off	C	21	C	21	C	23	D	54	E	59	D	54
Hopyard/Owens	D	47	D	48	D	55	F	330	F	333	F	342
Hopyard/Stoneridge	D	46	D	46	D	46	F	102	F	102	D	54
Hacienda/Owens	C	25	C	25	C	27	D	48	D	51	D	35
Santa Rita/I-550 EB off/ Pimlico	D	42	D	42	C	26	D	38	D	40	C	31
W. Las Positas/Stoneridge	C	29	C	30	C	33	C	31	C	32	D	52
Santa Rita/Stoneridge	D	49	D	50	E	56	D	35	D	37	E	58
Santa Rita/Valley	C	35	C	35	D	36	E	67	E	69	E	70
El Charro/Stanley [1]	--	--	--	--	--	--	--	--	--	--	--	--
First/Ray [3]	D	46	D	46	D	47	F	81	F	81	E	66
First/Kottinger [3]	C	34	C	34	D	54	C	33	C	34	D	39
Main/Ray [3]	F	161	F	162	F	146	F	83	F	94	E	72
Main/St. John [3]	B	16	B	18	B	16	E	58	E	76	F	93
First/Bernal [3]	D	48	D	48	D	52	D	45	D	45	E	57
El Charro/I-580 EB	B	16	F	110	C	33	A	9	C	22	A	9
El Charro/Freisman [2]	--	--	--	--	--	--	--	--	--	--	--	--
El Charro/Stoneridge	D	44	C	22	C	21	B	15	C	27	C	31
El Charro/El Charro	--	--	--	--	--	--	--	--	--	--	--	--
Fallon/I-580 WB Ramps [4]	A	5	A	5	A	10	A	5	A	6	A	7
Fallon/Dublin [4]	D	36	D	37	D	38	F	116	F	177	F	127
Tassajara/Central [4]	D	47	D	48	D	48	D	50	D	51	D	45
Livermore Intersections	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
Isabel/KittyHawk/Airway [5]	D	55	D	55	D	51	--	--	--	--	--	--
Murrieta/E. Jack London	E	58	E	59	E	72	F	113	F	116	F	149
Murrieta/East Stanley [6]	--	--	--	--	--	--	--	--	--	--	--	--
Dublin Intersections [7]	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
Dublin/Dougherty R	C	0.7	C	0.7	C	0.8	D	0.9	D	0.9	D	0.9

Source: Dowling Associates, 2008; City of Pleasanton, 2009.
Notes: Shaded cells indicate intersection operates at below corresponding City's LOS standards.
[1] Future intersection which does not exist under Existing + Approved Conditions.
[2] Intersection to be closed in future, therefore no Existing + Approved Conditions LOS presented.
[3] Intersection located in the Pleasanton CBD and exempt from LOS standards.
[4] Intersection located with City of Dublin, but adjacent to City of Pleasanton.
[5] Permitted to exceed Livermore LOS standards per Policy P4 of Goal CIR-4.1 of Livermore General Plan.
[6] No level of service provided under Existing +Approved Conditions.
[7] LOS calculated by V/C ratio per approved City of Dublin's CCTA methodology.

Table S-5.2-6 indicates that the Two-Lane Constrained Extension Alternative would result in the following intersections that would operate below acceptable levels of service under "Existing + Approved" Conditions:

Hopyard / Owens (City of Pleasanton)
Santa Rita / Stoneridge (City of Pleasanton)
Santa Rita / Valley (City of Pleasanton)
Fallon / Dublin (City of Dublin – in Pleasanton Model)
Murrieta / East Jack London (City of Livermore)

This does not include four intersections in Downtown Pleasanton that would operate at or below LOS E, but that are exempt from level-of-service standards under General Plan policies.

Table S-5.2-6 also indicates that, compared to the Proposed Project, the Two-Lane Constrained Extension Alternative would result in fewer total intersections (five) operating below acceptable levels of service, compared to seven under the Proposed Project. Three of the intersections are the same, but under the Proposed Project, the Hopyard/I-580 EB off-ramp intersection has an LOS of E (unacceptable) in the PM peak hour while under the Two-Lane Constrained Extension Alternative, this intersection operates at an acceptable LOS of D in the PM peak hour. In addition, under the Proposed Project, the El Charro / I-580 EB off-ramp intersection has an LOS of F in the AM peak hour, while under the Two-Lane Constrained Extension Alternative, this intersection operates at an acceptable LOS of C in the AM peak hour. Similarly, under the Proposed Project, the Hopyard/Stoneridge intersection operates at LOS F in the PM peak hour, while it operates at LOS D under the Two-Lane Constrained Extension Alternative.

Under the Two-Lane Constrained Extension Alternative, the Santa Rita/Stoneridge intersection has an LOS of E (unacceptable) in the AM and PM peak hours, while under the Proposed Project, this intersection operates at an acceptable LOS of D in the AM and PM peak hours.

As indicated in Table S-5.2-7, Mitigation Measures TR-1.2 (improve Hopyard/Owens intersection) and TR-1.4 (improve Santa Rita/Valley intersection) that were proposed for the Proposed Project, and are included in the City's Traffic Development Fee program, would also reduce the traffic impacts of the Two-Lane Constrained Extension Alternative at these intersections to a less-than-significant level. As discussed above under the transportation analysis of the Four-Lane Concurrent Extension Alternative, this SEIR amends Mitigation Measure TR-1.4 to increase light timing cycle length at the intersection from 120 seconds to 130 seconds, as specified in the Dowling Traffic Study.

As also indicated in Table S-5.2-7, Mitigation Measure S-TR-2.1 (described under the transportation analysis of the Four-Lane Concurrent Extension Alternative would mitigate the Two-Lane Constrained Extension Alternative's impact on the Santa Rita/ Stoneridge Drive intersection to a less-than-significant level.

Mitigation Measures TR-2.1 (improve Fallon Road at Dublin Boulevard, except a third left-turn lane and second through-lane would not be required) and TR-2.2 (improve Murrieta/E. Jack London), in conjunction with TR-2.3 (seek an interagency cooperative agreement) proposed for the Proposed Project would also reduce the traffic impacts resulting from the Two-Lane Constrained Extension Alternative at these intersections outside of Pleasanton. However, as described in the EIR, these intersection impacts occurring outside the City of Pleasanton's jurisdiction remain significant and unavoidable because it is uncertain whether the interagency cooperative agreement proposed in Mitigation Measure TR-2.3 can be reached and because the City of Pleasanton has no authority to approve mitigations in other jurisdictions. Furthermore, it should be noted that the City of Dublin has indicated that Mitigation Measure TR-2.1 for the Fallon Road/ Dublin Boulevard intersection is infeasible, thereby confirming that the impact to that intersection from either the Proposed Project or the Two-Lane Constrained Extension Alternative is a significant unavoidable impact.

Table S-5.2-7 below summarizes the effect of the above mitigation measures on intersections significantly impacted by the Two-Lane Constrained Extension Alternative.

Table S-5.2-7
Level of Service Before and After Recommended Mitigations
Two-Lane Constrained Extension Alternative

Intersection	Before Mitigation				After Mitigation			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Hopyard / Owens	--	--	F	342	--	--	D	51
Stoneridge/Santa Rita	E	56	E	58	D	53	D	47
Santa Rita / Valley	--	--	E	70	--	--	D	50
Fallon / Dublin	--	--	F	127	--	--	D	53
Murrieta / E. Jack London	E	72	F	149	C	35	C	31

Source: Dowling Associates, 2008, City of Pleasanton, 2009.
Note: LOS shown only for peak hours that failed to meet Pleasanton, Dublin, or Livermore LOS standards under unmitigated conditions.

Stoneridge Drive Intersections. The EIR states that full extension of Stoneridge Drive may result in a need for off-site safety improvements, such as potential signalization, to minor intersections along Stoneridge Drive east of the Santa Rita Road intersection (Draft EIR, pages 3.9-1, 4-18, 4-19; Final EIR, page 3-24). The City of Pleasanton does not require CEQA analysis of impacts to these intersections because they are minor intersections; the LOS D standard of significance for the City of Pleasanton applies only to major intersections, such as those City of Pleasanton intersections separately analyzed in the EIR. Nonetheless, in light of concerns raised during litigation and prior hearings regarding the development of the Staples Ranch site, the City of Pleasanton traffic engineer used the Pleasanton Traffic Model to estimate the level of service for the Two-Lane Constrained Extension Alternative under "Existing + Approved" conditions for the three currently unsignalized intersections on Stoneridge Drive between Kamp Drive and Staples Ranch, as well as for the two future Staples Ranch intersections formed

by Stoneridge Drive and the entrance to the auto mall and the continuing care community. As noted in the Two-Lane Constrained Extension Alternative Description above, all of these intersections would be signalized as part of the improvements constructed under this Two-Lane Constrained Extension Alternative. The results of this analysis are shown in Table S-5.2-8 below, which indicates that all of these signalized intersections will operate at acceptable levels of service under the Two-Lane Constrained Extension Alternative.

Table S-5.2-8
Stoneridge Drive Intersection LOS
Existing + Approved Conditions
Two-Lane Constrained Extension Alternative

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Newton/Stoneridge	C	25	C	22
Guzman/Stoneridge	B	16	B	13
Trevor/Stoneridge	B	20	B	13
Continuing Care/Stoneridge	B	20	B	19
Auto Mall/Stoneridge	C	30	C	32

Source: City of Pleasanton, 2009.

The transportation subsection of the cumulative analysis section of the EIR states that: "Cumulative impacts to intersections along Stoneridge Drive including signal warrants, pedestrian, and bicycle impacts associated with the extension of Stoneridge Drive are not fully addressed in this section. These impacts would be addressed during a separate detailed environmental review for the extension of Stoneridge Drive."

The City of Pleasanton Traffic Engineer also used the Pleasanton Traffic Model to estimate the level of service for the Two-Lane Constrained Extension Alternative under "cumulative plus project" conditions based on the same cumulative development assumptions as the EIR. The results of this analysis are shown in Table S-5.2-9 below, which indicates that all of these signalized intersections will operate at acceptable levels of service when the Two-Lane Constrained Extension Alternative is assumed under cumulative conditions.

Table S-5.2-9
Stoneridge Drive Intersection LOS
Cumulative Plus Project Conditions
Two-Lane Constrained Extension Alternative

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
Newton/Stoneridge	C	26	C	31
Guzman/Stoneridge	B	19	B	15
Trevor/Stoneridge	C	21	B	14
Continuing Care/Stoneridge	B	18	C	24
Auto Mall/Stoneridge	D	35	D	39

Source: City of Pleasanton, 2009.

Potential pedestrian, and bicycle impacts associated with the extension of Stoneridge Drive under the Two-Lane Constrained Extension Alternative are addressed under the "Increased Hazards" subsection below, the results of which analysis do not change under cumulative conditions.

Freeway and Arterial Level of Service. The Alameda County Congestion Management Agency requires a CMP analysis only if a project will change land use designations that will result in a net increase of more than 100 vehicle trips over the current land use designations for the area in question. Because the Proposed Project and this Two-Lane Constrained Extension Alternative will result in a substantial decrease in the total number of vehicle trips in comparison to the existing Specific Plan land use designations for Staples Ranch, the City of Pleasanton is not required to conduct an analysis of impacts to CMP roadways for either the Proposed Project or the Two-Lane Constrained Extension Alternative. However, the City has chosen to conduct a CMP analysis for the Proposed Project and the Two-Lane Constrained Extension Alternative to illustrate the potential effects of extending (or not extending) Stoneridge Drive on the regional roadway system.

Dowling conducted an analysis of the Two-Lane Constrained Extension Alternative for Year 2015 (near term), using the Alameda County Congestion Management Agency (CMA) model, to compare impacts to area freeways and major arterials with No Project and the Proposed Project, essentially illustrating the impact of extending Stoneridge Drive as a four-lane arterial constrained to two lanes at the Arroyo Mocho with the development of Staples Ranch. Under CMA standards, impacts to freeways and major arterials are considered significant if the addition of the Two-Lane Constrained Extension Alternative-related traffic would result in an LOS of F, except where the roadway link is already at LOS F under No Project conditions. At these locations, the impacts of the Two-Lane Constrained Extension Alternative are considered significant if the contribution of project-related traffic is more than three percent of the total traffic.

Table S-5.2-10 and Table S-5.2-11 below illustrate the results of the CMP analysis for the AM and PM peak hours, comparing No Project, Proposed Project and the Two-Lane Constrained Extension Alternative for 23 roadway segments in the Tri-Valley area. The analysis indicates that the Two-Lane Constrained Extension Alternative would result in no freeway or arterial roadway segments changing from an acceptable level of service under the No Project and Proposed Project scenarios to an unacceptable level of service, for either AM and PM hours, nor would any existing segments that are already at LOS F under the No Project conditions be impacted by more than three percent as a result of the Two-Lane Constrained Extension Alternative. Therefore, impacts to the regional roadway system resulting from this Two-Lane Constrained Extension Alternative are considered less-than-significant. It should be noted that while the Two-Lane Constrained Extension Alternative would not significantly impact any segments, Table S-5.2-10 indicates that the Proposed Project would significantly impact the Santa Rita Boulevard segment south of I-580 in the AM peak hour.

Table S-5.2-10
CMP Impact Analysis – Near Term 2015 AM Peak Hour

Link Location	Northbound/Eastbound						Southbound/Westbound					
	Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		2-Lane Extension Alternative With Stoneridge Extension		Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		Four-Lane Extension Alternative With Stoneridge Extension	
Interstate/State Highways	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
I-580 (Betn. Santa Rita & El Charro)	B	0.36	B	0.39	B	0.38	F	1.26	F	1.28	F	1.22
I-680 (Betn. Stoneridge & W. L. Positas)	B	0.50	B	0.50	B	0.50	F	1.23	F	1.23	F	1.24
SR- 84 (Betn. Portola & I-580)	A	0.17	A	0.17	A	0.17	A	0.07	A	0.07	A	0.07
SR- 84 (Betn. I-580 & Jack London)	C	0.58	C	0.58	D	0.76	D	0.76	D	0.76	D	0.58
SR- 84 (Betn. Jack London & Stanley)	E	0.95	E	0.97	E	0.97	F	1.17	F	1.17	F	1.17
SR- 84 (Betn. Stanley & Vineyard)	F	1.10	F	1.11	F	1.12	F	1.16	F	1.16	F	1.17
SR- 84 (Near Little Valley)	E	0.78	E	0.78	E	0.78	F	1.24	F	1.24	F	1.24
I-580 (Betn. El Charro & Airway)	B	0.42	B	0.42	B	0.42	F	1.19	F	1.20	F	1.22
I-580 (Betn. Airway & Isabel)	B	0.38	B	0.38	B	0.38	F	1.31	F	1.31	F	1.31
I-580 (Betn. Isabel & Portola)	B	0.47	B	0.47	B	0.48	F	1.39	F	1.39	F	1.39
I-580 (Betn. Portola & N.Livermore)	B	0.47	B	0.47	B	0.48	F	1.39	F	1.39	F	1.39
I-580 (Betn. N.Livermore & First)	B	0.44	B	0.45	B	0.45	F	1.27	F	1.27	F	1.27
I-580 (Betn. First & South Vasco)	B	0.47	B	0.47	B	0.47	F	1.06	F	1.06	F	1.06
I-580 (Betn. S.Vasco & Greenville)	B	0.38	B	0.38	B	0.38	F	1.27	F	1.27	F	1.27
Arterials												
Dougherty (Betn. Dublin and I-580)	E	0.81	E	0.81	D	0.81	F	1.13	F	1.14	F	1.07
Dublin (East of Tassajara)	B	0.00	B	0.00	B	0.00	F	1.06	F	1.08	D	0.94
Hopyard (Betn. I-580 & Owens)	F	1.03	F	1.04	F	1.05	F	1.10	F	1.10	F	1.10
W. Las Positas (West of Santa Rita)	D	0.45	D	0.46	D	0.45	F	1.07	F	1.07	E	0.97
Santa Rita (South of I-580)	D	0.32	D	0.38	D	0.34	F	1.09	F	1.13	E	0.94
Stanley (East of Valley)	D	0.23	D	0.23	D	0.23	F	1.45	F	1.45	F	1.44
Stoneridge (East of Santa Rita)	D	0.24	D	0.25	D	0.24	D	0.44	D	0.45	E	0.92
Sunol (North of I-680)	D	0.24	D	0.24	D	0.24	D	0.44	D	0.44	D	0.46
Tassajara (North of Dublin)	B	0.15	B	0.15	B	0.15	B	0.26	B	0.26	B	0.22

Source: Dowling Associates, 2008, City of Pleasanton, 2009.

Table S-5.2-11

CMP Impact Analysis – Near Term 2015 PM Peak Hour

Link Location	Northbound/Eastbound						Southbound/Westbound					
	Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		Two-Lane Extension Alternative With Stoneridge Extension		Vacant Site No Stoneridge Extension		Proposed Project No Stoneridge Extension		Two-Lane Extension Alternative With Stoneridge Extension	
Interstate/State Highways	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
I-580 (Betn. Santa Rita & El Charro)	F	1.02	F	1.04	E	0.96	C	0.58	C	0.63	C	0.63
I-680 (Betn. Stoneridge & W. L. Positas)	F	1.01	F	1.01	E	0.96	B	0.55	C	0.55	C	0.55
SR -84 (Betn. Portola & I-580)	A	0.17	A	0.18	A	0.18	A	0.13	A	0.13	A	0.13
SR- 84 (Betn. I-580 & Jack London)	B	0.49	B	0.49	B	0.49	C	0.65	C	0.66	C	0.66
SR- 84 (Betn. Jack London & Stanley)	E	0.91	E	0.92	E	0.92	E	0.86	E	0.87	E	0.88
SR- 84 (Betn. Stanley & Vineyard)	E	0.92	E	0.92	E	0.92	E	0.91	E	0.92	E	0.92
SR- 84 (Near Little Valley)	E	0.96	E	0.96	E	0.96	E	0.80	E	0.80	E	0.80
I-580 (Betn. El Charro & Airway)	F	1.00	F	1.01	F	1.01	B	0.43	B	0.44	B	0.44
I-580 (Betn. Airway & Isabel)	F	1.04	F	1.05	F	1.05	B	0.45	B	0.46	B	0.46
I-580 (Betn. Isabel & Portola)	F	1.16	F	1.16	F	1.16	B	0.50	B	0.51	B	0.51
I-580 (Betn. Portola & N.Livermore)	F	1.14	F	1.15	F	1.15	B	0.50	B	0.51	B	0.51
I-580 (Betn. N.Livermore & First)	F	1.00	F	1.00	F	1.00	B	0.42	B	0.42	B	0.42
I-580 (Betn. First & South Vasco)	E	0.97	E	0.97	E	0.97	B	0.38	B	0.38	B	0.38
I-580 (Betn. S. Vasco & Greenville)	D	0.86	D	0.86	D	0.86	B	0.44	B	0.44	B	0.44
Arterials												
Dougherty (Betn. Dublin and I-580)	F	1.12	F	1.13	F	1.13	D	0.76	D	0.77	D	0.76
Dublin (East of Tassajara)	B	0.73	B	0.75	B	0.74	B	0.00	B	0.00	B	0.00
Hopyard (Betn. I-580 & Owens)	F	1.05	F	1.06	F	1.05	F	1.04	F	1.05	F	1.05
W. Las Positas (West of Santa Rita)	E	0.85	E	0.86	D	0.69	D	0.60	D	0.61	D	0.60
Santa Rita (South of I-580)	E	0.81	E	0.86	D	0.63	D	0.38	D	0.45	D	0.42
Stanley (East of Valley)	F	1.24	F	1.24	F	1.23	D	0.28	D	0.28	D	0.28
Stoneridge (East of Santa Rita)	D	0.41	D	0.43	E	0.91	D	0.28	D	0.29	D	0.27
Sunol (North of I-680)	D	0.71	D	0.71	D	0.71	D	0.25	D	0.25	D	0.26
Tassajara (North of Dublin)	B	0.21	B	0.21	B	0.20	B	0.20	B	0.20	B	0.20

Source: Dowling Associates, 2008, City of Pleasanton, 2009.

Under cumulative conditions, the Two-Lane Constrained Alternative is the same as the Ice Center Alternative of the EIR. The cumulative transportation impacts of the Ice Center Alternative, and, therefore, the Two-Lane Constrained Extension Alternative, are analyzed in Section 5.3 of the EIR.

Future BART Extension. The Two-Lane Constrained Extension Alternative has the same land uses (the auto mall and senior continuing care community) adjacent to I-580 as under the Proposed Project. Therefore, potential conflicts with a future extension of BART to Livermore along I-580 would be the same as under the Proposed Project, and Mitigation Measure TR-5.1 (maintain adequate I-580 frontage setbacks) would reduce this potential impact to less than significant levels.

Increased Hazards. The Two-Lane Constrained Extension Alternative, like the Proposed Project, would use El Charro Road as a major access point to Staples Ranch from I-580. El Charro Road is currently a privately owned two-lane road that provides the major freeway access point to the gravel quarries to the south and therefore carries a heavy volume of quarry trucks. As discussed in the DEIR for the Proposed Project, potential hazards from mixing quarry trucks and passenger traffic from the Staples Ranch development and Livermore's El Charro Specific Plan development east of El Charro Road will be significantly reduced through the implementation of the 2007 Pre-Development Cooperation Agreement regarding the design and construction of El Charro Road improvements. While the Two-Lane Constrained Extension Alternative would result in additional vehicular traffic using El Charro Road within an earlier timeframe than under the Proposed Project, the El Charro Road design called for in the Pre-Development Cooperation Agreement – which will be constructed prior to occupancy of any Staples Ranch development – has been designed to accommodate traffic levels that assumed the full development of Staples Ranch, with an Ice Center, including the full extension of Stoneridge Drive to El Charro Road. In addition, because Stoneridge Drive is not a City-designated truck route, through trucks (including quarry traffic) would be prohibited from using Stoneridge Drive through Staples Ranch. Therefore, like the Proposed Project, no increased hazards are anticipated as a result of mixing quarry trucks and cars on El Charro Road as a result of the Two-Lane Constrained Extension Alternative.

While the Two-Lane Constrained Extension Alternative would result in an immediate and significant increase in the volume of traffic along the existing section of Stoneridge Drive between Santa Rita Road and El Charro Road, it is not anticipated that this will result in a significant increase in hazards for pedestrians or others in comparison to the Proposed Project. In both the proposed project and the Two-Lane Constrained Extension Alternative, Stoneridge Drive will be designed to have sidewalks on both sides of the street, separated from the curb by landscape plantings. As noted in the Two-Lane Constrained Extension Alternative Description above, the currently unsignalized intersections at Newton Way, Guzman Parkway, and Trevor Parkway would be signalized as part of the Staples Ranch circulation improvements. The signalization at these locations will provide safe and controlled crossing points for pedestrians and vehicles. These signals will be equipped with bicycle detection to allow for safe crossings for bicycles in the bike lanes.

Separated sidewalks are also planned along either side of Stoneridge Drive through Staples Ranch as well as on the Arroyo Mocho bridges, and controlled crossing points for

pedestrians will be provided by the new signalized intersections at the auto mall and senior continuing care community entrances.

While the immediate higher traffic volumes on Stoneridge Drive that would result from the Two-Lane Constrained Extension Alternative could pose relatively more risk for bicyclists sharing the road, six foot bike lanes will be included along the entire section of Stoneridge Drive to provide separation between bicycles and motor vehicles eliminating the need to share a lane. Additionally, the traffic signal intersections will include bike lanes and bicycle detection that will allow for separation of bicycles and vehicles through the entire length of the extension. These bike lanes along Stoneridge Drive provide the same level of protection to bicyclists as on other similar – or higher volume – roadways in the City. Therefore, no additional hazards to pedestrians or bicyclists are anticipated as a result of the Two-Lane Constrained Extension Alternative in comparison to the Proposed Project.

Emergency Vehicle Access. The Two-Lane Constrained Extension Alternative would eliminate the Proposed Project's gated emergency vehicle access along the Stoneridge Drive right-of-way, which would benefit emergency vehicle response times. Because the Two-Lane Constrained Extension Alternative would have the same land uses as the Proposed Project (with the addition of an ice center in the Community Park), Mitigation Measure TR-7.1 (requiring each development to include a minimum of two points of EVA access) would also reduce any potential impacts resulting from inadequate emergency access to Staples Ranch developments to a less than significant level.

Parking Capacity. For the same reasons described in the EIR with regard to the Proposed Project, no conflicts resulting from inadequate parking capacity within Staples Ranch developments is anticipated as a result of the Two-Lane Constrained Extension Alternative. The Two-Lane Constrained Extension Alternative will also have the added benefit of ensuring that Community Park users will not have parking options "split" by a gated EVA only buffer between users arriving via I-580 and El Charro Road and users arriving via Santa Rita and Stoneridge Drive. Under the Two-Lane Constrained Extension Alternative, Community Park users will have access to all parking spaces within the park and for the ice center, preventing the potential for users from Pleasanton finding all parking areas full and then having to drive via I-580 to access parking areas only accessible from the east.

Alternative Transportation. As noted under the Proposed Project, there are limited existing pedestrian, bicycle, and transit facilities in the project vicinity. Like the Proposed Project, the Two-Lane Constrained Extension Alternative would provide bike lanes and sidewalks along the Stoneridge Drive right-of-way, as well as bus stops on Stoneridge Drive that can be used by Wheels if bus service along Stoneridge is provided. Because the Two-Lane Constrained Extension Alternative removes the Proposed Project's gated Emergency Vehicle Access along the Stoneridge Drive right-of-way, through bus service along Stoneridge Drive may be more likely to happen under the Two-Lane Constrained Extension Alternative than under the Proposed Project. Implementation of Mitigation Measures TR-9.1 (provide acceptable bicycle and

pedestrian access) and TR-9.2 (provide adequate bus and paratransit access) will ensure, like the Proposed Project, that the Two-Lane Constrained Extension Alternative would not conflict with adopted alternative transportation programs, thereby reducing potential impacts to a less than significant level.

Truck Traffic. Under the Two-Lane Constrained Extension Alternative, there would be truck trips associated with project construction, as well as deliveries to project developments during the life of the project, similar to the Proposed Project. Like the analysis for the Proposed Project, project truck trips have been assumed in the traffic analysis and no significant impacts are expected beyond those identified in the intersection LOS impact analyses. Because Stoneridge Drive is not a City-designated truck route, through trucks (including quarry traffic) would be prohibited from using Stoneridge Drive through Staples Ranch.

Indeed a possible benefit of the Two-Lane Constrained Extension Alternative over the Proposed Project would be that all truck deliveries, including those to the senior continuing care community, could be routed directly off I-580 via El Charro Road, avoiding use of the portion of Stoneridge Drive east of Santa Rita Road that passes through residential neighborhoods. This could include construction traffic associated with later phases of the senior community, which, under the Proposed Project, would instead be forced to use Santa Rita Road and Stoneridge Drive

Program 1.6 of the Circulation Element. Program 1.6 of the Circulation Element of the Pleasanton General Plan 2005-2025 provides that the City of Pleasanton must reach an agreement with the City of Livermore, the City of Dublin, and the County of Alameda for a strategic approach and funding plan for relieving congestion in the Tri-Valley before it opens the Stoneridge Drive extension to through-traffic.

Water Supply

Because the Two-Lane Constrained Extension Alternative would include an ice center, overall water demand would be the same as the Ice Center Alternative. As depicted in Table 5-19 of the EIR, the Water Supply Assessment prepared for the project determined that the Ice Center Alternative would demand approximately 349 acre-feet per year, one more acre-foot than the Proposed Project. The Water Supply Assessment determined that the City of Pleasanton, through an agreement with Zone 7, has sufficient water supply to serve the project site now, at buildout, and out to 2030. Like the Ice Center Alternative, the impact of the Two-Lane Constrained Extension Alternative on water treatment and distribution systems would be slightly greater than the Proposed Project, but would still result in less than significant impacts. The Two-Lane Constrained Extension Alternative would have the same effect under cumulative conditions as the Proposed Project because the addition of one acre-foot per year for the ice center (a two-tenths-of-one-percent increase [0.2%] over the Proposed Project) will not alter the conclusion of the cumulative water supply analysis of the EIR.

S-5.4. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The impacts identified for the Four-Lane Concurrent Extension Alternative and the Two-Lane Constrained Extension Alternative would generally be similar to those of the Proposed Project. Both alternatives would generate slightly greater air quality and water supply impacts in comparison with the Proposed Project as a result of the inclusion of the ice center. However, both alternatives would have slightly fewer biological resource, construction noise and water quality impacts as a result of constructing both Stoneridge Drive bridges over the Arroyo Mocho channel at the same time, in comparison to the Proposed Project where bridge construction would be two separate projects separated by a number of years.

Both alternatives would result in greater noise impacts than the Proposed Project, both on- and off-site, as a consequence of extending Stoneridge Drive to El Charro Road at an earlier date than the Proposed Project. Both alternatives would significantly and unavoidably impact existing residences and sensitive receptors along Stoneridge Drive while the corresponding effects of the Proposed Project would be less than significant. The Two-Lane Constrained Extension Alternative would generate lower noise impacts to existing residences and sensitive receptors along Stoneridge Drive than the Four-Lane Concurrent Extension Alternative and would significantly impact fewer existing residences than the Four-Lane Concurrent Extension Alternative.

The Four-Lane Concurrent Extension Alternative significantly impacts one fewer intersection than the Proposed Project, but does impact more freeway segments and arterial segments. The Two-Lane Constrained Extension Alternative significantly impacts two fewer intersections than the Proposed Project and does not impact any freeway or arterial segments.

The Two-Lane Constrained Extension Alternative is considered environmentally superior to the Four-Lane Concurrent Extension Alternative because it includes the same land uses but results in fewer traffic impacts and noise impacts. While the Two-Lane Constrained Extension Alternative generates slightly greater air quality and water supply impacts than the Proposed Project (as a result of including an ice center) and slightly fewer biological resources, construction noise and water quality impacts (as a result of the simultaneous construction of the Stoneridge Drive bridges), the significance of these impacts remain essentially the same as for the Proposed Project.

The Two-Lane Constrained Extension Alternative generates fewer significant traffic impacts than the Proposed Project. However, at the non-cumulative level, noise impacts to existing residences and sensitive receptors along Stoneridge Drive are significant and unavoidable under the Two-Lane Constrained Alternative but less than significant under the Proposed Project after mitigation. For the same reasons stated in the EIR with regard to the Proposed Project, the Open Space Alternative still remains environmentally superior to all other alternatives.

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REFERENCES

Bay Area Air Quality Management District. 2008. Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2007.

Bay Area Air Quality Management District. 2009(a). Workshop Draft Options Report, California Environmental Quality Act Thresholds of Significance.

Bay Area Air Quality Management District. 2009(b). Draft Air Quality Guidelines.

Bay Area Air Quality Management District 2009(c). Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance.

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.

California Air Resources Board. 2007. California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit.

California Air Resources Board. 2008. Climate Change Scoping Plan.

California Climate Action Registry. 2009. General Reporting Protocol.

California Energy Commission. 2005. California's Water–Energy Relationship.

California Energy Commission. 2006, Refining Estimates of Water–Related Energy Use in California.

California Natural Resources Agency. 2009. Proposed Amendments to the CEQA Guidelines for greenhouse gas emissions.

City of Pleasanton. 2009. Pleasanton General Plan 2005-2025.

City of Pleasanton. 2009. Pleasanton General Plan 2005-2025 Environmental Impact Report.

California Energy Commission. 2006. Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004.

Governor's Office of Planning and Research. 2008. Technical Advisory – CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review.

Kostka, Zischke. 2008. Practice Under the California Environmental Quality Act, Second Edition.

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APPENDICES

WRA Environmental Consultants, Staples Ranch San Joaquin Spearscale Survey Letter Report, August 18, 2009.

WRA Environmental Consultants, Staples Ranch – Arroyo Mocho California Red-legged Frog Surveys Letter Report, August 6, 2009.

WRA Environmental Consultants, Staples Ranch – Arroyo Mocho Western Pond Turtle Letter Report, August 6, 2009.

WRA Environmental Consultants, California Tiger Salamander 2006-2008 Field Survey Report, June 2008.

Charles Salter Associates Inc., Stoneridge Drive Extension Noise Analysis Letter Report, August 28, 2009.

Dowling Associates, Inc., Stoneridge Drive Specific Plan Amendment – Staples Ranch, Technical Memorandum for Traffic and Circulation Supporting the Findings and Recommendations, December 7, 2007; revised March 20, 2008.

City of Pleasanton, Stoneridge Drive Specific Plan Amendment – Staples Ranch, Two-Lane Constrained Extension Alternative Traffic Analysis, September 30, 2009.

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Brian Dolan
Director of Community Development
City of Pleasanton,
200 Old Bernal Avenue
P.O. Box 520
Pleasanton, CA 94566

August 18, 2009

Re: Staples Ranch San Joaquin Spearscale Survey

Dear Mr. Dolan,

On June 2, 2009, WRA, Inc. conducted a survey for San Joaquin spearscale at Staples Ranch and the adjacent Arroyo Mocho channel (Figure 1) in Pleasanton, California. Staples Ranch is located at the southwest corner of the intersection of Interstate 580 and El Charro Road. The survey was a follow-up visit to protocol-level rare plant surveys made at Staples Ranch on October 25, 2005, and June 2, 2006, the results of which were documented in our August 15, 2006 "Rare Plant Survey Report – Staples Ranch Pleasanton, Alameda County, California". During those earlier surveys the CNPS List 1B plant, San Joaquin spearscale (*Atriplex joaquiniana*), was observed and mapped on-site. The recent, 2009 survey, was conducted to reassess the population size and location of San Joaquin spearscale throughout Staples Ranch and the adjacent Arroyo Mocho, as well as map the extent of habitat that could potentially support spearscale.

This report presents the results of the 2009 survey, assesses impacts to the spearscale population and potential habitat that could result from the development of Staples Ranch, and proposes mitigation to compensate for these impacts.

Background

San Joaquin spearscale (*Atriplex joaquiniana*) is a small, annual herb in the Chenopodiaceae family that blooms in mid to late summer. It typically occurs in more alkaline habitats within grasslands, meadows and seasonal wetlands. Although not a Federal or State listed species, the plant is classified by the California Native Plant Society (CNPS) as a List 1B species (rare, threatened or endangered in California), and is therefore considered a sensitive species under CEQA. According to the California Natural Diversity Database (CNDDB), there are over a dozen records of San Joaquin spearscale populations in eastern Alameda County, primarily north of I-580.

A population of San Joaquin spearscale was found on Staples Ranch during plant surveys conducted in the 1990s. In October 1995, Alameda County was authorized to construct the arroyo realignment project under an U.S. Army Corps permit (No. 20564S). The realignment project, which was constructed in 2003, relocated the Arroyo Las Positas flood control channel so that the flood waters that normally would have flowed through the Las Positas channel were

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directed to the adjacent Arroyo Mocho, which was significantly deepened and widened. The project also included restoration of riparian habitat along the newly widened and deepened Arroyo Mocho channel and banks as mitigation for impacts of the project. Because large amounts of fill material would be generated by the Arroyo Mocho excavations that were proposed to be spread over Staples Ranch, part of the Wetland Mitigation and Monitoring Plan approved with the Corps permit included mitigating impacts to the Staples Ranch population of San Joaquin spearscale by collecting seed from the Staples Ranch population and distributing them on the northern upper bank of the adjacent Arroyo Mocho channel. While the spearscale seeds were distributed, fill materials were stockpiled on the property in several large mounds in anticipation of spreading the materials when the property was developed.

WRA, Inc. conducted rare plant surveys on the Staples Ranch property and adjoining Arroyo Mocho in October and June of 2005 and 2006, respectively. The CNPS List 1B species, San Joaquin spearscale, was observed and mapped using GIS, primarily in the northwest portion of Staples Ranch and along the north bank of the adjacent Arroyo Mocho channel. The plants on Staples Ranch were remnants of the original population that was partially impacted during the permitted Arroyo realignment project. Staples Ranch population estimates during the June 2006 survey estimated 1,250 plants, covering about half an acre. Approximately 10 additional spearscale individuals were observed and mapped in two isolated occurrences in the central southern portion of the Staples Ranch property during the October 2005 survey. These plants were at the base of one of the large piles of fill that was deposited on site during the Arroyo realignment project, however spearscale plants were not been observed at these locations during the June 2006 site visit.

Over 10,000 spearscale plants were found along the north upper bank of the Arroyo Mocho, during the same surveys, in the area where seed had been distributed in accordance with the Wetland Mitigation and Monitoring Plan, although they were dispersed over a smaller area. The plants in the Arroyo Mocho mitigation area were extremely densely clustered, sometimes as many as 20 individuals per square foot. This is in contrast to the distribution of spearscale on Staples Ranch, which rarely had more than one plant in a square meter.

2009 Survey Results

In June 2009, WRA, Inc. returned to Staples Ranch and the adjacent Arroyo Mocho to re-survey and map the spearscale occurrences and compare them to the previous surveys. The site was generally unchanged from previous site visits except that the grass on the Staples Ranch property had not been cut for several years, due to biological survey work in 2006-2008. Previously, much of Staples Ranch was dry-land farmed for hay. As a result a number of weed species, specifically black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), brome grasses (*Bromus* sp.), and yellow start thistle (*Centaurea solstitialis*) dominate upland portions of the site. Figure 1 illustrates where spearscale were observed in June, 2009, and overlays this with previous observations made in October, 2005 and June, 2006.

San Joaquin spearscale was observed and mapped in the majority of the same areas as in previous survey work; however, population numbers on both the Staples Ranch property and adjacent Arroyo Mocho mitigation area were lower in 2009. Approximately 273 spearscale plants were observed in the northwest portion of Staples Ranch. No plants were seen in the two isolated occurrences where they were observed in October 2005, adjacent to the large dirt stockpile located in the south-central portion of the property. Approximately 1,746 spearscale individuals were observed on the northern bank of the adjacent Arroyo Mocho, including approximately 120 plants in the western portion of the Arroyo Mocho, where they were not

previously observed. Figure 1 shows the results of the June 2009 plant survey work overlaid on the 2005/2006 survey results

Since spearscale is an annual plant that grows anew from seed each year, annual variation in population sizes and exact locations are normal. The lower population numbers observed in both Staples Ranch and the adjacent Arroyo Mocho in 2009 in comparison to 2006 could be due to a number of natural or human influenced reasons such as rainfall patterns, competition from other nearby plants, poor seed set from the previous year, etc. For instance, 2006 was an exceptionally wet spring, while the last several years have had less-than-normal rainfall.

Given the wide variability in the number of annual plants from year-to-year, WRA, Inc. also mapped the areas with potential to support spearscale for both Staples Ranch and the adjacent Arroyo Mocho channel in 2009. San Joaquin spearscale has specific habitat requirements that only exist in a few locations on-site. Specifically the plants are typically associated with alkaline soils with low plant cover (see photo appendix). The main populations observed on the Staples Ranch property are found within an alkaline depression dominated by the low-growing non-native annual grass Mediterranean barley (*Hordeum marinum*). Other associated plants include common spikeweed (*Centromadia pungens* ssp. *pungens*) and alkali heath (*Frankenia saligna*). Also notable was the lack of wild rye (*Lolium multiflorum*) and wild oat (*Avena* sp.) from the areas that supported spearscale, while these species are dominant on the remainder of Staples Ranch. Based on these characteristics, which were quite distinct in the field, WRA Inc. mapped areas that had the potential to support San Joaquin spearscale on the Staples Ranch property (Figure 2) These habitat areas on Staples Ranch total 1.70 acres and correlate with all WRA spearscale observations in the northwestern portion of the property, as well as some adjoining area.

The two small isolated areas in the south-central portion of the property adjacent to the large pile of fill material were not mapped as potential San Joaquin habitat. While a small number of plants (10 in total) were observed in these locations in October, 2005, they were not observed in subsequent surveys in June, 2006 or June, 2009, nor were the other plant species associated with San Joaquin spearscale in the northwest portion of Staples observed in these locations. It is not surprising that no further observations of spearscale have been made, given the conditions in these specific areas. These areas were never planted with hay or mowed since they were at the toe of the slope of the large pile of excavated soil. Weeds have overtaken the area, leaving little room for native plants to thrive. Soil from the pile may have also covered the original locations as alluvium or colluvium further reducing the suitability of the area for supporting spearscale. Therefore, these isolated areas are no longer considered potential spearscale habitat due to the existing conditions.

Areas with the potential to support San Joaquin spearscale were also mapped along the northern bank of the Arroyo Mocho, based on their observed locations in 2006 and 2009. The habitat in this area is slightly different than the habitat found on Staples Ranch, however, in that the plants thrive on a 2.5:1 channel slope instead of an alkali depression. One common aspect of all of the areas that support spearscale along the north bank of the Arroyo Mocho is that they have distinctive white, alkaline soils, possibly where long-buried lenses of these soils were uncovered as a result of the Arroyo channel excavation, and support very little other plant cover (see photo appendix). Therefore, all such areas along the Arroyo Mocho channel adjacent to Staples Ranch were mapped as potential San Joaquin spearscale habitat (Figure 2). The area mapped as San Joaquin spearscale habitat within the Arroyo Mocho channel totals 0.27 acres. Approximately 0.07 acres of this habitat is located in the area along the western portion of the Arroyo Mocho, where the access road dips down below the bank.

Proposed Project Impacts

The Proposed Project involves development of the Staples Ranch property with a mix of urban uses and includes the construction of bridges over the western portion of the Arroyo Mocho so that Stoneridge Drive can be extended from its current eastern terminus at Trevor Parkway to access the Staples Ranch property. Because development of the property requires that fill be spread over the entire site (as was originally contemplated under the Arroyo project), spearscale populations and their habitat on the Staples Ranch property would be lost. In addition, the Stoneridge Drive bridge construction would require grading and abutment construction activities along the northern bank of the Arroyo Mocho channel in the vicinity of the dip in the north bank access road, impacting additional spearscale and their habitat that was mapped in the most recent survey.

In all, the Proposed Project would result in the loss of 1.70 acres of San Joaquin spearscale habitat on the Staples Ranch property, as well as an additional 0.07 acres of spearscale habitat on the north bank of the Arroyo Mocho, for a total of 1.77 acres (Figure 2). While plant numbers can vary widely from year to year, these areas contained a total of 393 plants in June, 2009.

Although the permit for the Arroyo realignment project allowed for permanent impacts to the entire spearscale population within the Staples Ranch property, through the establishment of a new population within the Arroyo Mocho channel, not all of the original Staples Ranch population or habitat was impacted because fill material was not distributed throughout the site as originally planned. Furthermore, the June 2009 survey found spearscale plants and suitable habitat along the north bank of Arroyo Mocho channel in the vicinity of the planned Stoneridge Drive Bridge, which is likely to be impacted by bridge construction.

Even though the surveys established that a new spearscale population has been successfully established along the north bank of the Arroyo Mocho, as required by the Arroyo realignment permit to mitigate for loss of the Staples Ranch population, a conservative approach would be to provide additional mitigation for the population and habitat that remains on the property because fill material has not been distributed over the site. In addition, because Stoneridge Drive bridge construction is likely to impact the small, westernmost portion of spearscale habitat along the north bank of the Arroyo Mocho, additional mitigation is necessary to offset this impact.

Mitigation

The preferred methods for mitigating for the loss of sensitive plant populations, in order of preference, are avoidance, on-site mitigation and off-site mitigation. Modifying the Proposed Project to avoid the remaining spearscale on Staples Ranch is not considered feasible because the need to fill much of the site to create positive drainage for sewers and storm water would result in small, unmanageable areas of spearscale habitat that would likely still be impacted by changes in drainage. Similarly, because the road right-of-way on the south side of the Arroyo Mocho is fixed, the alignment of the Stoneridge Drive Bridge cannot be changed to avoid the small area of spearscale habitat along the bank of the Mocho. On-site mitigation, by relocating the existing spearscale population to another portion of Staples Ranch, such as the proposed community park site, is also not considered feasible because the alkaline soils necessary for the plants to thrive are not found in other parts of Staples Ranch. Therefore, off-site mitigation for loss of habitat is considered to be the most feasible mitigation method.

Acceptable off-site mitigation for the loss of spearscale habitat as a result of the Proposed Project would be for the project proponents to cause the permanent preservation of similar San Joaquin spearscale habitat in Alameda County, prior to disturbing on-site habitat. This could be accomplished either by purchasing credits from an existing mitigation bank, such as the Springtown Natural Community Preserve in the City of Livermore, or by permanently protecting other spearscale habitat in Alameda County that contains the plant, through the use of a conservation easement or other similar method. An appropriate ratio to mitigate for the loss of spearscale as a result of the Project would be to preserve off-site habitat acreage at 1:1 for the amount of spearscale habitat lost. Therefore, a total of 1.77 acres of off-site San Joaquin spearscale habitat that contains the plant should be required to be protected prior to construction of the Staples Ranch project.

Sincerely,

Geoff Smick

Geoff Smick
Associate Plant Ecologist

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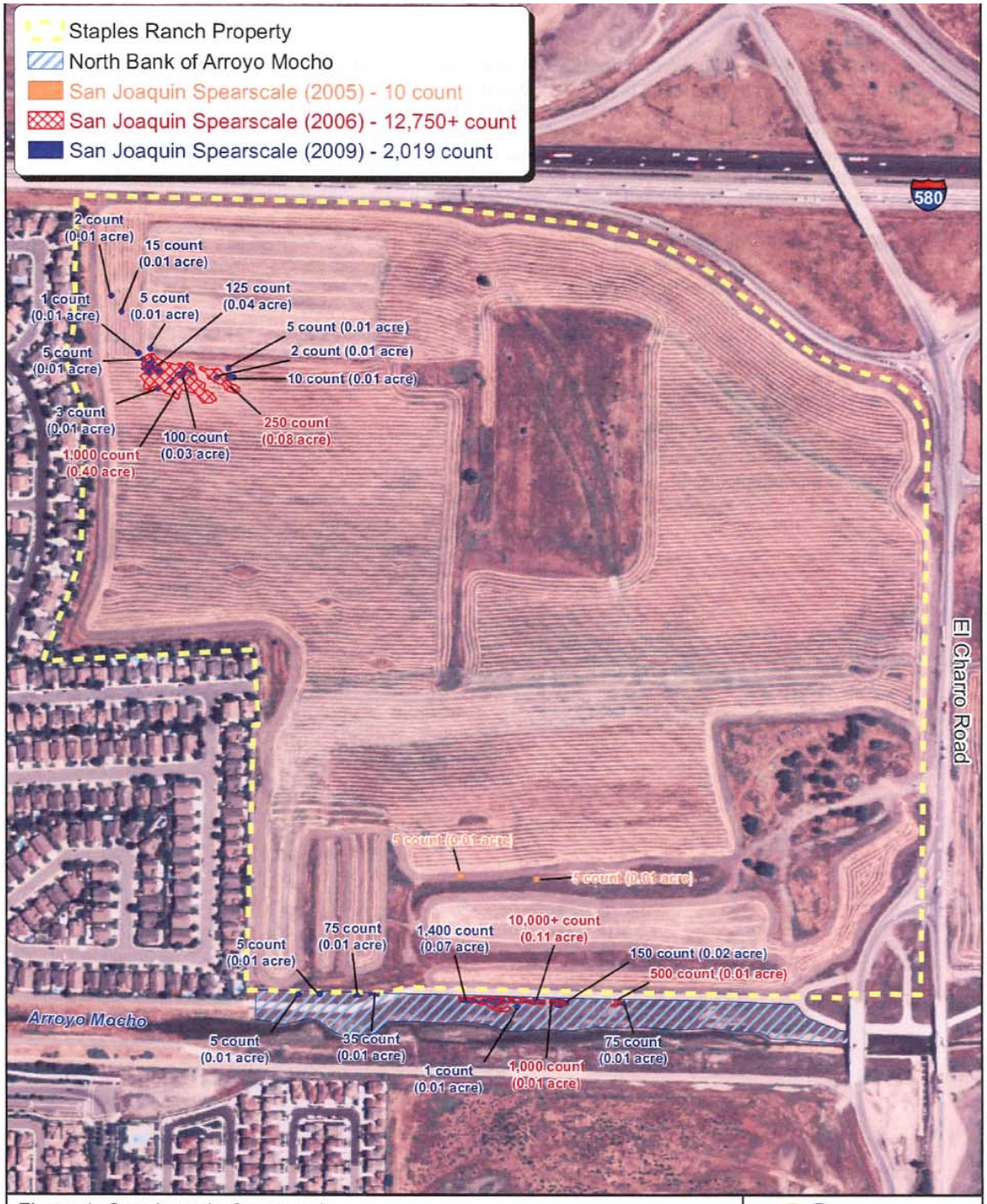

Figure 1. San Joaquin Spearscale Observed 2005, 2006, and 2009

Staples Ranch
Pleasanton, California

SCALE
400 200 0 400 Feet

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Date: June 2009
Map By: Michael Rochelle
Aerial: 2005 NAIP
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Figure 1. San Joaquin Spearscale Observed 2005, 2006, and 2009

Staples Ranch
Pleasanton, California

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August 6, 2009

Brian Dolan
Director of Community Development
City of Pleasanton
200 Old Bernal Avenue
P.O. Box 520
Pleasanton, California 94566

RE: **Staples Ranch-Arroyo Mocho California Red-legged Frog Surveys**

Dear Mr. Dolan:

This letter presents the results of field surveys undertaken by WRA, Inc. (WRA) for California Red-legged Frog (CRLF; *Rana draytonii*) along a reach of Arroyo Mocho located adjacent to the Staples Ranch site (Study Area) in Alameda County, during June and July 2009. CRLF is a federal threatened species. The purpose of the surveys was to provide an update on the status of this species in (1) the vicinity of the proposed bridge associated with development of the Staples Ranch site, and (2) the reach of Arroyo Mocho adjacent to the Staples Ranch site upstream of the proposed bridge.

This survey focused on the portion of Arroyo Mocho where bridge construction is proposed (Figure 1). Secondary areas, including approximately 2,400 feet of Arroyo Mocho upstream of the proposed bridge, were also surveyed; however, the full U.S. Fish and Wildlife Service (USFWS) protocol was not conducted because no project-related impacts were identified in the secondary area.

Previous Survey Efforts

LSA Associates (1993) conducted a special status species survey effort within the Study Area and its immediate vicinity in 1993. Arroyo Las Positas was re-aligned after 2002 and now converges with Arroyo Mocho near the southeastern corner of the Staples Ranch property. A subsequent survey effort in 2002 by Monk and Associates (2002) was also conducted. CRLF was not observed during either set of surveys. LSA (1993) and Monk & Associates (2002) noted that Arroyo Mocho was dry during the respective survey periods (i.e., February - April 1993 and May - June 2002), while Arroyo Las Positas was apparently perennial and provided suitable breeding habitat for CRLF. However, Monk & Associates (2002) also reported high numbers of Bullfrogs and Green Sunfish (*Lepomis cyanellus;* also a non-native predator of CRLF) in Arroyo Las Positas, and concluded that neither creek supported a population of CRLF within the area surveyed.

Since 2004, Davis Environmental Consulting has conducted annual biological monitoring of the approximately 2,000-foot re-alignment reach adjacent to the Staples Ranch site. CRLF was not observed during any of the monitoring visits (E. Davis, pers. comm.).

Figure 1. Study Area Location Map

Pleasanton, California

SCALE

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Study Area

The Study Area is located in Pleasanton, in central Alameda County. It consists primarily of an approximately 2,900-foot linear reach of Arroyo Mocho, a formerly ephemeral and currently perennial drainage that lies roughly west to east and transverses the cities of Pleasanton and Livermore. The Study Area is bounded by a housing development and undeveloped Staples Ranch to the north, adjacent portions of Arroyo Mocho and associated uplands to the east and west, and an additional housing development and quarry operation to the south.

Survey Methods

Protocol-level surveys for CRLF were conducted within the Study Area. The methodology employed followed *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005).

According to USFWS (2005), field surveys should be conducted between January and September. A complete suite of surveys consists of six breeding-season surveys (two day and four nocturnal surveys) from January through June, and two non-breeding-season surveys (one day and one nocturnal survey) from July through September. In this case, the six breeding-season surveys were conducted throughout June, and the non-breeding-season surveys were conducted the first week of July. USFWS (2005) allows for respective day and night surveys to be conducted on the same day.

Methodology for both day and nocturnal surveys involved a pair of biologists covering the Study Area on foot. Biologists visually scanned all shoreline areas of Arroyo Mocho while also listening carefully for frogs (i.e., both vocalizations and "plops" of disturbed basking frogs leaping into the water). During day surveys, there was a general tendency to walk along the creek's banks and thus increase the likelihood of encountering basking frogs. During nocturnal surveys, biologists typically conducted observations from within the creek, i.e. one biologist covering each bank. Binoculars were used by surveyors during all surveys. Nocturnal surveys focused on detecting amphibian eyeshine using LED headlamps and/or LED Mag-lite flashlights. When portions of the pools and backwaters were covered with floating vegetation, both the shoreline and surface of the water were scanned. While surveying along the bank, care was taken not to crush sheltering habitat, such as vegetation and woody debris. Areas of dense vegetation were surveyed as adequately as possible. All wildlife species observed within the Study Area were noted.

Survey Results

CRLF was not observed during the surveys. Bullfrogs were observed during most of the night surveys, though these respective detections included only a few individuals. On June 23, a sub-adult and adult Bullfrog in close proximity to each other (i.e., less than two feet apart) were observed within one of the Study Area's larger backwaters. Pacific Treefrog (*Hyla regilla*) was also observed in small numbers during most of the night surveys. No amphibian larvae were observed during the surveys.

In addition to Bullfrogs, potential non-native, aquatic predators of CRLF and other amphibians observed in Arroyo Mocho during the surveys included Common Carp (*Cyprinus carpio*) and red swamp crayfish (*Procambarus clarkii*). General survey data are provided in Table 1 below.

Table 1. Survey data for protocol-level CRLF surveys conducted at Arroyo Mocho, 2009.

Date	Survey #	Day / Night	Time start	Time end	Air temp. (°C)	# CRLF observed
June 4	1	Day	18:45	19:55	17	0
June 4	2	Night	21:45	23:00	14	0
June 10	3	Night	21:40	22:55	14 - 13	0
June 16	4	Day	16:40	17:35	23	0
June 16	5	Night	21:32	22:40	15	0
June 23	6	Night	22:10	23:20	18 - 17.5	0
July 6	7	Day	16:50	18:35	25	0
July 6	8	Night	21:40	23:45	14 - 13	0

Analysis of Previously Proposed Mitigation Measures

Field surveys conducted in 1993, 2002, and 2009 suggest that CRLF is not present in the Study Area. In addition, no dispersing CRLF were encountered during two years (2006-08) of protocol-level California Tiger Salamander trapping surveys conducted by WRA in uplands adjacent to Arroyo Mocho. During the salamander survey, approximately 9,500 feet of both perimeter and internal drift fencing with 489 2-gallon buckets were installed in accordance with USFWS protocol.

Despite these results, the USFWS is likely to assume that connectivity with upstream occurrences could result in individual frogs dispersing into the area. WRA proposed the following mitigation measures in the Staples Ranch Biological Resource Assessment (WRA 2007):

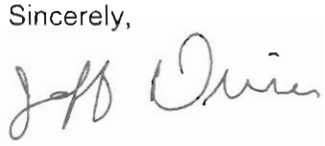
> ***Mitigation 4a: Restrict All Ground Disturbance Associated with Bridge Construction to the Dry Season (May 1 to October 15) or Use Exclusion Fencing for Construction that Cntinues outside the Dry Season***
> *To minimize disturbance to dispersing or foraging California red-legged frogs, all bridge construction activity within 100 feet of aquatic habitat shall be conducted during the dry season, between May 1 and October 15, or before the onset of the rainy season, whichever occurs first unless exclusion fencing is utilized. Construction that commences in the dry season may continue into the rainy season if exclusion fencing is placed between the bridge construction site and Arroyo Mocho to keep the frog from entering the construction area.*
>
> ***Mitigation 4b: Conduct a Pre-construction Survey for California Red-legged Frog***
> *To avoid and minimize impacts to the California red-legged frog, the project proponent shall retain a qualified wildlife biologist to conduct pre-construction clearance surveys in the bridge construction footprint for the frog no more than 48 hours before bridge construction activities in and within 100 feet of Arroyo Mocho. If a California red-legged frog is encountered during any project activities, construction will cease until the frog is*

removed by a USFWS-approved biologist and relocated to nearby suitable aquatic habitat. The USFWS and CDFG will be notified within five working days of any frog relocation.

Based on the results of field surveys, WRA recommends that these measures are still appropriate, and that they will reduce potential CRLF impacts to less than significant in the unlikely event that an individual frog disperses into the bridge construction area.

Please let me know if you have any questions.

Sincerely,



Jeff Dreier
Senior Wildlife Ecologist

References

LSA Associates. 1993. Biological Survey: Arroyo Las Positas - Arroyo Mocho Widening and Realignment. Unpublished report to the Alameda County Planning Department. September.

Monk & Associates. 2002. California Red-legged Frog and General Special-Status Species Survey Report. In: Davis Environmental Consulting, author. Biological Resources Survey Report for the Arroyo Mocho Widening/Arroyo Las Positas Realignment Project. Unpublished report for the Alameda County Community Development Agency. July.

U.S. Fish and Wildlife Service (USFWS). 2005. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. April.

WRA. 2007. Biological Resources Assessment, Impact Analysis and Mitigation: Staples Ranch, Pleasanton, Alameda County, California. Unpublished report prepared for Davis Environmental Consulting, Davis, California.

California Red-legged Frog Survey Report

ARROYO MOCHO, STAPLES RANCH
ALAMEDA COUNTY, CALIFORNIA

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1.0 INTRODUCTION

This report presents the results of protocol-level field surveys undertaken by WRA, Inc. (WRA) for the California Red-legged Frog (CRLF; *Rana draytonii*) along a reach of Arroyo Mocho located adjacent to the Staples Ranch site (Study Area) in Alameda County, during June and July 2009. CRLF is a U. S. Fish and Wildlife Service (USFWS) Threatened Species and a California Department of Fish and Game Species of Special Concern.

1.1 Study Area Description

The approximately 13.3-acre Study Area is located in Pleasanton, in central Alameda County. It consists primarily of Arroyo Mocho, a formerly ephemeral and currently perennial creek that lies roughly west to east and transverses the cities of Pleasanton and Livermore. The Study Area is bounded by a housing development and undeveloped Staples Ranch to the north, adjacent portions of Arroyo Mocho and associated uplands to the east and west, and an additional housing development and quarry operation to the south. For survey purposes, the Study Area was divided into two sections: the Primary Study Area is a 1,000 foot linear reach of Arroyo Mocho centered at the western boundary of Staples Ranch; the Secondary Study Area includes all of the Primary Study Area and continues east, with its eastern boundary lying 500 linear feet east of El Charro Road (Figure 1).

As stated above, Arroyo Mocho is currently perennial and flows east to west, although it was deemed ephemeral at least as recently as 2002 (Monk & Associates 2002). Within the vicinity of the Study Area, Arroyo Mocho is channelized with an overlying and variable substrate of sand, mud, and/or rock. Its bed varies from approximately three to 30 feet in width. Water depth ranges from approximately four inches in portions with a riffle-like character to approximately four feet in the deepest area (i.e., a plunge pool just east of El Charro Road), with an average depth of approximately one foot. Portions of the creek (generally narrow) currently have relatively high flow within the Study Area, while in other portions islands and small peninsulas result in backwaters with near-still or still water. Adjacent to El Charro Road, Arroyo Mocho passes through a large, cement-lined basin with relatively steep cement banks. Vegetation lining Arroyo Mocho consists primarily of upland species such as grasses, fennel (*Foeniculum vulgare*), and thistles, as well as more limited patches of emergent marsh vegetation including tule (*Scirpus* sp.) and cattail (*Typha* sp.). Riparian vegetation is also relatively limited along the creek, although recent presumed restoration plantings of cottonwood (*Populus fremontii*), willows (*Salix* spp.) and other riparian-associated plants are evident.

1.2 California Red-legged Frog Natural History

CRLF, formerly considered a subspecies of the Red-legged Frog (*R. aurora*), is the only native "pond frog" found throughout much of California. It was listed as Threatened by USFWS in 1996 following the determination that it had been extirpated from approximately 70 percent of its former range (Federal Register 1996).

Typical CRLF breeding habitat is characterized by deep (i.e., at least 20 inches) and still or slow-moving water associated with emergent marsh and/or riparian vegetation (Jennings and Hayes 1994). Suitable aquatic habitats include ponds (ephemeral and permanent),

Figure 1. Study Area Location Map

Pleasanton, California

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streams/creeks (ephemeral and permanent), seasonal wetlands, springs, seeps, man-made features (e.g. stock ponds, roadside ditches), marshes, dune ponds, and lagoons. Depending on local conditions, CRLF may complete its entire life cycle in a particular patch of habitat (i.e., a pond suitable for all life stages), or utilize multiple habitat types. CRLF often undergoes estivation (i.e., a period of inactivity) during the dry months, over-summering in small mammal burrows, moist leaf litter, incised stream channels, or large cracks in the bottom of dried ponds (Jennings and Hayes 1994). Adult and sub-adult (i.e., newly metamorphosed) CRLF may disperse from breeding habitats to nearby riparian and/or estivation habitats in the summer. Conversely, during the rainy season CRLF may disperse from estivation sites to suitable breeding habitat. During such dispersals, frogs can travel up to one mile over a variety of topographic and habitat types (Bulger et al. 2003). Upland dispersal habitats include riparian corridors, non-native annual grasslands, and oak savannas.

The CRLF breeding period is typically January through April; larvae generally take several months to reach metamorphosis (Jennings and Hayes 1994). Larvae are presumed to feed mainly on algae, while adults prey upon a variety of invertebrates and small vertebrates. CRLF itself is susceptible to predation during all life stages; non-native aquatic predators such as Bullfrog (*Rana catesbeiana)* and centrarchid fishes (e.g., bass and sunfish) are generally believed capable of having substantial impacts on CRLF populations (Jennings and Hayes 1994).

1.3 Critical Habitat

Critical Habitat is a term defined and used in the (federal) Endangered Species Act (ESA) as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. ESA requires federal agencies to consult with USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species.

The Study Area is not within CRLF Critical Habitat. However the nearest Critical Habitat unit, ALA-1B, is located approximately 3.1 northeast of the Study Area (Federal Register 2006).

2.0 METHODS

2.1 Literature Review

Prior to initiating the habitat assessment and survey effort, a search of CDFG's California Natural Diversity Database (CNDDB) was conducted to identify CRLF occurrences within two miles of the Study Area's boundaries. An element search of the database was conducted for Alameda County.

WRA also reviewed unpublished reports containing the results of previous habitat assessments and survey results for special status species (including CRLF) within and in the immediate vicinity of the Study Area. These reports were authored by LSA Associates (1993) and Monk & Associates (2002).

2.2 Protocol-level Surveys

Protocol-level surveys for CRLF were conducted within the Study Area. The methodology employed followed *Revised Guidance on Site Assessments and Field Surveys for the California*

Red-legged Frog (USFWS 2005; original dated 1997).

According to USFWS (2005), field surveys should be conducted between January and September. A complete suite of surveys consists of six breeding-season surveys (two day and four nocturnal surveys) from January through June, and two non-breeding-season surveys (one day and one nocturnal survey) from July through September. In this case, the six breeding-season surveys were conducted throughout June, and the non-breeding-season surveys were conducted the first week of July. USFWS (2005) allows for respective day and night surveys to be conducted on the same day.

All breeding-season surveys (i.e., those conducted in June) covered only the Primary Study Area. The non-breeding surveys (i.e., those conducted in July) covered the Secondary Study Area.

Methodology for both day and nocturnal surveys involved a pair of biologists covering the Study Area on foot. Biologists visually scanned all shoreline areas of Arroyo Mocho while also listening carefully for frogs (i.e., both vocalizations and "plops" of disturbed basking frogs leaping into the water). During day surveys, there was a general tendency to walk along the creek's banks and thus increase the likelihood of encountering basking frogs. During nocturnal surveys, biologists typically conducted observations from within the creek, i.e. one biologist covering each bank. Binoculars were used by surveyors during all surveys. Nocturnal surveys focused on detecting amphibian eyeshine using LED headlamps and/or LED Mag-lite flashlights. When portions of the pools and backwaters were covered with floating vegetation, both the shoreline and surface of the water were scanned. While surveying along the bank, care was taken not to crush sheltering habitat, such as vegetation and woody debris. Areas of dense vegetation were surveyed as adequately as possible. All wildlife species observed within the Study Area were noted (Appendix C).

Surveys were conducted by WRA wildlife biologists Kate Allan, Daniel Chase, Dana Riggs, Robert Schell, William Stagnaro, Liza Wozniak, and Jason Yakich.

3.0 RESULTS

Data sheets derived from the current surveys, required under the revised protocol, are provided as Appendix A. Representative photographs of the Study Area are presented in Appendix B.

3.1 Literature Review

According to the CNDDB search, there are five documented CRLF occurrences within two miles of the Study Area. Four of these occurrences are to the north, including one within one mile of the Study Area (CDFG 2009). However, the relevant habitats in these occurrences have no aquatic connectivity to the Study Area and the 580 Freeway, which lies between Arroyo Mocho and these occurrences, serves as effective barrier to CRLF dispersal.

The fifth occurrence is located approximately 1.5 miles east of the Study Area, in Arroyo Las Positas within the Las Positas Golf Course in Livermore (CDFG 2009). This occurrence consists of a single adult CRLF observed in 1997. Assuming perennial flow, there is direct aquatic connectivity between this occurrence and the Study Area.

LSA Associates (1993) and Monk & Associates (2002) respectively conducted special status

species surveys at Staples Ranch and an adjacent property prior to the re-alignment of Arroyo Las Positas, a perennial creek which previously flowed through Staples Ranch and converged with Arroyo Mocho within the current Study Area. Arroyo Las Positas was re-aligned after 2002 and now converges with Arroyo Mocho, near the southeastern corner of the Staples Ranch property. The survey area in both cases included reaches of Arroyo Las Positas and Arroyo Mocho, with the current Study Area included in the latter. CRLF was not observed during either set of surveys. LSA (1993) and Monk & Associates (2002) noted that Arroyo Mocho was dry during the respective survey periods (i.e., February - April 1993 and May - June 2002), while Arroyo Las Positas was apparently perennial and provided suitable breeding habitat for CRLF. However, Monk & Associates (2002) also reported high numbers of Bullfrogs and Green Sunfish (*Lepomis cyanellus;* also a non-native predator of CRLF) in Arroyo Las Positas, and concluded that neither creek supported a population of CRLF within the area surveyed.

3.2 Protocol-level Surveys

General survey data are provided in Table 1 below.

Table 1. Survey data for protocol-level CRLF surveys conducted at Arroyo Mocho, 2009.

Date	Survey #	Day / Night	Time start	Time end	Air temp. (°C)	# CRLF observed
June 4	1	Day	18:45	19:55	17	0
June 4	2	Night	21:45	23:00	14	0
June 10	3	Night	21:40	22:55	14 - 13	0
June 16	4	Day	16:40	17:35	23	0
June 16	5	Night	21:32	22:40	15	0
June 23	6	Night	22:10	23:20	18 - 17.5	0
July 6*	7	Day	16:50	18:35	25	0
July 6*	8	Night	21:40	23:45	14 - 13	0

* These surveys covered the Secondary Study Area; all previous surveys covered the Primary Study Area.

CRLF was not observed during the surveys. Bullfrogs were observed during most of the night surveys within the Primary Study Area, though these respective detections included only a few individuals. On June 23, a sub-adult and adult Bullfrog in close proximity to each other (i.e., less than two feet apart) were observed within one of the Primary Study Area's larger backwaters. Pacific Treefrog (*Hyla regilla*) was also observed in small numbers during the first four night surveys. During surveys 7 and 8 which covered the Secondary Study Area, a total of eight Bullfrogs were observed, including three individuals in the cement-lined basin adjacent to El Charro Road. No amphibian larvae were observed during the surveys.

In addition to Bullfrogs, potential non-native, aquatic predators of CRLF and other amphibians observed in Arroyo Mocho during the surveys included Common Carp (*Cyprinus carpio*) and red swamp crayfish (*Procambarus clarkii*).

4.0 DISCUSSION

CRLF was not observed within the Study Area during a complete set of protocol-level surveys (i.e., eight surveys total) conducted in 2009. These results are consistent with those obtained by LSA Associates (1993) and Monk & Associates (2002) following respective survey efforts within the Study Area and its immediate vicinity. In contrast to the prior survey periods, Arroyo Mocho held water, including one plunge pool of suitable depth for CRLF breeding, at least into July 2009. Furthermore, emergent marsh and riparian vegetation appear to be increasing in biomass along and within Arroyo Mocho. Both of these factors indicate that Arroyo Mocho is improving as potential CRLF habitat, although its current status as a perennial creek is dependent upon flow regime (and portions that appeared suitable for CRLF breeding may become less so during the winter season if water flow is increased). The effects of Bullfrogs, crayfish and other non-native predators upon the likelihood of CRLF establishment in Arroyo Mocho are unknown, although only small numbers of Bullfrogs are currently resident within the Study Area.

In summary, despite apparent habitat improvements, survey results indicate that the reach of Arroyo Mocho within the Study Area does not currently support CRLF.

5.0 REFERENCES

Bulger J. B., J. S. Norman, And R. B. Seymour. 2003. Terrestrial Activity and Conservation Of Adult California Red-Legged Frogs Rana *Aurora draytonii*, In Coastal Forests and Grasslands. Biological Conservation. Vol. 110: 10 pp.

California Department of Fish and Game (CDFG). 2009. Natural Diversity Data Base. Wildlife Habitat Data and Analysis Branch, Sacramento.

Federal Register. 2006. Final Critical Habitat for the California Red-legged Frog (*Rana aurora draytonii*). 71(71): 19243-19346. April.

Federal Register. 1996. Determination of Threatened Status for the California Red-legged Frog. 61(101): 25813-25833. May.

Jennings, M.R. 2000. California Red-legged Frog. In Goals Project, 2000, Baylands Ecosystem Species and Community Profiles: Life histories and environmental requirements of key plants, fish and wildlife. Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. P.R. Olofson, editor. San Francisco Bay Regional Water Quality Control Board, Oakland.

Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. Contract No. 8023.

LSA Associates. 1993. Biological Survey: Arroyo Las Positas - Arroyo Mocho Widening and Realignment. Unpublished report to the Alameda County Planning Department. September.

Monk & Associates. 2002. California Red-legged Frog and General Special-Status Species Survey Report. In: Davis Environmental Consulting, author. Biological Resources Survey Report for the Arroyo Mocho Widening/Arroyo Las Positas Realignment Project. Unpublished report for the Alameda County Community Development Agency. July.

U.S. Fish and Wildlife Service (USFWS). 2005. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. April.

Appendix A. Survey Data Sheets

California Red-legged Frog Survey Data Sheet

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 06/04/2009 (mm/dd/yyyy) **Survey Biologist:** Allan, Kate (Last name) (first name)

Survey Biologist: Riggs, Dana (Last name) (first name)

Site Location: Alameda Co, Staples Ranch Property, 37°41'38.56"N, 121°51'18.78"W
(County, General location name, UTM Coordinates or Lat/Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: _____
Brief description of proposed action:

Type of Survey (circle one): **DAY** **NIGHT** **BREEDING** **NON-BREEDING**

Survey number (circle one): **1** **2** **3** **4** **5** **6** **7** **8**

Begin Time: 18:45 **End Time:** 19:55

Cloud cover: _____ **Precipitation:** none

Air Temperature: _____ **Water Temperature:** 21.3°C

Wind Speed: 0-2 mph **Visibility Conditions:** clear

Moon phase: waxing gibbous **Humidity:** 62%

Description of weather conditions: clear, calm, warm, dry

Brand name and model of light used to conduct surveys: _____

Were binoculars used for the surveys (circle one)? **YES** **NO**
Brand, model, and power of binoculars: 8x40

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
Ø					

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Procambarus spp,

Other notes, observations, comments, *etc.*

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

California Red-legged Frog Survey Data Sheet

[redacted]

Date of Survey: 06/04/2009 (mm/dd/yyyy) **Survey Biologist:** Allan, Kate (Last name) (first name)

Survey Biologist: Riggs, Dana (Last name) (first name)

Site Location: Alameda Co, Staples Ranch Property, 37°41'38.56"N 121°51'18.78"W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: _____
Brief description of proposed action:

Type of Survey (circle one): **DAY** **NIGHT** **BREEDING** **NON-BREEDING**

Survey number (circle one): **1** **2** **3** **4** **5** **6** **7** **8**

Begin Time: 21:45 **End Time:** 23:00

Cloud cover: clear **Precipitation:** none

Air Temperature: [illegible] **Water Temperature:** [illegible]

Wind Speed: 0-2mph **Visibility Conditions:** clear

Moon phase: waxing gibbous **Humidity:** 62%

Description of weather conditions: clear, calm

Brand name and model of light used to conduct surveys: [illegible]

Were binoculars used for the surveys (circle one)? **YES** **NO**
Brand, model, and power of binoculars: 8x40

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of Indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
Rana catesbeiana	1	O	juvenile	3½"	100%
Hyla regilla	20	H	adults		100%

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Raccoon tracks observed on western end of channel, south bank

Other notes, observations, comments, *etc.*

RaCa: pale green, w/ tympanic membrane in water, mid channel

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

California Red-legged Frog Survey Data Sheet

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 06/10/2009 (mm/dd/yyyy)

Survey Biologist: Chase (Last name), Daniel (first name)

Survey Biologist: Yakich (Last name), Jason (first name)

Site Location: Alameda Co, Arroyo Mocho at Staples Ranch, 37° 41' 38.56" N 121° 51' 18.78" W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: _____
Brief description of proposed action:

Type of Survey (circle one): **DAY** **NIGHT** **BREEDING** **NON-BREEDING**

Survey number (circle one): **1** **2** **3** **4** **5** **6** **7** **8**

Begin Time: 21:40 **End Time:** 22:55

Cloud cover: 90% (high) **Precipitation:** None

Air Temperature: 14-13°C **Water Temperature:** 18.5°C

Wind Speed: 3-8 mph, west **Visibility Conditions:** Good / no issues

Moon phase: Waning gibbous, 92% illuminated **Humidity:** Low

Description of weather conditions: Overcast, warm, with no precipitation / fog.

Brand name and model of light used to conduct surveys: Energizer 2-bulb LED headlamps, LED Mag-lites

Were binoculars used for the surveys (circle one)? **YES** **NO**

Brand, model, and power of binoculars: Eagle Optics Ranger Platinum Class 8 x 42, Nikon Monarchs 8x42

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
Pacific Treefrog Hyla (Pseudacris) regilla	2	O, H	Adult	–	100 %

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Potential predators included Great Blue Heron (1), Common Carp (≥ 1 ; ~ 20" SL), red swamp crayfish (Procambarus clarkii).

Other notes, observations, comments, *etc.*

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

California Red-legged Frog Survey Data Sheet

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 06/16/2009 (mm/dd/yyyy)

Survey Biologist: Stagnaro, William (Last name) (first name)

Survey Biologist: Yakich, Jason (Last name) (first name)

Site Location: Alameda Co., Arroyo Mocho at Staples Ranch, 37° 41' 38.56" N 121° 51' 18.73" W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: _____
Brief description of proposed action:

Type of Survey (circle one): (DAY) NIGHT (BREEDING) NON-BREEDING

Survey number (circle one): 1 2 3 (4) 5 6 7 8

Begin Time: 16:40 **End Time:** 17:35

Cloud cover: 40% **Precipitation:** None

Air Temperature: 23°C **Water Temperature:** 18°C

Wind Speed: 5-10 mph, west **Visibility Conditions:** Good / no issues

Moon phase: Waning crescent, 41% illuminated **Humidity:** Low.

Description of weather conditions: Partly cloudy, warm, with no precipitation / fog.

Brand name and model of light used to conduct surveys: N/A

Were binoculars used for the surveys (circle one)? (YES) NO

Brand, model, and power of binoculars: Eagle Optics Ranger Platinum Class 8x42
Nikon Monarchs, 8x42

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
N/A					

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Potential predators included Great Egret (1)

Other notes, observations, comments, *etc.*

No amphibians observed.

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

California Red-legged Frog Survey Data Sheet

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 06/16/2009 (mm/dd/yyyy)

Survey Biologist: Stagnaro, William (Last name) (first name)

Survey Biologist: Yakich, Jason (Last name) (first name)

Site Location: Alameda Co., Arroyo Mocho at Staples Ranch, 37° 41' 39.56" N 121° 51' 19.78" W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: _____
Brief description of proposed action:

Type of Survey (circle one): **DAY** **NIGHT** **BREEDING** **NON-BREEDING**

Survey number (circle one): 1 2 3 4 5 6 7 8

Begin Time: 21:32 **End Time:** 22:40

Cloud cover: 90% **Precipitation:** None

Air Temperature: 15°c (start) **Water Temperature:** 17.5°c

Wind Speed: ~5 mph, west **Visibility Conditions:** Good / no issues

Moon phase: Waning crescent, 41% illuminated **Humidity:** low

Description of weather conditions: Overcast, cool, with no precipitation / fog.

Brand name and model of light used to conduct surveys: LED headlamps, LED Mag-lites

Were binoculars used for the surveys (circle one)? **YES** **NO**
Brand, model, and power of binoculars: Eagle Optics Ranger Platinum Class 8x42, Nikon Monarchs, 8x42

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
Bullfrog Rana catesbeiana	2	O H	Sub-adult Adult (presumed)	~3+ (S-V) —	100%
Pacific Treefrog Hyla / Pseudacris regilla	2	H	Adult	-	100%

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Potential predators included Barn Owl (1) and Striped Skunk (1). Also red swamp crayfish (4+).

Other notes, observations, comments, *etc.*

Presumed adult Bullfrog was vocalizing just east of the boundary of the survey area. Sub-adult Bullfrog detected by eyeshine. Pacific Treefrogs just west of the survey area, heard only.

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

California Red-legged Frog Survey Data Sheet

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 06/23/2009 (mm/dd/yyyy)

Survey Biologist: Woznick, Liza (Last name) (first name)

Survey Biologist: Yakich, Jason (Last name) (first name)

Site Location: Alameda Co., Arroyo Mocho at Staples Ranch, 37° 41' 38.56" N, 121° 51' 18.78" W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: _____
Brief description of proposed action:

Type of Survey (circle one): **DAY** **NIGHT** **BREEDING** **NON-BREEDING**

Survey number (circle one): **1** **2** **3** **4** **5** **6** **7** **8**

Begin Time: 22:10 **End Time:** 23:20

Cloud cover: None **Precipitation:** None

Air Temperature: 18 - 17.5°C **Water Temperature:** 19°C

Wind Speed: Calm **Visibility Conditions:** Good / no issues

Moon phase: Waxing crescent, 1% illuminated **Humidity:** Low

Description of weather conditions: Clear, warm, with no precipitation / fog.

Brand name and model of light used to conduct surveys: _____

Were binoculars used for the surveys (circle one)? **YES** **NO**
Brand, model, and power of binoculars: Eagle Optics Ranger Platinum Class 8 x 42

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of Indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
Bullfrog Rana catesbeiana	2	O	Sub-adult Adult	~3" (S.V) ~6"	100%

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Potential predators included red swamp crayfish (St).

Other notes, observations, comments, *etc.*

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

California Red-legged Frog Survey Data Sheet

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 07/06/2009 (mm/dd/yyyy)

Survey Biologist: Schell, Robert (Last name) (first name)

Survey Biologist: Yakich, Jason (Last name) (first name)

Site Location: Alameda Co., Arroyo Mocho at Staples Ranch, 37° 41' 38.37" N 121° 51' 07.41" W
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

ATTACH A MAP (include habitat types, important features, and species locations)

Proposed project name: _____
Brief description of proposed action:

Type of Survey (circle one): DAY NIGHT BREEDING NON-BREEDING

Survey number (circle one): 1 2 3 4 5 6 7 8

Begin Time: 16:50 End Time: 18:35

Cloud cover: 0% Precipitation: None

Air Temperature: 25° C Water Temperature: 26° C

Wind Speed: 5-8 mph, west Visibility Conditions: Good / no issues

Moon phase: Waxing gibbous, 100% illuminated Humidity: Low

Description of weather conditions: Clear, warm, with no precipitation / fog

Brand name and model of light used to conduct surveys: LED headlamps, LED Mag-lites

Were binoculars used for the surveys (circle one)? YES NO

Brand, model, and power of binoculars: Eagle Optics Ranger Platinum Class 8x42, Swift Warbler 8x42

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of Indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
Western Toad *Bufo boreas*	1	O	Adult	-	100%
Bullfrog *Rana catesbeiana*	3 1	C H	<subadult; adult Adult	3"; 8" -	100%

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Potential predators included Common Carp and Great Egret.

Other notes, observations, comments, *etc.*
One very large Bullfrog observed (~8" s-v length), in Secondary Study Area. Two other Bullfrogs observed, and one calling. One adult Western Toad observed in the stormwater basin below El Chaparro Rd. overpass. This survey included the Secondary Study Area (i.e., Primary Study Area plus Arroyo Mocho to 500' linear, east of El Chaparro Road.

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

California Red-legged Frog Survey Data Sheet

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 07/06/2009 (mm/dd/yyyy)

Survey Biologist: Schell, Robert (Last name) (first name)

Survey Biologist: Yakich, Jason (Last name) (first name)

Site Location: Alameda Co., Arroyo Mocho at Styles Ranch, 37° 31' 38.51" / 121° 51' 07.41" (County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: _____

Brief description of proposed action:

Type of Survey (circle one): **DAY** **NIGHT** **BREEDING** **NON-BREEDING**

Survey number (circle one): 1 2 3 4 5 6 7 8

Begin Time: 21:40 **End Time:** 23:45

Cloud cover: 0 % **Precipitation:** None

Air Temperature: 14 - 13°c **Water Temperature:** 18.5°c

Wind Speed: 1-4 mph, west **Visibility Conditions:** Good / no issues

Moon phase: Waxing gibbous, 100% illuminated. **Humidity:** Low.

Description of weather conditions: Clear, cool, w/ no precipitation / fog.

Brand name and model of light used to conduct surveys: LED headlamps, LED Mag-lites

Were binoculars used for the surveys (circle one)? **YES** **NO**

Brand, model, and power of binoculars: Eagle Optics Ranger Platinum Class 8x42, Swift Warbler 8x42

California Red-legged Frog Survey Data Sheet

AMPHIBIAN OBSERVATIONS

Species	# of indiv.	Observed (O) Heard (H)	Life Stages	Size Class	Certainty of Identification
Bullfrog *Rana catesbeiana*	8	O, H	Sub-adult Adult	3" 5-8"	100%

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Potential predators included Barn Owl (2), Black-crowned Night-heron (1), Common Carp (3), and red swamp crayfish (15+).

Other notes, observations, comments, *etc.*

This survey included the Secondary Study Area (i.e., Primary Study Area plus Arroyo Mocho to 500' (linear) east of El Charro Road. Eight bullfrogs observed, all but two east of the Primary Study Area. One was very large (i.e., 8" long s-v). All frogs detected via eyeshine, and/or by vocalizations.

Necessary Attachments:

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

Appendix B. Representative Study Area Photographs

Top: Typical view of Arroyo Mocho within the Primary Study Area.

Bottom: Another backwater of Arroyo Mocho within the Primary Study Area.

Photographs taken July 6, 2009.

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Top: Typical view of Arroyo Mocho within the Secondary Study Area.

Bottom: Plunge pool within the Secondary Study Area.

Photographs taken July 6, 2009

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Appendix C. Wildlife Species Observed

Appendix C. List of wildlife species observed during California Red-legged Frog surveys at Arroyo Mocho, Alameda County, June - July, 2009.

Latin name	Common name
MAMMALS	
Mephitis mephitis	Striped Skunk
Odocoileus hemionus	Black-tailed (Mule) Deer
Ondatra zibethicus	Muskrat
Lepus californicus	Black-tailed Jackrabbit
BIRDS	
Anas platyrhynchos	Mallard
Ardea herodias	Great Blue Heron
Ardea alba	Great Egret
Egretta thula	Snowy Egret
Nycticorax nycticorax	Black-crowned Night-Heron
Elanus leucurus	White-tailed Kite
Falco sparverius	American Kestrel
Himantopus mexicanus	Black-necked Stilt
Columba livia	Rock Pigeon
Zenaida macroura	Mourning Dove
Tyto alba	Barn Owl
Calypte anna	Anna's Hummingbird
Sayornis nigricans	Black Phoebe
Myiarchus cinerascens	Ash-throated Flycatcher
Aphelocoma californica	Western Scrub-Jay
Corvus brachyrhynchos	American Crow
Tachycineta bicolor	Tree Swallow
Stelgidopteryx serripennis	Northern Rough-winged Swallow
Petrochelidon pyrrhonota	Cliff Swallow
Hirundo rustica	Barn Swallow
Thryomanes bewickii	Bewick's Wren
Mimus polyglottos	Northern Mockingbird

Latin name	Common name
Melospiza melodia	Song Sparrow
Carpodacus mexicanus	House Finch
Carduelis psaltria	Lesser Goldfinch
Carduelis tristis	American Goldfinch
AMPHIBIANS	
Bufo boreas	Western Toad
Hyla (Pseudacris) regilla	Pacific Treefrog
Rana catesbeiana	Bullfrog
FISHES	
Cyprinus carpio	Common Carp
Catostomus occidentalis	Sacramento Sucker
Gambusia affinis	Mosquitofish
CRUSTACEANS	
Procambarus clarkii	red swamp crayfish

ENVIRONMENTAL CONSULTANTS

August 6, 2009

Brian Dolan
Director of Community Development
City of Pleasanton
200 Old Bernal Avenue
P.O. Box 520
Pleasanton, California 94566

RE: **Staples Ranch-Arroyo Mocho Western Pond Turtle Survey**

Dear Mr. Dolan:

This letter presents the results of field surveys undertaken by WRA, Inc. (WRA) for Western Pond Turtle (WPT; *Actinemys marmorata*) along a reach of Arroyo Mocho located adjacent to the Staples Ranch site (Study Area) in Alameda County, during June and July 2009. WPT is a California Department of Fish and Game (CDFG) Species of Special Concern.

Previous Survey Efforts

LSA Associates (1993) conducted a special status species survey within the Study Area and its immediate vicinity in 1993 and found WPT in Arroyo Las Positas, a perennial creek which previously flowed through Staples Ranch and converged with Arroyo Mocho within the current Study Area. A subsequent pre-construction survey in 2002 by Monk and Associates (2002) reported a single WPT in Arroyo Las Positas; this individual turtle was relocated upstream from the current Study Area prior to the re-alignment work. Arroyo Las Positas was re-aligned after 2002 and now converges with Arroyo Mocho near the southeastern corner of the Staples Ranch property. Arroyo Mocho was dry during both sets of surveys and thus was at least seasonally unsuitable for WPT at that time.

Since 2004, Davis Environmental Consulting has conducted annual WPT surveys and biological monitoring of the approximately 2,000-foot re-alignment reach adjacent to the Staples Ranch site. WPT has not been observed during any of the surveys or monitoring visits (E. Davis, pers. comm.).

Study Area Description

The approximately 13.3-acre Study Area is located in Pleasanton, in central Alameda County. It consists primarily of Arroyo Mocho, a formerly ephemeral and currently perennial creek that lies roughly west to east and transverses the cities of Pleasanton and Livermore. The Study Area is bounded by a housing development and undeveloped Staples Ranch to the north, adjacent portions of Arroyo Mocho and associated uplands to the east and west, and an additional housing development and quarry operation to the south. For survey purposes, the Study Area was divided into two sections: the Primary Study Area is a 1,000 foot linear reach of Arroyo Mocho centered at the western boundary of Staples Ranch; the Secondary Study Area includes all of the Primary Study Area and continues east, with its eastern boundary lying 500 linear feet east of El Charro Road (Figure 1).

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Figure 1. Study Area Location Map

Pleasanton, California

SCALE

400 200 0 400 Feet

wra
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Date: June 2009
Map By: Michael Rochelle
Aerial: 2005 NAIP
Filepath: I:\Acad2000\L15158\gis\Arcmap\Location_June09.mxd

As stated above, Arroyo Mocho is currently perennial and flows east to west, although it was deemed ephemeral at least as recently as 2002 (Monk & Associates 2002). Within the vicinity of the Study Area, Arroyo Mocho is channelized with an overlying and variable substrate of sand, mud, and/or rock. Its bed varies from approximately three to 30 feet in width. Water depth ranges from approximately four inches in portions with a riffle-like character to approximately four feet in the deepest area (i.e., a plunge pool just east of El Charro Road), with an average depth of approximately one foot. Portions of the creek (generally narrow) currently have relatively high flow within the Study Area, while in other portions islands and small peninsulas result in backwaters with near-still or still water. Adjacent to El Charro Road, Arroyo Mocho passes through a large, cement-lined basin with relatively steep cement banks. Vegetation lining Arroyo Mocho consists primarily of upland species such as grasses, fennel (*Foeniculum vulgare),* and thistles, as well as more limited patches of emergent marsh vegetation including tule (*Scirpus* sp.) and cattail (*Typha* sp.). Riparian vegetation is also relatively limited along the creek, although recent restoration plantings of cottonwood (*Populus fremontii*), willows (*Salix* spp.) and other riparian-associated plants are evident.

Western Pond Turtle Natural History

WPT is the only turtle (excluding marine species) native to northern California, associated with rivers, streams, lakes, and ponds throughout much of the state. Typical aquatic habitat features stagnant or low gradient water, aquatic vegetation, and aerial basking sites such as logs, rocks, and mud-banks. Adult females excavate nests in riparian and upland areas in the spring or early summer. Nest sites are generally located on unshaded slopes, and require friable soil that is sufficiently dry to promote successful egg development (Holland 1994). The young generally hatch and overwinter in the nest (Jennings and Hayes 1994, Reese and Welsh 1997). At least under some ecological conditions, WPT may regularly utilize terrestrial habitats (Reese and Welsh 1997). While some populations are active principally in the spring and estivate during the rest of the year, turtles along the central California coast may be active year-round (Jennings and Hayes 1994). WPT is a dietary generalist, subsisting principally on invertebrates as well as plant material and carrion.

Methods

Methodology for WPT surveys involved a pair of WRA biologists covering the Study Area on foot, i.e. one biologist covering each bank and adjacent portion of the creek. Biologists visually scanned all shoreline areas of Arroyo Mocho while also listening carefully for "plops" caused by disturbed basking turtles dropping into the water. Binoculars were used by both biologists during all surveys. There was a general tendency to walk along the creek's banks and thus increase the likelihood of encountering basking turtles. Along portions of the creek with backwaters or otherwise near-still water, surveys were also conducted from within the creek. When portions of the pools and backwaters were covered with floating vegetation, both the shoreline and surface of the water were scanned. Areas of dense vegetation were surveyed as adequately as possible. All participating biologists were experienced in the identification of WPT and familiar with its general habitat requirements.

Surveys conducted in June covered only the Primary Study Area, while the July survey covered the Secondary Study Area.

Results

General survey data are provided in Table 1 below.

Table 1. Survey data for Western Pond Turtle surveys conducted at Arroyo Mocho, 2009.

Date	Survey #	Time start	Time end	Air temp. (°C)	# WPT observed
June 4	1	18:45	19:55	17	0
June 16	2	16:40	17:35	23	0
July 6*	3	16:50	18:35	25	0

* This survey covered the Secondary Study Area; previous surveys covered only the Primary Study Area.

WPT was not observed during the surveys.

Discussion

The Study Area currently provides suitable and apparently perennial aquatic habitat for WPT, including backwaters with aquatic vegetation and basking substrates. However, WPT was not observed during the current surveys despite these favorable conditions. It is plausible that the turtles resident within Arroyo Las Positas prior to the re-alignment moved or were re-located further upstream, and have yet to disperse downstream and hence enter Arroyo Mocho. Furthermore, the perennial status of Arroyo Mocho is only a few years old and the habitat may simply not have been favorable long enough to expect WPT to be present.

If WPT was present, it seems unlikely that they would move into the adjacent Staples Ranch area to nest. High, steep banks of the flood control channel and existing chain-link fencing between the channel right-of-way and Staples Ranch represent potential barriers to movement. Nesting would most likely take place within the channel right-of-way.

In summary, despite apparent habitat improvements, survey results indicate that the reach of Arroyo Mocho within the Study Area does not currently support WPT.

Analysis of Previously Proposed Mitigation Measures

Field surveys conducted between 2004 and 2009 suggest that WPT is not present in the Study Area. Despite these results, CDFG is likely to assume that connectivity with upstream occurrences could result in individual turtles dispersing into the area. WRA proposed the following mitigation measure in the Staples Ranch Biological Resource Assessment (WRA 2007):

> ***Mitigation 4: Conduct a Pre-construction Survey for Western Pond Turtle***
> *To avoid and minimize impacts to the western pond turtle, the project proponent shall retain a qualified wildlife biologist to conduct pre-construction clearance surveys for the turtle no more than 48 hours before ground disturbance in aquatic. If a western pond turtle is encountered during any project activities, construction will cease until the turtle leaves the area or is removed by a qualified biologist and relocated to nearby suitable aquatic habitat.*

Based on the results of field surveys, WRA recommends that this measure is still appropriate, and that it will reduce potential impacts to less than significant in the unlikely event that an individual turtle disperses into the bridge construction area.

Please don't hesitate to contact me with questions or concerns.

Most sincerely,

Jason Yakich
Wildlife Biologist

References

Holland, Dan C. 1994. The Western Pond Turtle: Habitat and History. Final Report. Portland, OR: U.S. Department of Energy, Bonneville Power Administration.

Jennings, M. R. and M. P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. Contract No. 8023.

LSA Associates. 1993. Biological Survey: Arroyo Las Positas - Arroyo Mocho Widening and Realignment. Unpublished report to the Alameda County Planning Department. September.

Monk & Associates. 2002. California Red-legged Frog and General Special-Status Species Survey Report. In: Davis Environmental Consulting, author. Biological Resources Survey Report for the Arroyo Mocho Widening/Arroyo Las Positas Realignment Project. Unpublished report for the Alameda County Community Development Agency. July.

Reese, D. A. and H. H. Welsh. 1997. Use of Terrestrial Habitat by Western Pond Turtles, Clemmys marmorata: Implications for Management. Proceedings: Conservation, Restoration, and Management of Tortoises and Turtles. An International Conference held in 1997 by the New York Turtle and Tortoise Society. pp. 352-357.

WRA. 2007. Biological Resources Assessment, Impact Analysis and Mitigation: Staples Ranch, Pleasanton, Alameda County, California. Unpublished report prepared for Davis Environmental Consulting, Davis, California.

California Tiger Salamander 2006-2008 Field Survey Report

STAPLES RANCH
PLEASANTON, ALAMEDA COUNTY
CALIFORNIA

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Date:
June 2008

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INTRODUCTION

In accordance with U.S. Fish and Wildlife Service guidelines (USFWS 2003), WRA conducted California tiger salamander (*Ambystoma californiense*) (CTS) field surveys in winter 2006-07 and 2007-08 on the Staples Ranch (Project Area) in Pleasanton, Alameda County, California. Surveys were warranted because a proposed development project was located within the potential range of the CTS, and it was determined by the USFWS that suitable upland habitat was present.

Trapping surveys were conducted by WRA under permit TE825572-4 and in accordance with USFWS protocol. This report summarizes the habitat conditions and provides results of the surveys conducted within the Study Area.

STUDY AREA

The Study Area is located in Pleasanton in central Alameda County, California (Figure 1). The Study Area is approximately 128-acres in size and is located on El Charro Road. Housing developments border the Study Area to the west, Interstate 580 is located along the north boundary, Arroyo Mocho and a gravel mining operation are located to the south, and undeveloped lands are present across El Charro Road to the east. Adjacent lands up to 2 km (1.2 mile) away included the cities of Pleasanton and Livermore to the west, south, and east, and agricultural lands to the north.

The Study Area is characterized by generally flat terrain with large areas of fill material that is currently under intensive oat hay crop production. The higher portions of some fill areas and strips of ground along the perimeter fence, where discing has not occurred, are dominated by weedy vegetation. Low spots in the Study area, particularly in the northwest corner of the site, may pond water in years of greater than normal rainfall. A drainage ditch constructed along the west boundary in the mid-1990 does not appear to contain surface water for more than a few days in winter. In the eastern portion of the Study Area is the site of a former residence; this area contains compacted gravel and remnant non-native landscaping vegetation.

The Study Area has a history of severe ground disturbance (Figure 2). Large amounts of fill material were deposited on the site in the mid-1990's. In 2003-04, the Alameda County Planning Department completed a realignment project that resulted in the fill of Arroyo Las Positas within the Study Area, and the excavation of a new segment of Arroyo Mocho along the south boundary. Excavated material associated with this project was placed (and still exists) in the southern portion of the Study Area.

Other ground disturbance occurred during the installation of a fiber optic cable across the center of the Study Area, and likely occurred during construction of the adjacent freeway, roads, and housing development. The Study Area is disced at least twice per year in preparation of annual hay production.

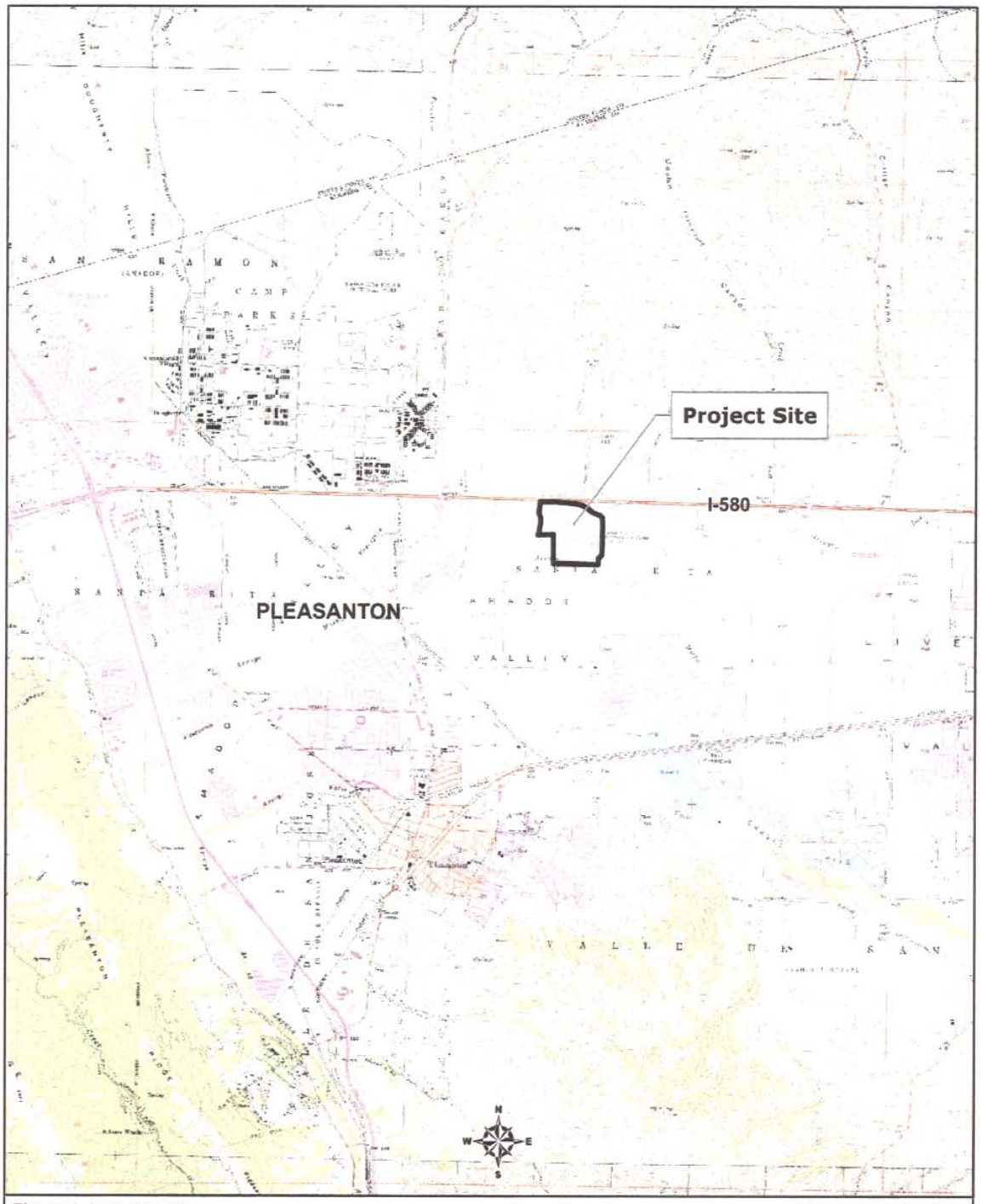

Figure 1. Location Map

Pleasanton, California

SCALE

1 0.5 0 1 Miles

1 inch equals 1 miles
1:63,360

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Map By: Gabe Olson
Basemap: USGS DOQQ
Filepath: I:\Acad2000\15158\gis\Arcmap\Fig1_LocMap.mxd

Figure 2. Aerial Photograph of Study Area

Pleasanton, California

SCALE

400 200 0 400 Feet

1 inch equals 400 feet
1:4,800

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Map By: Gabe Olson
Basemap: USGS DOQQ
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SURVEY METHODS

Trapping surveys were conducted by WRA under permit TE825572-4 and in accordance with USFWS protocol.

In September 2006, approximately 9,500 feet of both perimeter and internal fencing was installed (Figure 3). A total of 489 2-gallon buckets with snap lids were installed along the drift fences in accordance with USFWS protocol. The only possible CTS breeding habitat, a very shallow seasonal man-made feature in the northwest portion of the site, was nearly surrounded by the fencing. Rainfall data was collected during each trap field season to determine CTS activity during each storm event. CTS activity was also compared to other sites where WRA was conducting CTS surveys. All wildlife encountered in the traps were identified and released.

SURVEY RESULTS

During the 2006-07 trapping season, the traps were opened for a total of 24 nights between November 3, 2006 and March 15, 2007. The drift fences and traps were removed during the dry season, and re-installed in September 2007. During the 2007-08 trapping season, the traps were opened for a total of 21 nights between October 17, 200 and March 15, 2008. The drift fences and traps were removed during the week of March 16.

No CTS were trapped during the two survey seasons. Table 1 and Appendix A summarize all vertebrates captured on the site.

Although rainfall was less than normal during the 2006-07 trapping season, WRA trapped 35 CTS in northern San Benito County during the same time period. Because precipitation amounts were similar between the two sites, it is likely that if CTS had been present at Staples Ranch, individual CTS would have emerged during the storm events in November and December 2006.

Table 1. Species observed during two seasons of California tiger salamander trapping at the Staples Ranch Study Area, 2006-2008.

Common Name	Species
ornate shrew	*Sorex ornatus*
Botta's pocket gopher	*Thomomys bottae*
California vole	*Microtus californicus*
western harvest mouse	*Reithrodontomys megalotis*
western fence lizard	*Sceloporus occidentalis*
southern alligator lizard	*Elgaria multicarinata*
California slender salamander	*Batrachoseps attenuatus*
western toad	*Bufo boreas*
Pacific treefrog	*Pseudacris regilla*

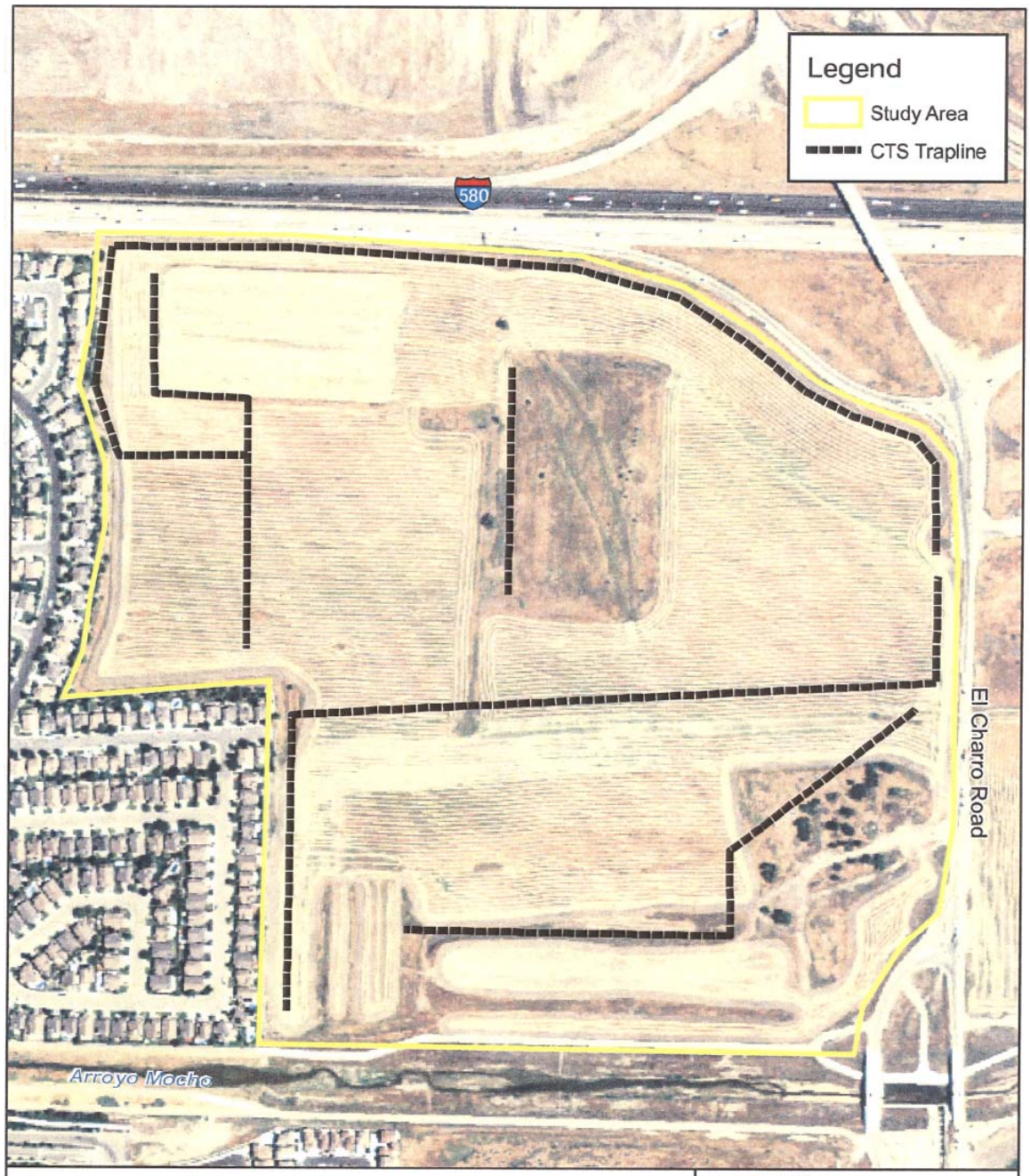

Figure 3. Trapline Locations During 2006 - 07 and 2007 - 08 CTS Surveys

Pleasanton
Somewhere, California

N
W E
S

0 100 200 400 600 Feet

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Date: April 2008
Image Date: 2005
Image Source: NAIP
Map By: Derek Chan
Filepath: L:\Acad 2000Files\15000\15156\gis\arcmap\Fig3_Trapline_04_02_08.mxd

Appendix A
Stapies Ranch Trapping Data

Staples Ranch - California Tiger Salamander trapping data

Project# 15158

Date	Trap Number	Species		Comment	Total Captured	Biologist
		CTS	Other			
3-Nov-06	86, 105, 145, 160, 188, 257, 291, 310, 316, 370	none	Western Fence Lizard, *Sceloporus occidentalis*		10	J. Dreier
	160		Western Toad, *Bufo boreas*		1	
4-Nov-06	139, 135, 127, 104, 84, 68, 143, 147, 151, 158, 163, 198, 245, 266, 279, 155, 156	none	Western Fence Lizard, *Sceloporus occidentalis*	All juveniles except for 2 adults caught in trap #155 and 156	17	B. Stagnaro
	350, 353, 365, 370, 10, 18, 20, 25, 35, 47, 177, 255, 265, 305		Western Toad, *Bufo boreas*	All subadults, 3 individuals captured in trap #365	16	
11-Nov-06	56, 99, 248, 254	none	Western Fence Lizard *Sceloporus occidentalis*		4	S. Gearhart
	183, 373		Western Toad, *Bufo boreas*		2	
12-Nov-06	255	none	Western Harvest Mouse *Reithrodontomys megalotis*	Trap # 205 was out of the ground and was closed until repair.	1	J. Dreier
13-Nov-06	74, 88, 104, 112, 127, 143, 148, 152, 156, 240, 256	none	Western Fence Lizard *Sceloporus occidentalis*	2 individuals captured in trap #143	12	S. Gearhart
	355		Western Toad, *Bufo boreas*		1	
14-Nov-06	146	none	Western Fence Lizard *Sceloporus occidentalis*	Skunk prints and dug up dirt found around trap #119.	1	S. Gearhart
	80, 161, 164, 202, 246, 265, 311, 359, 366, 375, 378, 385		Western Toad, *Bufo boreas*	3 individuals found in trap #378	14	
	380		Ornate Shrew, *Sorex ornatus*	Individual found deceased in trap.	1	
26-Nov-06	59, 90, 103	none	California Slender Salamander *Batrachoseps attenuatus*		3	D. Riggs
	61		Western Fence Lizard *Sceloporus occidentalis*		1	

Staples Ranch - California Tiger Salamander trapping data

Project# 15158

Date	Trap Number	Species		Comment	Total Captured	Biologist
		CTS	Other			
27-Nov-06	209, 372	none	Western Toad, *Bufo boreas*		2	B. Stagnaro
	231		Ornate Shrew, *Sorex ornatus*	Individual found deceased in trap.	1	
	168		Botta's Pocket Gopher *Thomomys bottae*	Individual found deceased in trap.	1	
	48		Pacific Treefrog, *Pseudacris regilla*		1	
28-Nov-06	149	none	Western Fence Lizard *Sceloporus occidentalis*		1	S. Gearhart
9-Dec-06	42, 115, 305, 317, 322, 329	none	California Slender Salamander *Batrachoseps attenuatus*	2 individuals in trap #322	7	D. Riggs
	202		Pacific Treefrog, *Pseudacris regilla*		1	
	287, 294, 375		Western Toad, *Bufo boreas*		3	
	202		Ornate Shrew, *Sorex ornatus*		1	
	101		Botta's Pocket Gopher *Thomomys bottae*		1	
10-Dec-06	115, 301, 306, 330	none	California Slender Salamander *Batrachoseps attenuatus*		4	S. Baulet
	100, 168, 200		Western Toad, *Bufo boreas*		3	
	109		Deer mouse, *Peromyscus maniculatus*		1	
	241		Ornate Shrew, *Sorex ornatus*		1	
11-Dec-06	93	none	California Slender Salamander *Batrachoseps attenuatus*		1	S. Gearhart
	199		Western Toad, *Bufo boreas*		1	
12-Dec-06	299, 300, 301, 302, 303, 309, 313, 315, 317, 318, 319, 322	none	California Slender Salamander *Batrachoseps attenuatus*	2 individuals in trap #'s 309 and 317 and 3 in trap #313	16	B. Stagnaro
	16, 49, 371, 378,381		Western Toad, *Bufo boreas*		5	
	224, 227, 308		Pacific Treefrog, *Pseudacris regilla*		3	
13-Dec-06	93, 101, 115, 278, 295, 309, 321	none	California Slender Salamander *Batrachoseps attenuatus*	2 individuals in trap #'s 278, 295, 309 and 321	11	S. Gearhart
	221, 339		Western Toad, *Bufo boreas*		2	

Staples Ranch - California Tiger Salamander trapping data

Project# 15158

Date	Trap Number	Species		Comment	Total Captured	Biologist
		CTS	Other			
	178		Pacific Treefrog, *Pseudacris regilla*		1	
22-Dec-06	93, 105, 113, 326, 318, 190, 61, 63, 86	none	California Slender Salamander *Batrachoseps attenuatus*	2 individuals found in trap #190	10	S. Gearhart, B. Stagnaro
	46		Western Toad, *Bufo boreas*		1	
	276, 191, 245		Pacific Treefrog, *Pseudacris regilla*		3	
	336		Botta's Pocket Gopher *Thomomys bottae*		1	
	254		Western Harvest Mouse *Reithrodontomys megalotis*	Individual found deceased in trap.	1	
27-Dec-06	59, 96, 97, 278, 288, 296, 305, 311, 325	none	California Slender Salamander *Batrachoseps attenuatus*	2 individuals found in trap #305	10	S. Badet
	93, 378		Western Toad, *Bufo boreas*		1	
	350		California Vole *Microtus californicus*		1	
28-Dec-06	-	none	-	No vertebrates captured; trap #'s 1, 370 and 375 were inactive	-	S. Stagnaro
4-Jan-07	155	none	Western Fence Lizard *Sceloporus occidentalis*		1	S. Gearhart
	223		Pacific Treefrog, *Pseudacris regilla*		1	
	150, 85, 305, 309		California Slender Salamander *Batrachoseps attenuatus*		4	
5-Jan-07	-	none	-	No vertebrates captured.	-	S. Gearhart
9-Feb-07	244	none	Pacific Treefrog, *Pseudacris regilla*		1	S. Gearhart
	297, 313, 319		California Slender Salamander *Batrachoseps attenuatus*	2 individuals found in trap #313	4	
22-Feb-07	98	none	California Slender Salamander *Batrachoseps attenuatus*		1	S. Gearhart
	63		Botta's Pocket Gopher *Thomomys bottae*	Individual found deceased in trap.	1	
23-Feb-07	-	none	-	No vertebrates captured.	-	S. Gearhart

Staples Ranch - California Tiger Salamander trapping data Project# 15158

Date	Trap Number	Species		Comment	Total Captured	Biologist
		CTS	Other			
27-Feb-07	85	none	California Slender Salamander *Batrachoseps attenuatus*	Many traps flooded - 1-30, 230-250, 350-387; each with large portions non-functional; repairs in progress	1	J. Doudna
28-Feb-07	-	none	-	No vertebrates captured.	-	S. Gearhart
17-Oct-07	108	none	Western Fence Lizard *Sceloporus occidentalis*	1 individual also captured in an unnumbered trap.	2	R. Schell
18-Oct-07	1, 13, 20, 34, 42, 51, 127, 129, 56, 59, 60, 67, 68, 76, 80, 83, 86, 88, 90, 93, 95, 97, 99, 102, 104, SouthWest trap line 1-17, NorthWest trap line 1-17, North trap line 1, 3-15 &17, East rap line 1-4	none	Western Fence Lizard *Sceloporus occidentalis*	Not all the re-installed traps had been numbered, so trap line locations were used to differentiate between traps. 2 individuals were caught in traps 129, 95, SW-2, SW-7, SW-13, NW-5, N-13 and E-3. 3 individuals captured in trap E-1. Individual in trap N-5 was deceased in trap.	88	D. Chase
	28, 110, SW-5		Southern Alligator Lizard *Elgari multicarinata*		3	
	112, 132, N-2		California Slender Salamander *Batrachoseps attenuatus*	Individual in traps 132 and N-2 were deceased in trap.	3	
	N-16		Pacific Treefrog, *Pseudacris regilla*		1	
5-Dec-07	108, 110	none	California Slender Salamander *Batrachoseps attenuatus*	4 individuals found in trap #108.	5	D. Chase
	92, 146, 291, 295, 341		Western Fence Lizard *Sceloporus occidentalis*		5	
	331		California Vole *Microtus californicus*		1	
	179, 358		Ornate Shrew, *Sorex ornatus*	Individuals found deceased in traps #179 and 358.	2	

Staples Ranch - California Tiger Salamander trapping data

Project# 15158

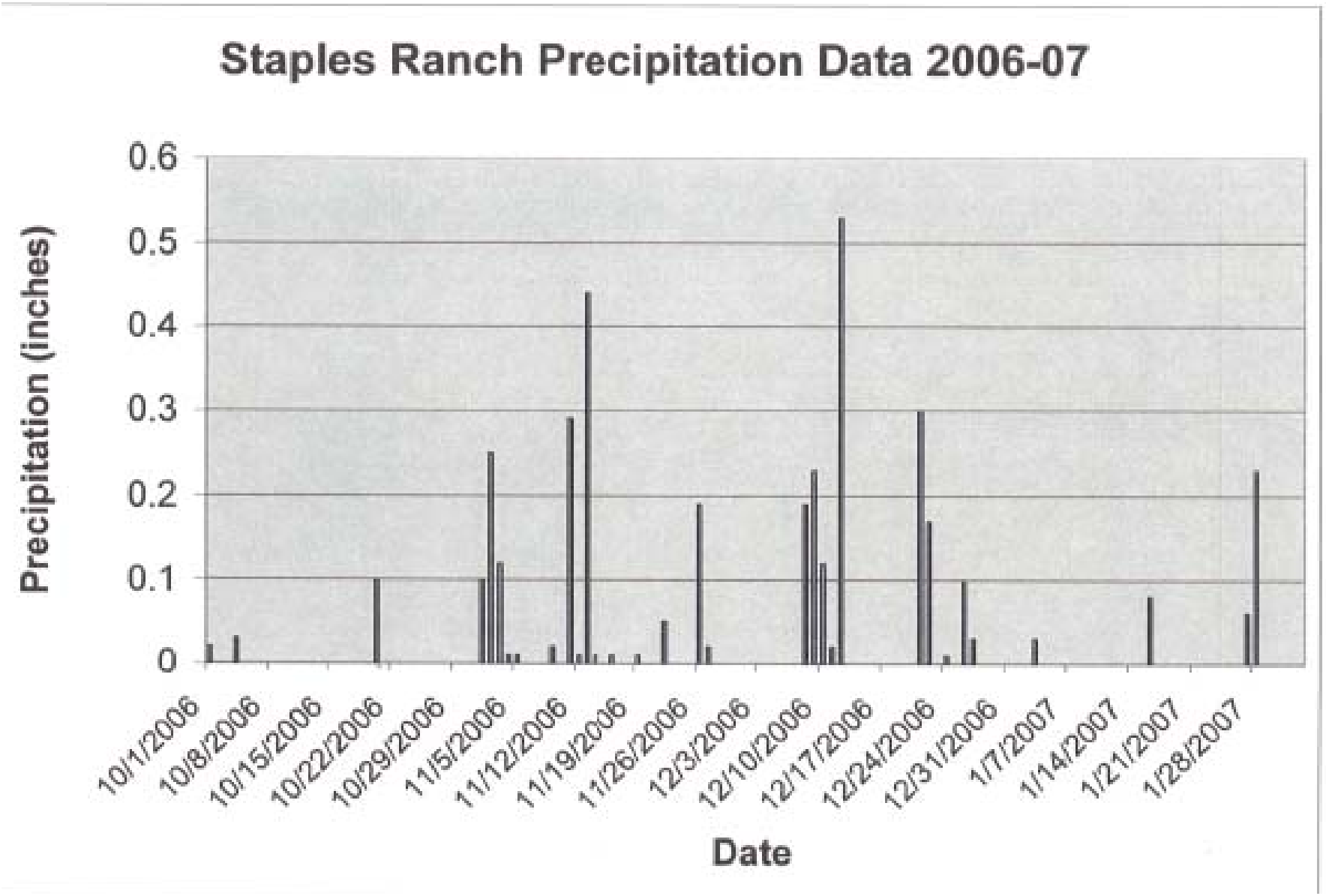
Date	Trap Number	Species		Comment	Total Captured	Biologist
		CTS	Other			
7-Dec-07	108, 115, 87, 89, 88, 93, 106, 280, 287, 293, 294, 312, 316, 327, 337	none	California Slender Salamander *Batrachoseps attenuatus*	4 individuals found in traps # 108 & 316. 2 individuals found in traps # 106, 293 & 313. Individual in trap # 280 greater than 8".	21	R. Schell
	355		Western Fence Lizard *Sceloporus occidentalis*		1	
	369		Western Harvest Mouse *Reithrodontomys megalotis*		1	
8-Dec-07	85, 167, 234	none	California Slender Salamander *Batrachoseps attenuatus*		3	S. Gillespie
18-Dec-07	90, 106, 309, 312, 313, 318, 322	none	California Slender Salamander *Batrachoseps attenuatus*		7	J. Doudna
19-Dec-07	80, 90, 106, 281, 305, 328	none	California Slender Salamander *Batrachoseps attenuatus*	2 individuals found in traps #281 & 305.	8	S. Badet
20-Dec-07	282, 327	none	California Slender Salamander *Batrachoseps attenuatus*		2	D. Chase, C. Vann
	386		Pacific Treefrog, *Pseudacris regilla*		1	
	87, 134		Botta's Pocket Gopher *Thomomys bottae*	Individual deceased in trap #87.	2	
21-Dec-07	88, 100, 103, 310	none	California Slender Salamander *Batrachoseps attenuatus*		4	D. Chase, M. Trieger
6-Jan-08	96, 100	none	California Vole *Microtus californicus*	Traps range in various states of usefulness -several found floating or not far enough into the ground. Fence needs repair as well. Repairs in progress.	2	J. Dreier
7-Jan-08	280, 336	none	California Slender Salamander *Batrachoseps attenuatus*	Traps in various states of usefulness. Additional 26 traps removed and closed. Fence needs repair as well.	2	J. Yakich
8-Jan-08	-	none	-	No vertebrates captured.	-	S. Badet

Staples Ranch - California Tiger Salamander trapping data

Project# 15158

Date	Trap Number	Species		Comment	Total Captured	Biologist
		CTS	Other			
24-Jan-08	-	none	-	No vertebrates captured. About 20% of traps closed due to flooding.	-	J. Dreier
25-Jan-08	318	none	California Slender Salamander *Batrachoseps attenuatus*	A total of 85 traps (about 21%) were closed or inactive during the visit.	1	D. Chase
26-Jan-08	307	none	California Slender Salamander *Batrachoseps attenuatus*	Lots of inactive traps due to flooding.	1	S. Badet
27-Jan-08	78, 293	none	California Slender Salamander *Batrachoseps attenuatus*		2	C. Vann
	181		Western Toad, *Bufo boreas*		1	
	90		California Vole *Microtus californicus*	Individual found deceased in trap.	1	
28-Jan-08	289, 318	none	California Slender Salamander *Batrachoseps attenuatus*	1-2 inches of water in most traps. Ground still highly saturated; approximately 20% of trapsclosed.	2	L. Wozniak
29-Jan-08	317	none	California Slender Salamander *Batrachoseps attenuatus*	About 20% of the traps remian closed.	1	J. Yakich
30-Jan-08	-	none	-	No CTS or Vertebrates captured. Trap status unchanged from Jan. 29.	-	J. Dreier
31-Jan-08	90	none	Western Harvest Mouse *Reithrodontomys megalotis*	Both mammals found in dry traps. Ground highly saturated (waterfowl were present); approx. 20% of traps closed.	1	L. Wozniak
	253		California Vole *Microtus californicus*		1	
1-Feb-08	135, 304, 319	none	California Slender Salamander *Batrachoseps attenuatus*	Still a lot of flooding in project area. About 21% of the traps out of commission.	3	D. Chase
22-Feb-08	82, 89	none	California Slender Salamander *Batrachoseps attenuatus*	Closed trap #18, still roughly 20-25% of traps closed/no longer functional due to ground water. 3 large millipedes found.	2	D. Chase, J. Yakich
	335		Botta's Pocket Gopher *Thomomys bottae*			

Appendix B
Staples Ranch Precipitation Data


Staples Ranch Precipitation Data 2006-07
Precipitation (inches)
0.6
0.5
0.4
0.3
0.2
0.1
0
10/1/2006
10/8/2006
10/15/2006
10/22/2006
10/29/2006
11/5/2006
11/12/2006
11/19/2006
11/26/2006
12/3/2006
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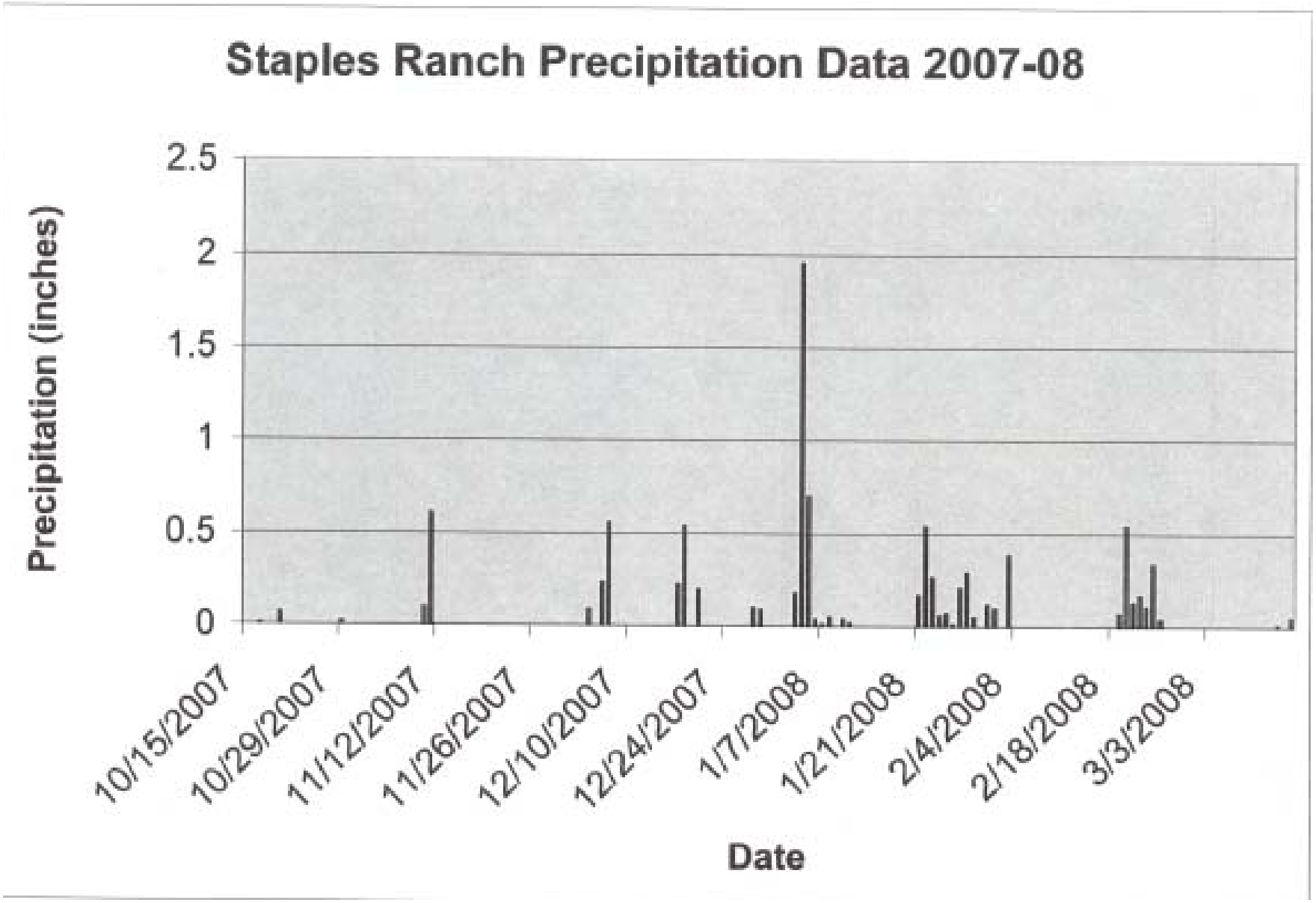
1/21/2007
1/28/2007
Date


Staples Ranch Precipitation Data 2007-08
Precipitation (inches)
2.5
2
1.5
1
0.5
0
10/15/2007
10/29/2007
11/12/2007
11/26/2007
12/10/2007
12/24/2007
1/7/2008
1/21/2008
2/4/2008
2/18/2008
3/3/2008
Date

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Claudia Kraehe
Heather Migut
Josselyn Salter
Candice Huey
Brian Good
Marva D Noerdzee
Debbie Garcia
Jasmine Recidoro
Alison Whitson

28 August 2009

Brian Dolan
Community Development Director
City of Pleasanton
200 Old Bernal Avenue
P.O. Box 520
Pleasanton, CA 94566
Email: BDolan@ci.pleasanton.ca.us

Subject: **Stoneridge Drive Extension Noise Analysis**
CSA Project No. 09-0266

Dear Mr. Dolan:

We understand that the City is considering how and when Stoneridge Drive will be extended from its current eastern terminus at Trevor Parkway, through the Staples Ranch property to El Charro Road. As requested, we have evaluated the potential noise impacts of this extension, both on the proposed Staples Ranch development and on the existing neighborhood to the west, under the two Year 2015 extension alternatives. The "4-Lane Concurrent Extension" would extend Stoneridge Drive as a four-lane road as part of the Staples Ranch development. The "2-Lane Constrained Extension" would extend Stoneridge Drive as a four-lane road as part of the Staples Ranch development, but would stripe the bridge crossing over the Arroyo Mocho for only two lanes, creating a traffic "bottleneck" to discourage non-Staples Ranch use of the roadway.

We also evaluated noise levels under the Cumulative 2030 conditions, where Stoneridge Drive would be a four-lane unconstrained roadway through Staples Ranch, but traffic levels would be reduced due to other regional roadway improvements.

EXECUTIVE SUMMARY

Under all three future Stoneridge Drive extension scenarios we found:

- Future noise levels (with the extension) will not exceed the City's "Normally Acceptable" land-use compatibility criterion of L_{dn}[1] 60 dB at Hacienda School and

[1] Day-Night Average Sound Level (L_{dn} or DNL) – A descriptor established by the U.S. Environmental Protection Agency to represent a 24-hour average noise level with a 10 dB penalty applied to noise occurring during the nighttime hours (10 p.m. to 7 a.m.) to account for the increased sensitivity of people during sleeping hours.

Mohr Elementary.

- Interior noise levels at residences adjacent to Stoneridge Drive are not expected to exceed the City standard of L_{dn} 45 dB; assuming closed windows and conventional construction methods and materials.

- Future backyard noise levels at some residences closest to Stoneridge Drive will exceed L_{dn} 60 dB: this can be mitigated by utilizing noise-attenuating pavement on the new extension and during the next scheduled repaving of the existing portion of Stoneridge Drive.

- Even with the incorporation of noise-attenuating pavement, the increase in noise levels over existing conditions will still be greater than 4 dB (i.e., a significant increase).

- Future noise levels adjacent to Stoneridge Drive within Staples Ranch will be L_{dn} 65 dB or less. Construction of the extension with noise-attenuating pavement will reduce the area impacted by noise. No additional mitigation is necessary to achieve the City's interior noise criterion of L_{dn} 45 dB at the proposed continuing care community health care facility, provided Mitigation Measures NO-1.1 and .NO-1.2 of the 2008 Staples Ranch EIR are applied.

CRITERIA

The City of Pleasanton's General Plan Noise Element stipulates the following relevant acoustical criteria:

- Use the "Normally Acceptable" designation and text description contained in the "Noise and Land-Use Compatibility Guidelines" to determine the acceptability of new noise-sensitive (e.g., residential development and to determine when noise studies are required.

- For single-family residential development, maintain a maximum day/night average noise level standard of L_{dn} 60 dB for exterior noise in private or shared outdoor use areas (e.g., backyards) and a maximum interior noise level of L_{dn} 45 dB.

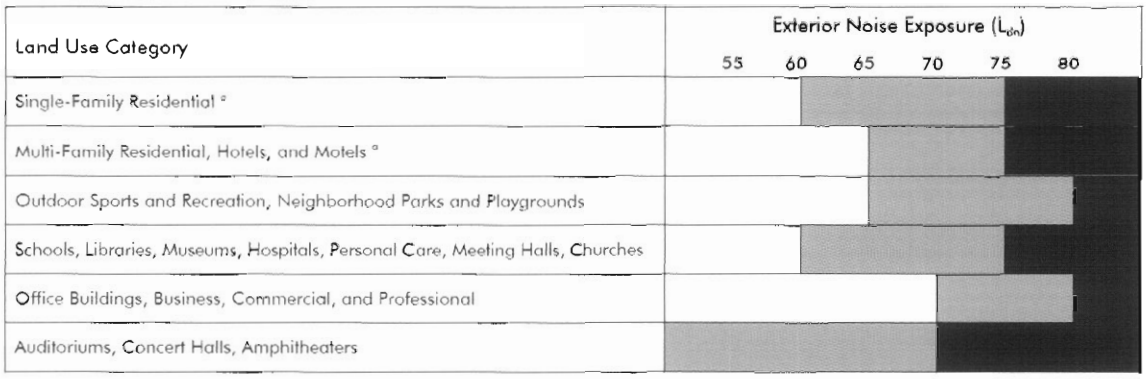
- Protect schools, hospitals, convalescent homes and other sensitive uses from noise levels exceeding those allowed in residential areas.

- Noise increases greater than L_{dn} 4 dB are considered significant.

General Plan policies also encourage the use of setbacks, berms, and noise-attenuating pavement instead of sound walls as mitigation measures to reduce noise impacts. Sound walls are considered a "last resort" mitigation measure

The following is a copy of the General Plan "Noise and Land-Use Compatibility Guidelines" figure:

TABLE 11-5: NOISE AND LAND USE COMPATIBILITY GUIDELINES



a In noise environments resulting primarily from railroad trains, exterior noise levels up to 70 dBA Ldn are normally acceptable recognizing that day-night average noise levels are controlled by intermittent, loud events.

b <65 dBA outdoors = < 45 dBA indoors

NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements

CONDITIONALLY ACCEPTABLE
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

UNACCEPTABLE
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

EXISTING NOISE ENVIRONMENT

The existing segment of Stoneridge Drive to the west of Staples Ranch, and the surrounding residential development between Kamp Drive and Trevor Parkway, was developed as part of the original 1989 Stoneridge Drive Specific Plan, which called for the full extension of Stoneridge Drive to El Charro Road as a four-lane arterial and contained guidelines for soundwalls and setbacks to shield new residential development from anticipated traffic noise. Consequently, the predominantly single-family residential developments along this portion of Stoneridge Drive largely do not face the road and back yards or side yards closest to Stoneridge Drive are shielded by soundwalls.

Those homes on the south side of Stoneridge Drive between Guzman and Trevor Parkway face an unwalled portion of the roadway, but are set back on the south side of Snowdrop Circle. Backyards of these homes are shielded from Stoneridge Drive by the homes themselves. Homes along the north side of the Arroyo Mocho are largely shielded by a large berm along the north side of Stoneridge Drive. However, several homes along Vermont Place on the north side of the Mocho, nearest to the planned Stoneridge Drive bridges over the channel, are unshielded by the berm and have backyards with open

fencing that would be exposed to bridge traffic noise. While homes on the south side of the bridge crossing are located much closer to the bridge crossing, they are also shielded by a soundwall.
The Pleasanton General Plan lists two existing "sensitive receptors" along the existing portion of Stoneridge Drive that could particularly be impacted by traffic noise. Hacienda School, a private school on the north side of Stoneridge Drive near Newton Drive, is set back and located significantly below the elevation of Stoneridge Drive. Mohr Elementary School is located to the south of Stoneridge Drive and is largely screened from the roadway by several rows of homes.

In order to quantify the existing noise environment, we conducted 48-hour noise measurements at three locations along Stoneridge Drive. In addition, we conducted two short-term, 15-minute noise measurements. The short-term monitors measured the noise levels simultaneously with the synchronized long-term monitors and were used to estimate the L_{dn} at the short-term measurement locations. Figure 1 shows the noise measurement locations and measured L_{dn} values.

The existing noise environment is controlled by distant Interstate 580 noise and occasional traffic noise on Stoneridge Drive. Occasional aircraft activity (typically departures) from Livermore Municipal Airport (LVK) was also audible.

EXISTING AND FUTURE TRAFFIC VOLUMES AND ROAD ALIGNMENT

Existing and future traffic volumes on Stoneridge Drive were provided by the City of Pleasanton[2] and are summarized in Table 1.

Table 1 – Stoneridge Drive Traffic Volumes

	Average Peak Hour Traffic Volume			
	Existing	**2-Lane Constrained 2015**	**4-Lane Concurrent 2015**	**Cumulative 2030 (full extension)**
East of Kamp Drive to Guzman Parkway	651	2641	3189	2271
East of Guzman Parkway to Arroyo Mocho bridge	499	2353	3031	2242
Arroyo Mocho bridge to first Staples Ranch intersection	0	2353	3031	2242

Under all scenarios analyzed, the Stoneridge Drive extension begins at Trevor Parkway and continues east, bridging the Arroyo Mocho channel and through Staples Ranch to connect with El Charro Road. Figure 2 shows the planned Stoneridge Drive alignment, as well as the proposed Staples Ranch land uses

[2] Existing and future volumes provided by Mike Tassano, City of Pleasanton via email dated 31 July 2009.

fencing that would be exposed to bridge traffic noise. While homes on the south side of the bridge crossing are located much closer to the bridge crossing, they are also shielded by a soundwall.

The Pleasanton General Plan lists two existing "sensitive receptors" along the existing portion of Stoneridge Drive that could particularly be impacted by traffic noise. Hacienda School, a private school on the north side of Stoneridge Drive near Newton Drive, is set back and located significantly below the elevation of Stoneridge Drive. Mohr Elementary School is located to the south of Stoneridge Drive and is largely screened from the roadway by several rows of homes.

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[2] Existing and future volumes provided by Mike Tassano, City of Pleasanton via email dated 31 July 2009.

connect with El Charro Road. Figure 2 shows the planned Stoneridge Drive alignment, as well as the proposed Staples Ranch land uses

CALCULATED TRAFFIC NOISE LEVELS

We have calculated the traffic noise levels at nearby sensitive receivers. Our calculations were based on the following:

- Traffic volumes summarized in Table 1
- 30 mph vehicle speed
- 2% truck traffic
- Federal Highway Administration (FHWA) traffic noise prediction algorithm (FHWA RD-77-108)
- Receiver height of five feet
- 6 - 7.5 foot tall residential sound walls as observed along Stoneridge Drive
- Standard pavement
- Arroyo Mocho bridge alignment (i.e.. elevation) provided by RJA Engineers

A computer noise model used the above data to calculate the expected noise level at the nearby sensitive receivers (i.e., backyards at single-family homes and the facades of the school buildings) . The computer model, titled CadnaA, conforms to International Organization for Standardization (ISO) 9613, "Attenuation of Sound during Propagation Outdoors." The sensitive receiver locations are identified on Figure 3. Table 2 summarizes the expected noise level at these receivers.

Table 2 – Existing and Future Stoneridge Drive Noise Levels (L_{dn}, dB)

Receiver	Existing Noise Level	2-Lane Constrained 2015 Future Noise Level	2-Lane Constrained 2015 Increase over Existing	4-Lane Concurrent 2015 Future Noise Level	4-Lane Concurrent 2015 Increase over Existing	Cumulative 2030 (full extension) Future Noise Level	Cumulative 2030 (full extension) Increase over Existing
Hacienda School	52	57	5	57	5	56	4
Mohr Elementary	49	54	5	55	6	53	4
North Residence East of Kamp	56*	62	6	63	7	61	5
South Residence, East of Kamp	56*	61	5	62	6	61	5
South Residence, East of Guzman	54*	61	7	62	8	61	7
Snowdrop Circle Residence (East of Guzman)	49*	51	2	51	2	51	2
Vermont Place Residence (N of bridge)	52	60	8	61	9	60	8
Chocolate Street Residence (S of bridge)	52*	62	10	63	11	62	10

* Estimated based on nearby ambient noise measurements.

We have also calculated the distance to two noise levels, L_{dr} 65 dB and L_{dr} 60 dB, from the centerlines of the Stoneridge Drive extension inside of Staples Ranch. We have provided these contour distances so estimates of Stoneridge Drive noise levels at various locations inside of Staples Ranch can be made. These noise contour distances do not take into account any shielding (i.e., noise reduction) provided by intervening buildings. However, because it is our understanding that the Stoneridge Drive extension will be constructed with noise-attenuating pavement, noise contour distances are shown for both standard pavement and noise-attenuating pavement. Table 3 summarizes these calculations:

Table 3 – Noise Contour Distances, in feet, at Staples Ranch

Receiver	2-Lane Constrained 2015		4-Lane Concurrent 2015		Cumulative 2030 (full extension)	
	L_{dn} 65 dB	L_{dn} 60 dB	L_{dn} 65 dB	L_{dn} 60 dB	L_{dn} 65 dB	L_{dn} 60 dB
Standard Pavement	101	216	118	255	98	209
Noise-Attenuating Pavement	68	135	78	159	66 ft.	131 ft.

ANALYSIS OF TRAFFIC NOISE LEVELS

Existing Sensitive Receivers

As shown in Table 2, the noise levels at the existing sensitive receivers along Stoneridge Drive will significantly increase over existing conditions under all three future scenarios that were analyzed. Under all three scenarios, at some residential locations, the exterior noise level will be above the City's "Normally Acceptable" noise level of L_{dn} 60 dB. However, under no scenarios will this level be exceeded at the two school sites.

With windows closed, we do not expect interior noise levels to be above L_{dn} 45 dB.[3] Modern facade construction provides approximately 25 to 30 dB of noise reduction. Based on the expected noise levels at the closest residential facades (see Table 2), noise levels inside of the homes will be less than L_{dn} 45 dB.

We understand that noise attenuating pavement is planned for the bridge crossing and extension. Noise attenuating pavement (i.e., open grade asphalt) typically reduces traffic noise levels by 3 dB.[4] This would generally reduce noise levels to L_{dn} 60 dB or less (i.e., Normally Acceptable) for most residences located adjacent to the bridge (i.e., Vermont Place and Chocolate Street residences)

For those residences located further west, along the existing portion of Stoneridge Drive, noise-attenuating pavement could be used instead of "traditional" pavement during the next scheduled repaving of Stoneridge Drive, which would reduce future noise levels shown in Table 2 by 3 dB. This would reduce noise levels to L_{dn} 60 dB or less under all three scenarios at all locations, which would be considered "Normally Acceptable" per the City's General Plan.

It should be noted that, even with the use of noise-attenuating pavement along the existing and future portions of Stoneridge Drive, under all three future scenarios we analyzed, the

[3] Based upon typical facade noise reduction of 25 to 30 dB.

[4] Please refer to Pleasanton General Plan 2005 2025, Page 11-4 for further information.

increase in noise levels over existing conditions would remain greater than 4 dB, which is considered a significant impact by the City.

Noise generated by aircraft utilizing the nearby Livermore Municipal Airport could result in higher ambient noise levels when combined with traffic noise from Stoneridge Drive, particularly for existing residences closest to the planned bridge crossing. The amount of additional noise from aircraft will depend on the level of activity at the Livermore Airport. As noted in the Staples Ranch EIR, a predicted airport noise contour of approximately CNEL 59 dB was conservatively estimated for this area for Year 2011, based on a projection that there would be 420,000 annual aircraft operations. An airport noise contour of CNEL 59 dB would add approximately 1 to 2 dB to future projected noise levels near the bridge crossing.

Staples Ranch Development

We also analyzed the projected traffic noise levels along Stoneridge Drive through Staples Ranch, particularly adjacent to the proposed continuing care community, which will include a health care facility located just north of the roadway. The proposed health care facility will be considered a "sensitive receptor" under the Pleasanton General Plan. Using the future traffic volumes shown in Table 1, we calculated future noise contour distances due to Stoneridge Drive traffic under the three scenarios, both with standard and noise-attenuating pavement. As shown in Table 3, the distance to the L_{dn} 60 dB noise contour will range from 131 to 159 feet from the centerline of Stoneridge Drive, depending on the extension alternative the City approves.

If the health care facility is located closer than these distances, the facility will be exposed to noise levels considered "Conditionally Acceptable", requiring site-specific analysis to ensure that noise criteria are met. It should be noted that Mitigation Measures NO-1.1 and NO-1.2 of the 2008 Staples Ranch EIR requires that a noise analysis of the health care facility be conducted prior to issuance of building permits to ensure it meets City standards for interior noise levels due to traffic and aircraft noise. Based on the current noise environment at the site, no additional mitigation will be required to achieve the City's interior noise goal of L_{dn} 45 dB at the health care facility. Any exterior use areas associated with the health care facility should be located outside of the calculated Stoneridge Drive L_{dn} 60 dB noise contour, or should be appropriately shielded from traffic noise. Locating outdoor use spaces in central courtyards (shielded by the health care building itself) would reduce noise levels by at least 10 dB below the noise level at the facade closest to Stoneridge Drive.

* * *

This concludes the Stoneridge Drive Extension noise study. Please do not hesitate to contact us with any questions.

Sincerely,

CHARLES M. SALTER ASSOCIATES, INC.

Randy D. Waldeck, P.E.
Principal Consultant

Enclosures: Figures 1 through 3

2009_08_28 Stoneridge Drive Extension Draft Noise Study (09-0266).doc

◉ = LONG-TERM 48 HOUR NOISE MEASUREMENT LOCATION

▣ = SHORT-TERM 15-MINUTE NOISE MEASUREMENT LOCATION

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STONERIDGE DRIVE EXTENSION:
MEASUREMENT LOCATIONS AND MEASURED Ldn

FIGURE 1

CSA #
09-0298

DATE
08.21.09

Charles M Salter Associates Inc

FIGURE 2

Charles M Salter Associates Inc

⊗ = SENSITIVE RECEIVER LOCATION

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STONERIDGE DRIVE EXTENSION:
SENSITIVE RECEIVER LOCATIONS

FIGURE 3

CSA #
09-0255

RDW
06.21.09

Charles M Salter Associates Inc

Stoneridge Drive Specific Plan Amendment – Staples Ranch

Technical Memorandum for Traffic and Circulation Supporting the Findings and Recommendations

Prepared for:

City of Pleasanton

December 7, 2007 (revised March 20, 2008)

Prepared By:
Richard G. Dowling, Principal
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December 7, 2007

Mr. Mike Tassano
Public Works Department
City of Pleasanton
200 Old Bernal Avenue
Pleasanton, CA 94566

Subject: Stoneridge Drive Specific Plan Amendment/ Staples Ranch Traffic Impact Analysis

P06089.6
P07095

Dear Mr. Tassano

Enclosed is our traffic impact analysis for the Stoneridge Drive Specific Plan Amendment/Staples Ranch. I would like to credit the following staff members for their contributions to this report:

- Ms. Kym Sterner prepared the traffic forecasts using the Pleasanton Model.
- Mr. Shusuke Iida converted the model forecasts to turning movement forecasts and prepared the Synchro analyses for the Pleasanton Model intersections. He also developed the recommended mitigation measures.
- Mr. Kevin Chen prepared the LOS analyses for the added Dublin intersections and the intersections in Livermore.
- Ms. Kamala Parks and Mr. John Dowden prepared the non-auto setting and impacts sections.

Please contact me at 510-839-1742 x120 if you have any questions.

Sincerely,

Dowling Associates, Inc.

Richard Dowling, Ph.D., P.E.
Principal
x:\miket\development projects\staples ranch\feb 25 2008 dowling report update\staples ranch traffic study march 20 2008.doc

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428 J Street, Suite 500, Sacramento, CA 95814 Phone: 916 266-2190 Fax: 916-266-2195

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1. Introduction

This report evaluates the transportation impacts of the Stoneridge Drive Specific Plan Amendment/Staples Ranch.

1.1 Project Description

The proposed project, the Stoneridge Specific Plan Amendment – Staples Ranch, will result in the following development on the project site:

- Approximately 37 acres of auto malls, containing 331,000 square feet of buildings;
- Approximately 45 acres of senior and assisted care housing containing 1.4 million square feet of buildings which would house 800 senior care units plus supporting skilled nursing units and common facilities;
- 17 acres of community parks; and
- 175,000 square feet of retail space.

According to the March 19, 2007 site plan upon which this analysis is based, this project would extend Stoneridge Drive eastwards as a two-lane divided arterial street across the Arroyo Mocho to the proposed driveways serving the community park and the senior and assisted care housing.

Emergency vehicle access only would be allowed between the community park driveway and the proposed Auto Mall Place. Auto Mall Place would be a public street open to all vehicles and would continue east to El Charro Road.

In 2007, the Pleasanton City Council approved a Pre-Development Cooperation Agreement with the City of Livermore, the Alameda County Surplus Property Authority, Alameda County, and Vulcan Materials regarding the design and construction of El Charro Road near the project area. In addition, in 2007, a Cost Sharing Agreement between Alameda County, the City of Pleasanton, and the City of Livermore was approved regarding each jurisdiction's financial contribution toward the El Charro Road improvements. According to the agreements, it is anticipated that the City of Livermore will commence construction of the El Charro Road improvements before the Staples Ranch project (including El Charro Road) is annexed into the City of Pleasanton. If this does not occur, then the City of Pleasanton would construct the El Charro Road improvements listed in the agreements, unless the cities of Pleasanton and Livermore agree otherwise in writing. According to the agreements, El Charro Road north of Jack London Boulevard would be a public road. El Charro Road generally south of Jack London Boulevard would continue to be a private road, owned by Vulcan Materials or other private entity if sold, until such time that El Charro Road is extended south to Stanley Boulevard, as anticipated in the 1996 Pleasanton General Plan. The El Charro Road improvements north of Jack London Boulevard include:

- Three northbound thru lanes
- Area for one future northbound thru lane
- Three southbound left turn lanes
- One southbound thru lane
- Area for one future southbound thru lane
- Area for one future southbound right turn lane
- One landscaped median to separate the north and southbound traffic

As shown in the agreements, the existing Freisman Road connection to El Charro Road would be abandoned as part of the El Charro Road improvements. Also per the agreements, two emergency access routes, at locations approved by Vulcan Materials, may be permitted on the private portion of El Charro Road located south of Jack London Boulevard. One of these routes is permitted to serve the Staples Ranch Development. The other is permitted to serve Livermore's approved El Charro Specific Plan Development.

All senior and assisted housing and community park vehicular access will be to the west via Stoneridge Drive. All other project vehicle access will be via Auto Mall Place to the east.

The 1996 Pleasanton General Plan shows that Stoneridge Drive shall be widened to a six-lane road and extended to El Charro Road at build out of the General Plan. The emergency vehicle access included in the proposed project would preserve the right-of-way for this future extension connecting Stoneridge Drive to Auto Mall Place and El Charro Road.

Ice Center Option

One project option analyzed in this report is an ice center to be located on a portion of the community park site. The ice center would be an approximately 138,500 square foot facility that will accommodate amateur ice hockey leagues (adult and youth), figure skating, broomball, curling, speed skating, ice dancing, as well as public skating. It will be capable of seating up to 2200 spectators.

The site plan was still subject to change at the time of preparation of this traffic study.

The ice center will feature an in-house pro shop, large meeting and party spaces, and a full service restaurant/bar that overlooks the rinks. The ice center will contain from two to four NHL-size ice rinks. The facility will be part of the 17-acre Staples Community Park of which 8 acres would be used by the ice center. The front of the facility will be accessible by vehicle only from Auto Mall Place using a single shared access driveway with the retail center.

The back of the facility shall be accessible from Stoneridge Only. And will contain approximately 10 percent of the required parking.

1.2 Executive Summary

This section provides a quick overview of the results of the traffic analysis.

Methodology

A range of methods was used to evaluate the project's potential impacts because the potential impacts of the project span a range of jurisdictions, each with their preferred impact analysis methodology.

Within the City of Pleasanton and near its borders the impacts of the project were evaluated using the same city model and analysis intersections that are regularly evaluated for the city's Baseline Traffic Report. Over 60 signalized intersections (some of which are within the City of Dublin and Alameda County) are evaluated in the model for both existing plus approved projects conditions and for general plan buildout conditions (These intersections are labeled 1-63 in Figure 1 and Figure 2).

For those intersections farther away from Pleasanton and within the City of Dublin, the impacts of the project were evaluated by adding the proposed project traffic to the short-term and long-term forecasts contained in the City of Dublin's Fallon Village Traffic Study by TJKM Associates (August 2005). These intersections are labeled D1, D2, and D3 in Figure 1 and Figure 2. These intersections are located outside of the main area of competence of the Pleasanton Model, consequently the Fallon Village Traffic Study was considered to be a superior basis for performing the traffic impact analysis for these 3 intersections. The level of service (LOS) of these intersections was analyzed using the City of Dublin's LOS method (the Contra Costa Transportation Authority LOS method).

For those intersections farther away from Pleasanton and within the City of Livermore, the Traffic Study for the El Charro Specific Plan (Dowling Associates, January 10, 2007) forecasts and level of service analysis method were used to evaluate the traffic impacts of the proposed project. These intersections are labeled ECA and EC1-EC13 in Figure 2. These intersections are located outside of the main area of competence of the Pleasanton Model, consequently the Traffic Study for the El Charro Specific Plan was considered to be a superior basis for performing the traffic impact analysis for these intersections. The El Charro study incorporates the development and road improvement assumptions already certified and accepted by the City of Livermore. Thus it was only necessary to show whether or not the addition of the Stoneridge Drive Specific Plan Amendment would reveal new impacts and require additional mitigations beyond those already adopted in the El Charro Specific Plan FEIR.

The I-580 freeway impacts were evaluated using the Alameda County Congestion Management Authority (ACCMA) model forecasts and that agency's level of service method.

Relationship to Prior Traffic Studies

The methodology used to evaluate the traffic impacts of the proposed project reflect new traffic counts that became available for use in the City Traffic Model in 2006. These counts were not available for previous traffic impact studies in the City of Pleasanton. Consequently the no-project (vacant site) data for existing plus approved and for cumulative development shown in this report vary from that reported in the earlier studies, such as for Oak Grove. The Stoneridge Drive Specific Plan Amendment is the first study (along with the current City General Plan update) to incorporate the new 2006 data.

Project Trip Generation and Distribution

The proposed project will generate 956 AM peak hour vehicle-trip ends and 1686 PM peak hour vehicle trip ends. The ice center will generate an additional 77 AM peak hour vehicle-trip ends and 349 PM peak hour vehicle-trip ends. Approximately 75% of the trips will be going to and from the west (Using a combination of I-580, Stoneridge, and Dublin Blvd. depending on whether or not Stoneridge Drive is extended to El Charro Road).

Short Term Impacts of Project (Existing Plus Approved)

The short-term impacts of the proposed project on intersections in Pleasanton, Dublin, and Livermore are listed in Table 4. The mitigations summarized in this table would mitigate the impacts of the proposed project on the intersections to a less than significant level.

Short Term Impacts of Project With Ice Center (Existing Plus Approved)

For Existing Plus Approved Conditions, and in the absence of the Stoneridge Drive extension, the project plus Ice Center would impact the same intersections and would require the same mitigations as identified above for the project without the Ice Center. For the convenience of the reader these mitigations are repeated below in Table 4: . The mitigations would reduce the impacts to a less than significant level.

With the construction of the Stoneridge Drive extension, the impacts of the project plus Ice Center would be different than for the project alone and would require slightly different mitigation measures (see mitigation measures for Intersection 56, Fallon and Dublin). The recommended mitigations would reduce the impacts of the project plus the Ice Center to a less than significant level.

Note that this impact analysis did NOT address the traffic impacts of special events at the Ice Center.

Long Term Impacts of Project (Cumulative)

The long-term impacts of the proposed project on intersections in Pleasanton, Dublin, and Livermore are listed in Table 5 below.

Long Term Impacts of Project With Ice Center (Existing Plus Approved)

The same intersections would be impacted with the proposed project plus the Ice Center as for the proposed project alone, with or without Stoneridge (see Table 5). The same mitigations would be required as listed above for the proposed project.

The average delay at the intersection of West Las Positas and Stoneridge (#30) would be reduced from just barely LOS "E" with the project to LOS "D" standards (barely) if the Ice Center were added to the proposed project. This is caused because the Ice Center would add traffic to the less delayed movements at this intersection. The difference is so minor that it has been elected to consider this intersection as impacted by the project with or without the Ice Center. More information on how adding traffic can improve the level of service (LOS) rating can be found in Chapter 2 under, "How Adding Traffic Can Improve Apparent LOS".

Note that this impact analysis did NOT address the traffic impacts of special events at the Ice Center.

Results of CMP Freeway and Arterial Analysis

The impacts of the proposed project were evaluated for the Alameda County Congestion Management Agency (ACCMA) Metropolitan Transportation System (MTS), which consists of freeways and major arterial streets of regional significance. The analysis was conducted according to ACCMA's Congestion Management Program (CMP).

The proposed project will contribute additional traffic to the I-580 freeway, which is expected to operate at unacceptable levels of service with and without the project. The recommended mitigation is to implement the following policy programs from the City's 1996 General Plan:

- Program 1.4: Preserve rights-of-way needed for freeway improvements through dedication and according to Caltrans standards, as adjacent properties develop.
- Program 12.1: Require developers of property adjacent to the proposed BART alignment to reserve adequate acreage for future BART stations and facilities.

The project sponsor should be required to construct all structures and the proposed CLC berm outside of the right of way anticipated to be acquired by Caltrans for the ultimate freeway configuration called for in Transportation 2030 Plan for the San Francisco Bay Area, by the Metropolitan Transportation Commissions (MTC), 2005. This report recommended I-580 corridor improvements, including widening I-580 in both directions for HOV and auxiliary lanes from Tassajara Road to Greenville Road. In addition the project sponsor should provide sufficient right-of-way along their I-580 frontage to accommodate the widening of the I-580 median to accommodate BART service in the median.

The ACCMA CMP analysis of regional arterials did not reveal any new arterial street impacts not already identified in the intersection analyses.

The analysis of regional transit service impacts did not identify any significant regional transit impacts of the proposed project.

Results of Project Access Drive Analysis

The analysis identified the minimum number of through lanes and turn lanes required to maintain city LOS standards at both project driveways (CLC/Community Park Driveway, and Hendrick/Retail Driveway) for with and without the Stoneridge Drive Extension. The easterly driveway, Hendrick/Retail Driveway was assumed to be signalized under all project scenarios. The westerly driveway (CLC/Community Park Driveway) meets peak hour signal warrants under any of the future conditions that include the Stoneridge Drive Extension,

Results of Stoneridge and Guzman Parkway Analysis

The intersection of Stoneridge Drive and Guzman Parkway was selected for analysis as an indicator of what traffic conditions would be like at the unsignalized intersections on Stoneridge Drive east of Santa Rita Road.

The analysis determined that the intersection of Stoneridge Drive and Guzman Parkway would meet peak hour signal warrants under any of the future conditions that include the Stoneridge Drive Extension because of the peak hour delay on Guzman Parkway. This will also be true for other unsignalized intersections on this stretch of Stoneridge Drive, where the peak hour approach volume on the side street exceeds 75 vehicles per hour during the peak hour.

Based on the results for Guzman Parkway, the proposed project will increase the delay to left turning traffic from side streets turning onto Stoneridge Drive for unsignalized intersections on Stoneridge Drive east of Santa Rita Road. The left turn delays will go from level of service "A" to level of service "B" with the project under the "No Stoneridge Drive Extension" scenario. The left turn delays will be go to level of service "D" with the project under the "With Stoneridge Drive Extension" scenario.

The addition of the Ice Center to the proposed project would significantly impact the delay to drivers attempting to make left turns under the "with Stoneridge Drive Extensions" scenario only. The left turn delays (entering Stoneridge Drive) would go from LOS "D" with the project to LOS "F" with the ice center and the project. For the unsignalized intersections in this stretch of Stoneridge Drive that are unlikely to meet signal warrants, the recommended mitigation measure is to provide extended left turn refuges in the median of Stoneridge Drive so the drivers can make the left turns onto Stoneridge Drive in two stages, first crossing one stream of traffic and then merging with the other stream of traffic on Stoneridge. For those intersections likely to meet signal warrants the recommended mitigation is to install a traffic signal.

Results of Emergency Access, Parking, Truck, Transit, Bicycle, and Pedestrian Analysis

Emergency Access: The proposed project will provide emergency access between the eastern terminus of Stoneridge Drive at CLC/Community Park Driveway and the western terminus of Auto Mall Place at Hendrick/Retail Driveway.

Parking: The proposed project will provide parking according to City requirements. The Ice Center will require a parking demand and supply study to identify the required on-site parking and methods for supplementing it with off-site parking and shuttle service (if any).

Truck: The project is expected to generate truck trips at a similar rate as existing residential and retail development in the City of Pleasanton. Thus no unusual truck traffic impacts are expected from this project. Truck traffic from the quarry was included in the overall traffic impact analysis and intersection level of service computations.

Transit: The project site (because it is vacant land) does not currently have transit service. The following mitigation measures are recommended:

1. The project sponsor shall work with LAVTA and provide any additional support required by the City of Pleasanton to secure regular bus service to the Continuing Living Community (CLC), to the auto mall, and to the retail center.
2. The project sponsor shall design the barriers to auto traffic that are planned for the emergency vehicle access drive (between the CLC drive and the Retail Center Drive) to allow convenient and rapid entry and exit by public transit buses and shuttle vans.
3. The project sponsor shall provide bus turnouts and transit shelters on Stoneridge Drive and on El Charro Road at locations specified by City staff in consultation with LAVTA.

Bicycle and Pedestrian: At the time of preparation of this report, the project site design available for review by the consultant did not provide sufficient detail to evaluate the bicycle or pedestrian access features to be incorporated in the project. The project site design should follow the requirements of the City of Pleasanton General Plan to ensure the project does not adversely impact bicycle or pedestrian access. To the extent that the project design is consistent with General Plan bicycle and pedestrian access policies, the project should have no significant adverse impacts on pedestrians or bicyclists.

Comparison to 1989 Specific Plan

The traffic analysis in this report assumed that the entire Staples Ranch site shown in the 1989 Stoneridge Drive Specific Plan had not been constructed; however, portions of it have been completed such as the following:

- 162 single family units

  These units have been removed from the comparison analysis.

- 2.8 acres of park

  This has such a small impact on the daily number of trips that it has been left in the analysis.

- Approximately eight acres of the Service Commercial Light Industrial land use is no longer available to be constructed (thus, leaving approximately 70 acres of the Service Commercial and Light Industrial land use)

The Existing Specific Plan Alternative would generate a total of 1,622 trips during the AM peak hour and 2.819 trips during the PM peak hour. Compared to conditions under the proposed project, the 1989 Stoneridge Specific Plan would generate 666 more trips in the AM peak hour and 1,133 more trips in the PM peak hour. Several elements within the existing 1989 specific plan have been constructed, but were not removed from the analysis. 162 homes, 2.8 acres of park have been constructed, resulting in a small decrease in remaining lands designated for Service Commercial development. Because of this, the traffic analysis over estimated the 1989 specific plan volumes approximately 242 AM peak hour and 275 PM peak hour trips. With these reductions, the existing 1989 Specific Plan would still generate 424 more AM peak hour trips, 858 more PM peak hour trips and 18,242 more daily trips than the proposed project.

The addition of the Ice Center trips to the proposed project would still produce 347 fewer AM trips, 509 fewer PM trips and 14,914 fewer daily trips.

The Ice Center volumes do not consider special events at the Ice Center, which were not evaluated here. However, the special event would have to generate more than 500 additional PM peak hour vehicle trip ends before the combination of the Specific Plan Amendment and the Ice Center would generate more PM peak hour vehicle trip-ends than the 1989 Specific Plan.

Table 1: 1989 Specific Plan Trip Generation

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
single family units	162	DU	38	90	128	113	48	161	1,620
Service Commercial	1,000	KSF	440	660	1100	660	440	1100	22,000
Community Park	20	Acres	3	3	6	3	3	6	120
Retail Component	353	KSF	194	194	388	776	776	1552	19,415
		TOTAL	**675**	**947**	**1622**	**1552**	**1267**	**2819**	**43,155**
~~single family units~~	~~162~~	~~DU~~	~~38~~	~~90~~	~~128~~	~~113~~	~~48~~	~~161~~	~~1,620~~
~~Community Park~~	~~2.8~~	~~Acres~~	~~0.4~~	~~0.4~~	~~0.8~~	~~0.4~~	~~0.4~~	~~0.8~~	~~1.6~~
~~Service Commercial*~~	~~102.6~~	~~KSF~~	~~45~~	~~68~~	~~113~~	~~68~~	~~45~~	~~113~~	~~2,256~~
TOTAL (minus constructed land)			**592**	**789**	**1380**	**1371**	**1174**	**2544**	**39,277**

Notes: **DU** = Dwelling Units, **KSF** = Thousand square feet

* The service commercial component was calculated by averaging the trip generation of the 1,000,000 sf over the 78 acres available, equating 12,820.5 sf per acre, which gives 102.6 ksf for the 8 constructed acres)

Table 2: Proposed Project Trip Generation

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
Senior Housing	800	DU	29	35	64	54	34	88	2,200
Auto Dealers	331	KSF	502	176	678	341	533	874	11,035
Community Park	17	Acres	17	17	34	34	34	68	300
Retail Component	175	KSF	110	70	180	315	341	656	7,500
		TOTAL	**658**	**298**	**956**	**744**	**942**	**1686**	**21,035**

Notes: **DU** = Dwelling Units, **KSF** = Thousand square feet

Table 3: Ice Center Trip Generation

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
Ice Center	138.5	KSF	41	36	77	175	174	349	3328
TOTAL (including proposed project)			**699**	**334**	**1033**	**919**	**1116**	**2035**	**25,728**

Notes: **KSF** = Thousand square feet

Table 4: Mitigations for Existing, and Existing Plus Approved Conditions

	Intersection	Existing	Exist+Approved	Exist+Approved+Project – No Stoneridge Extension	Exist+Approved+Project – With Stoneridge Extension	Exist+Approved+Project + Ice – No Stoneridge Ext.	Exist+Approved+Project + Ice – With Stoneridge Ext.
9	Hopyard & I-580 EB			Restripe one EBL lane to shared EBLR lane.		Restripe one EBL lane to shared EBLR lane.	
10	Hopyard Road at Owens Drive	Provide 2 NBL, 3 NBT, 1 NBR; 3 SBL, 3 SBT, 1 SBR (free); 2 EBL, 2 EBT, 1 EBR; 2 WBL, 2 WBT, 1 WBR (free).	See Existing +, narrow lane to reduce ped clearance to 20 seconds. Cycle length 130 seconds	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved
11	Hopyard Road at Stoneridge Drive	Provide EB right-turn overlap.	Provide EB free right turn (remove one SB through lane, if necessary).	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved
20	Hacienda Drive at Owens Drive	Widen SB & EB to provide 3rd left-turn lanes	See Existing	See Existing	See Existing	See Existing	See Existing
32	Stoneridge & Santa Rita		Restripe one EBR lane to shared EBTR lane, reduce ped clearance to 21 seconds (only if Stoneridge is extended).		Widen NB approach to provide separate right-turn lane. Restripe one EBR lane to shared EBTR lane, reduce ped clearance to 21 seconds.		Widen NB approach to provide separate right-turn lane. Restripe one EBR lane to shared EBTR lane, reduce ped clearance to 21 seconds.
34	Santa Rita Road at Valley Avenue	Widen WB to provide 2nd left-turn lane	Widen NB to provide separate right-turn lane. (only if Stoneridge Drive is extended)	Widen NB to provide separate right-turn lane.	Widen NB to provide separate right-turn lane	Widen NB to provide separate right-turn lane	Widen NB to provide separate right-turn lane Plus: Increase cycle length to 130 seconds
51	El Charro Road & I-580 EB	Signalize	See Existing	Same as Existing, Plus: Restripe one EBL lane to shared EBLR lane (included in project design).		Same as Existing, Plus: Restripe one EBL lane to shared EBLR lane. (included in project design).	
53	El Charro & Stoneridge				Provide SB free right-turn lane and widen EB approach to provide third left-turn lane.		Provide SB free right-turn lane and widen EB approach to provide third left-turn lane.
56	Fallon Rd & Dublin Blvd.		Provide third NB left-turn lane and second NBT lane, Provide two EB right-turn lanes.	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved

All mitigations presume signal cycle length will be re-optimized when mitigations are in.

Table 5: Mitigations for Cumulative Conditions

	Intersection	Cumulative – No Project – With Stoneridge Drive Extension	Cumulative+Project – No Stoneridge Extension	Cumulative+Project – With Stoneridge Extension	Cumulative+Project + Ice – No Stoneridge Extension	Cumulative+Project + Ice – With Stoneridge Extension
10	Hopyard Road at Owens Drive	Same as Existing and, narrow lane to reduce ped clearance to 20 seconds. Cycle length 130 seconds	Same as Cumulative no project	Same as Cumulative no project	Same as Cumulative no project	Same as Cumulative no project
11	Hopyard Road at Stoneridge Drive	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved
20	Hacienda Drive at Owens Drive	Same as Existing	Same as Existing	Same as Existing	Same as Existing	Same as Existing
26	Santa Rita Road @ I-580 EB	Widen SB approach to provide 2nd left-turn lane	Same as Cumulative No Project.	Same as Cumulative No Project.	Same as Cumulative No Project.	Same as Cumulative No Project.
30	W Las Positas Boulevard @ Stoneridge Drive	Widen SB approach to provide 2nd left-turn lane, restripe EB to provide separate right-turn lane and remove one left-turn lane.	Same as Cumulative No Project.	Same as Cumulative No Project.	Same as Cumulative No Project.	Same as Cumulative No Project.
32	Stoneridge & Santa Rita	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved	Same as Existing Plus Approved
34	Santa Rita Road at Valley Avenue	Same as Existing	Same as Existing plus: widen NB to provide separate right-turn lane	Same as Existing	Same as Existing plus: widen NB to provide separate right-turn lane	Same as Existing plus: widen NB to provide separate right-turn lane
45	El Charro at Stanley Blvd	provide 2 exclusive SB left-turn and 2 exclusive SBright-turn lanes, (current design in General Plan)	Same as Cumulative No Project.	Same as Cumulative No Project.	Same as Cumulative No Project.	Same as Cumulative No Project.
51	El Charro Road & I-580 EB	Same as Existing	Same as Existing plus: Restripe one EBL lane to shared EBLR lane. (proposed project design)	Same as Existing plus: Restripe one EBL lane to shared EBLR lane.	Same as Existing plus: Restripe one EBL lane to shared EBLR lane.	Same as Existing plus: Restripe one EBL lane to shared EBLR lane.
53	El Charro & Stoneridge			Provide SB free right-turn. (proposed project design)		Provide SB free right-turn. (proposed project design)
56	Fallon Rd & Dublin Blvd.	To Be Determined by Dublin	Provide dual EB free right-turn lanes	Provide single EB free right-turn lane.	Provide dual EB free right-turn lanes	Provide single EB free right-turn lane.
60	Tassajara Road @ Central Parkway	To Be Determined by Dublin	Widen EB to provide separate right-turn lane.	Widen EB to provide separate right-turn lane.	Widen EB to provide separate right-turn lane.	Widen EB to provide separate right-turn lane.

All mitigations presume signal cycle length will be re-optimized when mitigations are in.

The Synchro computation sheets showing the level of service with these are shown in the Appendix. Note that City Staff subsequently refined some of the recommended mitigations and developed a separate appendix of Synchro outputs showing the results with their refined mitigations. The City's appendix supercedes the Dowling appendix for those intersections where the mitigations were refined by City Staff.

2. Impact Analysis Methodology

A range of methods was used to evaluate the project's potential impacts because the potential impacts of the project span a range of jurisdictions, each with their preferred impact analysis methodology.

Within the City of Pleasanton and near its borders the impacts of the project were evaluated using the same city model and analysis intersections that are regularly evaluated for the city's Baseline Traffic Report. Over 60 signalized intersections (some of which are within the City of Dublin and Alameda County) are evaluated in the model for both existing plus approved projects conditions and for general plan buildout conditions (These intersections are labeled 1-63 in Figure 1 and Figure 2).

For those intersections farther away from Pleasanton and within the City of Dublin, the impacts of the project were evaluated by adding the proposed project traffic to the short-term and long-term forecasts contained in the City of Dublin's Fallon Village Traffic Study by TJKM Associates (August 2005). These intersections are labeled D1, D2, and D3 in Figure 1 and Figure 2. These intersections are located outside of the main area of competence of the Pleasanton Model, consequently the Fallon Village Traffic Study was considered to be a superior basis for performing the traffic impact analysis for these 3 intersections. The level of service (LOS) of these intersections was analyzed using the City of Dublin's LOS method (the Contra Costa Transportation Authority LOS method).

For those intersections farther away from Pleasanton and within the City of Livermore, the Traffic Study for the El Charro Specific Plan (Dowling Associates, January 10, 2007) forecasts and level of service analysis method were used to evaluate the traffic impacts of the proposed project. These intersections are labeled ECA and EC1-EC13 in Figure 2. These intersections are located outside of the main area of competence of the Pleasanton Model, consequently the Traffic Study for the El Charro Specific Plan was considered to be a superior basis for performing the traffic impact analysis for these intersections. The El Charro study incorporates the development and road improvement assumptions already certified and accepted by the City of Livermore. Thus it was only necessary to show whether or not the addition of the Stoneridge Drive Specific Plan Amendment would reveal new impacts and require additional mitigations beyond those already adopted in the El Charro Specific Plan FEIR.

The I-580 freeway impacts were evaluated using the Alameda County Congestion Management Authority (ACCMA) model forecasts and that agency's level of service method.

2.1 Analysis Method for Pleasanton Model Area Intersections

The intersections falling within the Pleasanton model analysis area are shown in Figure 1: Study Intersections Map (West), and in Figure 2: Study Intersections Map (East). Sixty-three intersections fall within the Pleasanton model analysis area.

These intersections have been selected by the City of Pleasanton for regular monitoring in its periodic Baseline Traffic Reports, the most recent of which was published in 2003. These intersections are considered by the City of Pleasanton to be of citywide significance.

The City of Pleasanton has developed a citywide travel demand forecasting model and an intersection level of service analysis model to monitor the operations of the Baseline Report intersections. The Baseline Report produces traffic forecasts and level of service results for existing conditions and two future scenarios: "existing plus approved" and a "buildout". The Baseline report also includes a set of city approved mitigations for each of the intersections failing to meet City General Plan level of service standards.

Table 6: Study Intersections, lists the Pleasanton Model area study intersections used in this impact analysis. The accompanying maps show these intersections and the additional intersections in Dublin, Livermore, and in the unincorporated area that were added to the Baseline Report intersections for the purposes of this specific project impact analysis.

Figure 1: Study Intersections Map (West)

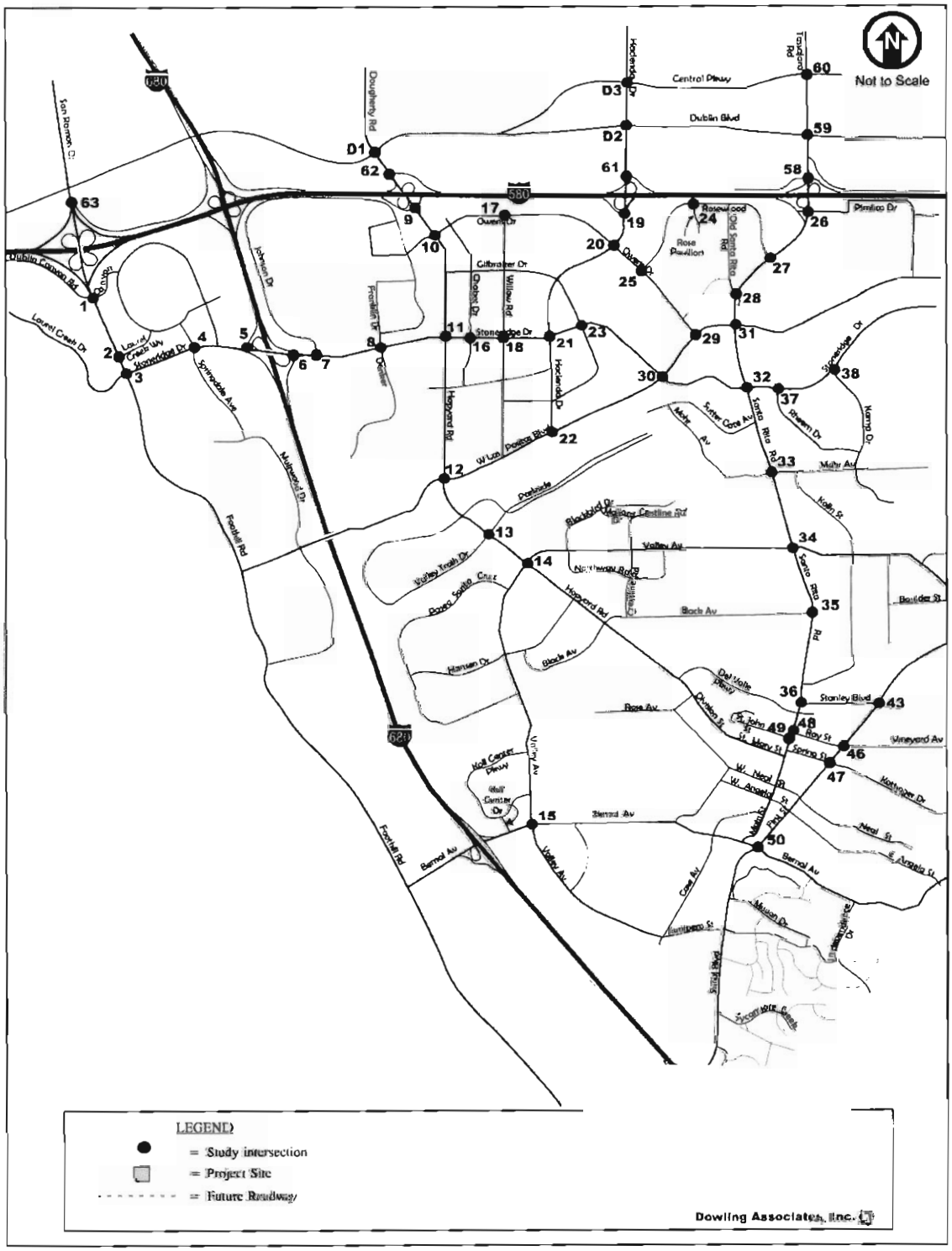

Figure 2: Study Intersections Map (East)

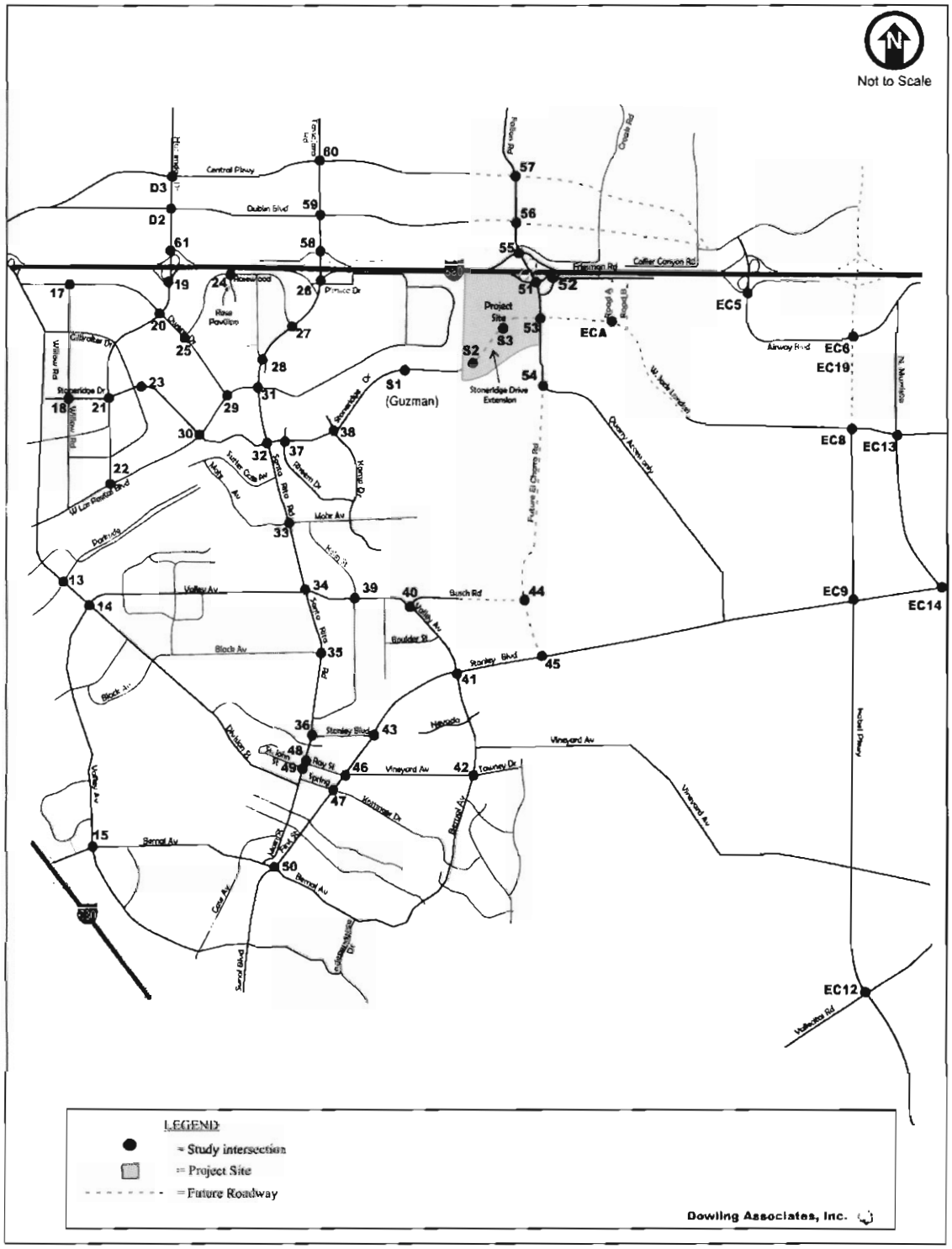

Table 6: Study Intersections Within Pleasanton Model Area.

Study Intersections	
# North-South at East-West	# North-South at East-West
1 Foothill Road at Dublin Canyon Road-Canyon Way	33 Santa Rita Road at Mohr Avenue
2 Foothill Road at Laurel Creek Drive	34 Santa Rita Road at Valley Avenue
3 Foothill Road at Stoneridge Drive	35 Santa Rita Road at Black Avenue
4 Springdale Avenue at Stoneridge Drive	36 Santa Rita Road at Stanley Boulevard
5 I-680 SB off-ramp at Stoneridge Drive	37 Rheem Drive-Milani Avenue at Stoneridge Drive
6 I-680 NB off-ramp at Stoneridge Drive	38 Kamp Road-Garden Circle at Stoneridge Drive
7 Johnson Drive at Stoneridge Drive	39 Kolln Street at Valley Avenue
8 Franklin Drive-Denker Drive at Stoneridge Drive	40 Busch Road at Valley Avenue
9 Hopyard Road at I-580 EB off-ramp	41 Valley Avenue-Bernal Avenue at Stanley Boulevard
10 Hopyard Road at Owens Drive	42 Bernal Avenue at Vineyard Avenue-Tawny Drive
11 Hopyard Road at Stoneridge Drive	43 First Street at Stanley Boulevard
12 Hopyard Road at W Las Positas Boulevard	44 El Charro Road at Busch Road [1]
13 Hopyard Road at Valley Trails Drive (S)-Parkside Drive	45 El Charro Road at Stanley Boulevard [1]
14 Hopyard Road at Valley Avenue	46 First Street at Ray Street-Vineyard Avenue
15 Valley Avenue at Bernal Avenue	47 First Street at Kottinger Drive-Spring Street
16 Chabot Drive at Stoneridge Drive	48 Main Street at Ray Street
17 Willow Road-BART Entrance at Owens Drive	49 Main Street at St. John Street
18 Willow Road at Stoneridge Drive	50 First Street-Sunol Boulevard at Bernal Avenue
19 Hacienda Drive at I-580 EB off-ramp	51 El Charro Road at I-580 EB ramps
20 Hacienda Drive at Owens Drive	52 El Charro Road at Freisman Road[2]
21 Hacienda Drive at Stoneridge Drive	53 El Charro Road at Jack London Boulevard-Automall Place [1]
22 Hacienda Drive at W Las Positas Boulevard	54 El Charro Road at El Charro Extension [1]
23 Gibraltar Drive at Stoneridge Drive	55 Fallon Road at I-580 WB ramps
24 Rosewood Drive at Rose Pavilion	56 Fallon Road at Dublin Boulevard [1]
25 Rosewood Drive at Owens Drive	57 Fallon Road at Central Parkway
26 Santa Rita Road at I-580 EB off-ramp-Pimlico Drive	58 Tassajara Road at I-580 WB off-ramp
27 Santa Rita Road at Rosewood Drive	59 Tassajara Road at Dublin Boulevard
28 Santa Rita Road at Old Santa Rita Drive	60 Tassajara Road at Central Parkway
29 W Las Positas Boulevard at Owens Drive	61 Hacienda Drive at I-580 WB off-ramp
30 W Las Positas Boulevard at Stoneridge Drive	62 Dougherty Road at I-580 WB off-ramp
31 Santa Rita Road at W Las Positas Boulevard	63 San Ramon Road at I-580 WB off-ramp
32 Santa Rita Road at Stoneridge Drive	

[1] Planned future intersection
[2] Intersection to be closed in future
This table does not show additional intersections evaluated within Dublin and Livermore. Consult text for these added intersections

While it is typical to evaluate only those intersections closest too and therefore likely to be impacted by a project, the City of Pleasanton has automated the process for most all of its signalized intersections. Thus the impacts of the project are evaluated at all 60+ critical intersections in Pleasanton, even those a long distance away from the project and unlikely to be significantly impacted by the project. Pleasanton has included in its model a limited number of critical intersections outside of its jurisdiction, located in the County, Dublin, and Livermore. The analysis of these intersections is also automated, and therefore they are included, even if they are located a great distance from the specific project.

For those intersections not included in the City model, the analysis process is NOT automated and it is therefore necessary to include only those intersections likely to be significantly impacted by the proposed project. In the case of the proposed project, staff at Dublin and Livermore were consulted to identify a list of key intersections within their jurisdiction thought to be possibly significantly impacted by the proposed project. These extra intersections suggested by Dublin and Livermore were evaluated as well as the intersections included in the Pleasanton model.

The traffic modeling process and level of service analysis methods used in the project traffic impact analysis are documented in the City of Pleasanton's City Council April 24, 2007 General Plan Workshop Agenda Report [1].

Intersection LOS Method for Pleasanton

Consistent with the City of Pleasanton's City Council April 24, 2007 General Plan Workshop Agenda Report, the intersection level of service (LOS) was analyzed for the weekday morning (AM) and evening (PM) peak-hours, using methodologies described in the *2000 Highway Capacity Manual* by the Transportation Research Board. Existing peak-hour traffic turning movement counts were collected at all of the study area intersections no earlier than June 2004 to derive the LOS calculations. Existing plus Approved and Cumulative peak-hour LOS calculations are based on modeled intersection vehicle turning movements.

Signalized intersection analyses were conducted using the operational methodology outlined in the *Highway Capacity Manual* [2], as required by the City of Pleasanton. This procedure calculates an average stopped delay in seconds per vehicle at a signalized intersection and assigns a level of service designation based upon the delay. Table 7 shows level of service criteria for signalized intersections in the 2000 Highway Capacity Manual.

Stop sign-controlled intersections were analyzed utilizing the operational methodology outlined in the Highway Capacity Manual [3] (Transportation Research Board, Washington, D.C., 2000, Chapter 17). This methodology determines the Level of Service by calculating an average total delay in seconds per vehicle for each controlled movement. For all-way stop-controlled intersections, LOS is based upon the weighted average control delay for all intersection legs, similar to the LOS basis for signalized intersections. Table 8 shows level of service criteria for unsignalized intersections in the 2000 Highway Capacity Manual.

Treatment of Signal Timing in Intersection LOS Analysis

Signal timing (cycle length and maximum green times) can have a profound effect on the average delay of traffic at the intersection and its level of service. Signal timing is required to apply the Highway Capacity Manual method to compute level of service.

The levels of service computed for existing conditions generally reflect the existing signal timing settings at each intersection as provided by city staff. These same settings are carried forward into all of the future

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[1] Joint Workshop of the City Council and Planning Commission Agenda Report, "General Plan Workshop Discussion on the Results of General Plan Traffic Modeling Without and With the Stoneridge Drive Extension, April 24, 2007, Planning and Public Works, City of Pleasanton.

[2] *Highway Capacity Manual*, Chapter 16. 2000. Transportation Research Board. Washington, D.C.

[3] *Highway Capacity Manual*, Chapter 17. 2000. Transportation Research Board. Washington, D.C.

forecasts, because it is not practical to optimize the signal settings for all 60+ signals for each peak hour for each future scenario and each project option.

If, in a future scenario it is observed that an intersection would fail to meet the city's level of service "D" standard, then a test was conducted to see if changing the cycle length would eliminate the violation. If successful, the new cycle length was applied to the intersection for the future scenario. If not successful, the cycle length was returned to its original setting.

The result of this approach is that the intersections forecasted to operate at level of service "D" or better will have generally sub-optimal signal timings for the given demand level. But since the level of service is satisfactory, it is considered to be an insignificant issue.

Table 7: Level of Service Criteria for Signalized Intersections

Level of Service (LOS)	Average Delay (seconds/vehicle)	Description
A	≤ 10	Very Low Delay: This level of service occurs when progression is extremely favorable and most vehicles arrive during a green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10 and ≤ 20	Minimal Delays: This level of service generally occurs with good progression, short cycle lengths, or both. More vehicles stop than at LOS A, causing higher levels of average delay.
C	> 20 and ≤ 35	Acceptable Delay: Delay increases due to fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level of service. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	> 35 and ≤ 55	Approaching Unstable Operation/Significant Delays: The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume / capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55 and ≤ 80	Unstable Operation/Substantial Delays: These high delay values generally indicate poor progression, long cycle lengths, and high volume / capacity ratios. Individual cycle failures are frequent occurrences.
F	> 80	Excessive Delays: This level, considered unacceptable to most drivers, often occurs with oversaturation (that is, when arrival traffic volumes exceed the capacity of the intersection). It may also occur at high volume / capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Highway Capacity Manual (HCM), Transportation Research Board, Washington, DC, 2000, Chapter 16 (Signalized Intersections)

Table 8: Level of Service Criteria for Unsignalized Intersections

Level of Service (LOS)	Average Delay (seconds/vehicle)	Description
A	≤ 10	Very Low Delay
B	> 10 and ≤ 15	Minimal Delays
C	> 15 and < 25	Acceptable Delay
D	> 25 and < 35	Approaching Unstable Operation and/or Significant Delays
E	> 35 and < 50	Unstable Operation and/or Substantial Delays
F	> 50	Excessive Delays

Source: Highway Capacity Manual (HCM), Transportation Research Board, Washington, DC, 2000, Chapter 17 (Unsignalized Intersections)

How Adding Traffic Can Improve Apparent LOS

The reader will note that when reviewing the delay results for LOS "D" or better intersections that sometimes the addition of project traffic will result in lower average delays. This is because the signal timings for these "satisfactorily" operating intersections has not been optimized to the lowest possible delay for each given traffic volume.

This situation often happens where an intersection was predicted to operate satisfactorily under the "no-project" condition but when the same signal timings were used for the "with project" analysis the intersection was initially found to operate at an unsatisfactory level of service. In this situation, the traffic engineer would then test different signal timings to see if the unsatisfactory level of service with the project can be mitigated with better signal timing. If the answer was yes, the results for the project were reported with the improved signal timing. Since the engineer did not then go back and improve the signal timing under the "no-project" condition, it is possible (and frequently happens) that the "no-project" delay will be higher than the "with project" delay. This is not an error in the methodology. It simply reflects the fact that it is not feasible to revisit the signal timing of all 63 intersections for both peak periods for all 13 future scenarios. In addition, it is not necessary, since the "no-project' condition was already found to be satisfactory, there is no point (for environmental impact analysis purposes) to revisiting the signal timing and finding out that the "no-project" could be even more satisfactory than it already is.

However, the result where adding traffic reduces delay can also happen for an intersection which has been optimized for both the "with project" and the "no-project" scenarios. This happens because of the way the average delay is being computed.

The Highway Capacity Manual intersection level of service is based on the average delay experienced by all vehicles at the intersection, including right turns. The result is that a project that adds a lot of right

turning traffic (which usually has low delay) to an intersection can actually reduce the average delay across all new and existing vehicles using the intersection and therefore improve the level of service.

The table below illustrates how this can happen. This illustration is for one approach leg of a hypothetical intersection.

Table 9: Example Where Adding Traffic Reduces Delay Per Vehicle

		Movement			
		Left	Thru	Right	Total
Before	Vehicles	100	200	100	400 vehicles
	Delay/Veh	30	25	15	
	Total Delay	3000	5000	1500	9500 veh-secs
	Ave. Delay				23.75 secs/veh
		Left	Thru	Right	Total
After	Vehicles	150	250	300	700 vehicles
	Delay/Veh	31	26	16	
	Total Delay	4650	6500	4800	15950 veh-secs
	Ave. Delay				22.79 secs/veh

The hypothetical project in this illustration added 300 vehicles to the intersection and increased the average delay for vehicles on each individual movement at the intersection, but because two-thirds of the new traffic turns right, it lowered the overall average delay for all vehicles (including the new vehicles) using the intersection.

The apparent contradiction comes about because we are comparing "before" and "after" averages that have each been computed over a different number of vehicles.

This is currently standard practice for level of service computations and because most of the time a project adds traffic to the turning movements in the same proportions as for existing traffic, the average delay usually increases with added traffic. The level of service usually gets worse with added traffic, but as shown above, that does not always have to be the case. It does not indicate an error in the analysis process. It is a fixture of the method used to compute the averages and the level of service.

Traffic Forecast Method for Pleasanton

The traffic volumes for existing conditions and the traffic forecasts for future conditions were developed as follows:

- Existing conditions are based on a 2006 survey of roadway configurations and intersection volume counts conducted by the City of Pleasanton. Traffic volumes for the intersection of El Charro Road at Freisman Road were conducted in October 2006 and contained in the *El Charro Specific Plan* Traffic Report. [4] Traffic volumes for non-freeway intersections in Dublin were conducted in June 2004 and contained in the *Fallon Village Traffic Study.* [5]
- Existing plus Approved conditions intersection turn movement volumes were developed by adding future traffic generated by a set of approved projects within Pleasanton's jurisdiction to Existing volumes. A set of approved projects is listed in the appendices of that report. Other approved developments outside of the City of Pleasanton are based upon the estimated growth in traffic as defined by ABAG for the year 2015 in the City of Dublin, City of Livermore and other

[4] *Traffic Report for El Charro Specific Plan.* January 10, 2007. Prepared by Dowling Associates for the City of Livermore.

[5] *Fallon Village Traffic Study.* August 2005. Prepared by TJKM Transportation Consultants for the City of Dublin.

local jurisdictions near Pleasanton. Turn volumes at intersections not in Pleasanton's Synchro model were derived from the *El Charro Specific Plan* (calculations based on 2008+ Phase I and 2030 + Full Project with Jack London extension) and obtained from the *Fallon Village Traffic Study*.

- Cumulative vehicle intersection turn movement volumes are based on buildout of Pleasanton's adopted 1996 General Plan, **excluding** adopted plans for the Staples Ranch project development area. Other approved developments outside of the City of Pleasanton are based upon the estimated growth in traffic as defined by ABAG for the year 2030 in the City of Dublin, City of Livermore and other local jurisdictions near Pleasanton. Turn volumes at intersections not in Pleasanton's Synchro model were obtained from the *El Charro Specific Plan* (2030 + Full Project with Jack London extension) and from the *Fallon Village Traffic Study*.

All intersection turning movement counts for existing conditions in this study were done during the weekday (Tuesday, Wednesday, or Thursday) during the AM and PM commute periods (7:00 to 9:00 AM and 4:00 to 6:00 PM). In Pleasanton and at I-580 ramps in Dublin, they were conducted by the City of Pleasanton in 2006 and incorporated into the most recent Synchro model. Counts were conducted in April 2006 at the El Charro Rd-Freisman Rd intersection and at the El Charro Road-Fallon Road interchange with I-580 for the *El Charro Specific Plan EIR*. Peak-hour intersection turning movement counts were done in Dublin in June 2004 at non-freeway ramp locations for the *Fallon Village Traffic Study*. Existing intersection geometries, traffic controls, and intersection turning movement count volumes are shown in the appendices.

2.2 Analysis Method for Livermore Intersections

The following intersections in Livermore were selected for analysis based on a review of the results of the El Charro FEIR traffic analysis. This review was conducted to determine which intersections might be potentially critically impacted intersections. The bullets below list the intersections selected for analysis in Livermore and the peak hours for which operations were likely to be most sensitive to impacts from the proposed project. The intersection of Jack London Blvd. with "A" Road (in the El Charro Specific Plan Area) was not identified as a potentially critical intersection, however; City of Pleasanton staff requested that it be evaluated as well.

- El Charro #5 – Airway at I-580 EB (AM only)
- El Charro #6/19 – Isabel/Kitty Hawk at Airway Blvd. (AM Only)
- El Charro #8 – Isabel Pkway at West Jack London Blvd. (PM only)
- El Charro #9 - Isabel Pkway at Stanley Blvd. (PM only)
- El Charro #12 – East Vallecitos at Isabel Ave. (AM only)
- El Charro #13 – Murrieta at East Jack London Blvd. (AM and PM)
- El Charro #14 – Murrieta at East Stanley Blvd. (Cumulative Only, AM and PM)
- El Charro #A – West Jack London Blvd. at "A" Road (AM and PM)

(Intersection numbers refer to their designation in the Traffic Report for El Charro Specific Plan EIR. The locations of these intersections are also shown in Figure 2)

The City of Livermore has a different travel demand model than the City of Pleasanton. Each of these models represents the other jurisdiction in differing levels of detail. Consequently the El Charro Specific Plan EIR (based on the Livermore model) and this Staples Ranch impact analysis (based on the Pleasanton Model) show different forecast volumes for El Charro Road. Additionally, the two models do not have the same future projection dates so the volumes differ slightly between the two models.

Since the Pleasanton Model traffic impact analysis is not designed to extend a significant distance into Livermore, and because each city has slightly different assumptions about the likely development and street improvements within their jurisdictions, it was desirable to use City of Livermore development and improvement assumptions for the analysis of project impacts deeper within the City of Livermore.

The methodology for evaluating the impacts of the proposed project on City of Livermore intersections east of El Charro Road therefore used the traffic report for the recently approved El Charro Specific Plan FEIR as the starting point for evaluating these intersections. The forecasted volumes in the Traffic Report for El Charro Specific Plan EIR were taken as the basis for the analysis, and then adjusted to reflect the current project description for Staples Ranch.

The Traffic Report for El Charro Specific Plan EIR included a portion of Staples Ranch among its approved projects list, so for the purposes of the Staples Ranch impact analysis it was necessary to add the full forecasted Staples Ranch trips to the Traffic Report for El Charro Specific Plan EIR existing plus approved plus El Charro project trips. This provided the existing plus approved plus Staples Ranch traffic forecasts for the Livermore intersections east of El Charro Road.

Since the Traffic Report for El Charro Specific Plan EIR already included the Staples Ranch Project with the Ice Center under its cumulative analysis scenario (and had already developed mitigations for this scenario), it was only necessary to identify the percentage contribution of the Staples Ranch Project to any cumulative impact mitigation measure already identified in the El Charro FEIR.

The analysis was conducted using the following relevant future scenarios taken from the Traffic Report for El Charro Specific Plan EIR:

- Baseline 2008
- Baseline 2008 + Phase 1 El Charro Project (No Jack London extension)
- Baseline 2008 + Full El Charro Buildout with Southern Jack London Extension.
- Cumulative Plus Full El Charro Buildout with Southern Jack London Extension

2.3 Analysis Method for Dublin Intersections

At the request of the City of Dublin the following intersections beyond those already included in the Pleasanton model area analysis were evaluated[6]:

- D1: Dublin Boulevard and Dougherty Road
- D2: Dublin Boulevard and Hacienda Drive
- D3: Central Parkway and Hacienda Drive

These intersections fell outside of the Pleasanton model area used for the Staples Ranch analysis so the Fallon Village Traffic Study by TJKM Associates, dated August 2005 was used to provide the basic short-term and cumulative traffic forecasts for these intersections. This study contains the road improvement and land development assumptions appropriate for these intersections in Dublin. The Staples Ranch traffic was then added to these Fallon Village forecasts to obtain the forecasts used for the project impact analysis for these intersections.

The extra Dublin intersections were analyzed using Dublin's preferred Contra Costa County Transportation Authority (CCTA) LOS method. This method relates volume/capacity ratio, rather than delay, to level of service.

[6] The City of Dublin also requested that the intersection of San Ramon Boulevard and Dublin Boulevard be evaluated, but this intersection was not included in this analysis, because this intersection is far away from the proposed project and therefore unlikely to be impacted when closer intersections with as much traffic are not found to be impacted. This intersection also was Not evaluated in the City of Dublin's Fallon Village Traffic Study, possibly for similar reasons.

Table 10: CCTA Volume/Capacity Ratio Thresholds for Extra Dublin Intersections

Level of Service	Volume/Capacity Ratio Threshold
A	<=0.60
B	> 0.60 to 0.70
C	> 0.70 to 0.80
D	> 0.80 to 0.90
E	> 0.90 to 1.00
F	> 1.00

2.4 Criteria of Significance (Non-CMP Analysis)

The proposed project is considered to generate a significant impact if the addition of project traffic to the baseline No-Project (Vacant Land) condition causes the intersection or facility to go from a satisfactory level of service to an unsatisfactory level of service.

If the intersection or facility is already operating at an unsatisfactory level of service under baseline No-Project (Vacant Land) conditions, then the project is considered to generate a significant impact if it adds one or more trips to the facility, as per Pleasanton's practice.

The threshold between satisfactory and unsatisfactory level of service depends on the standards of the jurisdiction in which the facility is located. For the congestion management program (CMP) required analysis a separate set of criteria of significance was employed as specified by the Alameda County Congestion Management Agency (ACCMA).

Pleasanton Intersections LOS Standards

Pleasanton's General Plan, Chapter III, Policy 2, Program 2.2, states that a significant impact will occur when the Project causes an intersection to operate at LOS E or worse. However, intersections in the Downtown are not subject to a level of service standard per the Downtown Specific Plan. The following intersections are considered to be within Downtown Pleasanton.

Table 11: Analysis Intersections Located in Downtown Pleasanton

46	First Street at Ray Street-Vineyard Avenue
47	First Street at Kottinger Drive-Spring Street
48	Main Street at Ray Street
49	Main Street at St. John Street
50	First Street-Sunol Boulevard at Bernal Avenue

Livermore Intersections LOS Standards

In Livermore's General Plan, Objective CIR-4.1, Policy 1 established that the lowest acceptable LOS at a signalized intersection is mid-level LOS D (an average total stop delay per vehicle of more than 45 seconds), except in the Downtown Area and on specified intersections near freeway interchanges. Additionally, Objective CIR-4.1, Policy 3 allows for LOS E at identified signalized intersections located near freeway interchanges. The General Plan also accepts the need to balance competing objectives, as stated in Objective CIR-4.1, Policy 4, and some signalized intersections may exceed the established LOS standard due to right of way constraints and regional roadway network needs. Livermore does not have an LOS standard for unsignalized intersections.

Study intersection numbers and names, and the City of Livermore standards that they are subject to are listed below.

Table 12: Analysis Intersections Subject to Livermore LOS Standards

Number	Intersection	Livermore LOS Standard
El Charro #5	Airway at I-580 EB	LOS "E" per Goal CIR-4.1, Policy P3
El Charro #6/19	Isabel/Kitty Hawk at Airway Blvd.	OK to Exceed per Policy P4 of Goal CIR-4.1 of General Plan
El Charro #8	Isabel Pkway at West Jack London Blvd.	OK to Exceed per Policy P4 of Goal CIR-4.1 of General Plan
El Charro #9	Isabel Pkway at Stanley Blvd.	mid-LOS "D"
El Charro #12	East Vallecitos at Isabel Ave.	mid-LOS "D"
El Charro #13	Murrieta at East Jack London Blvd.	mid-LOS "D"
El Charro #14	Murrieta at East Stanley Blvd.	mid-LOS "D"
El Charro #A	West Jack London Blvd. at "A" Road	mid-LOS "D"

El Charro Road at Freisman Road, is an unsignalized intersection, and thus not subject to Livermore's level of service standards. Additionally, the El Charro Road-Freisman Road intersection will be eliminated, according to the El Charro Specific Plan.

Dublin Intersections

According to Dublin's General Plan, Chapter 5, Additional Design Criteria, Guiding Policy F, operating levels of service at the City's intersections should be no worse than LOS D. Study intersection numbers and names subject to Dublin's standards are listed below.

Table 13: Analysis Intersections Subject to Dublin LOS Standards

55	Fallon Road at I-580 Westbound ramps - *Unsignalized under Existing conditions*
56	Fallon Road at Dublin Boulevard - *Future intersection*
57	Fallon Road at Central Parkway – *Future intersection*
59	Tassajara Road at Dublin Boulevard
60	Tassajara Road at Central Parkway
63	San Ramon Road at I-580 Westbound off-ramp
D1	Dublin Boulevard and Dougherty Road
D2	Dublin Boulevard and Hacienda Drive
D3	Central Parkway and Hacienda Drive

D1 = The last three intersections are not in the current Pleasanton Modeling system and consequently are numbered D1 through D3.

2.5 Alameda County Congestion Management Agency CMP Analysis

The proposed Stoneridge Drive Specific Plan Amendment (proposed project) would generate fewer trips than the approved specific plan and would not require a CMP analysis, however, The Alameda County Congestion Management Agency (ACCMA) in their letter dated April 25th, 2007 in response to the Notice of Preparation (NOP) of the EIR, requested a Congestion Management Program (CMP) analysis for the project. A CMP analysis was conducted for this project. The impacts of the project on the regional transportation system were assessed using the ACCMA Countywide Travel Demand Model. The impact

analysis for roadways includes all Metropolitan Transportation System (MTS) roadways and Congestion Management Program (CMP) designated roadways, plus several local MTS roadways as well as transit corridors in the vicinity of the project area (see Table 14).

Congestion Management Agency Criteria of Significance

The criteria of significance for evaluating the significance of project impacts on the ACCMA MTS system were the same as those used in the El Charro Specific Plan FEIR[7] for evaluating ACCMA MTS system impacts.

This CMP analysis focuses on roadway links on MTS and CMP highway segments and transit corridors, and does not extend to intersections. This is consistent with the guidelines of the 2005 Congestion Management Program[8].

The roadway impacts of the project were considered significant if the addition of project-related traffic would result in a level of service (LOS) value worse than LOS E, except where the roadway link was already at LOS F under no project conditions.

For those locations where the Baseline (No-Project (Vacant Land)) condition is LOS F, the impacts of the project were considered significant if the contribution of project-related traffic is at least three percent (3%) of the total traffic. This criterion has been included to address impacts along roadway segments currently operating under unacceptable levels and was developed based on professional judgment using a "reasonableness test" of daily fluctuations of traffic. Also a change of "volume to capacity" (V/C) ratio of 3% has been found to be the threshold for which a perceived change in congestion is observed (the V/C ratio is calculated by comparing the peak hour link volume to the peak hour capacity of the road link). This change is equivalent to about one-half of the change from one level of service to the next.

Analysis Method for Roadway Segments

The levels of service for the designated links were analyzed in a spreadsheet using the Florida Department of Transportation LOS methodology (as is required by the CMA)[9], which provides a planning level analysis based on Highway Capacity Manual 1985 methods. As a planning level analysis, the level of service is based on forecasts of traffic and assumptions for roadway and signalization control conditions, such as facility type (freeway, expressway, and arterial classification), speeds, capacity and number of lanes. The assumption for the number of lanes at each link location was extracted from the ACCMA Countywide Travel Model, and also confirmed through field observations.

The traffic baseline forecasts for 2015 & 2030 were extracted at the required CMP and MTS highway segments from the ACCMA Countywide Travel Model for both the AM and PM peak hours. The peak hour operations were evaluated in compliance with ACCMA requirements. No-Project results were compared to the With-Project results for each model horizon year.

Analysis Method for Transit Corridors

The Specific Plan project area is located within the service area of the Livermore Amador Valley Transit Authority (LAVTA) and the Bay Area Rapid Transit (BART) system. The impact of the Project on the transit system was assessed using the latest version of the ACCMA Countywide Model. The transit trips generated by No Project and With Project conditions have been forecast using the ACCMA Countywide Model for LAVTA transit and BART.

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[7] FINAL Environmental Impact Report for the El Charro Specific Plan, State Clearinghouse #: 2006052112, City of Livermore, April 2007.

[8] Alameda County 2005 Congestion Management Program, Alameda County Congestion Management Agency, Nov. 2005.

[9] Florida Department of Transportation. Level of Service Standards and Guidelines Manual for Planning, 1995.

Table 14: List of Road Segments Analyzed for ACCMA CMP Analysis

Link Location
Interstate/State Highways
I-580 (Betn. Santa Rita & El Charro)
I-680 (Betn. Stoneridge and W Las Positas)
SR 84 (Near Little Valley)
I-580 (Betn. El Charro & Airway Pkwy)
I-580 (Betn. Airway Pkwy & Isabel Pkwy)
I-580 (Betn. Isabel Pkwy & Portola Ave)
I-580 (Betn. Portola Ave & N.Livermore Ave)
I-580 (Betn. N.Livermore Ave & First St.)
I-580 (Betn. First St & South Vasco Rd.)
I-580 (Betn. South Vasco Rd. & Greenville Rd.)
Arterials
Dougherty Rd. (Betn. Dublin Blvd. and I-580)
Dublin Blvd. (East of Tassajara Rd.)
Hopyard Rd. (Betn. I-580 & Owens Dr.)
W Las Positas (West of Santa Rita Rd.)
Santa Rita Rd. (South of I-580)
Stanley Blvd. (East of Valley Blvd.)
Stoneridge (East of Santa Rita Rd.)
Sunol Blvd. (North of I-680)
Tassajara Rd. (North of Dublin Blvd.)

3. Existing Conditions

This section describes the existing condition within the project traffic impact area.

3.1 Pleasanton Intersections

Table 15: Pleasanton Intersections Currently Failing City LOS Standards, shows the intersections currently failing to meet city level of service (LOS) standards. The LOS computations and results for all intersections can be found in the Synchro outputs in the appendices.

Per the City's Downtown Specific Plan, downtown intersections are exempt from the City of Pleasanton's General Plan level of service standards.

The current operation of the stop-sign controlled intersection of El Charro Road and I-580 freeway eastbound is shown in Table 16. Note that the LOS is shown for only the worst movement at this intersection. Other movements operate at superior LOS. The LOS computation for this intersection can be found in the appendices.

Mitigations for intersections operating at substandard levels of service under Existing conditions and resultant LOS after implementation are summarized in Table 17: Mitigations for Existing Intersections.

Table 15: Pleasanton Intersections Currently Failing City LOS Standards

#	Intersection	Control Type	AM		PM	
			LOS	Delay	LOS	Delay
10	Hopyard Rd at Owens Dr	Signal	D	36.2	**F**	**345.5**
11	Hopyard Rd at Stoneridge Dr	Signal	D	44.2	**E**	**78.4**
20	Hacienda Dr at Owens Dr	Signal	C	22.5	**F**	**96.4**
34	Santa Rita Rd at Valley Ave	Signal	D	39.8	**E**	**59.3**

Table 16: Existing LOS for Intersection of El Charro Road and I-580 Eastbound

#	Intersection	Control Type	AM		PM	
			LOS	Delay	LOS	Delay
51	El Charro Rd at I-580 EB ramps (N/A)	TWSC	A	4.5	**F**	**249.9**

Table 17: Mitigations for Existing Intersections

#	Intersection	Mitigation	After Mitigation			
			AM		PM	
			LOS	Delay	LOS	Delay
10	Hopyard Road at Owens Drive	Provide 2L, 3T, 1R (free) in NB; 3L, 3T, 1R in SB; 1L, 3T, 1R in EB; 2L, 2T, 1R (free) in WB. Change EB-WB signal to protected phasing and cycle length to 120 seconds (PM).			D	53.2
11	Hopyard Road at Stoneridge Drive	Provide EB right-turn overlap.			D	49.0
20	Hacienda Drive at Owens Drive	Widen SB & EB to provide 3rd left-turn lanes			D	46.7
34	Santa Rita Road at Valley Avenue	Widen WB to provide 2nd left-turn lane			D	51.6
51	El Charro Road at I-580 EB ramps	Signalize			C	21.8

Notes: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane;
SB = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach

3.2 Dublin Intersections

The existing 2006-2007 levels of service for the Dublin intersections evaluated within the Pleasanton modeling process for Staples Ranch are shown in Table 18: Existing LOS for Dublin Intersections in Pleasanton Model Area. All intersections evaluated currently meet City of Dublin's LOS standard.

Table 18: Existing LOS for Dublin Intersections in Pleasanton Model Area

#	Intersection	Control	AM		PM	
			LOS	Delay	LOS	Delay
55	Fallon Road at I-580 WB ramps	TWSC	A	4.8	A	1.2
56	Fallon Road at Dublin Boulevard	Future	N/A	N/A	N/A	N/A
57	Fallon Road at Central Parkway	Future	N/A	N/A	N/A	N/A
59	Tassajara Road at Dublin Boulevard	Signal	B	14.4	B	18.0
60	Tassajara Road at Central Parkway	Signal	A	2.8	A	3.7
63	San Ramon Road at I-580 WB off-ramp	Signal	B	12.1	B	10.1

Note that LOS for these intersections evaluated using the 2000 Highway Capacity Manual method.

The 2005 levels of service for the additional City of Dublin intersections were taken from the Fallon Village Traffic Study by TJKM Transportation Consultants (August 2005). They are shown in Table 19: Existing LOS for Added Dublin Intersections. All three intersections evaluated currently operate at LOS D or better.

Table 19: Existing LOS for Added Dublin Intersections

Intersection	AM		PM	
	V/C	LOS	V/C	LOS
Dougherty Road/Dublin Blvd	0.55	A	0.83	D
Hacienda Drive/Dublin Blvd.	0.34	A	0.46	A
Hacienda Drive/Central Pkwy	0.51	A	0.25	A

Source: Table 1, Fallon Village Traffic Study, TJKM Transportation Consultants, August 2005
Note that LOS was evaluated per the City of Dublin CCTA method, which is based on volume/capacity ratio rather than delay.

3.3 Livermore Intersections

The estimated 2008 levels of service for selected evaluation intersections in Livermore were taken from the Traffic Report for El Charro Specific Plan EIR. The information is shown in Table 20: Existing 2006 and Estimated 2008 LOS for Added Livermore Intersections. Two of the intersections evaluated currently exceed the City of Livermore's LOS standard (45 seconds delay).

Table 20: Existing 2006 and Estimated 2008 LOS for Added Livermore Intersections

Intersection	LOS Std	2006 LOS	2006 Delay	2008 LOS	2008 Delay
# 5 Airway at I-580 EB (AM)	E	D	37	D	42
# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	Exempt	C	26	E	70
# 8 Isabel at Jack London Blvd. (PM)	Exempt	B	12	C	22
# 9 Isabel at Stanley Blvd. (PM)	Mid-D	B	18	C	22
#12 East Vallecitos at Isabel Ave. (AM)	Mid-D	E	58	C	29
#13 Murrieta & East Jack Lond Blvd. (AM)	Mid-D	**E**	**72**	**E**	**72**
#13 Murrieta & East Jack Lond Blvd. (PM)	Mid-D	**C**	**32**	**D**	**48**

Intersection numbers refer to Traffic Report for El Charro Specific Plan EIR numbering system.
Source for 2006: Jones & Stokes, El Charro Specific Plan Draft EIR, State Clearinghouse #: 2006052112, Table 3-15, January 2007.
Source for 2008: Traffic Study for El Charro Specific Plan, Dowling Associates, Inc., January 10, 2007.

3.4 The I-580 Freeway

The I-580 freeway currently operates at level of service "F" (volume/capacity ratio greater than 1.00) during both the morning and evening peak hours. Traffic congestion is generally present between the I-680 freeway interchange and the Santa Rita Road interchange.

4. Existing plus Approved Conditions (No Project)

This section describes intersection traffic volumes, intersection levels of service, and freeway operations based on existing conditions plus future traffic generated by approved projects, including El Charro Specific Plan Phase I.

The Existing plus Approved condition includes two roadway options. One assumes the extension of Stoneridge Drive to El Charro Road while the second assumes that Stoneridge Drive is not extended to El Charro Road.

Truck trips from the Quarry on El Charro Road were manually added to the Pleasanton Model forecasted vehicle trips. Total trip generation from quarry lands located in the project vicinity was obtained from the City of Livermore's Travel Demand Model (consistent with the El Charro Specific Plan EIR) which were in turn estimated from truck counts on El Charro Road.

The specific roadway improvements and land use changes assumed for Existing plus Approved and Cumulative (2030) conditions were generally taken from the technical analysis completed for the April 24, 2007 Joint City Council and Planning Commission Workshop on the General Plan Traffic Modeling Results. The land use and roadway assumptions are documented in the appendices to this report. Roadway and land use changes outside of Pleasanton's jurisdiction were assumed as years 2015 for Existing plus Approved conditions, even though the proposed project, if approved, would likely be in place before 2015. Table 21 summarizes planned roadway changes to freeway, arterial, and collector roadways in or in close proximity to the study area that were assumed to be implemented and operational under the Existing plus Approved conditions for Pleasanton roadways and by year 2015 for roadways outside of Pleasanton's jurisdiction.

4.1 Pleasanton Intersections

Table 33: Pleasanton/Dublin LOS Results – Existing Plus Approved Plus Project, in Chapter 6, shows the baseline No-Project (Vacant Land) existing plus approved levels of service. Table 22: Mitigations for Existing plus Approved Intersections, shows the recommended mitigations for these intersections. The mitigations shown in Table 22 are necessary to correct No-Project (Vacant Site) conditions.

The impacts of leaving the current 1989 Stoneridge Drive Specific Plan in place are shown in Table 23 as well. Mitigations for the 1989 Stoneridge Drive Specific Plan conditions are given in Chapter 6.

4.2 Dublin Intersections

Table 33: Pleasanton/Dublin LOS Results – Existing Plus Approved Plus Project, in Chapter 6, shows the baseline No-Project (Vacant Land) levels of service for Dublin Intersections for existing plus approved conditions. One intersection, Fallon Road at Dublin Boulevard would fail to meet the City of Dublin's LOS standard.

Table 23: Existing Plus Approved (No-Project) LOS - Added Dublin Intersections, shows the levels of service for the existing plus approved (No-Project (Vacant Land)) scenario for the additional intersections in Dublin. None of these additional intersections would violate the City of Dublin's LOS standard.

4.3 Livermore Intersections

Table 24: Existing Plus Approved No-Project LOS - Livermore, shows the intersection levels of service for the Livermore intersections for the various existing plus approved future scenarios contained in the Traffic Report for El Charro Specific Plan EIR. These scenarios included a certain percentage buildout of the Staples Ranch site, so an extra set of columns has been added to the table showing what the Traffic Report for El Charro Specific Plan EIR results would have been if the Staples Ranch development were left a vacant land. The scenarios show the baseline no-staples-ranch-project LOS with and without the

Jack London Blvd. extension and for two development levels (Phase 1 and Buildout) of the El Charro Specific Plan development.

One intersection will violate the City of Livermore's 45 second, mid-level of service "D" standard, Murrieta at East Jack London Blvd. Isabel/Kitty Hawk at Airway Blvd. is exempt from the City of Livermore's General Plan LOS standards.

Table 21: Roadway Changes for Existing Plus Approved Scenarios

Description	Jurisdiction
Central Parkway (2 lanes) extension from Keegan Street to Fallon Road	Dublin
Dublin Boulevard (6 lanes) extension from Keegan Street to Doolan Road and North Canyons Parkway	Dublin
Dublin Boulevard widening (from 4 to 6 lanes) from Tassajara Road to Keegan Street	Dublin
Fallon Road widening (from 2 to 6 lanes) from I-580 WB ramps to south of Dublin Boulevard	Dublin
Fallon Road-El Charro Road at I-580 interchange - install partial loop ramps, signalize ramp intersections, widen overpass from 2 lanes to 4 lanes and widen WB off-ramp from 1 lanes to 2 lanes	Livermore, Dublin, and Caltrans
I-580 at Isabel Avenue new interchange with partial loop ramps	Caltrans and Livermore
I-580 at Portola Avenue WB on-ramp and EB off-ramp elimination	Caltrans and Livermore
I-580 EB widened to add an HOV lane from Hacienda to Greenville Road	Caltrans
I-580 WB off-ramp at Tassajara Road widening (from 1 to 2 lanes)	Dublin and Caltrans
I-580 widening (from 8 to 10 lanes) from Tassajara Road-Santa Rita Road to El Charro Road-Fallon Road interchanges	Caltrans
Isabel Avenue extension (6 lanes) from Airway Boulevard to Portola Avenue	Livermore
Isabel Avenue-SR-84 widening (from 2 to 4 lanes) from Stanley Boulevard to Vallecitos Road	Livermore
Portola Avenue extension (4 lanes) from Isabel Avenue to south of I-580 to connect with existing Portola Avenue	Livermore
Portola Avenue extension (6 lanes) from Collier Canyon Road to Isabel Avenue	Livermore
Stoneridge Drive (4 lanes) extended from Trevor Parkway to El Charro Road.[1]	Pleasanton

Source: Joint Workshop of the City Council and Planning Commission Agenda Report and Attachments, "General Plan Workshop Discussion on the Results of General Plan Traffic Modeling Without and With the Stoneridge Drive Extension, Planning and Public Works, April 24, 2007

[1] Stoneridge Drive extension not modeled in all existing + approved scenarios.

Note that the extension of West Jack London Blvd as a two-lane street between El Charro Road and Isabel Parkway was not included as an "approved" project in the City Council April 24, 2007 General Plan Workshop Agenda Report, but has been included as an "approved" project for the purposes of this Staples Ranch traffic impact analysis, because it was approved as part of the El Charro Specific Plan EIR (State Clearinghouse Number 2006052112) in April 2007.

The intersection of Friesman with El Charro Road will be closed under all future scenarios.

Table 22: Mitigations for Existing plus Approved Intersections (Vacant Site)

#	Sychro	Intersect	Recommended Mitigation
10	310	Owens Drive & Hopyard	Same as Existing Mitigations + narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11		Hopyard & Stoneridge	Provide EB free right turn (remove one SB through lane, if necessary).
32	327	Stoneridge & Santa Rita	Restripe one EBR lane to shared EBTR lane (only if Stoneridge Drive is extended).
34	329	Valley & Santa Rita	Widen NB to provide separate right-turn lane. (only if Stoneridge Drive is extended)
56	102	Fallon Rd & Dublin Blvd.	Widen NB approach to provide third left-turn lane and second through lane, widen EB to provide two right-turn lanes. (planned design by Dublin)

Notes: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane; **SB** = Southbound approach, **NB** = Northbound approach,
EB = Eastbound approach, **WB** = Westbound approach

The number sign (#) indicates the intersection number as shown in Figure 1 and Figure 2. The Synchro number indicates the intersection number as reported in the Synchro outputs in the appendices.

Table 23: Existing Plus Approved (No-Project) LOS - Added Dublin Intersections

Fallon Village Analysis Scenario	Additional Dublin Intersections		
		LOS	V/C
Scenario #2 - Interim Year 2015 with Fallon Village (With the Stoneridge Extension)	Dublin Blvd/Dougherty Rd (AM)	C	0.74
	Dublin Blvd/Dougherty Rd (PM)	D	0.87
	Dublin Blvd/Hacienda Dr (AM)	C	0.78
	Dublin Blvd/Hacienda Dr (PM)	B	0.68
	Central Pkwy/Hacienda Dr (AM)	C	0.78
	Central Pkwy/Hacienda Dr (PM)	A	0.33
Scenario #2 - Interim Year 2015 with Fallon Village (Without the Stoneridge Extension)	Dublin Blvd/Dougherty Rd (AM)	C	0.73
	Dublin Blvd/Dougherty Rd (PM)	D	0.87
	Dublin Blvd/Hacienda Dr (AM)	C	0.79
	Dublin Blvd/Hacienda Dr (PM)	C	0.72
	Central Pkwy/Hacienda Dr (AM)	C	0.78
	Central Pkwy/Hacienda Dr (PM)	A	0.33

Notes:

1. Intersection LOS in this table is computed per City of Dublin's CCTALOS volume/capacity ratio criteria.
2. Shaded cells (if any) indicate LOS results that would violate the City of Dublin's LOS standards.

Table 24: Existing Plus Approved No-Project LOS - Livermore

El Charro Development Analysis Scenario	Livermore Intersections	City LOS Std.	LOS as Shown in El Charro Traffic Report			LOS Without Staples Ranch Project		
			LOS	Delay	V/C	LOS	Delay	V/C
Baseline 2008	# 5 Airway at I-580 EB (AM)	E	D	41.5	0.918	D	41.0	0.913
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	Exempt	E	70.4	1.108	E	69.7	1.105
	# 8 Isabel at Jack London Blvd. (PM)	Exempt	C	22.2	0.884	C	21.9	0.880
	# 9 Isabel at Stanley Blvd. (PM)	mid-D	C	22.3	0.907	C	22.1	0.906
	#12 East Vallecitos at Isabel Ave. (AM)	mid-D	C	29.2	0.911	C	29.2	0.911
	#13 Murrieta & East Jack Lond Blvd. (AM)	mid-D	E	71.5	1.001	E	71.3	1.000
	#13 Murrieta & East Jack Lond Blvd. (PM)	mid-D	D	48.4	0.873	D	48.2	0.871
Baseline 2008 + Phase 1 El Charro Project (No Jack London Extension)	# 5 Airway at I-580 EB (AM)	E	D	40.5	0.907	D	40.0	0.902
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	Exempt	E	66.0	1.092	E	65.3	1.089
	# 8 Isabel at Jack London Blvd. (PM)	Exempt	C	24.7	0.911	C	24.3	0.907
	# 9 Isabel at Stanley Blvd. (PM)	mid-D	C	28.2	0.963	C	27.9	0.961
	#12 East Vallecitos at Isabel Ave. (AM)	mid-D	C	28.9	0.910	C	28.9	0.910
	#13 Murrieta & East Jack Lond Blvd. (AM)	mid-D	E	67.0	0.984	E	66.8	0.983
	#13 Murrieta & East Jack Lond Blvd. (PM)	mid-D	E	61.1	0.958	E	60.7	0.956
	#42 Jack London Blvd/Road A(AM)	mid-D	A	7.3	0.181	A	7.3	0.181
	#42 Jack London Blvd/Road A(PM)	mid-D	B	12.3	0.634	B	12.3	0.634
Baseline 2008 + Full Project El Charro Buildout with Southern Jack London Blvd. Roadway	# 5 Airway at I-580 EB (AM)	E	D	41.0	0.900	D	40.9	0.898
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	Exempt	D	54.7	1.014	D	54.5	1.013
	# 8 Isabel at Jack London Blvd. (PM)	Exempt	C	25.6	0.934	C	25.2	0.929
	# 9 Isabel at Stanley Blvd. (PM)	mid-D	C	23.2	0.918	C	23.0	0.915
	#12 East Vallecitos at Isabel Ave. (AM)	mid-D	C	31.5	0.928	C	31.5	0.928
	#13 Murrieta & East Jack Lond Blvd. (AM)	mid-D	E	58.7	0.995	E	58.2	0.992
	#13 Murrieta & East Jack Lond Blvd. (PM)	mid-D	F	115.5	1.165	F	112.9	1.158
	#42 Jack London Blvd/Road A(AM)	mid-D	B	15.8	0.537	B	15.7	0.525
	#42 Jack London Blvd/Road A(PM)	mid-D	C	26.1	0.845	C	25.7	0.831

4.4 CMP Analysis – Freeway and Arterial Operations

Table 25: Year 2015 (No-Project) CMP Freeway and Arterial Analysis, shows the freeway and arterial mainline operations for CMP designated roadways for the year 2015[10]. A number of roadways in the study area are characterized by congestion in Existing plus Approved conditions during peak-hours, as indicated by a level of service designation of LOS F. The substandard roadway segments per the ACCMA guidelines are shaded in the table.

Table 25: Year 2015 (No-Project) CMP Freeway and Arterial Analysis

	Northbound/Eastbound			Southbound/Westbound		
Link Location	**Time**	**V/C**	**LOS**	**Time**	**V/C**	**LOS**
Interstate/State Highways						
I-580 between Santa Rita Road and El Charro Road	AM	0.36	B	AM	1.26	*F*
	PM	1.02	*F*	PM	0.58	C
I-680 between Stoneridge Drive and W Las Positas Boulevard	AM	0.50	B	AM	1.23	*F*
	PM	1.01	*F*	PM	0.55	B
SR 84 near Little Valley	AM	0.78	E	AM	1.24	*F*
	PM	0.96	E	PM	0.80	E
Arterials						
Santa Rita Road south of I-580	AM	0.32	D	AM	1.09	*F*
	PM	0.81	E	PM	0.38	D
Dougherty Road between Dublin Boulevard and I-580	AM	0.81	E	AM	1.13	*F*
	PM	1.12	*F*	PM	0.76	D
Dublin Boulevard east of Tassajara Road	AM	0.00	B	AM	1.06	*F*
	PM	0.73	B	PM	0.00	B
Hopyard Road between I-580 and Owens Drive	AM	1.03	*F*	AM	1.10	*F*
	PM	1.05	*F*	PM	1.04	*F*
W Las Positas Boulevard west of Santa Rita Road	AM	0.45	D	AM	1.07	*F*
	PM	0.85	E	PM	0.60	D
Stanley Boulevard east of Valley Avenue	AM	0.23	D	AM	1.45	*F*
	PM	1.24	*F*	PM	0.28	D

Notes: **V/C** = Volume-to-Capacity ratio

[10] The ACCMA CMP analysis requirements are based on forecast years, not on whether or not development projects have been approved. The 2015 analysis reflects the land use and road improvements that ACCMA has determined to be likely to be in place by the year 2015.

5. Proposed Project Traffic

This section presents the project description and the methodology used to estimate its trip generation and distribution.

5.1 Project Description

The proposed project, the Stoneridge Specific Plan Amendment – Staples Ranch, will result in the following development on the project site:

- Approximately 37 acres of auto malls, containing 331,000 square feet of buildings;
- Approximately 45 acres of senior and assisted care housing containing 1.4 million square feet of buildings which would house 800 senior care units plus supporting skilled nursing units and common facilities;
- 17 acres of community parks; and
- 175,000 square feet of retail space.

According to the March 19, 2007 site plan upon which this analysis is based, this project would extend Stoneridge Drive eastwards as a two-lane divided arterial street across the Arroyo Mocho to the proposed driveways serving the community park and the senior and assisted care housing.

Emergency vehicle access only would be allowed between the community park driveway and the proposed Auto Mall Place. Auto Mall Place would be a public street open to all vehicles and would continue east to El Charro Road.

All senior and assisted housing and community park vehicular access will be to the west via Stoneridge Drive. All other project vehicle access will be via Auto Mall Place to the east.

The 1996 Pleasanton General Plan shows that Stoneridge Drive shall be widened to a four-lane road and extended to El Charro Road at build out of the General Plan. The emergency vehicle access included in the proposed project would preserve the right-of-way for this future extension connecting Stoneridge Drive to Auto Mall Place and El Charro Road.

Ice Center Option

One project option analyzed in this report is an ice center to be located on a portion of the community park site. The ice center would be an approximately 138,500 square foot facility that will accommodate amateur ice hockey leagues (adult and youth), figure skating, broomball, curling, speed skating, ice dancing, as well as public skating. It will be capable of seating up to 2200 spectators.

The site plan was still subject to change at the time of preparation of this traffic study.

The ice center will feature an in-house pro shop, large meeting and party spaces, and a full service restaurant/bar that overlooks the rinks. The ice center will contain from two to four NHL-size ice rinks. The facility will be part of the 17-acre Staples Community Park of which 8 acres would be used by the ice center. The front of the facility will be accessible by vehicle only from Auto Mall Place using a single shared access driveway with the retail center.

1989 Stoneridge Specific Plan Option

Table 26 shows the land use that the existing Stoneridge Specific Plan would allow on the project site and its estimated vehicle-trip generation. This traffic analysis included 162 new single family units, 2.8 acres of park and eight acres of service commercial/ light industrial in the 1989 Specific Plan model run. These elements of the 1989 specific plan have already been constructed or no longer available. The model run for the 1989 specific plan therefore over estimated the 1989 specific plan volumes approximately 242 AM peak hour and 275 PM peak hour trips and over calculated the Daily volume by 3878 vehicles.

Table 26: 1989 Specific Plan Trip Generation

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
single family units	162	DU	38	90	128	113	48	161	1,620
Service Commercial	1,000	KSF	440	660	1100	660	440	1100	22,000
Community Park	20	Acres	3	3	6	3	3	6	120
Retail Component	353	KSF	194	194	388	776	776	1552	19,415
		TOTAL	**675**	**947**	**1622**	**1552**	**1267**	**2819**	**43,155**

Source: DEIR for the Stoneridge Drive Specific Plan - September 1988, Table 3, page 32.

1989 Specific Plan Trip Generation (trips associated with constructed elements removed)

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
single family units	162	DU	38	90	128	113	48	161	1,620
Service Commercial	1,000	KSF	440	660	1100	660	440	1100	22,000
Community Park	20	Acres	3	3	6	3	3	6	120
Retail Component	353	KSF	194	194	388	776	776	1552	19,415
		TOTAL	**675**	**947**	**1622**	**1552**	**1267**	**2819**	**43,155**
~~single family units~~	~~162~~	~~DU~~	~~38~~	~~90~~	~~128~~	~~113~~	~~48~~	~~161~~	~~1,620~~
~~Community Park~~	~~2.8~~	~~Acres~~	~~0.4~~	~~0.4~~	~~0.8~~	~~0.4~~	~~0.4~~	~~0.8~~	~~1.6~~
~~Service Commercial*~~	~~102.6~~	~~KSF~~	~~45~~	~~68~~	~~113~~	~~68~~	~~45~~	~~113~~	~~2256~~
TOTAL (minus constructed land)			**592**	**789**	**1380**	**1371**	**1174**	**2544**	**39,277**

Notes: **DU** = Dwelling Units, **KSF** = Thousand square feet

* The service commercial component was calculated by averaging the trip generation of the 1,000,000 sf over the 78 acres available, equating 12,820.5 sf per acre, which gives 102.6 ksf for the 8 constructed acres)

5.2 Project Trip Generation

Trips generated from the Proposed Project were calculated using the City of Pleasanton 2003 Baseline Traffic Report trip generation rates, which were updated in 2006 for the City Council General Plan Workshop[11]. The City's trip generation rates are generally based on Institute of Transportation Engineer's *Trip Generation,* 7th Edition supplemented with data from other sources. Table 27 shows the trip rates used in this analysis. A summary of weekday AM and PM peak-hour vehicle trips generated by the Proposed Project is contained in Table 28.

The retail trips were not reduced for pass-by or internal trips.

[11] Joint Workshop of the City Council and Planning Commission Agenda Report, General Plan Workshop Discussion on the Results of General Plan Traffic Modeling Without and With The Stoneridge Drive Extension, April 24, 2007.

The 7th Edition of the Institute of Transportation Engineers, "Trip Generation" provides trip generation rates for Continuing Care Retirement Community (ITE Land Use Code 255). However page 501 of this book cautions about using these rates because of the varying mixes of dwelling units, rooms, and beds in these types of development. Consequently, since the great majority of the Continuing Care Community within Staples Ranch is expected to be Senior Adult Housing Attached, City staff opted to add the number of beds, rooms, and dwelling units for the project together and apply the Senior Adult Housing Attached trip rates (ITE Land Use Code 252) to the total (beds plus rooms plus dwellings) to obtain the estimated AM and PM peak hour trip generation for the Continuing Care Community.

The design of the Community Park is undefined at this time. The park is large enough so that it could potentially accommodate two lighted soccer fields, however, there are no plans for specific uses or facilities at this time for the park. Consequently the City's standard community park trip generation rate was used.

The Ice Center trip generation was estimated based on three-days of surveys of the San Jose Logitech Ice Center conducted by the Wiltec on Tuesday, February 6, 2007, through Thursday, February 8, 2007. City staff computed the hourly trip generation table for the ice center based on the average of the Logitech Ice Center counts (shown in Table 30). From this table it was determined that the Ice Center will have the trip generation shown in Table 29.

Table 27: Trip Generation Rates

			Trip Generation Rates						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
Senior Housing	800	DU	45%	55%	0.08	61%	39%	0.11	2.74
Auto Dealers	331	KSF	74%	26%	2.05	39%	61%	2.64	33.34
Community Park	17	Acres	50%	50%	2.00	50%	50%	4.00	20.00
Retail Component	175	KSF	61%	39%	1.03	48%	52%	3.75	42.92
		TOTAL	69%	31%		44%	56%		

Notes: **DU** = Dwelling Units, **KSF** = Thousand square feet

Table 28: Project Trip Generation

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
Senior Housing	800	DU	29	35	64	54	34	88	2,200
Auto Dealers	331	KSF	502	176	678	341	533	874	11,035
Community Park	17	Acres	17	17	34	34	34	68	300
Retail Component	175	KSF	110	70	180	315	341	656	7.500
		TOTAL	**658**	**298**	**956**	**744**	**942**	**1686**	**21,035**

Notes: **DU** = Dwelling Units, **KSF** = Thousand square feet

Table 29: Estimated Ice Center Peak Hour Vehicle-Trip Ends

PEAK HOUR	IN	OUT	TOTAL
8:00 a.m. - 9:00 a.m.	41	36	77
5:00 p.m. - 6:00 p.m.	175	174	349
Average Daily Traffic:			3328

Table 30: Average Logitech Ice Center Vehicle Trip Ends Generation (Weekday)

Hour of Day	Vehicles In	Vehicles outs	Total
12:00 midnight - 1:00 a.m.	21	73	94
1:00 a.m. - 2:00 a.m.	6	23	29
2:00 a.m. - 3:00 a.m.	0	2	2
3:00 a.m. - 4:00 a.m.	4	3	7
4:00 a.m. - 5:00 a.m.	5	4	9
5:00 a.m. - 6:00 a.m.	31	15	46
6:00 a.m. - 7:00 a.m.	35	28	63
7:00 a.m. - 8:00 a.m.	29	34	63
8:00 a.m. - 9:00 a.m.	41	36	77
9:00 a.m. - 10:00 a.m.	59	43	102
10:00 a.m. - 11:00 a.m.	37	46	83
11:00 a.m. - 12:00 p.m.	57	57	114
12:00 p.m. - 1:00 p.m.	59	51	110
1:00 p.m.- 2:00 p.m.	59	73	132
2:00 p.m. - 3:00 p.m.	63	58	121
3:00 p.m. - 4:00 p.m.	136	105	241
4:00 p.m. - 5:00 p.m.	174	143	317
5:00 p.m. - 6:00 p.m.	175	174	349
6:00 p.m. - 7:00 p.m.	155	153	308
7:00 p.m. - 8:00 p.m.	168	142	310
8:00 p.m. - 9:00 p.m.	111	114	225
9:00 p.m. - 10:00 p.m	94	110	204
10:00 p.m. - 11:00 p.m.	106	109	215
11:00 p.m. - 12:00 midnight	33	74	107
Total			3328

Figure 3: Project Site Plan Used in Traffic Analysis

Source: Van Tilburg, Banvard & Soderbergh, AIA, Drawing # VTBS 25024, March 19, 2007

5.3 Project Trip Distribution

The vehicle trips to and from the Proposed Project are estimated using the validated City of Pleasanton model trip distribution. During the last validation effort, the model calibration was updated to ensure that, in particular, commute trip patterns to and from the City reflect Citywide commuter surveys as well as journey to work information by census tract and the Altamont Pass Commuter Survey. In addition, other non-work trips were distributed based on type of trip (e.g., retail) and average trip lengths.

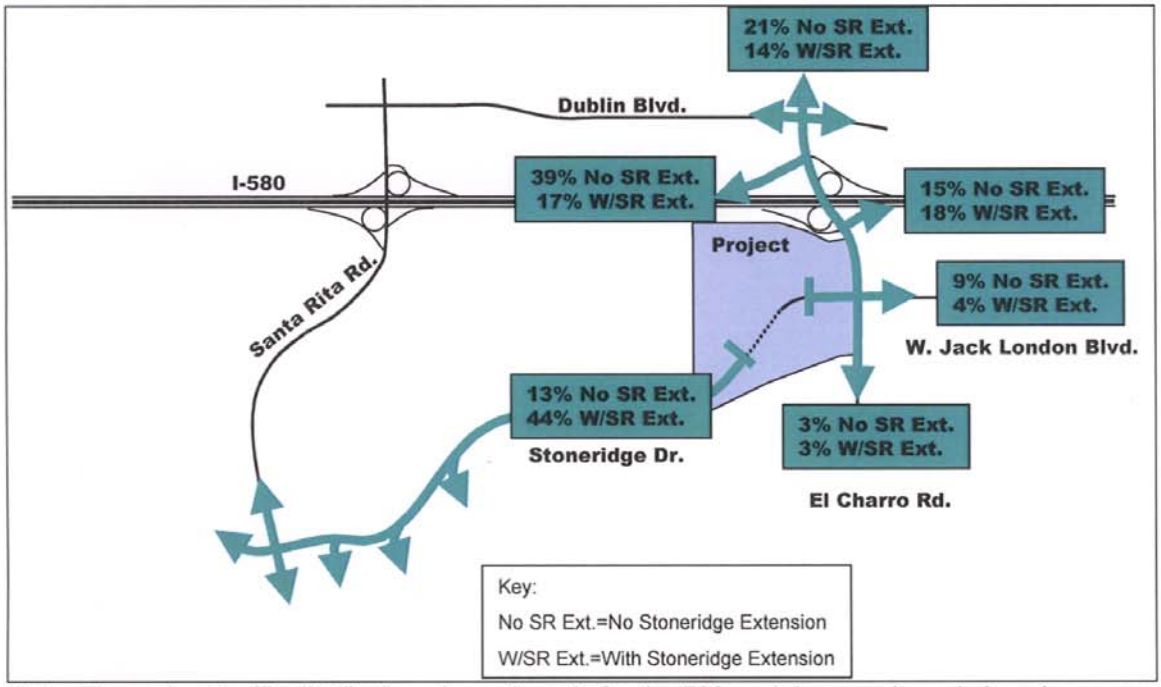
The analysis of the Stoneridge Drive Specific Plan traffic impacts involves multiple sequential steps, with the conclusions of each step reviewed for reasonableness before proceeding with the next step. The sequence of steps in the traffic analysis for the Proposed Project was as follows:

Traffic Task	Method or Tool Applied
1) Forecast project related trips	Institute of Transportation Engineer (ITE) Manual trip rates were provided for each land use designation. Peak-hour weekday AM and PM trips were estimated for each use.
2) Assign trips to road network	The Pleasanton travel demand model [12] was used to distribute daily and peak-hour traffic to and from the project site to the future roadway network.
3) Estimate background traffic	The Synchro [13] model was used to determine peak-hour traffic conditions at the 63 intersections at which the Project may affect traffic. The model was used to generate data files representing traffic movements at those 63 intersections under two future scenarios without the project. both with and without Stoneridge Drive extension: Existing plus Approved development without project and; Cumulative development without project.
4) Add project traffic to future scenarios	Project traffic was added to the Synchro model traffic to create two future with-project scenarios, both with and without Stoneridge Drive extension: Existing plus Approved development with project and; Cumulative development with project.

[12] The Pleasanton Traffic Model is a comprehensive local traffic model that integrates Pleasanton's roadway network with local land use data in order to be able to accurately assign traffic from potential future projects to the transportation system.

[13] The Synchro model complements the Pleasanton Traffic Model by translating model-projected travel patterns into assessments of intersection congestion A through F.

Figure 4: Project Trip Distribution (External Trips Only)



Note: The project traffic distribution shown here is for the PM peak hour under existing plus approved conditions, only for trips leaving the project site. The AM peak hour distribution will be different. The distribution for cumulative conditions will be different than that shown here because of cumulative road and freeway improvements.

Ice Center Trip Distribution

The Pleasanton model was used to estimate the distribution of trips for the Ice Center. The model distribution was compared to the distribution estimated by the project sponsor's traffic engineer, Jim Benshoof. The two distributions were quite close, with the exception being that the project sponsor's traffic engineer predicted more Ice Center traffic going east on I-580 than was predicted by the Pleasanton Model. Given that the Pleasanton model has a more detailed representation of where people live than the project sponsor's traffic engineer, and given that the two distributions were close in most respects, the Pleasanton model distribution was used to distribute the Ice Center traffic. Thus, the distribution of traffic for the Ice Center trips was the same as for the rest of the proposed project.

Traffic Added at Key Intersections

Table 31 and Table 32 show the forecasted traffic with and without the proposed project plus ice center (with and without the Stoneridge Drive Extension) for existing plus approved conditions and for cumulative conditions at selected reporting intersections in the City of Pleasanton.

Table 31: Traffic At Key Intersections – Existing Plus Approved

			Existing + Approved, No Stoneridge Drive Ext.							
EIR #	Synchro #	Intersection	No Project (Vacant Site)		Project Added		Ice Center Added		Total	
			AM	PM	AM	PM	AM	PM	AM	PM
10	310	Hopyard Rd at Owens Dr	4690	8136	20	32	1	3	4711	8171
11	313	Hopyard Rd at Stoneridge Dr	5868	6866	18	25	2	2	5888	6893
26	323	Santa Rita Rd at I-580 EB offramp-Pimlico Dr	5197	5199	242	463	23	71	5462	5733
34	329	Santa Rita Rd at Valley Ave	5431	5294	65	99	5	15	5501	5408
41	371	Valley Ave-Bernal Ave at Stanley Blvd	4172	5555	20	62	1	12	4193	5629
32	327	Santa Rita Rd at Stoneridge Drive	4994	4767	229	384	20	58	5243	5209
38	466	Kamp Rd-Garden Cir at Stoneridge Dr	1114	665	138	238	13	38	1265	941

			Existing + Approved, With Stoneridge Drive Ext.							
EIR #	Synchro #	Intersection	No Project (Vacant Site)		Project Added		Ice Center Added		Total	
			AM	PM	AM	PM	AM	PM	AM	PM
10	310	Hopyard Rd at Owens Dr	4565	7875	9	6	0	0	4574	7881
11	313	Hopyard Rd at Stoneridge Dr	5885	6464	10	46	1	6	5896	6516
26	323	Santa Rita Rd at I-580 EB offramp-Pimlico Dr	4066	4363	16	23	1	3	4083	4389
34	329	Santa Rita Rd at Valley Ave	5184	5034	72	158	5	25	5261	5217
41	371	Valley Ave-Bernal Ave at Stanley Blvd	3914	4412	20	39	1	6	3935	4457
32	327	Santa Rita Rd at Stoneridge Drive	5690	6004	186	462	16	75	5892	6541
38	466	Kamp Rd-Garden Cir at Stoneridge Dr	2661	3034	234	565	20	95	2915	3694

Table 32: Traffic At Key Intersections – Cumulative

			Cumulative, No Stoneridge Drive Ext.							
EIR #	Synchro #	Intersection	No Project (Vacant Site)		Project Added		Ice Center Added		Total	
			AM	PM	AM	PM	AM	PM	AM	PM
10	310	Hopyard Rd at Owens Dr	4857	7959	18	22	1	3	4876	7984
11	313	Hopyard Rd at Stoneridge Dr	6185	6574	13	21	1	2	6199	6597
26	323	Santa Rita Rd at I-580 EB offramp-Pimlico Dr	5874	6167	112	148	10	23	5996	6338
34	329	Santa Rita Rd at Valley Ave	5752	5795	40	127	2	21	5794	5943
41	371	Valley Ave-Bernal Ave at Stanley Blvd	5303	6592	64	131	4	23	5371	6746
32	327	Santa Rita Rd at Stoneridge Drive	4870	4605	128	194	11	27	5009	4826
38	466	Kamp Rd-Garden Cir at Stoneridge Dr	912	503	125	209	13	32	1050	744

			Cumulative, With Stoneridge Drive Ext.							
EIR #	Synchro #	Intersection	No Project (Vacant Site)		Project Added		Ice Center Added		Total	
			AM	PM	AM	PM	AM	PM	AM	PM
10	310	Hopyard Rd at Owens Dr	4817	7790	12	26	0	4	4829	7820
11	313	Hopyard Rd at Stoneridge Dr	6248	6485	14	32	1	5	6263	6522
26	323	Santa Rita Rd at I-580 EB offramp-Pimlico Dr	5304	5787	8	17	1	3	5313	5807
34	329	Santa Rita Rd at Valley Ave	5677	5508	30	60	2	9	5709	5577
41	371	Valley Ave-Bernal Ave at Stanley Blvd	5270	6427	56	116	4	20	5330	6563
32	327	Santa Rita Rd at Stoneridge Drive	5504	5835	118	277	12	49	5634	6161
38	466	Kamp Rd-Garden Cir at Stoneridge Dr	2035	2249	136	312	12	55	2183	2616

6. Existing Plus Approved Plus Project

This section presents the traffic impact results of adding the proposed project to the "existing plus approved" future scenario.

The project impacts are presented for the following development scenarios for the project site. Note that the existing plus approved No-Project (Vacant Land) baseline assumes no development at all on the project site.

1. Proposed Staples Ranch Project (With and Without Stoneridge Drive Extension)
2. Proposed Project Plus Ice Center (With and Without Stoneridge Drive Extension)
3. 1989 Specific Plan (with Stoneridge Drive Extension)

The discussion starts with impacts on Pleasanton and Dublin intersections, proceeds to the impacts on additional intersections in Dublin, continues with impacts on intersections in Livermore, and concludes with a CMP analysis of freeway and arterial impacts.

6.1 Pleasanton and Dublin Intersections

Proposed Project

Most of the intersections analyzed in the Pleasanton area would continue to operate at satisfactory levels of service with or without the proposed project and with or without the Stoneridge Drive extension. Table 33 shows the intersections in Pleasanton and Dublin that are expected to operate at unsatisfactory levels of service with or without the proposed project, with and without the Stoneridge Drive Extension. A shaded cell in the column for the project alternative indicates a significant impact.

The recommended mitigations for the proposed project are shown in Table 34 for the without Stoneridge Drive Extension condition. Table 35 shows the recommended mitigations for the proposed project if the Stoneridge Drive Extension is built. No mitigations are proposed for downtown Pleasanton intersections, which are exempt from the City's level of service standard per the Downtown Specific Plan.

Proposed Project Plus Ice Center

Most of the intersections analyzed in the Pleasanton area would continue to operate at satisfactory levels of service with or without the proposed project plus the ice center, with or without the Stoneridge Drive extension. Table 33 shows the levels of service for the intersections in Pleasanton with or without the proposed project, with and without the Stoneridge Drive Extension. A shaded cell in the column for the project alternative indicates a significant impact. No mitigations are proposed for downtown Pleasanton intersections, which are exempt from the City's level of service standard per the Downtown Specific Plan.

The recommended mitigations for the proposed project are shown in Table 36 for the without Stoneridge Drive Extension condition. Table 37 shows the recommended mitigations for the proposed project if the Stoneridge Drive Extension is built.

1989 Specific Plan

Most of the intersections analyzed in the Pleasanton area would continue to operate at satisfactory levels of service with or without the Staples Ranch development as shown in the 1989 Specific Plan development, with the Stoneridge Drive extension. Table 33 shows the intersections in Pleasanton that are expected to operate at unsatisfactory levels of service with or without the 1989 Specific Plan and with the Stoneridge Drive Extension. A shaded cell in the column for the project alternative indicates a significant impact. The recommended mitigations are shown in Table 38. No mitigations are proposed for downtown Pleasanton intersections, which are exempt from the City's level of service standard.

Table 33: Pleasanton/Dublin LOS Results – Existing Plus Approved Plus Project

				AM PEAK										PM PEAK									
No.	Syn	NS Street	EW Street	Vacant Site No Stoneridge Extension		Vacant Site With Stoneridge Extension		1989 Sp.Pln With Stoneridge Extension		Project No Stoneridge Extension		Project With Stoneridge Extension		Vacant Site No Stoneridge Extension		Vacant Site With Stoneridge Extension		1989 Sp.Pln With Stoneridge Extension		Project No Stoneridge Extension		Project With Stoneridge Extension	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	302	Foothill	Dublin Canyon	C	34	D	46	D	47	C	34	D	46	C	24	C	23	C	23	C	24	C	23
2	372	Foothill	Laurel Creek	A	10	B	12	B	12	A	10	B	12	A	10	B	13	B	13	A	10	B	13
3	304	Foothill	Stoneridge	B	14	B	16	B	16	B	14	B	16	B	17	C	30	C	32	B	18	C	31
4	344	Springdale	Stoneridge	B	12	B	12	B	12	B	12	B	12	C	20	C	22	C	21	C	20	C	22
5	346	I-680 SB off	Stoneridge	B	11	B	12	B	12	B	11	B	12	B	11	A	10	A	10	B	11	A	10
6	347	I-680 NB off	Stoneridge	B	11	B	11	B	11	B	11	B	11	C	24	C	25	C	27	C	24	C	25
7	348	Johnson	Stoneridge	B	16	B	16	B	16	B	16	B	16	D	43	C	28	C	32	D	43	C	28
8	349	Franklin	Stoneridge	C	21	C	22	C	23	C	21	C	22	B	17	B	15	B	14	B	17	B	15
9	309	Hopyard	I-580 EB off	C	21	B	20	C	21	C	21	B	20	D	54	D	51	D	50	E	59	D	50
10	310	Hopyard	Owens	D	47	D	44	D	46	D	48	D	44	F	330	F	342	F	347	F	333	F	342
11	313	Hopyard	Stoneridge	D	46	D	44	D	47	D	46	D	44	F	102	D	48	D	54	F	102	E	70
12	316	Hopyard	W Las Positas	C	22	C	26	C	27	C	22	C	26	C	32	C	31	C	33	C	33	C	32
13	318	Hopyard	Valley Trails (S)	A	8	A	10	A	10	A	8	A	10	C	20	C	28	C	26	B	20	C	28
14	319	Hopyard	Valley	C	26	C	27	C	26	C	26	C	27	C	31	C	33	C	33	C	31	C	33
15	353	Valley	Bernal	D	42	D	46	D	53	D	42	D	46	D	47	D	46	D	47	D	47	D	46
16	405	Chabot	Stoneridge	A	8	A	8	A	8	A	8	A	8	B	12	B	13	B	13	B	13	B	14
17	355	Willow	Owens	A	8	A	7	A	7	A	8	A	7	A	9	A	9	A	10	A	9	A	10
18	357	Willow	Stoneridge	B	13	B	13	B	13	B	13	B	13	A	10	B	11	B	11	A	10	B	11
19	387	Hacienda	I-580 EB off	C	24	C	23	C	22	C	24	C	23	D	36	C	31	C	34	D	37	C	31
20	361	Hacienda	Owens	C	25	C	25	C	25	C	25	C	25	D	48	D	49	D	52	D	51	D	45
21	363	Hacienda	Stoneridge	C	28	C	29	C	28	C	28	C	29	C	34	C	32	C	33	C	34	C	32
22	365	Hacienda	W Las Positas	C	24	C	23	C	25	C	24	C	23	C	22	B	13	B	14	C	22	B	14
23	366	Gibraltar	Stoneridge	A	7	A	7	A	7	A	7	A	7	B	13	B	20	C	30	B	13	C	22
24	911	Rosewood	Rose Pavillian	A	5	A	5	A	5	A	5	A	5	A	10	A	10	B	10	A	10	A	10
25	369	Rosewood	Owens	A	8	A	8	A	8	A	8	A	8	A	9	A	10	A	10	A	9	A	10
26	323	Santa Rita	I-580 EB off/Pim	D	42	C	26	C	25	D	42	C	26	D	38	C	26	C	26	D	40	C	28

No.	Syn	NS Street	EW Street	AM PEAK Vacant Site No Stoneridge Extension		AM PEAK Vacant Site With Stoneridge Extension		AM PEAK 1989 Sp.Pln With Stoneridge Extension		AM PEAK Project No Stoneridge Extension		AM PEAK Project With Stoneridge Extension		PM PEAK Vacant Site No Stoneridge Extension		PM PEAK Vacant Site With Stoneridge Extension		PM PEAK 1989 Sp.Pln With Stoneridge Extension		PM PEAK Project No Stoneridge Extension		PM PEAK Project With Stoneridge Extension	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
27	324	Santa Rita	Rosewood	A	9	B	14	B	14	A	9	B	14	C	21	C	25	C	25	B	20	C	25
28	325	Santa Rita	Old Santa Rita	A	3	A	5	A	5	A	3	A	5	A	4	A	4	A	4	A	4	A	4
29	368	W Las Positas	Owens	B	14	B	13	B	13	B	14	B	13	C	21	C	21	C	21	C	21	C	21
30	367	W Las Positas	Stoneridge	C	29	C	34	C	35	C	30	C	34	C	31	D	49	D	52	C	32	D	50
31	326	Santa Rita	W Las Positas	D	37	C	33	C	33	D	37	C	33	C	35	D	41	D	47	D	36	D	44
32	327	Santa Rita	Stoneridge	D	49	D	52	D	53	D	50	E	55	D	35	E	59	F	93	D	37	F	96
33	328	Santa Rita	Mohr	B	20	B	20	C	20	B	20	C	20	B	19	B	20	C	24	B	19	C	21
34	329	Santa Rita	Valley	C	35	D	36	D	38	C	35	D	36	E	67	E	68	F	93	E	69	F	87
35	330	Santa Rita	Black	C	24	C	26	C	26	C	24	C	26	C	27	C	28	C	27	C	28	C	29
36	331	Santa Rita	Stanley	B	19	B	15	B	17	B	20	B	16	C	23	B	18	B	17	C	24	B	18
37	1105	Rheem	Stoneridge	A	7	B	11	B	12	A	7	B	11	A	6	B	17	B	16	A	7	C	28
38	466	Kamp	Stoneridge	A	7	B	11	B	12	A	7	B	11	A	5	B	13	B	15	A	5	B	18
39	468	Kolln	Valley	B	15	B	15	B	17	B	16	B	15	B	13	A	8	B	13	B	13	B	12
40	437	Busch	Valley	B	13	B	12	B	12	B	13	B	12	A	7	A	7	A	7	A	7	A	7
41	371	Valley	Stanley	D	38	D	39	D	45	D	38	D	40	D	43	C	29	C	30	D	44	C	30
42	378	Bernal	Vineyard	C	27	C	29	D	39	C	27	C	29	B	17	B	15	B	16	B	17	B	15
43	337	First	Stanley	B	14	B	13	B	14	B	14	B	13	C	25	B	11	B	19	C	25	B	12
44	87	El Charro	Busch																				
45	92	El Charro	Stanley																				
46	338	First	Ray (Exempt)	D	46	D	40	C	31	D	46	D	40	F	81	F	80	F	99	F	81	E	80
47	576	First	Kottinger (Exempt)	C	34	D	54	C	34	C	34	D	54	C	33	D	44	D	47	C	34	D	44
48	332	Main	Ray (Exempt)	F	161	F	147	F	176	F	162	F	163	F	83	D	50	F	118	F	94	E	62
49	1332	Main	St. John (Exempt)	B	16	B	16	B	13	B	18	B	14	E	58	F	89	F	92	E	76	F	105
50	342	First	Bernal (Exempt)	D	48	F	81	E	73	D	48	F	87	D	45	E	65	E	71	D	45	E	64
51	375	El Charro	I-580 EB	B	16	C	22	C	23	F	110	D	51	A	9	A	8	A	8	C	22	B	11
53	85	El Charro	Stoneridge	D	44	D	52	D	47	C	22	F	102	B	15	C	34	D	40	C	27	F	142
54	29	El Charro	El Charro																				
55	374	Fallon	I-580 WB	A	5	B	11	B	11	A	5	B	11	A	5	A	7	A	7	A	6	A	8

No.	Syn	NS Street	EW Street	AM PEAK Vacant Site No Stoneridge Extension		AM PEAK Vacant Site With Stoneridge Extension		AM PEAK 1989 Sp.Pln With Stoneridge Extension		AM PEAK Project No Stoneridge Extension		AM PEAK Project With Stoneridge Extension		PM PEAK Vacant Site No Stoneridge Extension		PM PEAK Vacant Site With Stoneridge Extension		PM PEAK 1989 Sp.Pln With Stoneridge Extension		PM PEAK Project No Stoneridge Extension		PM PEAK Project With Stoneridge Extension	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
56	102	Fallon	Dublin	D	36	C	33	C	33	D	37	C	34	F	116	F	113	F	118	F	177	F	151
57	99	Fallon	Central	C	25	C	31	C	31	C	31	C	31	C	31	C	28	C	29	D	35	C	30
58	322	Tassajara	I-580 WB off	B	11	D	43	D	47	B	11	D	45	B	11	C	31	D	37	B	13	D	36
59	1141	Tassajara	Dublin	C	25	C	24	C	24	C	25	C	24	D	48	D	48	D	48	D	48	D	50
60	1233	Tassajara	Central	D	47	D	46	D	46	D	48	D	47	D	50	D	52	D	52	D	51	D	53
61	386	Hacienda	I-580 WB off	A	8	A	9	B	12	A	8	A	9	B	11	A	10	B	11	B	12	A	10
62	308	Hopyard	I-580 WB off	B	12	B	12	B	12	B	13	B	12	C	26	B	15	B	18	C	28	B	18
63	8	Foothill	I-580 WB	B	11	B	12	B	12	B	11	B	12	B	12	B	12	B	13	B	13	B	12

Notes:

1. No. = Intersection number as shown in Table 6 and in Figure 1 and Figure 2.
2. Syn = Intersection number within City of Pleasanton Synchro model (appendices with LOS calculations are sorted by Synchro Number)
3. Vacant Site means the Staples Ranch Development area is assumed to be vacant.
4. 1989 Sp.Pln. means the Staples Ranch Development area is assumed to be developed according to the adopted 1989 Stoneridge Drive Specific Plan.
5. LOS = level of service
6. Delay = average seconds delay per vehicle at intersection. Note that because it is an "average", the addition of project traffic to a right turn movement may reduce the "average" delay for all vehicles using the intersection.
7. Intersections operating at LOS "D" or better were not optimized to minimize delay, thus delays may increase or decrease with added traffic because the signal timing has not been optimized to the specific traffic volumes for each alternative.
8. Shaded cells indicate results that violate Pleasanton or Dublin LOS Standards for signalized intersections.
9. Note that intersections #46-50 are located in the Pleasanton downtown and are therefore exempt from the Pleasanton LOS standards.
10. Intersections #44 (El Charro and Busch), #45 (El Charro and Stanley), # 52 (El Charro and Freisman) and #54 (El Charro and El Charro) do not exist under this future scenario.
11. The Highway Capacity Manual method was used to compute LOS for the Dublin intersections in this table. This method is considered to provide approximately equivalent results to the City of Dublin CCTALOS method for the purposes of identifying significant impacts and mitigations.

Table 34: Mitigations for Proposed Project for Existing Plus Approved, No Stoneridge Extension

No.	Syn	NS Street	EW Street	Before Mitigation				After Mitigation				Mitigation
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
9	309	Hopyard	I-580 EB off			E	59			C	31	Restripe one EBL lane to shared EBLR lane.
10	310	Hopyard	Owens			F	333			D	53	Narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Hopyard	Stoneridge			F	102			D	46	Retime traffic signal
34	329	Santa Rita	Valley			E	69			D	49	Widen NB to provide separate right-turn lane. Change cycle length to 120 seconds (PM).
51	375	El Charro	I-580 EB	F	110			C	24			Restripe one EBL lane to shared EBLR lane (included in project design).
56	102	Fallon	Dublin			F	177			D	45	Widen NB approach to provide third left-turn lane and second through lane, widen EB to provide two right-turn lanes.

Notes:

- All mitigations for existing conditions are assumed to be already in place.
- Key to Mitigations: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane;
  SB = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 35: Mitigations for Proposed Project for Existing Plus Approved, With Stoneridge Extension

No.	Syn	NS Street	EW Street	Before Mitigation				After Mitigation				Mitigation
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
10	310	Hopyard	Owens			F	342			D	51	Narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Hopyard	Stoneridge			E	70			D	40	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 100 seconds (PM).
32	327	Santa Rita	Stoneridge	E	55	F	96	D	47	D	52	Widen NB approach to provide separate right-turn lane, restripe one EBR lane to shared EBTR lane, reduce ped clearance to 21 seconds.
34	329	Santa Rita	Valley			F	87			D	54	Widen NB to provide separate right-turn lane
53	85	El Charro	Stoneridge	F	102	F	142	C	25	D	36	Provide SB free right-turn lane and widen EB approach to provide third left-turn lane.
56	102	Fallon	Dublin			F	151			D	53	Widen NB approach to provide third left-turn lane and EB to provide two right-turn lanes.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Key to Mitigations: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane;
  SB = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 36: Mitigations for Proposed Project Plus Ice Center for Existing Plus Approved, No Stoneridge Extension

No.	Syn	Intersection	Before Mitigation AM Peak Hour LOS	Before Mitigation AM Peak Hour Delay	Before Mitigation PM Peak Hour LOS	Before Mitigation PM Peak Hour Delay	After Mitigation AM Peak Hour LOS	After Mitigation AM Peak Hour Delay	After Mitigation PM Peak Hour LOS	After Mitigation PM Peak Hour Delay	Mitigation
9	309	I-580 EB Off & Hopyard			E	59			C	31	Restripe one EBL lane to shared EBLR lane.
10	310	Owens Drive & Hopyard			F	333			D	54	narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Stoneridge & Hopyard			F	102			D	43	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 100 seconds (PM).
34	329	Valley & Santa Rita			E	69			D	49	Widen WB approach to provide 2nd left-turn lane, widen NB to provide separate right-turn lane. Change cycle length to 120 seconds (PM).
51	375	I-580 & Fallon	F	121			B	15			Restripe one EBL lane to shared EBLR lane.
56	102	Dublin & Fallon			F	167			D	46	Widen NB approach to provide third left-turn lane and second through lane, widen EB to provide two right-turn lanes.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Key to Mitigations: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane;
  SB = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 37: Mitigations for Proposed Project Plus Ice Center for Existing Plus Approved, With Stoneridge Extension

No.	Syn	Intersection	Before Mitigation AM Peak Hour LOS	Before Mitigation AM Peak Hour Delay	Before Mitigation PM Peak Hour LOS	Before Mitigation PM Peak Hour Delay	After Mitigation AM Peak Hour LOS	After Mitigation AM Peak Hour Delay	After Mitigation PM Peak Hour LOS	After Mitigation PM Peak Hour Delay	Mitigation
10	310	Owens Drive & Hopyard			F	343			D	51	narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Stoneridge & Hopyard			E	70			D	38	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 100 seconds (PM).
32	327	Stoneridge & Santa Rita	F	83	F	98	D	53	D	54	Widen NB approach to provide separate right-turn lane, restripe one EBR lane to shared EBTR lane. Change cycle length to 130 and 120 seconds for AM and PM, respectively.
34	329	Valley & Santa Rita			F	88			D	54	Widen NB to provide separate right-turn lane and increase cycle length to 130 seconds
53	85	Stoneridge & El Charro	F	108	F	163	C	21	C	31	Provide SB free right-turn lane and widen EB approach to provide third left-turn lane.
56	102	Dublin & Fallon	E	57	F	153	C	25	D	44	Widen NB approach to provide third left-turn lane and second through lane, widen EB to provide two right-turn lanes.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Key to Mitigations: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane;
  SB = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 38: Mitigations for 1989 Specific Plan Option - Existing + Approved, With Stoneridge Extension

No.	Syn	NS Street	EW Street	Before Mitigation				After Mitigation				Description of Mitigation
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
10	310	Hopyard	Owens			F	347			D	49	narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
32	327	Santa Rita	Stoneridge			F	93			D	46	Widen NB approach to provide separate right-turn lane, restripe one EBR lane to shared EBTR lane, reduce ped clearance to 21 seconds. Change cycle length to 140 and 120 seconds for AM and PM, respectively.
34	329	Santa Rita	Valley			F	93			D	54	Widen WB approach to provide 2nd left-turn lane, widen NB to provide separate right-turn lane. Change cycle length to 120 seconds (PM).
56	102	Fallon	Dublin			F	118			D	48	Widen NB approach to provide third left-turn lane and EB to provide two right-turn lanes.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Intersection # 53, El Charro and Stoneridge assumed to be constructed to meet city standards as part of 1989 Specific Plan.
- Key to Mitigations: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane;
  SB = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

6.2 Additional Dublin Intersections

This section presents the project impacts for several additional intersections in Dublin that are not currently modeled within the Pleasanton Modeling System. As such. the baseline No-Project (Vacant Land) traffic forecasts for these intersections were taken from a recent traffic study for Fallon Villages. The project traffic was then added on top of these forecasts.

Proposed Project

Table 39 below shows the near term, year 2015 impacts of the proposed project on the additional Dublin intersections. The traffic added by the project to these intersections that are generally farther away from the proposed project is sufficient to change the volume/capacity ratios by 1% in a few cases. None of the intersections would be caused to exceed Dublin's LOS standard.

Table 39: Project Impacts on Added Dublin Intersections (Near Term 2015)

Fallon Village Analysis Scenario	Additional Dublin Intersections	No Project		Plus Staples Ranch		Plus Staples Ranch & Ice Center	
		LOS	V/C	LOS	V/C	LOS	V/C
Scenario #2 - Interim Year 2015 with Fallon Village (With the Stoneridge Extension)	Dublin Blvd/Dougherty Rd (AM)	C	0.74	C	0.74	C	0.74
	Dublin Blvd/Dougherty Rd (PM)	D	0.87	D	0.87	D	0.87
	Dublin Blvd/Hacienda Dr (AM)	C	0.78	C	0.79	C	0.79
	Dublin Blvd/Hacienda Dr (PM)	B	0.68	B	0.69	B	0.69
	Central Pkwy/Hacienda Dr (AM)	C	0.78	C	0.78	C	0.78
	Central Pkwy/Hacienda Dr (PM)	A	0.33	A	0.33	A	0.33
Scenario #2 - Interim Year 2015 with Fallon Village (Without the Stoneridge Extension)	Dublin Blvd/Dougherty Rd (AM)	C	0.73	C	0.74	C	0.74
	Dublin Blvd/Dougherty Rd (PM)	D	0.87	D	0.88	D	0.88
	Dublin Blvd/Hacienda Dr (AM)	C	0.79	C	0.79	C	0.79
	Dublin Blvd/Hacienda Dr (PM)	C	0.72	C	0.73	C	0.73
	Central Pkwy/Hacienda Dr (AM)	C	0.78	C	0.78	C	0.78
	Central Pkwy/Hacienda Dr (PM)	A	0.33	A	0.33	A	0.33

Note: Level of service is computed per the City of Dublin CCTALOS method, which is based on volume/capacity ratio.
Source for No Project: Fallon Village Traffic Study, TJKM Transportation Consultants, August 2005.

Proposed Project Plus Ice Center

Table 39 above shows the near term, year 2015 impacts of the proposed project plus the ice center on the additional Dublin intersections. The traffic added by the project to these intersections that are generally farther away from the proposed project is sufficient to change the volume/capacity ratios by 1% in a few cases. None of the intersections would be caused to exceed Dublin's LOS standard.

1989 Specific Plan Project

The impacts of the 1989 Specific Plan were not evaluated for the additional Dublin intersections, because the 1989 Specific Plan is not the proposed project.

6.3 Livermore Intersections

This section presents the impacts of the proposed project on intersections in Livermore.

Proposed Project

Table 40 shows the impacts of the proposed project on the intersections within Livermore that were evaluated for this analysis. No new intersections would be significantly impacted (according to Livermore's LOS standard) by the proposed project. However, the project will contribute to congestion at Murrieta and East Jack London, which would be operating at an unacceptable level of service in the absence of the proposed project, and in the absence of any of the mitigation measures contained in the El Charro Specific Plan.

The El Charro Specific Plan FEIR recommended mitigation for the intersection of Murrieta and East Jack London Boulevard is to:

"Add a second eastbound right-turn lane to provide dual right-turn lanes at the intersection of Murrieta Boulevard at East Jack *London Boulevard and Pine Street and improve signal operations. This could be accomplished by re-striping the bike lanes and removing the existing median, and improving the signal operations.*"[14]

This measure would improve operations for the Staples Ranch Project Scenario to an acceptable level and would therefore reduce the impact of the proposed project to a less than significant level.

Proposed Project Plus Ice Center

Table 40 shows the impacts of the proposed project plus ice center on the intersections within Livermore that were evaluated for this analysis. No new intersections would be significantly impacted (according to Livermore's LOS standard) by the proposed project. However, the project will contribute to congestion at Murrieta and East Jack London, which would be operating at an unacceptable level of service in the absence of the proposed project, and in the absence of any of the mitigation measures contained in the El Charro Specific Plan.

The same mitigation measure is recommended as specified for the proposed project (without the ice center).

1989 Specific Plan Project

The impacts of the 1989 Stoneridge Drive Specific Plan were not evaluated for Livermore intersections, because the 1989 Specific Plan is not the proposed project.

[14] Traffic Study for El Charro Specific Plan, Dowling Associates, January 10, 2007, Mitigation Measure #2, page 74.

Table 40: Project Impacts on Livermore (Near Term)

El Charro Development Analysis Scenario	Intersections	City LOS Std.	LOS as Shown in El Charro Report			No Project			Plus Staples Ranch			Plus Staples Ranch & Ice Center		
			LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Baseline 2008	# 5 Airway at I-580 EB (AM)	E	D	41.5	0.918	D	41.0	0.913	D	41.8	0.922	D	41.9	0.922
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	Exempt	E	70.4	1.108	E	69.7	1.105	E	73.4	1.118	E	73.6	1.119
	# 8 Isabel at Jack London Blvd. (PM)	Exempt	C	22.2	0.884	C	21.9	0.880	C	22.9	0.893	C	22.9	0.893
	# 9 Isabel at Stanley Blvd. (PM)	mid-D	C	22.3	0.907	C	22.1	0.906	C	22.4	0.912	C	22.4	0.914
	#12 East Vallecitos at Isabel Ave. (AM)	mid-D	C	29.2	0.911	C	29.2	0.911	C	29.7	0.912	C	29.7	0.912
	#13 Murrieta & East Jack Lond Blvd. (AM)	mid-D	E	71.5	1.001	E	71.3	1.000	E	72.2	1.004	E	72.2	1.004
	#13 Murrieta & East Jack Lond Blvd. (PM)	mid-D	D	48.4	0.873	D	48.2	0.871	D	48.3	0.871	D	48.3	0.871
Baseline 2008 + Phase 1 El Charro Project (No Jack London Extension)	# 5 Airway at I-580 EB (AM)	E	D	40.5	0.907	D	40.0	0.902	D	40.8	0.911	D	40.9	0.911
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	Exempt	E	66.0	1.092	E	65.3	1.089	E	68.9	1.102	E	69.0	1.103
	# 8 Isabel at Jack London Blvd. (PM)	Exempt	C	24.7	0.911	C	24.3	0.907	C	25.4	0.920	C	25.5	0.921
	# 9 Isabel at Stanley Blvd. (PM)	mid-D	C	28.2	0.963	C	27.9	0.961	C	28.9	0.969	C	29.2	0.971
	#12 East Vallecitos at Isabel Ave. (AM)	mid-D	C	28.9	0.910	C	28.9	0.910	C	29.3	0.911	C	29.3	0.911
	#13 Murrieta & East Jack Lond Blvd. (AM)	mid-D	E	67.0	0.984	E	66.8	0.983	E	67.7	0.987	E	67.7	0.987
	#13 Murrieta & East Jack Lond Blvd. (PM)	mid-D	E	61.1	0.958	E	60.7	0.956	E	60.9	0.956	E	60.9	0.956
	#42 Jack London Blvd/Road A(AM)	mid-D	A	7.3	0.181	A	7.3	0.181	A	7.3	0.181	A	7.3	0.181
	#42 Jack London Blvd/Road A(PM)	mid-D	B	12.3	0.634	B	12.3	0.634	B	12.3	0.634	B	12.3	0.634
Baseline 2008 + Full Project El Charro Buildout with Southern Jack London Blvd. Roadway	# 5 Airway at I-580 EB (AM)	E	D	41.0	0.900	D	40.9	0.898	D	41.1	0.900	D	41.1	0.900
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	Exempt	D	54.7	1.014	D	54.5	1.013	D	54.7	1.015	D	54.7	1.015
	# 8 Isabel at Jack London Blvd. (PM)	Exempt	C	25.6	0.934	C	25.2	0.929	C	26.6	0.946	C	27.0	0.950
	# 9 Isabel at Stanley Blvd. (PM)	mid-D	C	23.2	0.918	C	23.0	0.915	C	23.4	0.922	C	23.5	0.923
	#12 East Vallecitos at Isabel Ave. (AM)	mid-D	C	31.5	0.928	C	31.5	0.928	C	31.9	0.929	C	31.9	0.929
	#13 Murrieta & East Jack Lond Blvd. (AM)	mid-D	E	58.7	0.995	E	58.2	0.992	E	59.8	1.001	E	59.9	1.002
	#13 Murrieta & East Jack Lond Blvd. (PM)	mid-D	F	115.5	1.165	F	112.9	1.158	F	118.6	1.175	F	119.9	1.178
	#42 Jack London Blvd/Road A(AM)	mid-D	B	15.8	0.537	B	15.7	0.525	B	16.1	0.550	B	16.2	0.552
	#42 Jack London Blvd/Road A(PM)	mid-D	C	26.1	0.845	C	25.7	0.831	C	28.1	0.895	C	28.6	0.904

Notes:

1. LOS computed based on HCM 2000 methodologies. Shaded cells indicate intersections that will violate City of Livermore LOS standard.
2. LOS for the El Charro Specific Plan EIR intersections were completed using Traffix software version 7.8, and additional analysis completed herein used Traffix software version 7.9.
3. Source for "LOS as Shown in El Charro Report": Traffic Study for: El Charro Specific Plan, Dowling Associates, January 10, 2007.
4. "No Project" is El Charro Report results minus the Staples Ranch development that was assumed in the El Charro Report.

6.4 CMP Analysis of Freeways and Arterials

This section describes the impacts of the proposed project on the I-580 freeway and the ACCMA MTS system of arterials in the vicinity. The analysis is performed for the years 2015 according to the ACCMA methodology with its specified growth and highway/transit network improvement assumptions (which differ from those used in the previous sections to evaluate intersection LOS impacts). The West Jack London Boulevard Extension is assumed to be in place by ACCMA in its 2015 analysis. The Stoneridge Drive extension and the connection of El Charro Road through to Stanley Boulevard are both excluded from the ACCMA 2015 analysis.

The ACCMA model assumptions were left unchanged for this analysis, so as to provide all ACCMA member agencies a consistent basis for evaluating the relative impacts of their land use decisions and those of other jurisdictions on the regional CMP network.

Proposed Project

The impacts of the proposed project are shown in Table 41 (for AM peak hour) and in Table 42 (for PM peak hour). Shaded cells show the segments that violate the ACCMA level of service thresholds. In no case does the proposed project cause a road segment to go from non-violation to violation of the ACCMA standards. In one case, Santa Rita Road in the PM peak hour, the proposed project does cause the volume/capacity ratio to increase by over 3% for a road segment that already violates the ACCMA standards without the proposed project. This is a significant impact. The recommended mitigation is the Santa Rita and Valley intersection mitigation shown in Table 34. Since intersection LOS analysis is more accurate than the segment based Florida LOS method, this mitigation will reduce the impacts to a less than significant level.

Proposed Project Plus Ice Center

The impacts of the proposed project plus the Ice Center are shown in Table 41 (for AM peak hour) and in Table 42 (for PM peak hour). Shaded cells show the segments that violate the ACCMA level of service thresholds. In no case does the proposed project plus Ice Center cause a road segment to go from non-violation to violation of the ACCMA standards. In one case, Santa Rita Road in the AM peak hour, the proposed project does cause the volume/capacity ratio to increase by over 3% for a road segment that already violates the ACCMA standards without the proposed project. This is a significant impact. The recommended mitigation is the Santa Rita and Valley intersection mitigation shown in Table 36. Since intersection LOS analysis is more accurate than the segment based Florida LOS method, this mitigation will reduce the impacts to a less than significant level.

1989 Specific Plan Project

The impacts of the 1989 Specific Plan are shown in Table 41 (for AM peak hour) and in Table 42 (for PM peak hour). Shaded cells show the segments that violate the ACCMA level of service thresholds. In no case does the 1989 Specific Plan cause a road segment to go from non-violation to violation of the ACCMA standards, nor increase the v/c by greater than 3% for an already deficient road segment.

Table 41: CMP Project Impact Analysis - Near Term 2015 – AM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No Project		Project		Project + Ice Center		1989 Specific Plan		No Project		Project		Project + Ice Center		1989 Specific Plan	
	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways																
I-580 (Betn. Santa Rita & El Charro)	0.36	B	0.39	B	0.39	B	0.40	B	1.26	F	1.28	F	1.28	F	1.27	F
I-680 (Betn. Stoneridge and W Las Positas)	0.50	B	0.50	B	0.50	B	0.50	B	1.23	F	1.23	F	1.23	F	1.23	F
SR 84 (Near Little Valley)	0.78	E	0.78	E	0.78	E	0.78	E	1.24	F	1.24	F	1.24	F	1.24	F
I-580 (Betn. El Charro & Airway Pkwy)	0.42	B	0.42	B	0.42	B	0.42	B	1.19	F	1.20	F	1.20	F	1.20	F
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	0.38	B	0.38	B	0.38	B	0.38	B	1.31	F	1.31	F	1.31	F	1.32	F
I-580 (Betn. Isabel Pkwy & Portola Ave)	0.47	B	0.47	B	0.47	B	0.47	B	1.39	F	1.39	F	1.39	F	1.40	F
I-580 (Betn. Portola Ave & N.Livermore Ave)	0.47	B	0.47	B	0.47	B	0.47	B	1.39	F	1.39	F	1.39	F	1.40	F
I-580 (Betn. N.Livermore Ave & First St.)	0.44	B	0.45	B	0.45	B	0.44	B	1.27	F	1.27	F	1.27	F	1.28	F
I-580 (Betn. First St & South Vasco Rd.)	0.47	B	0.47	B	0.47	B	0.47	B	1.06	F	1.06	F	1.06	F	1.06	F
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.38	B	0.38	B	0.38	B	0.38	B	1.27	F	1.27	F	1.27	F	1.27	F
Arterials																
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	0.81	E	0.81	E	0.81	E	0.81	E	1.13	F	1.14	F	1.14	F	1.14	F
Dublin Blvd. (East of Tassajara Rd.)	0.00	B	0.00	B	0.00	B	0.00	B	1.06	F	1.08	F	1.09	F	1.07	F
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.03	F	1.04	F	1.04	F	1.04	F	1.10	F	1.10	F	1.10	F	1.10	F
W Las Positas (West of Santa Rita Rd.)	0.45	D	0.46	D	0.46	D	0.46	D	1.07	F	1.07	F	1.08	F	1.07	F
Santa Rita Rd. (South of I-580)	0.32	D	0.38	D	0.38	D	0.38	D	1.09	F	1.13	F	1.13	F	1.11	F
Stanley Blvd. (East of Valley Blvd.)	0.23	D	0.23	D	0.23	D	0.23	D	1.45	F	1.45	F	1.45	F	1.45	F
Stoneridge (East of Santa Rita Rd.)	0.24	D	0.25	D	0.25	D	0.24	D	0.44	D	0.45	D	0.45	D	0.45	D
Sunol Blvd. (North of I-680)	0.24	D	0.24	D	0.24	D	0.24	D	0.44	D	0.44	D	0.44	D	0.44	D
Tassajara Rd. (North of Dublin Blvd.)	0.15	B	0.15	B	0.15	B	0.15	B	0.26	B	0.26	B	0.26	B	0.26	B

Shaded cells indicate LOS "F". Note that levels of service are computed per the criteria in the Florida method, not the volume/capacity ratios. The volume/capacity ratios are provided to show the percentage increase in traffic caused by the project. No-Project is the ACCMA model forecast for 2015 without adjustment. ACCMA model predicts very little traffic in the eastbound direction of Dublin Blvd. during the AM peak hour (thus the 0.00 v/c results).

Table 42: CMP Project Impact Analysis - Near Term 2015 – PM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No Project		Project		Project + Ice Center		1989 Specific Plan		No Project		Project		Project + Ice Center		1989 Specific Plan	
	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways																
I-580 (Betn. Santa Rita & El Charro)	1.02	F	1.04	F	1.04	F	1.04	F	0.58	C	0.63	C	0.64	C	0.64	C
I-680 (Betn. Stoneridge and W Las Positas)	1.01	F	1.01	F	1.01	F	1.01	F	0.55	B	0.55	C	0.55	C	0.55	C
SR 84 (Near Little Valley)	0.96	E	0.96	E	0.96	E	0.96	E	0.80	E	0.80	E	0.80	E	0.80	E
I-580 (Betn. El Charro & Airway Pkwy)	1.00	F	1.01	F	1.01	F	1.01	F	0.43	B	0.44	B	0.44	B	0.44	B
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	1.04	F	1.04	F	1.05	F	1.05	F	0.45	B	0.46	B	0.46	B	0.46	B
I-580 (Betn. Isabel Pkwy & Portola Ave)	1.16	F	1.16	F	1.16	F	1.16	F	0.50	B	0.51	B	0.51	B	0.51	B
I-580 (Betn. Portola Ave & N.Livermore Ave)	1.14	F	1.15	F	1.15	F	1.15	F	0.50	B	0.51	B	0.51	B	0.51	B
I-580 (Betn. N.Livermore Ave & First St.)	1.00	E	1.00	F	1.00	F	1.00	F	0.42	B	0.42	B	0.42	B	0.42	B
I-580 (Betn. First St & South Vasco Rd.)	0.97	E	0.97	E	0.97	E	0.97	E	0.38	B	0.38	B	0.38	B	0.38	B
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.86	D	0.86	D	0.86	D	0.86	D	0.44	B	0.44	B	0.44	B	0.44	B
Arterials																
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	1.12	F	1.13	F	1.13	F	1.13	F	0.76	D	0.77	D	0.77	D	0.76	D
Dublin Blvd. (East of Tassajara Rd.)	0.73	B	0.75	B	0.75	B	0.75	B	0.00	B	0.00	B	0.00	B	0.00	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.05	F	1.06	F	1.06	F	1.06	F	1.04	F	1.05	F	1.06	F	1.05	F
W Las Positas (West of Santa Rita Rd.)	0.85	E	0.86	E	0.86	E	0.86	E	0.60	D	0.61	D	0.61	D	0.61	D
Santa Rita Rd. (South of I-580)	0.81	E	0.86	E	0.86	E	0.86	E	0.38	D	0.45	D	0.46	D	0.45	D
Stanley Blvd. (East of Valley Blvd.)	1.24	F	1.24	F	1.24	F	1.24	F	0.28	D	0.28	D	0.28	D	0.28	D
Stoneridge (East of Santa Rita Rd.)	0.41	D	0.43	D	0.43	D	0.43	D	0.28	D	0.29	D	0.29	D	0.29	D
Sunol Blvd. (North of I-680)	0.71	D	0.71	D	0.71	D	0.71	D	0.25	D	0.25	D	0.25	D	0.25	D
Tassajara Rd. (North of Dublin Blvd.)	0.21	B	0.21	B	0.21	B	0.21	B	0.20	B	0.20	B	0.20	B	0.20	B

Shaded cells indicate LOS "F". Note that levels of service are computed per the criteria in the Florida method, not the volume/capacity ratios. The volume/capacity ratios are provided to show the percentage increase in traffic caused by the project. No-Project is the ACCMA model forecast for 2015 without adjustment. ACCMA model predicts very little traffic in the westbound direction of Dublin Blvd. during the PM peak hour (thus the 0.00 v/c results).

7. Cumulative Conditions (No Project)

This section describes intersection traffic volumes, intersection levels of service, and freeway operations based on Cumulative conditions based on buildout of Pleasanton's 1996 General Plan, including El Charro Specific Plan Full Project Buildout with a four-lane extension of West Jack London Boulevard.

The Cumulative condition includes two roadway options; one assumes the extension of Stoneridge Drive to El Charro Road while the second assumes that Stoneridge Drive is not extended to El Charro Road. Rather, the central portion of Stoneridge Drive, within the project area, would function as an emergency vehicle access (EVA) and would include a cul-de-sac at both ends of the EVA.

The two future No-Project (Vacant Land) conditions assumed land use and roadway improvements intended to accommodate projected growth in the area. The specific roadway improvements and land use changes assumed for Existing plus Approved and Cumulative conditions are documented in the appendices. Roadway and land use changes outside of Pleasanton's jurisdiction were assumed as 2030 for Cumulative conditions.

Table 43 summarizes planned roadway changes to freeway, arterial, and collector roadways in or in close proximity to the study area that were assumed to be implemented and operational under the Cumulative conditions. These roadway changes were incorporated into the traffic model.

7.1 Pleasanton Model Area Intersections

Table 45 in the following chapter shows the forecasted levels of service at intersections within the Pleasanton Model area with and without the Stoneridge Drive extension for cumulative No-Project (Vacant Land) conditions.

Several intersections would fail to meet either the Pleasanton or Dublin LOS standards under the cumulative No-Project (Vacant Land) conditions. Recommended mitigations for these intersections are identified in Table 44.

7.2 Added Dublin Intersections

The cumulative No-Project (Vacant Land) levels of service for the additional Dublin intersections are shown in Table 51 in the next chapter. None of these added intersections would violate City of Dublin's LOS standards under the cumulative No-Project (Vacant Land) conditions.

7.3 Livermore Intersections

The cumulative with-project levels of service for selected evaluation intersections in Livermore are shown in Table 52 in the next chapter. The percentage traffic contributions of the proposed project to each intersection are shown in Table 53. One of the intersections evaluated would require the mitigations listed in the El Charro FEIR to meet City of Livermore LOS standards under cumulative growth conditions.

7.4 CMP Analysis of Freeways and Arterials

The cumulative No-Project (Vacant Land) levels of service and volume/capacity ratios for the year 2030 for ACCMA MTS facility segments in the area are shown in Table 54 (for AM peak hour) and in Table 55 (for PM peak hour) in the next chapter. The I-580 freeway and several arterial streets would violate ACCMA LOS standards in the year 2030.

Table 43: Roadway Changes Included in Cumulative Analysis

Description	Jurisdiction
Airway Boulevard widening (from 4 to 6 lanes) from I-580 to North Canyons Parkway	Livermore
Airway Boulevard-SR-84 widening (from 2 to 4 lanes) from Terminal Circle to Isabel Avenue	Livermore
Bernal Avenue widening (from 3 to 4 lanes) from Foothill Road to I-680 SB ramps	Pleasanton
Busch Road (4 lanes) extension from existing eastern terminus to El Charro Road	Pleasanton
Busch Road widening (from 2 to 4 lanes) from Valley Avenue to eastern terminus	Pleasanton
Central Parkway extension (2 lanes) from Fallon Road to Croak Road	Dublin
Dougherty Road widening (from 4 to 6 lanes) from Dublin Boulevard to northern city limit	Dublin
El Charro Road at I-580 interchange widening overpass (from 4 lanes to 6 lanes), add new WB on-ramp and eliminate existing WB on-ramp	Livermore, Dublin and Caltrans
El Charro Road extension (4 lanes) from Jack London to Stanley Boulevard	Pleasanton
El Charro Road widening (from 2 to 6 lanes) from EB ramps to Stoneridge Drive-W Jack London Boulevard	Livermore
Fallon Road extension (4 lanes) from Signal Hill Drive to Tassajara Road	Dublin
Fallon Road widening (from 2 to 4 lanes) from Old Fallon Road to Signal Hill Drive	Dublin
Fallon Road widening (from 2 to 6 lanes) from Central Parkway to Old Fallon Road	Dublin
Fallon Road widening (from 4 to 6 lanes) from Dublin Boulevard to Central Parkway	Dublin
Fallon Road widening (from 4 to 8 lanes) from south of Dublin Boulevard to Dublin Boulevard	Dublin
Foothill Road widening (from 4 to 6 lanes) from I-580 EB ramps to Stoneridge Drive	Pleasanton
Hacienda Drive widening (from 2 to 4 lanes) from Central Parkway to Gleason Drive	Dublin
Hopyard Road widening (from 2 to 4 lanes) from Black Avenue to Del Valle Parkway	Pleasanton
I-580 EB auxiliary road (1 lane) from Arnold Road to Greenville Road interchange	Caltrans, Livermore
I-580 WB off-ramp at Airway Boulevard widening (from 1 to 2 lanes)	Caltrans and Livermore
I-580 WB on-ramp at Tassajara Road widening (from 1 to 2 lanes)	Caltrans and Dublin
I-580 widening (from 8 to 10 lanes) from Vasco Road to Fallon Road-El Charro Road	Caltrans
Isabel Avenue-SR-84 widening (from 4 to 6 lanes) from Stanley Boulevard to Airway Boulevard	Caltrans and Livermore
Jack London Road widening (4 lanes) from El Charro Road to Isabel Parkway	Livermore
Nevada Street (2 lanes) extension from California Avenue to First Street-Stanley Boulevard	Pleasanton
North Canyons Parkway widening (from 4 to 6 lanes) from Republic Drive to Collier Canyon Road	Livermore
Stanley Boulevard widening (from 4 to 6 lanes) from Livermore's western city limit to Murrieta Boulevard	Livermore
Tassajara Road widening (from 2 to 6 lanes) from N Dublin Ranch Drive to northern city limit	Dublin
Tassajara Road widening (from 4 to 6 lanes) from Dublin Boulevard to N Dublin Ranch Drive	Dublin
Tassajara Road widening (from 6 to 8 lanes) from I-580 WB ramps to Dublin Boulevard	Dublin
Valley Avenue widening (from 4 to 6 lanes) from Koll Center Parkway (South) to Bernal Avenue	Pleasanton

The 1996 Pleasanton General Plan calls for the extension of Stoneridge Drive at buildout; however, it was not included so as to provide a baseline no development vacant land scenario for evaluating the Stoneridge Drive Specific Plan Amendment.

Table 44: Mitigations for Cumulative No-Project – Pleasanton Model Intersections

#	Intersection Failing LOS Standards	Mitigation	LOS After Mitigation			
			AM		PM	
			LOS	Delay	LOS	Delay
10	Hopyard Road @ Owens Drive	Provide 2 NBL, 3 NBT. 1 NBR; 3 SBL, 3 SBT, 1 SBR (free); 2 EBL, 2 EBT, 1 EBR; 2 WBL, 2 WBT, 1 WBR (free). Unsplit EB/WB, narrow lane to reduce ped clearance to 20 seconds, and change cycle length (PM)			D	53
11	Hopyard Road @ Stoneridge Drive	Provide EB free right turn (remove one SB through lane, if necessary). Modify cycle			D	54
26	Santa Rita Road @ I-580 EB off-ramp-Pimlico Drive	Widen SB approach to provide 2nd left-turn lane Change cycle length (PM)			D	47
30	W Las Positas Boulevard @ Stoneridge Drive	Widen SB approach to provide 2nd left-turn lane, restripe EB to provide separate right-turn lane and remove on left-turn lane. Change cycle length to 120 seconds (PM).			D	50
34	Santa Rita Road @ Valley Avenue	Widen WB approach to provide 2nd left-turn lane. Change cycle length to 120 seconds (PM).			D	48
56	Fallon Road @ Dublin Boulevard	Since this is a "no-project" condition, mitigations would need to be developed by the City of Dublin			**E**	**65**
60	Tassajara Road @ Central Parkway	Since this is a "no-project" condition, mitigations would need to be developed by the City of Dublin			**E**	**66**

Notes: **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane; **SB** = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach

This table, being based on the current City of Pleasanton General Plan, includes the extension of Stoneridge Drive to El Charro Road.

8. Cumulative Conditions With Project

This section presents the traffic impact results of adding the proposed project to the "cumulative development" future scenario.

The project impacts are presented for the following development scenarios for the project site (Note that the cumulative no-project baseline assumes no development at all on the project site):

1. Proposed Staples Ranch Project (With and Without Stoneridge Drive Extension)
2. Proposed Project Plus Ice Center (With and Without Stoneridge Drive Extension)
3. 1989 Specific Plan (with Stoneridge Drive Extension)

The discussion starts with impacts on Pleasanton and Dublin intersections, proceeds to the impacts on additional intersections in Dublin, continues with impacts on intersections in Livermore, and concludes with a CMP analysis of freeway and arterial impacts.

8.1 Pleasanton Model Area Intersections

Proposed Project

Most of the intersections analyzed in the Pleasanton area would continue to operate at satisfactory levels of service with or without the proposed project plus the ice center, with or without the Stoneridge Drive extension. Table 45 shows the intersections in Pleasanton that are expected to operate at unsatisfactory levels of service with or without the proposed project, with and without the Stoneridge Drive Extension. A shaded cell in the column for the project alternative indicates a significant impact. No mitigations are proposed for downtown Pleasanton intersections, which are exempt from the City's level of service standard.

The recommended mitigations for the proposed project are shown in Table 46 for the without Stoneridge Drive Extension condition. Table 47 shows the recommended mitigations for the proposed project if the Stoneridge Drive Extension is built. No mitigations are shown for the downtown area intersections which are exempt from the City of Pleasanton's LOS standards.

Proposed Project Plus Ice Center

Most of the intersections analyzed in the Pleasanton area would continue to operate at satisfactory levels of service with or without the proposed project plus the ice center, with or without the Stoneridge Drive extension. Table 48 and Table 49 show the intersections in Pleasanton that are expected to operate at unsatisfactory levels of service with or without the proposed project, with and without the Stoneridge Drive Extension. A shaded cell in the column for the project alternative indicates a significant impact. No mitigations are proposed for downtown Pleasanton intersections, which are exempt from the City's level of service standard. The recommended mitigations for the proposed project are shown in Table 48 for the without Stoneridge Drive Extension condition. Table 49 shows the recommended mitigations for the proposed project if the Stoneridge Drive Extension is built.

1989 Specific Plan

Most of the intersections analyzed in the Pleasanton area would continue to operate at satisfactory levels of service with or without the 1989 Specific Plan development, with the Stoneridge Drive extension. Table 50 shows the intersections in Pleasanton that are expected to operate at unsatisfactory levels of service with or without the 1989 Specific Plan and the Stoneridge Drive Extension. A shaded cell in the column for the project alternative indicates a significant impact. The recommended mitigations are shown in Table 50. No mitigations are proposed for downtown Pleasanton intersections, which are exempt from the City's level of service standard.

Table 45: Cumulative Impacts of Proposed Project – Pleasanton Model Intersections

				AM PEAK								PM PEAK							
				Vacant Site No Stoneridge Extension		Vacant Site With Stoneridge Extension		Project No Stoneridge Extension		Project With Stoneridge Extension		Vacant Site No Stoneridge Extension		Vacant Site With Stoneridge Extension		Project No Stoneridge Extension		Project With Stoneridge Extension	
No	Syn	NS Street	EW Street	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	302	Foothill	Dublin Canyon	C	22	C	23	C	22	C	23	C	25	C	24	C	25	C	24
2	372	Foothill	Laurel Creek	B	15	B	15	B	15	B	15	A	9	A	9	A	9	A	9
3	304	Foothill	Stoneridge	B	17	B	17	B	17	B	17	C	25	C	24	C	25	C	25
4	344	Springdale	Stoneridge	B	13	B	14	B	13	B	14	C	22	C	21	C	22	C	21
5	346	I-680 SB off	Stoneridge	B	16	C	29	B	16	C	29	C	26	C	25	C	27	C	25
6	347	I-680 NB off	Stoneridge	B	11	B	12	B	11	B	12	C	30	C	30	C	30	C	30
7	348	Johnson	Stoneridge	B	17	C	23	B	17	C	23	D	35	C	34	D	35	C	34
8	349	Franklin	Stoneridge	C	30	D	44	C	31	D	45	B	18	B	19	B	18	B	20
9	309	Hopyard	I-580 EB off	D	46	D	41	D	47	D	41	D	53	D	44	D	54	D	44
10	310	Hopyard	Owens	C	28	C	29	C	29	C	29	F	265	F	271	F	265	F	271
11	313	Hopyard	Stoneridge	D	44	D	45	D	44	D	45	F	101	F	107	F	101	F	108
12	316	Hopyard	W Las Positas	C	28	C	28	C	28	C	29	D	45	D	43	D	45	D	43
13	318	Hopyard	Valley Trails (S)	A	9	A	10	A	9	A	10	C	22	C	22	C	22	C	22
14	319	Hopyard	Valley	C	28	C	28	C	28	C	29	C	33	C	34	C	34	C	35
15	353	Valley	Bernal	D	45	D	45	D	45	D	45	D	54	D	54	D	54	D	54
16	405	Chabot	Stoneridge	A	8	A	9	A	8	A	9	B	13	B	14	B	13	B	14
17	355	Willow	Owens	A	7	A	7	A	7	A	7	A	8	A	8	A	8	A	8
18	357	Willow	Stoneridge	C	22	D	35	C	22	D	36	A	10	A	9	A	10	A	9
19	387	Hacienda	I-580 EB off	C	27	B	20	C	27	B	20	D	45	C	30	D	46	C	30
20	361	Hacienda	Owens	C	23	C	23	C	23	C	23	D	44	D	37	D	44	D	37
21	363	Hacienda	Stoneridge	C	31	C	31	C	31	C	31	D	37	C	32	D	37	C	33
22	365	Hacienda	W Las Positas	C	23	D	53	C	23	D	53	B	18	B	16	B	18	B	17
23	366	Gibraltar	Stoneridge	A	7	A	7	A	8	A	7	B	14	B	18	B	15	B	19
24	911	Rosewood	Rose Pavillian	A	5	A	5	A	5	A	5	A	9	A	9	A	9	A	9
25	369	Rosewood	Owens	A	8	A	8	A	8	A	8	A	9	A	9	A	9	A	9
26	323	Santa Rita	I-580 EB off/Pimlico	D	50	C	32	D	53	C	32	F	82	E	72	F	89	E	73
27	324	Santa Rita	Rosewood	B	11	B	11	B	11	B	11	C	25	C	27	C	24	C	27
28	325	Santa Rita	Old Santa Rita	A	5	A	5	A	5	A	5	A	6	A	6	A	6	A	7
29	368	W Las Positas	Owens	B	14	B	14	B	14	B	15	C	21	C	21	C	21	C	21
30	367	W Las Positas	Stoneridge	C	30	C	32	C	30	C	32	C	30	E	56	C	31	E	57
31	326	Santa Rita	W Las Positas	D	46	D	41	D	47	D	42	D	40	D	44	D	41	D	45
32	327	Santa Rita	Stoneridge	D	39	D	53	D	40	D	54	D	42	D	48	D	42	D	54
33	328	Santa Rita	Mohr	C	21	C	22	C	21	C	22	C	21	B	17	C	21	B	18
34	329	Santa Rita	Valley	D	49	D	46	D	50	D	46	F	88	E	59	F	92	E	60
35	330	Santa Rita	Black	C	28	C	28	C	29	C	28	C	29	C	31	C	30	C	31
36	331	Santa Rita	Stanley	C	21	C	22	C	21	C	22	C	22	C	21	C	22	C	21
37	1105	Rheem	Stoneridge	A	7	A	9	A	7	A	9	A	7	A	10	A	7	B	11
38	466	Kamp	Stoneridge	A	7	A	8	A	7	A	9	A	6	A	8	A	6	A	9
39	468	Kolln	Valley	B	19	B	15	B	19	B	15	B	14	B	13	B	16	B	13
40	437	Busch	Valley	C	22	B	16	C	23	B	16	C	21	B	16	C	22	B	16

No	Syn	NS Street	EW Street	AM PEAK								PM PEAK							
				Vacant Site No Stoneridge Extension		Vacant Site With Stoneridge Extension		Project No Stoneridge Extension		Project With Stoneridge Extension		Vacant Site No Stoneridge Extension		Vacant Site With Stoneridge Extension		Project No Stoneridge Extension		Project With Stoneridge Extension	
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
41	371	Valley	Stanley	D	36	D	42	D	37	D	43	D	50	D	44	D	48	D	49
42	378	Bernal	Vineyard	D	45	D	46	D	46	D	47	C	25	C	21	C	27	C	22
43	337	First	Stanley	B	12	B	11	B	12	B	11	B	17	B	14	B	17	B	14
44	87	El Charro	Busch	D	39	C	25	D	45	C	26	C	30	B	13	D	50	B	13
45	92	El Charro	Stanley	D	36	D	37	D	39	C	35	D	36	C	31	D	38	C	32
46	338	First	Ray (exempt)	D	45	D	39	D	46	D	39	F	117	E	65	F	126	E	71
47	576	First	Kottinger (exempt)	D	46	D	42	D	47	D	43	F	94	D	53	F	99	E	57
48	332	Main	Ray (exempt)	C	33	D	38	C	34	D	40	F	157	F	146	F	162	F	151
49	1332	Main	St. John (exempt)	D	46	E	61	D	48	E	65	F	198	F	185	F	204	F	193
50	342	First	Bernal (exempt)	F	97	F	85	F	100	F	87	D	52	D	51	D	55	D	54
51	375	El Charro	I-580 EB	C	34	D	40	E	71	E	73	B	12	B	11	B	19	B	14
53	85	El Charro	Jack London	C	21	C	33	D	35	D	52	C	24	D	49	D	47	F	85
54	29	El Charro	El Charro	C	27	C	27	D	40	C	33	B	12	B	11	B	13	B	12
55	374	Fallon	I-580 WB	B	12	B	12	B	13	B	14	B	12	B	12	B	15	B	13
56	102	Fallon Rd	Dublin Blvd	D	44	C	28	D	49	C	29	E	66	E	61	F	84	E	73
57	99	Fallon Rd	Central Pkwy	D	36	C	35	D	36	C	35	D	51	D	40	D	54	D	41
58	322	Tassajara	I-580 WB off	B	18	B	13	B	19	B	13	B	18	B	20	B	19	C	21
59	1141	Tassajara Rd	Dublin Blvd	D	41	D	35	D	41	D	35	D	51	D	50	D	52	D	50
60	1233	Tassajara Rd	Central Pkwy	D	36	C	33	D	35	C	33	E	66	E	65	E	69	E	65
61	386	Hacienda	I-580 WB off	A	8	A	9	A	8	A	9	C	20	B	14	C	21	B	14
62	308	Hopyard	I-580 WB off	B	20	B	19	C	20	B	19	D	37	D	44	D	38	D	45
63	8	Foothill	I-580 WB	A	10	A	10	A	10	A	10	B	14	B	13	B	14	B	13

Notes:

1. No. = Intersection number as shown in Table 6 and in Figure 1 and Figure 2.
2. Syn = Intersection number within City of Pleasanton Synchro model (appendices with LOS calculations are sorted by Synchro Number)
3. Vacant Site means the Staples Ranch Development area is assumed to be vacant.
4. LOS = level of service
5. Delay = average seconds delay per vehicle at intersection. Note that because it is an "average", the addition of project traffic to a right turn movement may reduce the "average" delay for all vehicles using the intersection.
6. Intersections operating at LOS "D" or better were not optimized to minimize delay, thus delays may increase or decrease with added traffic because the signal timing has not been optimized to the specific traffic volumes for each alternative.
7. Shaded cells indicate results that violate Pleasanton or Dublin LOS Standards for signalized intersections.
8. Note that intersections #46-50 are located in the Pleasanton downtown and are therefore exempt from the Pleasanton LOS standards.
9. Intersection # 52 (El Charro and Freisman) does not exist under this future scenario.
10. The Highway Capacity Manual method was used to compute LOS for the Dublin intersections in this table. This method is considered to provide approximately equivalent results to the City of Dublin CCTALOS method for the purposes of identifying significant impacts and mitigations.
11. For impacts of Ice Center and 1989 Specific Plan see following tables providing recommended mitigation measures.

Table 46: Recommended Mitigations - Cumulative Plus Project - Without Stoneridge Extension

No	Syn	NS Street	EW Street	Before Mitigation				After Mitigation				Comments
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
10	310	Hopyard	Owens			F	265			D	52	Narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Hopyard	Stoneridge			F	101			D	40	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 120 seconds (PM).
26	323	Santa Rita	I-580 EB off/Pimlico			F	89			D	40	Widen SB to provide 2nd left-turn lane. Change cycle length to 120 seconds (PM).
34	329	Santa Rita	Valley			F	92			D	49	Widen NB to provide separate right-turn lane. Change cycle length to 120 seconds (PM).
51	375	El Charro	I-580 EB	E	71			C	23			Restripe one EBL lane to shared EBLR lane. (included in project design)
56	102	Fallon	Dublin			F	84			D	53	Provide dual EB free right-turn lanes. Change cycle length to 120 seconds (PM).
60	1233	Tassajara	Central			E	69			D	49	Widen EB to provide separate right-turn lane.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Key to Mitigations: **SB** = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach; **L** = Left turn lane, **T** = Through lane, **R** Right turn lane.
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 47: Recommended Mitigations - Cumulative Plus Project - With Stoneridge Extension

No	Syn	Intersection	Before Mitigation				After Mitigation				Comments
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
10	310	Hopyard & Owens			F	271			D	53	Narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Hopyard & Stoneridge			F	108			D	38	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 120 seconds.
26	323	Santa Rita & I-580 EB off/Pimlico			E	73			D	41	Widen SB to provide 2nd left-turn lane.
30	367	W Las Positas & Stoneridge			E	71			D	50	Widen SB approach to provide 2nd left-turn lane, restripe EB to provide separate right-turn lane and remove on left-turn lane. Change cycle length to 120 seconds (PM).
34	329	Santa Rita & Valley			E	60			D	48	Change cycle length to 120 seconds (PM).
51	375	El Charro & I-580 EB	E	73			C	24.8			Restripe one EBL lane to shared EBLR lane.
53	85	El Charro & Stoneridge			F	85			D	43	Provide SB free right-turn and construct third EBLT lane (in proposed project design)
56	102	Fallon & Dublin			E	73			D	55	Provide single EB free right-turn lane.
60	1233	Tassajara & Central			E	65			D	48	Widen EB to provide separate right-turn lane.

Notes:

- Key to Mitigations: **SB** = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach; **L** = Left turn lane, **T** = Through lane, **R** – Right turn lane.
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 48: Cumulative Impacts and Mitigations – Project Plus Ice Center – Without Stoneridge Extension

No.	Syn	Intersection	Before Mitigation AM Peak Hour LOS	Before Mitigation AM Peak Hour Delay	Before Mitigation PM Peak Hour LOS	Before Mitigation PM Peak Hour Delay	After Mitigation AM Peak Hour LOS	After Mitigation AM Peak Hour Delay	After Mitigation PM Peak Hour LOS	After Mitigation PM Peak Hour Delay	Mitigation
10	310	Owens Drive & Hopyard			F	266			D	52	Provide 2 NBL, 3 NBT, 1 NBR; 3 SBL, 3 SBT, 1 SBR (free); 2 EBL, 2 EBT, 1 EBR; 2 WBL, 2 WBT, 1 WBR (free). Unsplit EB/WB, narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Stoneridge & Hopyard			F	101			D	49	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 100 seconds (PM).
26	323	Santa Rita & I-580 EB off			F	90			D	41	Widen SB to provide 2nd left-turn lane. Change cycle length to 120 seconds (PM).
34	329	Valley & Santa Rita			F	93			D	50	Widen WB approach to provide 2nd left-turn lane, widen NB to provide separate right-turn lane. Change cycle length to 120 seconds (PM).
51	375	I-580 & Fallon	E	75			C	24			Restripe one EBL lane to shared EBLR lane. (in proposed project design)
56	102	Dublin & Fallon			F	88			D	54	Provide dual EB free right-turn lanes. Change cycle length to 120 seconds (PM).
60	1233	Central & Tasajara			E	69			D	46	Widen EB to provide separate right-turn lane.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Key to Mitigations: **SB** = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach; **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane.
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 49: Cumulative Impacts and Mitigations – Project Plus Ice Center – With Stoneridge Extension

No.	Syn	Intersection	Before Mitigation AM Peak Hour LOS	Before Mitigation AM Peak Hour Delay	Before Mitigation PM Peak Hour LOS	Before Mitigation PM Peak Hour Delay	After Mitigation AM Peak Hour LOS	After Mitigation AM Peak Hour Delay	After Mitigation PM Peak Hour LOS	After Mitigation PM Peak Hour Delay	Mitigation
10	310	Owens Drive & Hopyard	C	29	F	271	C	23	D	53	Provide 2 NBL, 3 NBT, 1 NBR; 3 SBL, 3 SBT, 1 SBR (free); 2 EBL, 2 EBT, 1 EBR; 2 WBL, 2 WBT, 1 WBR (free). Unsplit EB/WB, narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Stoneridge & Hopyard	D	45	F	108	D	44	D	48	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 100 seconds (PM).
26	323	I-580 EB off & Santa Rita	C	32	E	73	C	32	D	36	Widen SB to provide 2nd left-turn lane. Change cycle length to 120 seconds (PM).
30	367	W.Las Positas & Stoneridge	C	32.6	E	75.2	C	31.4	D	46.7	Widen SB approach to provide 2nd left-turn lane, restripe EB to provide separate right-turn lane and remove on left-turn lane. Change cycle length to 120 seconds (PM).
34	329	Valley & Santa Rita	D	46	E	59	C	34	D	46	Widen WB approach to provide 2nd left-turn lane, widen NB to provide separate right-turn lane.
51	375	I-580 & Fallon	E	75	B	15	C	26	B	13	Restripe one EBL lane to shared EBLR lane. (in proposed project design)
53	85	Stoneridge & El Charro	D	50	F	99	D	37	D	46	Provide SB free right-turn and construct third EBLT lane. (in proposed project design)
56	102	Dublin & Fallon	C	29	E	76	C	27	D	54	Provide single EB free right-turn lane. Change cycle length to 120 seconds (PM).
60	1233	Central & Tasajara	C	33	E	65	C	33	D	48	Widen EB to provide separate right-turn lane.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Key to Mitigations: **SB** = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach; **L** = Left turn lane, **T** = Through lane, **R** = Right turn lane.
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

Table 50: Cumulative LOS & Mitigations - 1989 Specific Plan

No.	Syn	NS Street	EW Street	Before Mitigation				After Mitigation				Comments
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
7	348	Johnson	Stoneridge			F	90			D	42	Restripe WB right-turn lane to shared through/right lane and widen WB departure to receive 4 through lanes.
10	310	Hopyard	Owens			F	261			D	54	Provide 2 NBL, 3 NBT, 1 NBR; 3 SBL, 3 SBT, 1 SBR (free); 2 EBL, 2 EBT, 1 EBR; 2 WBL, 2 WBT, 1 WBR (free). Unsplit EB/WB, narrow lane to reduce ped clearance to 20 seconds, and change cycle length to 130 seconds (PM).
11	313	Hopyard	Stoneridge			F	105			D	38	Provide EB free right turn (remove one SB through lane, if necessary). Change cycle length to 120 seconds.
26	323	Santa Rita	I-580 EB Off			D	55			D	36	Widen SB to provide 2nd left-turn lane. Change cycle length to 120 seconds (PM).
30	367	W Las Positas	Stoneridge			E	75			D	49	Widen SB approach to provide 2nd left-turn lane. Change cycle length to 120 seconds (PM).
34	329	Santa Rita	Valley			E	63			D	51	Widen WB approach to provide 2nd left-turn lane. Change cycle length to 120 seconds (PM).
51	375	El Charro	I-580 EB	E	68			C	24			Restripe one EBL lane to shared EBLR lane. (in proposed project design)
53	85	El Charro	Stoneridge	E	77	F	140	D	46	D	44	Provide SB free right-turn and construct third EBLT lane
56	102	Fallon	Dublin			F	86			D	50	Provide dual EB free right-turn lane. Change cycle length to 120 seconds (PM).
60	1233	Tassajara	Central			E	66			D	49	Widen EB to provide separate right-turn lane.

Notes:

- All mitigations for existing conditions assumed to be already in place.
- Key to Mitigations: **SB** = Southbound approach, **NB** = Northbound approach, **EB** = Eastbound approach, **WB** = Westbound approach; **L** = Left turn lane, **T** = Through lane, **R** Right turn lane.
- LOS shown only for peak hours that failed to meet Pleasanton or Dublin LOS standards under unmitigated conditions.

8.2 Additional Dublin Intersections

This section presents the project impacts for several additional intersections in Dublin that are not currently modeled within the Pleasanton Modeling System. As such, the baseline No-Project (Vacant Land) traffic forecasts for these intersections were taken from a recent traffic study for Fallon Villages. The project traffic was then added on top of these forecasts.

Proposed Project

Table 51 below shows the long term, buildout impacts of the proposed project on the additional Dublin intersections. The traffic added by the project to these intersections that are generally farther away from the proposed project is sufficient to change the volume/capacity ratios by 1% in a few cases. One of the intersections, Dublin Blvd at Dougherty Road would exceed Dublin's LOS standard with or without the proposed project.

Table 51: Project Impacts on Added Dublin Intersections (Long Term Buildout)

Fallon Village Analysis Scenario	Additional Dublin Intersections	No Project		Plus Staples Ranch		Plus Staples Ranch & Ice Center	
		LOS	V/C	LOS	V/C	LOS	V/C
Scenario #6, Buildout plus Fallon Village Project Plus Offset (With Stoneridge Extension)	Dublin Blvd/Dougherty Rd (AM)	C	0.77	C	0.77	C	0.77
	Dublin Blvd/Dougherty Rd (PM)	E	0.93	E	0.93	E	0.93
	Dublin Blvd/Hacienda Dr (AM)	D	0.88	D	0.88	D	0.88
	Dublin Blvd/Hacienda Dr (PM)	D	0.84	D	0.84	D	0.84
	Central Pkwy/Hacienda Dr (AM)	D	0.89	D	0.89	D	0.89
	Central Pkwy/Hacienda Dr (PM)	A	0.45	A	0.45	A	0.45

Note: Level of service is computed per the City of Dublin CCTALOS method, which is based on volume/capacity ratio.
Source for No Project: Fallon Village Traffic Study, TJKM Transportation Consultants, August 2005.

Proposed Project Plus Ice Center

Table 39 above shows the long term, buildout impacts of the proposed project plus the ice center on the additional Dublin intersections. The traffic added by the project to these intersections that are generally farther away from the proposed project is sufficient to change the volume/capacity ratios by 1% in a few cases. One of the intersections would exceed Dublin's LOS standard, with or without the Ice Center.

1989 Specific Plan Project

The impacts of the 1989 Specific Plan were not evaluated for the additional Dublin intersections, because it is an alternative, not the proposed project.

8.3 Livermore Intersections

This section presents the impacts of the proposed project on intersections in Livermore that were predicted by the Traffic Report for El Charro Specific Plan EIR to be operating at an unacceptable LOS under unmitigated cumulative traffic conditions.

Proposed Project and Proposed Project Plus Ice Center

Table 52 shows the forecasted cumulative level of service for the Livermore intersections evaluated in this study. These results are taken from the Traffic Report for El Charro Specific Plan EIR. Only those forecasted in that report to be operating at unacceptable LOS are shown in this table (The intersection of Jack London and Road A is included to show its operation under cumulative development).

Table 52: Cumulative With Project With Ice Center LOS of Livermore Intersections

El Charro Development Analysis Scenario	Critical Livermore Intersections	City LOS Std.	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
Cumulative Plus Project with Southern Jack London Blvd. Extension	#8 Isabel Ave at Jack London Blvd	E	E	74.1	F	88.1
	#13 Murrieta Blvd at Jack London –Pine	Mid-D	E	56.8	D	42.4
	#14 Murrieta Blvd at East Stanley Blvd	Mid-D	D	54.5	D	37.9
	#6/19 Isabel Ave (SR-84) at Airway Blvd	Exempt	D	42.3	F	81.2
	#42 Jack London Blvd/Road A(AM)	Mid-D	B	13.6	D	40.5

Delay is in units of seconds per vehicle. Shaded cells indicate intersection is forecasted to operate below jurisdiction LOS standards. Intersections #8 and #6/19 are exempt from City of Livermore LOS standards per General Plan policy.
Source: Traffic Report for El Charro Specific Plan, January 2007, Dowling Associates, Inc.

The mitigation measures recommended in the El Charro FEIR for the intersections of Isabel/Jack London, Murrieta/Jack London, and Isabel/Airway would improve operations of these intersections to a level acceptable to the City of Livermore, with the project plus ice center included in those forecasts.

These mitigations quoted from the El Charro Traffic Study are:

> *"Mitigation Measure 1: At the intersection of Isabel Avenue at Jack London Boulevard, improvements would require adding a fourth through lane in the northbound and southbound directions and overlap phasing on all right turns. With the increased traffic on Isabel Avenue under cumulative conditions, additional capacity would be needed. However, widening is not feasible. Therefore, the impact at this intersection would be cumulatively considerable and remain considerable.*
>
> *Mitigation Measure 2: Add a second eastbound right-turn lane to provide dual right-turn lanes at the intersection of Murrieta Boulevard at East Jack London Boulevard and Pine Street and improve signal operations. This could be accomplished by re-striping the bike lanes and removing the existing median, and improving the signal operations. This measure would improve operations to LOS D with an average delay of 42 seconds during the AM peak hour and LOS C with 31 seconds delay during the PM peak hour. Therefore, with mitigation, this impact is less than significant during both the AM and the PM peak hour.*
>
> *Mitigation Measure 3: At the intersection of Murrieta Boulevard at East Stanley Boulevard, add a third westbound through lane. This intersection is not considered impacted as the LOS does not cross the threshold, but the proposed widening of Stanley Boulevard to six lanes would reduce the LOS to below the City standard. This measure would improve operations to LOS operations to LOS D with 38 seconds delay during the AM peak hour and LOS C with 30 seconds delay during the PM peak hour. Therefore, this impact is less than cumulatively considerable with mitigation.*
>
> *Mitigation Measure 4: At the intersection of Isabel Avenue at Airway Boulevard, add a fourth through lane on Isabel Avenue. With the increased traffic on Isabel Avenue under cumulative conditions, additional capacity would be needed. However, widening is not feasible. Therefore, the impact at this intersection would be cumulatively considerable and remain significant."*[15]

[15] Traffic Study for El Charro Specific Plan, Dowling Associates, January 10, 2007, page 90

Table 53 shows the percentage contribution of the proposed project and proposed project plus ice center to the AM and PM peak hour cumulative traffic at the intersections in the Traffic Report for El Charro Specific Plan EIR that are forecasted to be operating at levels of service unacceptable to the City of Livermore.

Table 53: Percentage Contribution of Project to Cumulative Traffic - Livermore

El Charro Development Analysis Scenario	Critical Livermore Intersections	% Added by Staples Ranch		% Added by Staples + Ice Center	
		AM	PM	AM	PM
Cumulative Plus Project with Southern Jack London Blvd. Extension	#8 Isabel Ave at Jack London Blvd	1.32%	1.30%	1.42%	1.53%
	#13 Murrieta Blvd at Jack London -Pine	0.79%	0.87%	0.84%	0.99%
	#14 Murrieta Blvd at East Stanley Blvd	0.52%	0.93%	0.57%	1.10%
	#6/19 Isabel Ave (SR-84) at Airway Blvd	0.25%	0.21%	0.27%	0.23%

Results shown only for intersections forecasted to be operating at unacceptable LOS under cumulative conditions. Intersections #8 and 19 are exempt from City of Livermore LOS Standards per General Plan policy. The number 0.87% means the project contributes 87 one-hundredths of one percent to the cumulative traffic at the intersection.

1989 Specific Plan Project

The impacts of the 1989 Specific Plan were not evaluated for Livermore intersections.

8.4 CMP Analysis of Freeways and Arterials

This section describes the impacts of the proposed project on the I-580 freeway and the ACCMA MTS system of arterials in the vicinity. The analysis is performed for the years 2030 according to the ACCMA methodology with its specified growth and highway/transit network improvement assumptions (which differ from those used in the previous sections to evaluate intersection LOS impacts). The Stoneridge Drive, West Jack London Boulevard extensions are both assumed to be in place by ACCMA in its 2030 analysis. Similarly, El Charro Road is assumed to be connected through to Stanley Boulevard in ACCMA's 2030 analysis.

Proposed Project

The impacts of the proposed project are shown in Table 54 (for AM peak hour) and in Table 55 (for PM peak hour). Shaded cells show the segments that violate the ACCMA level of service thresholds. In no case does the proposed project cause a road segment to go from non-violation to violation of the ACCMA standards, nor does it increase the volume/capacity ratio by over 3% for a road segment that already violates the ACCMA standards without the proposed project.

Since the project will contribute additional traffic to the I-580 freeway, which is expected to operate at unacceptable levels of service with and without the project, the recommended mitigation is to implement the following Policy Programs from the City's 1996 General Plan:

- Program 1.4: Preserve rights-of-way needed for freeway improvements through dedication and according to Caltrans standards, as adjacent properties develop.
- Program 12.1: Require developers of property adjacent to the proposed BART alignment to reserve adequate acreage for future BART stations and facilities.

Proposed Project Plus Ice Center

The impacts of the proposed project plus Ice Center are shown in Table 54 (for AM peak hour) and in Table 55 (for PM peak hour). Shaded cells show the segments that violate the ACCMA level of service thresholds. In no case does the proposed project plus Ice Center cause a road segment to go from non-violation to violation of the ACCMA standards, nor does it increase the volume/capacity ratio by over 3% for a road segment that already violates the ACCMA standards without the proposed project.

Since the ice center will contribute additional traffic to the I-580 freeway, which is expected to operate at unacceptable levels of service with and without the project, the recommended mitigation is to implement the Policy Programs from the City's 1996 General Plan identified above for the project without the ice center.

1989 Specific Plan Project

The impacts of the 1989 Specific Plan are shown in Table 54 (for AM peak hour) and in Table 55 (for PM peak hour). Shaded cells show the segments that violate the ACCMA level of service thresholds. In no case does the 1989 Specific Plan cause a road segment to go from non-violation to violation of the ACCMA standards, nor does it increase the volume/capacity ratio by over 3% for a road segment that already violates the ACCMA standards without the proposed project.

Table 54: CMP Project Impact Analysis – Long Term 2030 – AM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No Project		Project		Project + Ice Center		1989 Specific Plan		No Project		Project		Project + Ice Center		1989 Specific Plan	
	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways																
I-580 (Betn. Santa Rita & El Charro)	0.52	B	0.53	B	0.54	B	0.54	B	1.21	F	1.22	F	1.22	F	1.21	F
I-680 (Betn. Stoneridge and W Las Positas)	0.46	B	0.46	B	0.46	B	0.46	B	1.51	F	1.51	F	1.51	F	1.51	F
SR 84 (Near Little Valley)	0.50	B	0.50	B	0.50	B	0.50	B	1.08	F	1.08	F	1.08	F	1.08	F
I-580 (Betn. El Charro & Airway Pkwy)	0.58	C	0.58	C	0.58	C	0.58	C	1.30	F	1.30	F	1.30	F	1.30	F
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	0.45	B	0.45	B	0.45	B	0.45	B	1.25	F	1.25	F	1.25	F	1.25	F
I-580 (Betn. Isabel Pkwy & Portola Ave)	0.67	C	0.68	C	0.68	C	0.68	C	1.55	F	1.55	F	1.55	F	1.55	F
I-580 (Betn. Portola Ave & N.Livermore Ave)	0.61	C	0.62	C	0.62	C	0.62	C	1.55	F	1.55	F	1.55	F	1.55	F
I-580 (Betn. N.Livermore Ave & First St.)	0.53	B	0.53	B	0.53	B	0.53	B	1.36	F	1.36	F	1.36	F	1.36	F
I-580 (Betn. First St & South Vasco Rd.)	0.64	C	0.64	C	0.64	C	0.64	C	1.18	F	1.18	F	1.18	F	1.18	F
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.56	C	0.56	C	0.56	C	0.56	C	1.38	F	1.39	F	1.39	F	1.39	F
Arterials																
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	1.02	F	1.02	F	1.02	F	1.02	F	1.14	F	1.15	F	1.16	F	1.15	F
Dublin Blvd. (East of Tassajara Rd.)	0.01	B	0.01	B	0.01	B	0.01	B	0.93	C	0.95	D	0.95	D	0.95	D
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.05	F	1.05	F	1.05	F	1.05	F	1.11	F	1.12	F	1.12	F	1.12	F
W Las Positas (West of Santa Rita Rd.)	0.44	D	0.45	D	0.45	D	0.45	D	1.05	F	1.05	F	1.05	F	1.05	F
Santa Rita Rd. (South of I-580)	0.33	D	0.33	D	0.33	D	0.33	D	1.12	F	1.14	F	1.14	F	1.14	F
Stanley Blvd. (East of Valley Blvd.)	0.52	D	0.55	D	0.55	D	0.55	D	1.65	F	1.66	F	1.66	F	1.66	F
Stoneridge (East of Santa Rita Rd.)	0.18	D	0.25	D	0.25	D	0.25	D	0.94	E	0.97	E	0.97	E	0.97	E
Sunol Blvd. (North of I-680)	0.28	D	0.29	D	0.29	D	0.29	D	0.69	D	0.69	D	0.69	D	0.69	D
Tassajara Rd. (North of Dublin Blvd.)	0.43	B	0.43	B	0.43	B	0.43	B	0.49	B	0.49	B	0.49	B	0.49	B

Shaded cells indicate LOS "F". Note that levels of service are computed per the criteria in the Florida method, not the volume/capacity ratios. The volume/capacity ratios are provided to show the percentage increase in traffic caused by the project. No-Project is the ACCMA model forecast for 2030 without adjustment.

Table 55: CMP Project Impact Analysis – Long Term 2030 – PM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No Project		Project		Project + Ice Center		1989 Specific Plan		No Project		Project		Project + Ice Center		1989 Specific Plan	
	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways																
I-580 (Betn. Santa Rita & El Charro)	1.05	F	1.06	F	1.06	F	1.06	F	0.59	C	0.60	C	0.60	C	0.60	C
I-680 (Betn. Stoneridge and W Las Positas)	1.18	F	1.18	F	1.18	F	1.18	F	0.56	C	0.57	C	0.57	C	0.57	C
SR 84 (Near Little Valley)	0.95	E	0.95	E	0.95	E	0.95	E	0.52	C	0.52	C	0.52	C	0.52	C
I-580 (Betn. El Charro & Airway Pkwy)	1.13	F	1.13	F	1.14	F	1.14	F	0.65	C	0.65	C	0.65	C	0.65	C
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	1.01	F	1.02	F	1.02	F	1.02	F	0.53	B	0.53	B	0.53	B	0.53	B
I-580 (Betn. Isabel Pkwy & Portola Ave)	1.47	F	1.48	F	1.48	F	1.48	F	0.67	C	0.68	C	0.68	C	0.68	C
I-580 (Betn. Portola Ave & N.Livermore Ave)	1.47	F	1.48	F	1.48	F	1.48	F	0.62	C	0.62	C	0.62	C	0.62	C
I-580 (Betn. N.Livermore Ave & First St.)	1.27	F	1.27	F	1.27	F	1.27	F	0.52	B	0.52	B	0.52	B	0.52	B
I-580 (Betn. First St & South Vasco Rd.)	1.06	F	1.06	F	1.06	F	1.06	F	0.58	C	0.58	C	0.58	C	0.58	C
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	1.00	F	1.00	F	1.00	F	1.00	F	0.61	C	0.61	C	0.61	C	0.61	C
Arterials																
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	1.14	F	1.14	F	1.15	F	1.15	F	0.87	E	0.87	E	0.87	E	0.87	E
Dublin Blvd. (East of Tassajara Rd.)	0.79	B	0.81	C	0.81	C	0.81	C	0.00	B	0.00	B	0.00	B	0.00	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	0.92	E	0.92	E	0.92	E	0.92	E	1.21	F	1.21	F	1.21	F	1.21	F
W Las Positas (West of Santa Rita Rd.)	1.06	F	1.06	F	1.06	F	1.06	F	0.52	D	0.53	D	0.53	D	0.53	D
Santa Rita Rd. (South of I-580)	0.73	D	0.75	D	0.75	D	0.75	D	0.42	D	0.42	D	0.42	D	0.42	D
Stanley Blvd. (East of Valley Blvd.)	1.70	F	1.72	F	1.72	F	1.72	F	0.49	D	0.51	D	0.52	D	0.51	D
Stoneridge (East of Santa Rita Rd.)	0.96	E	0.99	E	0.99	E	0.99	E	0.18	D	0.26	D	0.28	D	0.26	D
Sunol Blvd. (North of I-680)	0.75	D	0.75	D	0.75	D	0.75	D	0.51	D	0.51	D	0.52	D	0.51	D
Tassajara Rd. (North of Dublin Blvd.)	0.51	B	0.51	B	0.52	B	0.52	B	0.36	B	0.36	B	0.37	B	0.36	B

Shaded cells indicate LOS "F". Note that levels of service are computed per the criteria in the Florida method, not the volume/capacity ratios. The volume/capacity ratios are provided to show the percentage increase in traffic caused by the project. No-Project is the ACCMA model forecast for 2030 without adjustment.

Project Effect on Transit Corridors

The ACCMA model generates daily home-based work and non-work trips, but does not generate peak hour transit trips. Therefore to estimate the number of transit trips occurring during the peak period, it was conservatively assumed that half of all daily transit trips would occur during the AM or PM peak hours. Transit trips generated by No Project and With Project conditions are compared for LAVTA transit and for BART.

Ridership on LAVTA Transit Buses

The proposed project would have no significant impact on LAVTA bus ridership. Total daily boardings for LAVTA are forecasted to remain at 6,500 passengers in 2015 and at 8,400 passengers in 2030, with or without the proposed project. There are no bus stops near the project site projected in the ACCMA model for 2015 or 2030. Therefore, the project site is inaccessible by transit and is not expected to attract transit trips. As a result, the impact on the LAVTA transit buses is less than significant. Future direct service by LAVTA to the site may produce more trips than this analysis shows.

Ridership on BART

The proposed project would have no significant impact on BART boardings and alightings at the Dublin-Pleasanton station. The total boardings and alightings at this station are forecasted to remain at 19,000 passengers per day in 2015 and at 27,000 passengers per day in 2030, with or without the proposed project.

As explained above, there is no bus connection between the Dublin/Pleasanton station and the project site, thus the project is not expected to attract any significant BART trips. Future direct service by BART to the site may produce more trips than this analysis shows.

9. Project Access Drive Intersections

This section recommends the intersection geometries for the two major project access drives.

One project access drive will be the intersection of Auto Mall Place or the future Stoneridge Drive with the Hendrick/Retail Driveways (see Figure 5). This will be a 3-legged intersection unless or until all-vehicle access is allowed between Auto Mall Place and the Senior Housing access drive on Stoneridge Drive.

The other major project access drive will be the future intersection of the community park and senior housing access drives with Stoneridge Drive. This will also be a 3-legged intersection unless or until all-vehicle access is allowed between Auto Mall Place and the Senior Housing access drive on Stoneridge Drive.

9.1 Analysis Scenarios

The following scenarios have been analyzed for the driveway analyses:

1. Existing Plus Approved Plus Staples Ranch, no Stoneridge Drive extension.
2. Existing Plus Approved Plus Staples Ranch Plus Ice Center, no Stoneridge Drive extension.
3. Existing Plus Approved Plus Staples Ranch, with Stoneridge Drive extension.
4. Existing Plus Approved Plus Staples Ranch Plus Ice Center, with Stoneridge Drive extension.
5. Cumulative Conditions Plus Staples Ranch, with Stoneridge Drive extension.
6. Cumulative Conditions Plus Staples Ranch Plus Ice Center, with Stoneridge Drive extension.

Without Stoneridge Drive extension, project trips would only travel to the west as there is no vehicle access to El Charro Road (EVA only). Therefore, the driveway intersections operations would be identical under both existing plus approved conditions and the cumulative conditions.

9.2 Localized Trip Distribution For Driveway Intersections

It has been assumed that all (100%) of the retail trips would use the main entrance on Auto Mall Place (This street would be called Stoneridge Drive if extended, and if the City elects to rename Auto Mall Place after Stoneridge Drive is extended) and none would use the El Charro Road driveway, since this latter driveway would be for emergency vehicle access only. All (100%) of the auto mall trips were assumed to use the single Auto Mall Place access drive onto Stoneridge, opposite the main retail/ice center access drive.

With Stoneridge Drive extension, project trip distribution to the east and to the west of the of the project site, were developed based on the City of Pleasanton travel demand model. Table 56summarizes the distribution percentages under each analysis scenario.

Table 56: Project Site Localized Distribution of Trips

	Inbound		Outbound	
	From East	From West	To East	To West
Ex+App AM peak	75%	25%	82%	18%
Ex+App PM peak	60%	40%	61%	39%
Cumulative AM peak	86%	14%	74%	26%
Cumulative PM peak	79%	21%	76%	24%

In addition, it is assumed that 90% of the Ice Center trips would use the main retail access drive opposite the Auto Mall Place intersection, and 10% would park in the Community Park parking lot and access that lot though the Community Park/Senior Housing access drive intersection.

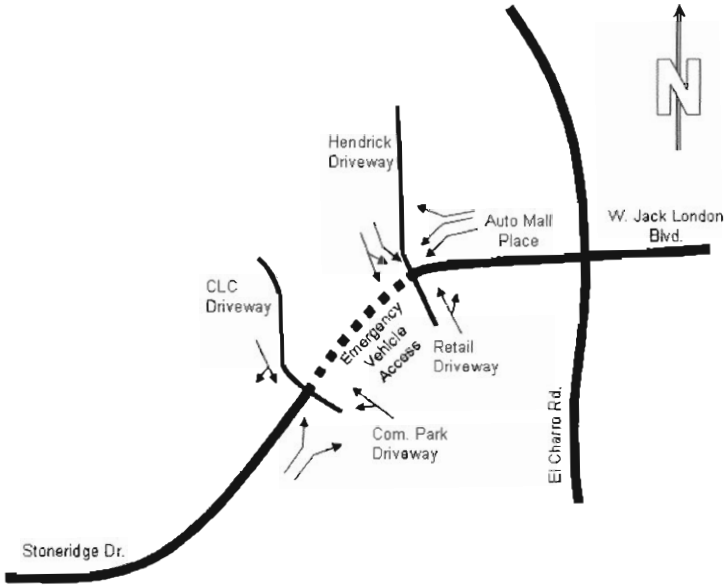
9.3 Recommended Driveway Lane Configurations

The current analysis assumed both driveway intersections would be signalized. A separate signal warrant analysis is performed for the Community Park/Senior Housing intersection, as shown later in the text. Two sets of lane configuration were assumed – with and without Stoneridge Drive extension.

Without Stoneridge Drive Extension:
At the Community Park/Senior Housing intersection, it is recommended that Stoneridge Drive to have 2 through lanes in each direction with one left turn storage lane. Both driveways would require just a single lane approach to the intersection.

At the Auto Mall intersection, the two through lanes on the eastbound direction would transition to one left turn and one right turn lane. Both driveways would require just a single lane approach to the intersection. Figure 5 depicts the recommended minimum lane configuration in the absence of an extension of Stoneridge Drive to El Charro Road.

Figure 5: Recommended Minimum Access Drive Lanes - No Stoneridge Extension

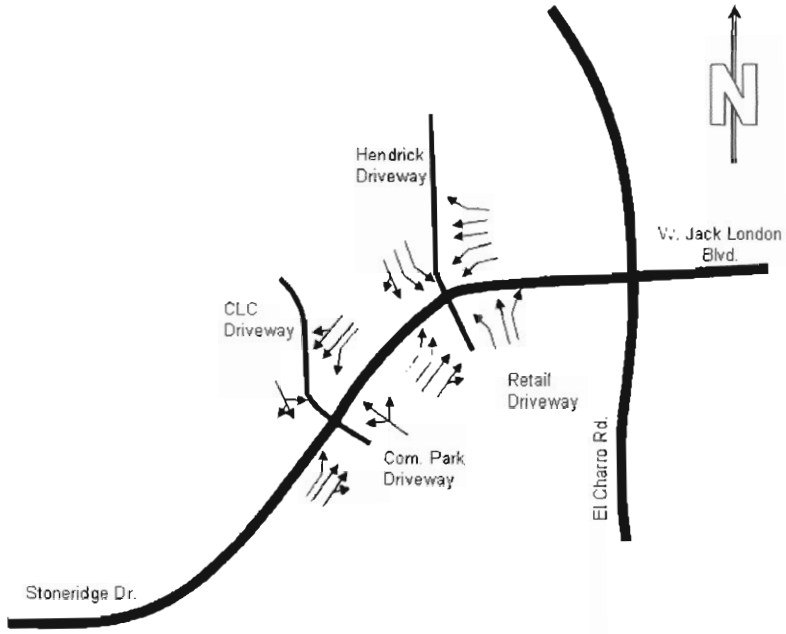


With Stoneridge Drive Extension:
At the Community Park/Senior Housing intersection, it is recommended that Stoneridge Drive have 2 through lanes in each direction with one left turn storage lane. Both driveways would require just a single lane approach to the intersection.

At the Auto Mall intersection, the lane configuration recommended would be similar to the Figure 4 of the Benshoof memorandum dated May 8, 2007, the difference is that the middle through lane on the

driveways should be striped as left-through shared lanes (compared to through lane as depicted in Benshoof memo). In terms of traffic operations, it is recommended that split phasing be implemented for the driveways because of the heavy left turning volumes. The northbound right turn lane coming out from the Retail center would also require an overlap phasing to serve the high right turn traffic. Therefore, U-Turn on westbound Stoneridge Drive should be prohibited. Figure 6 depicts the recommended minimum lane configurations at the project access driveways for the scenario where Stoneridge Drive is extended through to El Charro Road.

Figure 6: Recommended Minimum Access Drive Lanes - With Stoneridge Extension



Note that the above figures show the recommended minimum number of lanes for the project access intersections for with and without the Stoneridge Drive Extension. The project sponsor and/or the City may choose to implement more lanes or different lane configurations based upon additional criteria beyond just level of service.

9.4 Signal Warrants Evaluation

Due to the higher peak hour volumes expected at the intersection of Hendrick/Retail Driveways with Auto Mall Place (if the project were built), this intersection was assumed to be signalized, under all scenarios. No signal warrant analysis was performed for this intersection.

A peak hour signal warrant analysis was conducted for the intersection of Community Park/CLC project driveways with Stoneridge Drive to determine if it should be signalized. The peak hour signal warrant analysis (Signal Warrant #3 as described in California MUTCD) was selected since the current available information for this future intersection is limited to peak hour data only.

The total driveway approach volumes (northbound plus southbound) are greater than the 75 vph threshold to meet the signal warrant if the City chooses to post the speed limit on Stoneridge Drive at 45 mph or higher (the minimum 100 vph warrant would apply if the City posts a speed limit on Stoneridge of 40

mph or lower). Therefore this intersection is anticipated to meet this signal warrant requirement with Stoneridge Drive Extension.

However, it should be recognized that the MUTCD cautions that, "This [peak hour] signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time."

So the peak hour warrant is being used in this impact analysis study as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed the peak hour warrant are considered (for the purposes of this impact analysis) to be likely to meet one or more of the other signal warrants (such as the 4-hour or 8-hour warrants). This peak hour analysis is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

Pedestrian warrants would be an additional traffic signal warrant not considered here.

9.5 Level of Service Analysis Summary

Table 57 summarizes the level of service analyses for the existing plus approved conditions scenarios. Both driveways would operate at LOS D or better under these various scenarios.

Table 58 summarizes the level of service analyses for the cumulative (build out) conditions scenarios. Both driveways would operate at LOS D or better under these various scenarios. It should be noted that under the cumulative conditions, there are other roadway improvements in the area that affected traffic patterns along Stoneridge Drive, including:

- I-580 eastbound HOV lane from Pleasanton to Livermore
- SR 84 improvements
- El Charro Road extension to Stanley Boulevard

Therefore, the traffic volumes along Stoneridge Drive through the project vicinity have generally decreased under the cumulative conditions, as traffic diverted to other east-west roadways in the region.

Table 57: Existing Plus Approved Conditions LOS Summary

No.	Syn.	Intersection		Scenario	LOS	Delay
2	102	Comm. Park/CLC & Stoneridge Drive	No Stoneridge Dr Extension	APPnSE + Staples AM	A	6.7
				APPnSE + Staples PM	A	7.7
				APPnSE + Staples + Ice Ctr AM	A	6.7
				APPnSE + Staples + Ice Ctr PM	A	7.8
			With Stoneridge Dr Extension	APPwSE + Staples AM	A	3.1
				APPwSE + Staples PM	B	10.6
				APPwSE + Staples + Ice Ctr AM	A	3.1
				APPwSE + Staples + Ice Ctr PM	B	13.7
3	103	Auto Mall Place & Stoneridge Dr.	No Stoneridge Dr Extension	APPnSE + Staples AM	B	11.8
				APPnSE + Staples PM	B	15.3
				APPnSE + Staples + Ice Ctr AM	B	12.5
				APPnSE + Staples + Ice Ctr PM	C	20.3
			With Stoneridge Dr Extension	APPwSE + Staples AM	C	21.6
				APPwSE + Staples PM	D	39.0
				APPwSE + Staples + Ice Ctr AM	C	23.2
				APPwSE + Staples + Ice Ctr PM	D	47.5

APPnSE = Existing Plus Approved without Stoneridge Extension
APPwSE = Existing Plus Approved with Stoneridge Extension

Table 58: Cumulative Conditions LOS Summary

No.	Syn	Intersection		Sceario	LOS	Delay
2	102	Comm. Park/CLC &Stoneridge Dr	Without Stoneridge Dr Extension	BOnSE + Staples AM	A	3.6
				BOnSE + Staples PM	A	8.2
				BOnSE + Staples + Ice Ctr AM	A	3.6
				BOnSE + Staples + Ice Ctr PM	A	8.5
3	103	Auto Mall & Stoneridge Dr	With Stoneridge Dr Extension	BOwSE + Staples AM	B	15.1
				BOwSE + Staples PM	C	29.9
				BOwSE + Staples + Ice Ctr AM	B	15.7
				BOwSE + Staples + Ice Ctr PM	D	45.3

BOnSE = Buildout without the Stoneridge Extension open to all traffic.
BOwSE = Buildout with the Stoneridge Extension open to all traffic.

10. Stoneridge Drive and Guzman Parkway

The unsignalized intersection of Stoneridge & Guzman was selected for analysis to serve as an indicator of the likely impacts of the proposed project on this and other unsignalized intersections located on Stoneridge Drive east of Santa Rita Road. Traffic operations at the intersection of Stoneridge & Guzman were analyzed for the following study scenarios:

- Existing + Approved No Project, No Stoneridge Drive extension
- Existing + Approved No Project, With Stoneridge Drive extension
- Existing + Approved + Staples Ranch, No Stoneridge Drive extension
- Existing + Approved + Staples Ranch, With Stoneridge Drive extension
- Existing + Approved + Staples Ranch + Ice Center, No Stoneridge Drive extension
- Existing + Approved + Staples Ranch + Ice Center, With Stoneridge Drive extension
- Cumulative No Project, No Stoneridge Drive extension
- Cumulative No Project, With Stoneridge Drive extension
- Cumulative + Staples Ranch, No Stoneridge Drive extension
- Cumulative + Staples Ranch, With Stoneridge Drive extension
- Cumulative + Staples Ranch + Ice Center, No Stoneridge Drive extension
- Cumulative + Staples Ranch + Ice Center, With Stoneridge Drive extension

10.1 Methodology

Background volumes at the intersection of Stoneridge & Guzman (without Staples Ranch and the Ice Center) were calculated based on the following sources:

- Peak hour turning movement volumes on Guzman were calculated based on approach/departure traffic counts conducted by City staff during the week of September 10, 2007. The analysis assumed a growth factor of 1% per year to determine traffic volumes in 2015 (Existing + Approved scenarios) and 2030 (Cumulative scenarios).
- Background volumes on Stoneridge, for scenarios without the extension, were calculated based on volumes at the adjacent intersection of Stoneridge & Kamp. The approach/departure volumes from this intersection were adjusted to account for traffic entering and exiting at the intermediary intersection at Newton. Traffic volumes at Newton were calculated based on counts conducted by City staff at this location during the week of September 3, 2007.
- Background volumes on Stoneridge, for scenarios with the extension, were calculated based on the project access driveway analyses, which were based on volumes from the adjacent intersection of Stoneridge & El Charro. The approach/departure volumes were reduced by 1% to account for traffic entering and exiting at the intermediary intersection at Trevor.

The traffic operations analysis assumes the existing lane configuration at the intersection of Stoneridge & Guzman for all of the study scenarios. The eastbound approach of Stoneridge consists of two through lanes and one right-turn lane. The westbound approach of Stoneridge consists two through lanes and one left-turn lane. The northbound approach of Guzman is stop-controlled and consists of one left-turn lane and one right-turn lane.

Jack London Drive extension has been assumed in all analyses scenarios.

Project Trip Distribution

The project trip distribution with the Stoneridge Drive extension was developed based on the City of Pleasanton travel demand model. Table 59 summarizes the distribution percentages under each analysis scenario.

Table 59: Project Trip Distribution Used for Guzman/Stoneridge Analysis

	Inbound To Project		Outbound From Project	
	From East	From West	To East	To West
Ex+App AM peak	75%	25%	82%	18%
Ex+App PM peak	60%	40%	61%	39%
Cumulative AM peak	86%	14%	74%	26%
Cumulative PM peak	79%	21%	76%	24%

10.2 Intersection Volume Forecasts

Table 60 below summarizes the total AM and PM peak hour volumes at the intersection of Stoneridge at Guzman for each of the study scenarios.

Table 60: Stoneridge at Guzman Intersection Volume Summary

Scenario	No Project		With Staples Ranch		With Staples Ranch + Ice Center	
	AM	PM	AM	PM	AM	PM
Existing + Approved No Stoneridge Dr. Extension	693	319	791	475	799	511
Existing + Approved With Stoneridge Dr. Extension	2,235	2,979	2,454	3,644	2,470	3,782
Cumulative No Stoneridge Dr. Extension	536	226	634	382	642	418
Cumulative With Stoneridge Dr. Extension	1,756	2,334	1,924	2,716	1,939	2,795

The table above indicates traffic volumes under Cumulative conditions are lower compared to their corresponding (with or without Stoneridge extension) volumes under Existing + Approved conditions. This is because of the added freeway capacity on I-580 under Cumulative conditions, which draws traffic off of Stoneridge Drive.

10.3 Signal Warrants Evaluation

The Peak Hour signal warrant analysis, Signal Warrant #3 as described in California MUTCD, was performed for the stop-controlled intersection of Stoneridge & Guzman. This method was selected as the traffic forecast information currently available for this intersection is limited to peak hour data only. Traffic counts and the traffic forecasts indicated that the total approach volumes on the minor street (Guzman) would be greater than the 125 vehicles per hour threshold, and therefore, would meet the peak hour signal warrant requirement under all scenarios.

However, it should be noted that the MUTCD cautions that, "This [peak hour] signal warrant shall be applied only in unusual cases. such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time."

Consequently, the peak hour warrant is being used in this impact analysis study as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed the peak hour warrant are considered (for the purposes of this impact analysis) to be likely to meet one or more of the other signal warrants (such as the 4-hour or 8-hour warrants). This peak hour analysis is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction.

10.4 Level of Service Results

Table 61 summarizes the level of service analysis results at the intersection of Stoneridge & Guzman for all of the study scenarios. The analysis indicates the average delay for all vehicles at this intersection would be less than 5 seconds per vehicle for both peak hours under all scenarios.

The northbound, stop sign controlled, left turn from Guzman onto Stoneridge is the most delayed movement at this intersection. The project would increase average delay for this movement by less than 1 second in the absence of the Stoneridge Drive Extension, regardless of the peak hour or development scenario.

If the Stoneridge Drive Extension is built, then:

- The project would add up to 22 seconds of delay to northbound left turn movement under the Existing Plus Approved scenario. The project would cause this movement to operate at LOS "F". This can be mitigated to LOS "D" by removing a portion of the landscaped median at this intersection to provide a two-car left turn refuge for vehicles turning from Guzman onto Stoneridge. Further mitigation for the left turn delay can be obtained by installing a traffic signal at this location, although it would not meet signal warrants. An alternative mitigation to installing a signal at this intersection would be to install a signal at a nearby intersection (such as Newton Way or Kamp Drive) to break up traffic on Stoneridge Drive and provide more gaps for left turns.

- Under cumulative conditions the project would add up to 5 seconds of delay to the northbound left turn movement. The added delay is less because of the greater freeway improvements assumed in the cumulative analysis, resulting in lower volumes on the Stoneridge Drive Extension. The lower volumes provide more gaps for left turning traffic, thus reducing average delay. The project adds less delay at these lower volumes because delay is less sensitive to volume increases at these lower levels.

Table 61: Intersection Level of Service for Stoneridge at Guzman (unsignalized)

Scenarios			AM Peak Hour		PM Peak Hour	
			LOS	Delay Overall, (NB Left)	LOS	Delay Overall, (NB Left)
Existing + Approved	No Stoneridge Dr Extension	No Project	A(B)	2.0 (11.0)	A(A)	2.1 (9.6)
		Staples Ranch	A(B)	1.8 (11.5)	A(B)	1.5 (10.3)
		Staples Ranch + Ice Center	A(B)	1.8 (11.6)	A(B)	1.4 (10.4)
	With Stoneridge Dr Extension	No Project	A(D)	1.9 (27.4)	A(D)	1.0 (33.8)
		Staples Ranch	A(D)	2.1 (32.5)	A(F)	1.2 (50.1)
		Staples Ranch + Ice Center	A(D)	2.1 (33.0)	A(F)	1.2 (55.5)
Cumulative	No Stoneridge Dr Extension	No Project	A(B)	2.8 (10.3)	A(A)	3.4 (9.2)
		Staples Ranch	A(B)	2.4 (10.7)	A(A)	2.1 (9.8)
		Staples Ranch + Ice Center	A(B)	2.4 (10.7)	A(A)	2.0 (10.0)
	With Stoneridge Dr Extension	No Project	A(C)	2.2 (20.1)	A(C)	1.0 (21.1)
		Staples Ranch	A(C)	2.2 (22.5)	A(D)	1.0 (25.2)
		Staples Ranch + Ice Center	A(C)	2.2 (22.7)	A(D)	1.0 (26.2)

Notes:

LOS and delay reported for overall intersection and for the worst-case movement (The northbound left turn at this intersection). The values for the worst-case movement are shown in parentheses.

11. Emergency Access, Parking, Truck, Transit, Bicycle, Pedestrian Impacts

11.1 Emergency Access

The site plan is subject to policies and guidelines of the City of Pleasanton for emergency vehicle access.

The current site plan for the project will provide emergency vehicle access between the eastern terminus of Stoneridge Drive at the Continuing Life Community (CLC) driveway and the westerly terminus of Auto Mall Place at Retail/Hendrick Parkway. This will enable emergency vehicles based in Pleasanton to directly access the project site on city streets without having to use the I-580 freeway.

11.2 Parking

The site plan is subject to policies and guidelines of the City of Pleasanton for parking. The proposed project will be required to provide adequate on-site parking per City of Pleasanton requirements. If the ice center is a part of the project, a special parking study will be required as directed by City staff to ensure that the parking demand for this particular use will be satisfied. The parking study will determine the expected peak parking demand needs and will identify on-site and off-site options for satisfying those demands.

11.3 Trucks

The cities of Dublin, Livermore, and Pleasanton have established rules for trucks using local roadways. Generally, trucks may only travel on local roadways using the most direct connections from freeways to the truck's origin or destination and restrict through movements to designated truck routes. The City of Pleasanton requires all gravel trucks to use the El Charro Road route as the sole access to I-580. The City of Livermore does allow truck through movements on East Stanley Boulevard and SR-84.

The 1996 City of Pleasanton General Plan has the following policy programs relevant to the proposed project:

- Program 3.2: Discourage non-local and commercial traffic from using streets through residential areas.
- Program 4.2: Restrict truck traffic to deliveries on all City streets except truck routes.
- Program 4.3: Require all gravel trucks to use the El Charro Road route as the sole access to 1-580 and 1-680.

Twenty-four hour roadway directional counts (pneumatic tube counter) were conducted of vehicles over a weeklong period in October 2006 on El Charro Road at Freisman Road for the El Charro Specific Plan EIR. Vehicle volumes averaged about 3,920 on a weekday and consisted primarily of truck traffic from the quarries. Saturday also experienced significant vehicle volumes. perhaps due to quarry-related traffic and access to the golf driving range on Freisman Road, whereas vehicle volumes on Sunday were low. A summary of the results is contained in Table 62.

Table 62: 24-Hour Count Summaries – El Charro Road

Day	Direction Northbound	Direction Southbound	Total Vehicles
Monday	1,762	2,168	3,930
Tuesday	1,935	1,891	3,826
Wednesday	2,331	1,799	4,130
Thursday	2.103	1,918	4,021
Friday	1,727	1,968	3,695
Weekday Average	**1,972**	**1,949**	**3,920**
Saturday	1,432	1,639	3,071
Sunday	331	352	683
Weekend Average	**882**	**996**	**1,877**

Source: El Charro Specific Plan, Counts conducted by Wiltec from October 19 to October 25, 2006

A twelve-hour truck count was conducted for the El Charro Specific Plan EIR on Wednesday, October 18, 2006 from 6:00 AM to 6:00 PM on El Charro Road between I-580 eastbound ramps and Freisman Road because of a high percentage of trucks at this location. El Charro Road provides the sole access roadway to I-580 from the quarries, which are located in the unincorporated area to the south of the proposed project site. The most common truck type was gravel trucks. accounting for 55.8% of all northbound traffic and 60.2% of all southbound traffic in the studied twelve-hour period. Trucks accounted for the majority of traffic in the surveyed twelve-hour period, as well as the AM peak-hour. However, truck traffic tapered off in the PM peak-hour. A summary of the twelve-hour truck count is displayed in Table 63: Axle Counts on El Charro Road between I-580 and Freisman Road.

Table 63: Axle Counts on El Charro Road between I-580 and Freisman Road

	12-Hour Total				8:00-9:00 AM				4:30-5:30 PM			
	Northbound		Southbound		Northbound		Southbound		Northbound		Southbound	
Vehicle Type	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Gravel Trucks	773	55.8%	761	60.2%	69	61.1%	63	66.3%	4	5.2%	11	22.9%
Garbage Trucks	31	2.2%	33	2.6%	3	2.7%	3	3.2%	0	0.0%	0	0.0%
Cement Trucks	100	7.2%	97	7.7%	9	8.0%	5	5.3%	2	2.6%	15	31.3%
Other Trucks	132	9.5%	101	8.0%	20	17.7%	16	16.8%	5	6.5%	7	14.6%
All Other Vehicles	350	25.3%	273	21.6%	12	10.6%	8	8.4%	66	85.7%	15	31.3%
Total	**1386**	**100%**	**1265**	**100%**	**113**	**100%**	**95**	**100%**	**77**	**100%**	**48**	**100%**

Source: El Charro Specific Plan, Count conducted on Wednesday, October 18, 2006 by Wiltec

Project Impacts & Mitigations

Truck trips have been included in the no-project and project traffic forecasts. Total trip generation from quarry lands located in the project vicinity (which is mostly truck trips) was obtained from the City of Livermore's Travel Demand Model, consistent with the El Charro Specific Plan EIR.

The truck trips generated by the proposed project and other forecasted land uses are included in the intersection level of service impact analyses.

The project is not expected to generate truck trips beyond those normally associated with standard retail and residential developments typical of the City of Pleasanton. The project will contribute to the improvement of El Charro Road serving the quarry. Thus no significant impacts are expected beyond those already identified above in the intersection level of service impact analyses. No mitigation measures, beyond those identified above for the off-site intersections or already included in the project site plan are required.

11.4 Transit

The project site is currently vacant and consequently is not served by existing transit. Some very limited school bus service is available in the residential neighborhoods west of the project site. Future transit services may be provided if the Stoneridge Drive Specific Plan is implemented.

Pleasanton Paratransit Services (PPS) provides scheduled door-to-door, shared ride transportation for residents of Pleasanton and Sunol age 60 and above, and residents meeting the American's with Disabilities Act (ADA) eligibility requirements. Wheels Dial-a-Ride staff can certify ADA eligibility.

PPS covers Pleasanton and Sunol, with limited service for medical appointments to San Ramon (San Ramon Regional Medical Center) and Livermore (Veterans Administration Medical Center, Valley Memorial Hospital/Medical Corridor, Kaiser Medical Offices, and Concannon Boulevard medical area).

PPS provides transportation Monday through Friday, 8:00 a.m.-6:00 p.m., with last scheduled pick ups between 5:00-5:15 p.m. Saturday hours are 9:00 a.m.-4:00 p.m. PPS does not operate on Sundays and City holidays. Wheels Dial-a-Ride serves Pleasanton ADA-eligible riders when PPS is not operating. (Wheels Dial-a-Ride has its own registration form and fare vouchers.)

The Livermore Amador Valley Transit Authority (LAVTA) provides "Wheels" bus service in Eastern Alameda County, serving Livermore, Pleasanton, and Dublin. "Wheels" runs bus service on 13 local fixed-routes, one regional fixed route express bus service to eastern Contra Costa County, 3 local shuttles, 14 school routes, and dial-a-ride paratransit services. Additionally, "Wheels" is a participating transit provider for the regional, "All Nighter" bus system, that provides late night hourly bus service from Bay Fair BART Station to Livermore when BART is not operating.

The Project site is located 1.5 miles from two existing bus stops with regular (not school bus) service, one to the west near I-580 at Santa Rita Road-Tassajara Road in Pleasanton and one to the east near I-580 at Airway Boulevard in Livermore. However, these bus stops are currently inaccessible by foot from the Project site due to roadway configurations, man-made barriers, and Arroyos Las Positas and Mocho.

The Wheel School Bus Routes 605 (serving Amador Valley High School) and 610 (serving Hart Middle School) on West Las Positas Blvd. do not approach closer than 0.16 miles away from the westerly edge of the proposed project site[16]. These two routes are accessible via Staples Ranch Drive which stubs into the project site. The great majority of the project site lies beyond the quarter-mile walking radius typically associated with walk access to a bus stop.

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[16] Source: Livermore Amador Valley Transit Authority (LAVTA), accessed online January 23, 2007, http://www.lavta.org/schedules/systemap.html

Potential future improvements to Wheels' bus service include shorter headways and a possible Bus Rapid Transit (BRT) service on Route 10. The planned roadway extensions of Stoneridge Drive and West Jack London Boulevard to El Charro Road would make non-freeway bus routes in the study area feasible and could become a secondary BRT corridor in the future.[17]

The Altamont Commuter Express (ACE) train provides weekday commuter service from Stockton in San Joaquin County to San Jose in Santa Clara County. The closest stations to the Project site are the Pleasanton station, located 3.75 miles away near the Alameda County Fairgrounds in the southern part of the city, and the Livermore station, located 3.5 miles away in downtown at the Wheels Livermore Transit Center. 18

The San Francisco Bay Area Rapid Transit District (BART) provides heavy-rail, regional transit service to Alameda, San Francisco, Contra Costa, and San Mateo counties. The closest BART Station to the project site is the Dublin-Pleasanton Station, located about 2.75 miles west in the median of I-580. A second BART station at West Dublin/Pleasanton is currently (2007) under construction.

Potential changes to rail service in close proximity to the Project site include an extension of BART tracks from Dublin-Pleasanton to a new station in Livermore, which has been studied. The Regional Rail Plan is a study currently underway to create a blueprint for rail expansion projects in the nine-county, Bay Area region and adjacent counties for the next fifty years. This study includes expansion of rail service, including BART, commuter rail, high-speed rail and freight within the Tri-Valley. 19

Criteria for Significant Impacts

The Pleasanton General Plan has the following program public transit policies relevant to this project:

- Program 6.7 – Require the installation of bus turnouts and shelters along planned transit routes.

A transit impact is considered significant if the Project would:

- Be inaccessible to transit riders (defined as within a ¼ mile walking distance of a transit stop);
- Disrupt existing transit service;
- Interfere with planned transit facilities; or
- Not provide amenities necessary to transit demand.

Project Impacts & Mitigations

There are currently no transit facilities or service in the vicinity. Thus the project site is inaccessible to transit riders. This is considered a significant impact. The recommended mitigations are:

- The project sponsor shall work with LAVTA and provide any additional support required by the City of Pleasanton to secure regular bus service to the Continuing Living Community (CLC), to the auto mall, and to the retail center. BART serving Wheels routes 12 (Las Positas College to BART) and 20 (Springtown and Livermore Lab to BART) could potentially be re-routed to pick-up drop off passengers at the I-580/El Charro/Fallon Road interchange. However, given the walking distance involved to reach most of the project site, supplemental van shuttle service would be required to shuttle passengers between the freeway interchange and the project site.
- Construct the barriers to auto traffic planned for the emergency vehicle access drive (between the CLC drive and the Retail Center Drive) to allow convenient and rapid entry and exit by

[17] The Livermore Amador Valley Transit Authority. *Wheels, Connecting People and Places: Draft Short-Range Transit Plan FY2004-2013*. September 13, 2003

[18] The Altamont Commuter Express website. http://www.acerail.com/. Accessed December 6, 2006

[19] Regional Rail Communications Center website. http://www.bayarearailplan.info/. Accessed February 21, 2007.

public transit buses and shuttle vans, so as to keep the cost of providing bus service to the site down.

- Provide bus turnouts and transit shelters on Stoneridge Drive at CLC Driveway, on Automall Drive at Hendrick/Retail Driveway. and on El Charro Road at Automall/West Jack London Blvd.

11.5 Bicycle

Bicycle facilities consist of bike lanes, bike routes, bicycle parking, transit access (bike racks on busses, allowance of bikes on trains), and ancillary provisions such as employee locker and showering facilities. The lack of bicycle designations on roadways does not preclude bicycle usage, as they are defined as a vehicle in the California Vehicle Code and subject to the same rules governing motor vehicles.

The Alameda Countywide Bike Plan recommends two bikeways in close proximity to the project site. They are a Class I multi-use trail along Arroyo Mocho from Pleasanton's eastern city limit to I-680 and Class II bike lanes along Stoneridge Drive from Pleasanton's eastern city limit to West Las Positas Boulevard. The proposed bikeway network includes the addition of a Class I multi-use trail following West Jack London Boulevard's alignment from Isabel Road in Livermore, across El Charro Road, to connect with Pleasanton bikeways along Stoneridge Drive and Arroyo Mocho[20].

Other bicycle facilities available include front-loading racks on "Wheels" buses that can hold up to three bicycles. A field reconnaissance revealed an absence of bicycle loop detectors at signalized intersections on roadways and bike racks and storage at locations in close proximity to the project site.

Criteria for Significant Impacts

Alameda County (*Alameda Countywide Bike Plan* and *East County Area Plan*) and Pleasanton, Dublin, and Livermore General Plans all have policies supporting the creation of bikeway networks in their respective jurisdictions.

Pleasanton's General Plan has the following bicycle policies relevant to this project:
Program 6.3 – Separate vehicular, bicycle, and pedestrian traffic, whenever feasible.
Program 6.4 – Provide Bike Lanes on collector streets.
Program 15.3 – Integrate bicycle lanes or separate bikeways into street projects.
Program 15.4 – Provide adequate bicycle storage facilities

A bicycle impact is considered significant if the Project would:

- Disrupt existing bicycle facilities;
- Interfere with planned bicycle facilities;
- Conflict or create inconsistencies with adopted bicycle system plans, guidelines, policies or standards; or
- Not provide secure and safe bicycle parking facilities in adequate proportion to anticipated demand.

Project Impacts & Mitigations

At the time of preparation of this report, the project site design available for review by the consultant did not provide sufficient detail to evaluate the bicycle access features to be incorporated in the project. The project site design should follow the requirements of the City of Pleasanton General Plan to ensure the project does not adversely impact bicycle access. Bicycle lanes, separate bikeways and bicycle

[20] Source: Alameda Countywide Bike Plan, 2006, accessed online January 23, 2007 http://www.accma.ca.gov/pages/HomeBicyclePlan.aspx

storage facilities should be provided as called for in the City of Pleasanton General Plan. Then the project will have no significant adverse impact on bicyclists.

11.6 Pedestrian

No pedestrian facilities are currently located near the Project site and walking access to this site from Livermore, Dublin or other points in Pleasanton is difficult. Most roadways in the Project's vicinity do not contain pathways for pedestrian access or prohibit pedestrians altogether. I-580 is a freeway that prohibits pedestrian activity. El Charro Road, Fallon Road, and Freisman Road do not have sidewalks or shoulders for pedestrians.

Planned pedestrian facilities in close proximity to the Project site include an extension of the Arroyo Mocho multi-use trail, which will connect to Livermore's Jack London Boulevard multi-use trail if the El Charro Specific Plan is implemented. The design of the trail below the new bridge will be subject to staff review.

Pedestrians wishing to cross Stoneridge Drive between the senior care facility and the community park will be able to do so at the future intersection of Stoneridge Drive with the driveway to the community park. This intersection is not projected to meet signal volume warrants but may meet other signal warrants not evaluated in this study (some of which require the intersection to be in place before they can be evaluated).

Criteria for Significant Impacts

Alameda County (*Pedestrian Master Plan for the Unincorporated Area* and *East County Area Plan*) and Pleasanton, Dublin, and Livermore General Plans have policies supporting facilities for non-motorized circulation. All jurisdictions, except for Dublin, provide specific policies for creating a pedestrian and trail network, encouraging pedestrian activity through land use, and requiring routine accommodation to pedestrians in new developments.

The 1996 City of Pleasanton General Plan has the following pedestrian policies relevant to this project:
Program 6.3 – Separate vehicular, bicycle, and pedestrian traffic, whenever feasible.
Program 16.1 – Require developers to finance and install sidewalks and pedestrian pathways.

A pedestrian impact is considered significant if the Project would:

- Disrupt existing pedestrian facilities;
- Interfere with planned pedestrian facilities; or
- Conflict or create inconsistencies with adopted pedestrian plans, guidelines, policies or standards.
- Not provide secure and safe pedestrian facilities in adequate proportion to anticipated demand.

Project Impacts & Mitigations

At the time of preparation of this report, the project site design available for review by the consultant did not provide sufficient detail to evaluate the pedestrian access features to be incorporated in the project. The project site design should follow the requirements of the City of Pleasanton General Plan to ensure the project does not adversely impact pedestrian access. To the extent that the project design is consistent with General Plan pedestrian access policies, the project should have no significant adverse impacts on pedestrians.

Stoneridge Drive Specific Plan Amendment Staples Ranch

Two-Lane Constrained Extension Alternative Traffic Analysis

Prepared by:

City of Pleasanton

September 30, 2009

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This report identifies the impact of the Staples Ranch Development for a Two Lane Constrained Extension Alternative. This alternative includes the proposed project land uses as adopted by the City of Pleasanton on February 24, 2009 (including the ice center) with a roadway network that connects Stoneridge Drive from its current terminus at Trevor Parkway to El Charro Road. The design of this roadway was modeled as a 4 lane facility, with the exception of the section of roadway that crosses the Arroyo Mocho. The Arroyo Mocho section was modeled as a two lane section to limit roadway capacity.

The analysis of this alternative is for existing + approved. Under cumulative conditions, Stoneridge Drive will be constructed as a full 4 lane roadway. This cumulative analysis was completed in the Technical Memorandum for Traffic and Circulation – Stoneridge Drive Specific Plan Amendment - Staples Ranch, prepared for the City of Pleasanton by Dowling Associates, dated March 20, 2008 (2008 Dowling Report).

Project Description

The project land use analyzed in the alternative is identical to the proposed project (with Ice Center) analyzed in the 2008 Dowling Report. This development includes:

- Approximately 37 acres of auto malls, containing 331,000 square feet of buildings;
- Approximately 45 acres of senior and assisted care housing containing 1.4 million square feet of buildings which would house 800 senior care units plus supporting skilled nursing units and common facilities;
- 17 acres of community parks;
    - ice center to be located on a portion of the community park site. The ice center would be an approximately 138,500 square foot facility that will accommodate amateur ice hockey leagues (adult and youth), figure skating, broomball, curling, speed skating, ice dancing, as well as public skating. It will be capable of seating up to 2200 spectators.
- 175,000 square feet of retail space.

Project Trip Generation

The project trip generation analyzed in the alternative is identical to the proposed project (with Ice Center) analyzed in the 2008 Dowling ReportThis development includes:

Table 1 Project Trip Generation

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
Senior Housing	800	DU	29	35	64	54	34	88	2,200
Auto Dealers	331	KSF	502	176	678	341	533	874	11,035
Community Park	17	Acres	17	17	34	34	34	68	300
Retail Component	175	KSF	110	70	180	315	341	656	7.500

TOTAL	**658**	**298**	**956**	**744**	**942**	**1686**	**21,035**
Ice Center	41	36	77	175	174	349	3328
Total	**699**	**334**	**1033**	**919**	**1116**	**2035**	**24363**

Project Trip Distribution

The vehicle trips to and from the Project using the Two Lane Constrained Extension Alternative were estimated using the validated City of Pleasanton model trip distribution. This analysis method is identical to the methods used and outlined in the 2008 Dowling Report

Stoneridge Drive Volume Distribution

For comparison purposes of the different alternatives analyzed, two locations were selected to provide volume distribution data on Stoneridge Drive which were: Stoneridge Drive just east of Kamp Drive and Stoneridge Drive on the future bridge across the Arroyo. The table below shows AM and PM peak hour volumes at these two locations under the following conditions:

No project - no Stoneridge extension
Project - no Stoneridge extension
Project + Ice - no Stoneridge extension
Project + Ice - 2 lane Stoneridge extension (2 lane section over bridge)
Project + Ice - 4 lane Stoneridge extension

Table 2 Stoneridge Drive Alternative Volumes

2015 AM Peak Volumes		Stoneridge east of Kamp		Stoneridge at new Bridge		Stoneridge east of Kamp	Stoneridge at new Bridge
		WB	EB	WB	EB	total	total
No Project	No SDE	497	351	0	0	848	0
Project	No SDE	549	397	52	46	946	98
Project+Ice	No SDE	585	438	88	87	1023	175
Project+Ice	2 Lane SDE	1581	708	1200	522	2289	1722
Project+Ice	4 Lane SDE	2037	770	1710	637	2807	2347

2015 PM Peak Volumes		Stoneridge east of Kamp		Stoneridge at new Bridge		Stoneridge east of Kamp	Stoneridge at new Bridge
		WB	EB	WB	EB		
No Project	No SDE	173	234	0	0	407	0
Project	No SDE	245	322	72	88	567	160
Project+Ice	No SDE	419	497	246	263	916	509
Project+Ice	2 Lane SDE	1249	1743	1254	1729	2992	2983
Project+Ice	4 Lane SDE	1328	2242	1412	2302	3570	3714

The two columns to the right shows the total volume for each location with volumes in the PM Peak hour increasing from the no project no SDE volume of roughly 400 vehicles to 900 vehicles with the project but no SDE, to 3000 with the 2 lane alternative and 3600 with the approved 4 lane SDE design.

Intersection Level of Service Analysis

Pleasanton Intersections

The method of analysis is identical to the methods used and outlined in the 2008 Dowling ReportThe table below shows the City of Pleasanton intersection level of service for a Two Lane Constrained Extension Alternative (also shown for comparative purposes are no project no Stoneridge Drive alternative as well as the City Council approved project of the project + ice center with a 4 lane Stoneridge Drive).

Intersection level of service (LOS) was analyzed for the weekday morning (AM) and evening (PM) peak-hours, using methodologies described in the 2000 Highway Capacity Manual by the Transportation Research Board and the volumes used are based on modeled intersection vehicle turning movements.

Signalized intersection analyses were conducted using the operational methodology outlined in the Highway Capacity Manual 1, as required by the City of Pleasanton. This procedure calculates an average stopped delay in seconds per vehicle at a signalized intersection and assigns a level of service designation based upon the delay.

Pleasanton's General Plan, Chapter III, Policy 2, Program 2.2, states that a significant impact will occur when the Project causes an intersection to operate at LOS E or worse. However, intersections in the Downtown are not subject to a level of service standard per the Downtown Specific Plan.

[1] *Highway Capacity Manual*, Chapter 16. 2000. Transportation Research Board. Washington, D.C.

Table 3 Pleasanton LOS Summary

City Of Pleasanton - Approved + Project + Ice Center Conditions LOS Summary

		AM PEAK						PM PEAK					
		Vacant Site No SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4		Vacant Site No SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4	
NS Street	EW Street	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Foothill	I-580 WB	B	11.0	B	12.8	B	12.3	B	12.0	B	11.5	B	11.9
Foothill	Dublin Canyon	C	34.0	D	44.5	D	45.5	C	24.0	C	23.0	C	23.3
Foothill	Stoneridge	B	14.0	B	15.4	B	15.5	B	17.0	C	32.8	C	30.5
Hopyard	I-580 WB off	B	12.0	B	12.9	B	12.6	C	26.0	B	18.3	B	18.6
Hopyard	I-580 EB off	C	21.0	C	23.1	C	21.5	D	54.0	D	54.2	D	52.3
Hopyard	Owens	D	47.0	D	54.5	D	47.5	F	330.0	F	341.5	F	342.8
Hopyard	Stoneridge	D	46.0	D	45.9	D	47.9	F	102.0	D	54.9	E	69.9
Hopyard	W Las Positas	C	22.0	C	27.2	C	26.2	C	32.0	C	30.9	C	31.7
Hopyard	Valley Trails (S)	A	8.0	A	9.1	A	9.5	C	20.0	C	25.8	C	26.0
Hopyard	Valley	C	26.0	C	26.0	C	26.5	C	31.0	C	33.1	C	33.1
Tassajara	I-580 WB off	B	11.0	D	42.0	D	44.7	B	11.0	C	35.0	D	36.9
Santa Rita	I-580 EB off/Pimlico	D	42.0	C	25.9	C	26.1	D	38.0	C	30.9	C	27.6
Santa Rita	Rosewood	A	9.0	B	13.5	B	14.2	C	21.0	C	25.3	C	25.0
Santa Rita	Old Santa Rita	A	3.0	A	4.5	A	5.3	A	4.0	A	3.9	A	3.7
Santa Rita	W Las Positas	D	37.0	C	33.7	C	32.6	C	35.0	D	41.7	D	44.1
Santa Rita	Stoneridge	D	49.0	E	56.1	F	82.9	D	35.0	E	57.5	F	98.0
Santa Rita	Mohr	B	20.0	C	20.0	C	20.2	B	19.0	C	22.5	C	21.9
Santa Rita	Valley	C	35.0	D	36.4	D	36.4	E	67.0	E	70.0	F	88.4
Santa Rita	Black	C	24.0	C	26.6	C	26.3	C	27.0	C	32.5	C	28.7
Santa Rita	Stanley	B	19.0	B	12.3	B	12.6	C	23.0	B	14.3	B	15.6
Santa Rita	Ray	F	161.0	F	146.1	F	162.8	F	83.0	E	71.7	E	62.5
First	Stanley	B	14.0	B	12.8	B	12.8	C	25.0	B	12.6	B	11.5
First	Ray	D	46.0	D	47.1	D	40.2	F	81.0	E	66.2	E	79.8
First	Bernal	D	48.0	D	51.8	E	59.6	D	45.0	E	57.1	E	76.5
Springdale	Stoneridge	B	12.0	B	14.2	B	14.1	C	20.0	C	25.6	C	25.5
I-680 SB off	Stoneridge	B	11.0	B	12.0	B	11.9	B	11.0	A	9.4	A	9.7
I-680 NB off	Stoneridge	B	11.0	B	10.1	A	10.0	C	24.0	C	26.0	C	25.4
Johnson	Stoneridge	B	16.0	B	16.0	B	16.2	D	43.0	C	25.8	C	26.6
Franklin	Stoneridge	C	21.0	C	20.3	C	21.8	B	17.0	B	15.9	B	15.0
Valley	Bernal	D	42.0	D	47.0	D	48.2	D	47.0	D	44.1	D	45.4
Willow	Stoneridge	B	13.0	B	12.7	B	13.2	A	10.0	B	10.9	B	10.7
Hacienda	Owens	C	25.0	C	27.0	C	25.7	D	48.0	D	35.1	D	45.2
Hacienda	Stoneridge	C	28.0	C	24.1	C	24.4	C	34.0	C	27.9	C	28.3
Hacienda	W Las Positas	C	24.0	C	21.7	C	22.9	C	22.0	B	12.3	B	13.6
Gibraltar	Stoneridge	A	7.0	A	7.2	A	7.2	B	13.0	C	20.2	C	22.6
W Las Positas	Stoneridge	C	29.0	C	32.9	C	34.2	C	31.0	D	52.2	D	49.5
W Las Positas	Owens	B	14.0	B	13.8	B	13.2	C	21.0	B	17.9	C	21.3
Valley	Stanley	D	38.0	D	42.3	D	39.9	D	43.0	C	29.7	C	29.7
Foothill	Laurel Creek	A	10.0	B	11.8	B	12.0	A	10.0	B	14.0	B	13.3
Fallon	I-580 WB	A	5.0	A	9.6	B	11.2	A	5.0	A	7.2	A	7.7
El Charro	I-580 EB	B	16.0	C	33.3	D	54.3	A	9.0	A	8.6	B	11.3
Bernal	Vineyard	C	27.0	C	32.1	C	28.8	B	17.0	B	13.8	B	15.0
Hacienda	I-580 WB off	A	8.0	A	9.0	A	8.5	B	11.0	A	9.9	B	10.1
Hacienda	I-580 EB off	C	24.0	C	22.8	C	22.6	D	36.0	D	35.4	C	31.3
Chabot	Stoneridge	A	8.0	A	7.8	A	7.6	B	12.0	B	13.6	B	13.5
Busch	Valley	B	13.0	B	12.4	B	12.0	A	7.0	A	7.0	A	6.9
Kamp	Stoneridge	A	7.0	A	9.3	B	11.5	A	5.0	B	11.9	B	19.5
Kolln	Valley	B	15.0	B	13.4	B	14.8	B	13.0	B	12.9	B	12.0
First	Kottinger	C	34.0	D	54.0	D	53.3	C	33.0	D	39.1	D	42.7
Rosewood	Rose Pavillian	A	5.0	A	5.2	A	5.2	A	10.0	A	9.9	A	10.0
Rheem	Stoneridge	A	7.0	A	9.4	B	11.1	A	6.0	B	13.3	C	28.9
Main	St. John	B	16.0	B	15.6	B	13.5	E	58.0	F	93.1	F	104.8
El Charro	Stoneridge	D	44.0	C	21.0	C	20.3	B	15.0	C	31.0	C	23.7
Fallon	Central	C	25.0	C	31.2	C	31.1	C	31.0	C	31.2	C	31.9
Fallon	Dublin	D	36.0	D	38.3	E	56.8	F	116.0	F	126.7	F	152.7
Tassajara	Dublin	C	25.0	C	32.3	C	23.9	D	48.0	D	49.2	D	51.6
Tassajara	Central	D	47.0	D	48.3	D	46.9	D	50.0	D	44.6	D	50.8

Table 4 identified 8 Pleasanton intersections with failing level of service under the Two Lane Constrained Extension Alternative. 4 of these intersections are within Pleasanton's Downtown and are exempt from the Level of Service standard.

Table 4 Pleasanton LOS Summary impacted intersections
City Of Pleasanton - Approved + Project + Ice Center Conditions LOS Summary

		AM PEAK						PM PEAK					
NS Street	EW Street	Vacant Site No SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4		Vacant Site No SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Hopyard	I-580 EB off	C	21.0	C	23.1	C	21.5	D	54.0	D	54.2	D	52.3
Hopyard	Owens	D	47.0	D	54.5	D	47.5	F	330.0	F	341.5	F	342.8
Hopyard	Stoneridge	D	46.0	D	45.9	D	47.9	F	102.0	D	54.9	E	69.9
Santa Rita	Stoneridge	D	49.0	E	56.1	F	82.9	D	35.0	E	57.5	F	98.0
Santa Rita	Valley	C	35.0	D	36.4	D	36.4	E	67.0	E	70.0	F	88.4
Santa Rita	Ray	F	161.0	F	146.1	F	162.8	F	83.0	E	71.7	E	62.5
First	Ray	D	46.0	D	47.1	D	40.2	F	81.0	E	66.2	E	79.8
First	Bernal	D	48.0	D	51.8	E	59.6	D	45.0	E	57.1	E	76.5
El Charro	I-580 EB	B	16.0	C	33.3	D	54.3	A	9.0	A	8.6	B	11.3
Main	St. John	B	16.0	B	15.6	B	13.5	E	58.0	F	93.1	F	104.8
El Charro	Stoneridge	D	44.0	C	21.0	C	20.3	B	15.0	C	31.0	C	23.7
Fallon	Dublin	D	36.0	D	38.3	E	56.8	F	116.0	F	126.7	F	152.7

The remain four intersections that are identified as failing the level of service standard include:

- Hopyard @ Owens (PM)
- Santa Rita @ Stoneridge (AM and PM)
- Santa Rita @ Valley (PM)
- Fallon @ Dublin (PM)

Fallon @ Dublin is a City of Dublin intersection but was analyzed as a City of Pleasanton intersection due to its proximity to Pleasanton intersections.

Pleasanton Intersection Mitigations

Each of the four intersections identified in the Two Lane Constrained Extension Alternative also failed to meet the level of service standard in the City Council approved project. The City Council approved project identified mitigation for these intersections in the 2008 Dowling ReportThe mitigations identified in the Dowling Report are also sufficient to mitigate the LOS impacts.

The table below shows the identified mitigations for each of the four impacted intersections. Elements of the mitigation that are lined out were necessary in the City Council approved project, but are not required mitigations in the Two Lane Constrained Extension Alternative.

Table 5 Pleasanton AM Mitigations

City Of Pleasanton - 2 lane constrained Alternative AM Mitigations

NS Street	EW Street	No Mitigation		Mitigated		comments
		AM Peak				
		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 2		
		LOS	Delay	LOS	Delay	
Hopyard	I-580 EB off	C	23.1			
Hopyard	Owens	D	54.5			
Hopyard	Stoneridge	D	45.9			
Santa Rita	Stoneridge	E	56.1	D	52.7	Widen NB approach to provide separate right-turn lane, ~~restripe one EBR lane to shared EBTR lane~~. Change cycle length to ~~130 and~~ 120 seconds for AM and ~~PM, respectively~~.
Santa Rita	Valley	D	36.4			
Santa Rita	Ray	F	146.1	F	146.1	Downtown
First	Ray	D	47.1			
First	Bernal	D	51.8			
El Charro	I-580 EB	C	33.3			
Main	St. John	B	15.6			
El Charro	Stoneridge	C	20.3			
Fallon	Dublin	D	38.3			

Table 6 Pleasanton PM Mitigations

City Of Pleasanton - 2 lane constrained Alternative PM Mitigations

NS Street	EW Street	No Mitigation		Mitigated		Comments
		PM Peak				
		APP + Proj +		APP + Proj +		
		LOS	Delay	LOS	Delay	
Hopyard	I-580 EB off	D	54.2			
Hopyard	Owens	F	341.5	D	51.3	Provide 2 NBL, 3 NBT, 1 NBR; 3 SBL, 3 SBT, 1 SBR (free); 2 EBL, 2 EBT, 1 EBR; 2 WBL, 2 WBT, 1 WBR (free). Unsplit EB/WB, ~~narrow lane to reduce ped clearance to 20 seconds,~~ and change cycle length to 130 seconds (PM).
Hopyard	Stoneridge	D	54.9			
Santa Rita	Stoneridge	E	57.5	D	46.7	Widen NB approach to provide separate right-turn lane, ~~restripe one EBR lane to shared EBTR lane~~. Change cycle length to ~~130 and~~ 120 seconds for AM and ~~PM, respectively~~.
Santa Rita	Valley	E	70.0	D	49.9	Widen WB approach to provide 2nd left-turn lane, widen NB to provide separate right-turn lane. Change cycle length to 120 seconds (PM).
Santa Rita	Ray	E	71.7	E	71.7	Downtown
First	Ray	E	66.2	E	66.2	Downtown
First	Bernal	E	57.1	E	57.1	Downtown
El Charro	I-580 EB	A	8.6			
Main	St. John	F	93.1	F	93.1	Downtown
El Charro	Stoneridge	C	23.7			
Fallon	Dublin	F	126.7	D	53.2	Widen NB approach to provide third left-turn lane and second through lane, widen EB to provide two right-turn lanes.

Intersection Impact #1:

The Santa Rita Road at Stoneridge Drive intersection is projected to operate at an unacceptable level of service E in both the AM and PM peak hour with the addition of the 2 lane constrained alternative volumes. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

Intersection Mitigation Measure #1:

The project developer will be responsible to widen the northbound approach to provide a separate right turn lane.

Intersection Impact #2:
The Hopyard Road at Owens Drive intersection is projected to operate at LOS F in the PM Peak Hour prior to the addition of project traffic. The addition of project traffic would further deteriorate this level of service. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

Intersection Mitigation Measure #2:
Modification of intersection to provide 2 northbound left turn lanes, 3 southbound left turn lanes, a southbound free right turn lane, 2 eastbound left turn lanes, 1 eastbound through, 1 eastbound right, 2 westbound left lanes, 2 westbound through lanes and a westbound free right turn lane. Construction of this planned improvement would result in LOS D operation during the PM peak hour. The project developer is responsible to pay their fair share toward the planned improvement through payment of the Pleasanton Traffic Fee.

Intersection Impact #3:
The intersection of Santa Rita Road and Valley Avenue is projected to operate at an unacceptable level of service with the addition of the project alternative traffic. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

Intersection Mitigation Measure #3:
Modification of intersection to provide a northbound right turn lane and construct a second westbound left turn lane. Construction of these improvements would result in LOS D operation during the PM peak hour. The project developer is responsible to pay their fair share toward the planned improvements through payment of the Pleasanton Traffic Fee.

Intersection Impact #4:
The intersection of Fallon road and Dublin Boulevard is projected to operate at an unacceptable level of service with the addition of the project alternative traffic. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

Intersection Mitigation Measure #4:
Modification of intersection to provide a third northbound right turn lane, a s second northbound through lane and a second eastbound right turn lane. Construction of these improvements would result in LOS D operation during the PM peak hour. Because this improvement falls outside the City of Pleasanton city limits, The project developer is responsible to seek an interagency cooperative agreement that could provide a mechanism for cost sharing among multiple jurisdictions.

Dublin Intersections

The method of analysis is identical to the methods used and outlined in the 2008 Dowling ReportThe table below shows the City of Dublin intersection level of service for a Two Lane Constrained Extension Alternative.

Table 7 Dublin LOS Summary

Dublin LOS - 2 Lane Stoneridge Drive Extension

Fallon Village Analysis Scenario	Additional Dublin Intersections	No Project - no SDE		With 2-Lane SDE		With 4-Lane SDE	
		LOS	V/C	LOS	V/C	LOS	V/C
Scenario #2 - Interim Year 2015 with Fallon Village - Plus Staples Ranch & Ice Center	Dublin Blvd/Dougherty Rd (AM)	C	0.73	C	0.75	C	0.74
	Dublin Blvd/Dougherty Rd (PM)	D	0.87	D	0.86	D	0.87
	Dublin Blvd/Hacienda Dr (AM)	C	0.79	C	0.78	C	0.79
	Dublin Blvd/Hacienda Dr (PM)	C	0.72	B	0.65	B	0.69
	Central Pkwy/Hacienda Dr (AM)	C	0.78	C	0.78	C	0.78
	Central Pkwy/Hacienda Dr (PM)	A	0.33	A	0.33	A	0.33

Notes

1. LOS computed based on CCTA methodologies.
2. To be consistent with the Fallon Village report, significant figures are shown to the one hundredth place.

Dublin Intersection Mitigations

The Two Lane Constrained Extension Alternative did not result in the reduction of level of service to any Dublin intersections using Dublin's volume to capacity analysis and therefore no intersection mitigations are necessary.

Livermore Intersections

The method of analysis is identical to the methods used and outlined in the 2008 Dowling ReportThe table below shows the City of Livermore intersection level of service for a Two Lane Constrained Extension Alternative.

Table 8 Livermore LOS Summary

Livermore LOS - 2-Lane Stoneridge Drive Extension Alternative

Existing Plus Approved Conditions

El Charro Development Analysis Scenario	Critical Livermore Intersections	No Project			Plus Staples Ranch & Ice Center - w/2-In SDE			Plus Staples Ranch & Ice Center - w/4-In SDE		
		LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Baseline 2008 + Full Project El Charro Buildout with Southern Jack London Blvd. Roadway	# 5 Airway at I-580 EB (AM)	D	40.9	0.898	D	40.2	0.886	D	38.7	0.869
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	D	54.5	1.013	D	51.5	1.028	D	47.1	0.992
	# 8 Isabel at Jack London Blvd. (PM)	C	25.2	0.929	C	31.9	0.993	C	28.9	0.973
	# 9 Isabel at Stanley Blvd. (PM)	C	23	0.915	C	31.2	0.997	C	27.8	0.976
	#12 East Vallecitos at Isabel Ave. (AM)	C	31.5	0.928	C	24.8	0.848	C	29.3	0.906
	#13 Murrieta & East Jack Lond Blvd. (AM)	**E**	**58.2**	**0.992**	**E**	**71.8**	**1.064**	**E**	**67.7**	**1.044**
	#13 Murrieta & East Jack Lond Blvd. (PM)	**F**	**112.9**	**1.158**	**F**	**149.0**	**1.254**	**F**	**136.9**	**1.231**
	#42 Jack London Blvd/Road A(AM)	B	15.7	0.525	B	16.2	0.596	B	16.2	0.616
	#42 Jack London Blvd/Road A(PM)	C	25.7	0.831	C	26.9	0.851	C	28.3	0.900

LOS computed based on HCM 2000 methodologies., and obtained through Traffix software version 7.9.

Table 9 Livermore Mitigations

Livermore LOS - 2-Lane Stoneridge Drive Extension Alternative Mitigation

Existing Plus Approved Conditions

Mitigated LOS Summary

El Charro Development Analysis Scenario	Critical Livermore Intersections	Staples Ranch & Ice Center - w/2-In SDE no mitigation			Staples Ranch & Ice Center - w/2-In SDE Mitigated			
		LOS	Delay	V/C	LOS	Delay	V/C	
Baseline 2008 + Full Project El Charro Buildout with Southern Jack London Blvd. Roadway	# 5 Airway at I-580 EB (AM)	D	40.2	0.886				
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	D	51.5	1.028				
	# 8 Isabel at Jack London Blvd. (PM)	C	31.9	0.993				
	# 9 Isabel at Stanley Blvd. (PM)	C	31.2	0.997				
	#12 East Vallecitos at Isabel Ave. (AM)	C	24.8	0.848				
	#13 Murrieta & East Jack Lond Blvd. (AM)	**E**	**71.8**	**1.064**	**C**	**35.0**	**0.864**	Add a second eastbound right-turn lane to provide dual right-turn lanes at the intersection of Murrieta Boulevard at East Jack *London Boulevard and Pine Street and improve signal operations*
	#13 Murrieta & East Jack Lond Blvd. (PM)	**F**	**149.0**	**1.254**	**C**	**30.5**	**0.582**	
	#42 Jack London Blvd/Road A(AM)	B	16.2	0.596				
	#42 Jack London Blvd/Road A(PM)	C	26.9	0.851				

LOS computed based on HCM 2000 methodologies., and obtained through Traffix software version 7.9.

Livermore Intersection Mitigations

Intersection Impact #5:

The intersection of Murrieta and East Jack London Boulevard is projected to operate at an unacceptable level of service in both the AM and PM peak hour with or without the addition of the 2 lane constrained alternative volumes. The addition of the project alternative traffic will contribute to congestion at Murrieta and East Jack London. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

Intersection Mitigation Measure #5:

Add a second eastbound right-turn lane to provide dual right-turn lanes at the intersection of Murrieta Boulevard at East Jack London Boulevard. Because this improvement falls outside the City of Pleasanton city limits, the project developer is responsible to seek an interagency cooperative agreement that could provide a mechanism for cost sharing among multiple jurisdictions.

CMP Roadway Segments

This section describes the impacts of the Two Lane Constrained Extension Alternative on the I-580 freeway and the ACCMA MTS system of arterials in the vicinity.
The I-580 freeway currently operates at level of service "F" (volume/capacity ratio greater than 1.00) during both the morning and evening peak hours. Traffic congestion is generally present between the I-680 freeway interchange and the Santa Rita Road interchange.

The levels of service for the designated links were analyzed in a spreadsheet using the Florida Department of Transportation LOS methodology (as is required by the CMA), which provides a planning level analysis based on Highway Capacity Manual 1985 methods. As a planning level analysis, the level of service is based on forecasts of traffic and assumptions for roadway and signalization control conditions. such as facility type (freeway, expressway, and arterial classification), speeds, capacity and number of lanes. The assumption for the number of lanes at each link location was extracted from the ACCMA Countywide Travel Model, and also confirmed through field observations.

The peak hour operations were evaluated in compliance with ACCMA requirements. The analysis is performed for the years 2015 according to the ACCMA methodology with its specified growth and highway/transit network improvement assumptions.

Operations of the MTS freeway and surface street segments were assessed based on volume-to-capacity (V/C) ratios. For freeway segments. a per-lane capacity of 1,950 vehicles per hour was used. This capacity is consistent with the capacities used in the ACCMA analysis presented in the City of Pleasanton General Plan Update. For surface streets. a per-lane capacity of 900 vehicles per hour was used. Roadway segments with a V/C ratio greater than 1.0 are assigned LOS F.

According to the significance criteria, the addition of project traffic causes a significant impact on an MTS roadway segment if:

- The addition of project traffic causes a segment's operation to degrade to LOS F.
- The addition of project trips causes the V/C ratio to increase by more than 0.03 on a segment that already operates at LOS F without the project traffic.

The table below shows the CMP Link Segment level of service for a Two Lane Constrained Extension Alternative (also shown for comparative purposes are the no project no Stoneridge Drive alternative as well as the City Council approved project of the project + ice center with a 4 lane Stoneridge Drive).

Table 10 CMP Analysis AM North/East

AM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Northbound/Eastbound					
	No Project		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	0.36	B	0.38	B	0.37	B
I-680 (Betn. Stoneridge and Las Positas)	0.50	B	0.50	B	0.50	B
SR84 (Betn. Portola & I-580)	0.17	A	0.17	A	0.16	A
SR84 (Betn. I-580 & Jack London)	0.76	D	0.76	D	0.72	D
SR84 (Betn. Jack London & Stanley)	0.95	E	0.97	E	0.90	E
SR84 (Betn. Stanley & Vineyard)	1.10	F	1.12	F	1.06	F
SR84 (Near Little Valley)	0.78	E	0.78	E	0.79	E
I-580 (Betn. El Charro & Airway Pkwy)	0.42	B	0.42	B	0.42	B
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	0.38	B	0.38	B	0.38	B
I-580 (Betn. Isabel Pkwy & Portola Ave)	0.47	B	0.48	B	0.48	B
I-580 (Betn. Portola Ave & N.Livermore Ave)	0.47	B	0.48	B	0.48	B
I-580 (Betn. N.Livermore Ave & First St.)	0.44	B	0.45	B	0.45	B
I-580 (Betn. First St & South Vasco Rd.)	0.47	B	0.47	B	0.47	B
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.38	B	0.38	B	0.38	B
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	0.81	E	0.81	D	0.78	D
Dublin Blvd. (East of Tassajara Rd.)	0.00	B	0.00	B	0.00	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.03	F	1.05	F	1.05	F
Las Positas (West of Santa Rita Rd.)	0.45	D	0.45	D	0.47	D
Santa Rita Rd. (South of I-580)	0.32	D	0.34	D	0.27	D
Stanley Blvd. (East of Valley Blvd.)	0.23	D	0.23	D	0.23	D
Stoneridge (East of Santa Rita Rd.)	0.24	D	0.24	D	0.36	D
Sunol Blvd. (North of I-680)	0.24	D	0.24	D	0.25	D
Tassajara Rd. (North of Dublin Blvd.)	0.15	B	0.15	B	0.16	B

Table 11 CMP Analysis AM South/West

AM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Southbound/Westbound					
	No Project		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	1.26	F	1.22	F	1.25	F
I-680 (Betn. Stoneridge and Las Positas)	1.23	F	1.24	F	1.25	F
SR84 (Betn. Portola & I-580)	0.07	A	0.07	A	0.05	A
SR84 (Betn. I-580 & Jack London)	0.58	C	0.58	C	0.59	C
SR84 (Betn. Jack London & Stanley)	1.17	F	1.17	F	1.20	F
SR84 (Betn. Stanley & Vineyard)	1.16	F	1.17	F	1.20	F
SR84 (Near Little Valley)	1.24	F	1.24	F	1.28	F
I-580 (Betn. El Charro & Airway Pkwy)	1.19	F	1.22	F	1.20	F
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	1.31	F	1.31	F	1.30	F
I-580 (Betn. Isabel Pkwy & Portola Ave)	1.39	F	1.39	F	1.38	F
I-580 (Betn. Portola Ave & N.Livermore Ave)	1.39	F	1.39	F	1.38	F
I-580 (Betn. N.Livermore Ave & First St.)	1.27	F	1.27	F	1.27	F
I-580 (Betn. First St & South Vasco Rd.)	1.06	F	1.06	F	1.08	F
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	1.27	F	1.27	F	1.30	F
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	1.13	F	1.07	F	1.14	F
Dublin Blvd. (East of Tassajara Rd.)	1.06	F	0.94	E	1.06	F
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.10	F	1.10	F	1.07	F
Las Positas (West of Santa Rita Rd.)	1.07	F	0.97	E	0.79	D
Santa Rita Rd. (South of I-580)	1.09	F	0.94	E	0.69	D
Stanley Blvd. (East of Valley Blvd.)	1.45	F	1.44	F	1.50	F
Stoneridge (East of Santa Rita Rd.)	0.44	D	0.92	E	1.23	F
Sunol Blvd. (North of I-680)	0.44	D	0.45	D	0.46	D
Tassajara Rd. (North of Dublin Blvd.)	0.26	B	0.26	B	0.22	B

Table 12 CMP Analysis PM North/East

PM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Northbound/Eastbound					
	No Project		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	1.02	F	0.96	E	0.98	E
I-680 (Betn. Stoneridge and Las Positas)	1.01	F	0.96	E	1.02	F
SR84 (Betn. Portola & I-580)	0.17	A	0.18	A	0.27	A
SR84 (Betn. I-580 & Jack London)	0.49	B	0.49	B	0.49	B
SR84 (Betn. Jack London & Stanley)	0.91	E	0.92	E	0.94	E
SR84 (Betn. Stanley & Vineyard)	0.92	E	0.92	E	0.95	E
SR84 (Near Little Valley)	0.96	E	0.96	E	0.98	E
I-580 (Betn. El Charro & Airway Pkwy)	1.00	F	1.01	F	1.03	F
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	1.04	F	1.05	F	1.08	F
I-580 (Betn. Isabel Pkwy & Portola Ave)	1.16	F	1.16	F	1.18	F
I-580 (Betn. Portola Ave & N.Livermore Ave)	1.14	F	1.15	F	1.16	F
I-580 (Betn. N.Livermore Ave & First St.)	1.00	F	1.00	F	1.01	F
I-580 (Betn. First St & South Vasco Rd.)	0.97	E	0.97	E	0.99	E
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.86	D	0.86	D	0.86	D
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	1.12	F	1.13	F	1.12	F
Dublin Blvd. (East of Tassajara Rd.)	0.73	B	0.74	B	0.44	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.05	F	1.05	F	0.91	E
Las Positas (West of Santa Rita Rd.)	0.85	E	0.69	D	0.87	E
Santa Rita Rd. (South of I-580)	0.81	E	0.63	D	0.65	D
Stanley Blvd. (East of Valley Blvd.)	1.24	F	1.23	F	1.25	F
Stoneridge (East of Santa Rita Rd.)	0.41	D	0.91	E	1.24	F
Sunol Blvd. (North of I-680)	0.71	D	0.71	D	0.61	D
Tassajara Rd. (North of Dublin Blvd.)	0.21	B	0.20	B	0.22	B

Table 13 CMP Analysis PM South/West

PM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Southbound/Westbound					
	No Project		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
	v/c	LOS	v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	0.58	C	0.63	C	0.60	C
I-680 (Betn. Stoneridge and Las Positas)	0.55	B	0.55	C	0.55	C
SR84 (Betn. Portola & I-580)	0.13	A	0.13	A	0.12	A
SR84 (Betn. I-580 & Jack London)	0.65	C	0.66	C	0.68	C
SR84 (Betn. Jack London & Stanley)	0.86	E	0.88	E	0.88	E
SR84 (Betn. Stanley & Vineyard)	0.91	E	0.92	E	0.93	E
SR84 (Near Little Valley)	0.80	E	0.80	E	0.80	E
I-580 (Betn. El Charro & Airway Pkwy)	0.43	B	0.44	B	0.44	B
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	0.45	B	0.46	B	0.46	B
I-580 (Betn. Isabel Pkwy & Portola Ave)	0.50	B	0.51	B	0.52	B
I-580 (Betn. Portola Ave & N. Livermore Ave)	0.50	B	0.51	B	0.52	B
I-580 (Betn. N. Livermore Ave & First St.)	0.42	B	0.42	B	0.42	B
I-580 (Betn. First St & South Vasco Rd.)	0.38	B	0.38	B	0.38	B
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.44	B	0.44	B	0.43	B
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	0.76	D	0.76	D	0.79	D
Dublin Blvd. (East of Tassajara Rd.)	0.00	B	0.00	B	0.00	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.04	F	1.05	F	1.04	F
Las Positas (West of Santa Rita Rd.)	0.60	D	0.60	D	0.52	D
Santa Rita Rd. (South of I-580)	0.38	D	0.42	D	0.33	D
Stanley Blvd. (East of Valley Blvd.)	0.28	D	0.28	D	0.28	D
Stoneridge (East of Santa Rita Rd.)	0.28	D	0.27	D	0.38	D
Sunol Blvd. (North of I-680)	0.25	D	0.26	D	0.26	D
Tassajara Rd. (North of Dublin Blvd.)	0.20	B	0.20	B	0.20	B

CMP Mitigations

The tables show that while several segments exceed capacity, no segments violate the ACCMA level of service threshold for the Two Lane Constrained Extension Alternative and there are no mitigations necessary.

It should be noted that the Two Lane Constrained Extension Alternative improves several failing level of service link segments to acceptable level of service when comparing the data to the no Stoneridge Extension Alternative. These segments include:

I-580 (Betn. Santa Rita & El Charro)
I-680 (Betn. Stoneridge and Las Positas)
Dublin Blvd. (East of Tassajara Rd.)
Las Positas (West of Santa Rita Rd.)
Santa Rita Rd. (South of I-580)

Project Intersections and Stoneridge Drive Intersections

In addition to the Pleasanton, Dublin and Livermore intersections identified in the previous sections, the unsignalized intersections along Stoneridge Drive and the two intersections that would be constructed with the project were analyzed to determine if traffic signals are needed under the Two Lane Constrained Extension Alternative.

Three intersections exist along Stoneridge Drive between Santa Rita Road and the eastern terminus at Trevor parkway that are not signalized. These intersections include Newton Way, Guzman Parkway and Trevor Parkway. There are two intersections within the project area: CLC entrance and Automall. Each of these intersections were analyzed using MUTCD's peak hour warrant. Given the volume on each of these roadways is in excess of 75 vph in the peak hour, the threshold to meet the signal warrant is satisfied. As discussed in the Technical Memorandum for Traffic and Circulation -- Stoneridge Drive Specific Plan Amendment - Staples Ranch, the MUTCD cautions that, *the peak signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.*

Given the MUTCD caution, the peak hour warrant is being used as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed the peak hour warrant are considered (for the purposes of this impact analysis) to be likely to meet one or more of the other signal warrants (such as the 4-hour or 8-hour warrants).

The signalization of these intersections will provide the following levels of service:

Table 14 Stoneridge Drive Intersection's Level of Service
Level of Service with 2 lane and 4 lane SDE

		Newton				Guzman				Trevor			
		AM		PM		AM		PM		AM		PM	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Ex+App+ Project+Ice	2 Lane SDE	25	C	22.4	C	16	B	12.7	B	19.8	B	13.2	B
Ex+App+ Project+Ice	4 Lane SDE	19.4	B	18.2	B	14	B	15.6	B	19.9	B	15.6	B

		CLC				Automall			
		AM		PM		AM		PM	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Ex+App+ Project+Ice	2 Lane SDE	19.5	B	19	B	29.5	C	32.4	C
Ex+App+ Project+Ice	4 Lane SDE	16.5	B	29.1	C	37	D	54.7	D

The approved project 4 lane Stoneridge Drive Extension level of service is shown for comparative purposes only.

Intersection Impact #6:
The intersection of Stoneridge Drive and Newton Way is projected to meet MUTCD's peak hour delay signal warrant resulting in an unacceptable level of service with the addition of the project traffic. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

> **Intersection Mitigation Measure #6:**
> Construct traffic signal at the intersection to reduce peak hour delay. The project developer is responsible to construct this improvement.

Intersection Impact #7:
The intersection of Stoneridge Drive and Guzman Parkway is projected to meet MUTCD's peak hour delay signal warrant resulting in an unacceptable level of service with the addition of the project traffic. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

> **Intersection Mitigation Measure #7:**
> Construct traffic signal at the intersection to reduce peak hour delay. The project developer is responsible to construct this improvement.

Intersection Impact #8:
The intersection of Stoneridge Drive and Trevor Parkway is projected to meet MUTCD's peak hour delay signal warrant resulting in an unacceptable level of service with the addition of the project traffic. This impact and the resulting mitigation is the same as the impact and mitigation identified in the City Council approved project.

> **Intersection Mitigation Measure #8:**
> Construct traffic signal at the intersection to reduce peak hour delay. The project developer is responsible to construct this improvement.

The intersection of Stoneridge Drive and CLC and Stoneridge Drive and Automall were assumed to be signalized, under all scenarios that contained an extension of Stoneridge Drive to El Charro Road. The construction of these two traffic signals is included in the project design. Review of the level of service at these two intersections indicate that they will operate at an acceptable level of service and are therefore not considered impacted intersections.

Stoneridge Drive Extension

The data included in this section of the report collects and organizes the relevant data from the previous section and the 2008 Dowling Report to show the Project + Ice Center at existing + approved with the three different roadway configurations.

1. Project + Ice - No Stoneridge Drive Extension (Stoneridge cul-de-sac east of CLC).
2. Project + Ice - 2 Lane Constrained Stoneridge Drive Extension
3. Project + Ice - 4 Lane Stoneridge Drive Extension (City Council approved option).

Project Trip Generation

The project trip generation and volumes shown in this section are identical for each scenario.

Table 15 Project Trip Generation

			Project-Generated Trips						
			AM Peak-Hour			PM Peak-Hour			Daily
Land Use	Amount		In	Out	Total	In	Out	Total	
Senior Housing	800	DU	29	35	64	54	34	88	2,200
Auto Dealers	331	KSF	502	176	678	341	533	874	11,035
Community Park	17	Acres	17	17	34	34	34	68	300
Retail Component	175	KSF	110	70	180	315	341	656	7.500
TOTAL			**658**	**298**	**956**	**744**	**942**	**1686**	**21,035**
Ice Center			41	36	77	175	174	349	3328
Total			**699**	**334**	**1033**	**919**	**1116**	**2035**	**24363**

Project Trip Distribution

The project trip distribution is the same between the 2 lane and the 4 lane Stoneridge scenarios, but is slightly varied in comparison to the no Stoneridge Drive extension alternative. Under the no Stoneridge Drive extension scenario, project trips have slightly longer trip lengths due to the need to use Interstate 580 or Dublin Boulevard to access the Automall and Retail components of the project.

Stoneridge Drive Volume Distribution

For comparison purposes of the different alternatives analyzed, two locations were selected to provide volume distribution data on Stoneridge Drive which were: Stoneridge Drive just east of Kamp Drive and Stoneridge Drive on the future bridge across the Arroyo. The table below shows AM and PM peak hour volumes at these two locations under the following conditions:

Table 16 Stoneridge Drive Alternative Volumes

2015 AM Peak Volumes		Stoneridge east of Kamp		Stoneridge at new Bridge		Stoneridge east of Kamp	Stoneridge at new Bridge
		WB	EB	WB	EB	total	total
Project+Ice	No SDE	585	438	88	87	1023	175
Project+Ice	2 Lane SDE	1581	708	1200	522	2289	1722
Project+Ice	4 Lane SDE	2037	770	1710	637	2807	2347

2015 PM Peak Volumes		Stoneridge east of Kamp		Stoneridge at new Bridge		Stoneridge east of Kamp	Stoneridge at new Bridge
		WB	EB	WB	EB		
Project+Ice	No SDE	419	497	246	263	916	509
Project+Ice	2 Lane SDE	1249	1743	1254	1729	2992	2983
Project+Ice	4 Lane SDE	1328	2242	1412	2302	3570	3714

Intersection Level of Service Analysis

Pleasanton Intersections

The method of analysis is identical to the methods used and outlined in the 2008 Dowling Report

Table 17 Pleasanton LOS Summary

City Of Pleasanton - Approved + Project + Ice Center Conditions LOS Summary

		AM PEAK						PM PEAK					
NS Street	EW Street	APP + Proj + Ice no SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4		APP + Proj + Ice no SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Foothill	I-580 WB	B	11.3	B	12.8	B	12.3	B	12.6	B	11.5	B	11.9
Foothill	Dublin Canyon	C	33.8	D	44.5	D	45.5	C	25.0	C	23.0	C	23.3
Foothill	Stoneridge	B	14.7	B	15.4	B	15.5	C	20.1	C	32.8	C	30.5
Hopyard	I-580 WB off	B	12.9	B	12.9	B	12.6	C	28.5	B	18.3	B	18.6
Hopyard	I-580 EB off	C	23.2	C	23.1	C	21.5	E	59.1	D	54.2	D	52.3
Hopyard	Owens	D	51.0	D	54.5	D	47.5	F	333.1	F	341.5	F	342.8
Hopyard	Stoneridge	D	51.1	D	45.9	D	47.9	F	102.2	D	54.9	E	69.9
Hopyard	W Las Positas	C	29.1	C	27.2	C	26.2	D	36.9	C	30.9	C	31.7
Hopyard	Valley Trails (S)	A	9.3	A	9.1	A	9.5	C	23.3	C	25.8	C	26.0
Hopyard	Valley	C	26.0	C	26.0	C	26.5	C	32.4	C	33.1	C	33.1
Tassajara	I-580 WB off	B	11.3	D	42.0	D	44.7	B	13.5	C	35.0	D	36.9
Santa Rita	I-580 EB off/Pimlico	D	41.5	C	25.9	C	26.1	D	40.7	C	30.9	C	27.6
Santa Rita	Rosewood	A	8.6	B	13.5	B	14.2	B	19.7	C	25.3	C	25.0
Santa Rita	Old Santa Rita	A	3.2	A	4.5	A	5.3	A	3.9	A	3.9	A	3.7
Santa Rita	W Las Positas	D	37.4	C	33.7	C	32.6	D	36.4	D	41.7	D	44.1
Santa Rita	Stoneridge	D	49.7	E	56.1	F	82.9	D	39.4	E	57.5	F	98.0
Santa Rita	Mohr	B	19.9	C	20.0	C	20.2	B	17.8	C	22.5	C	21.9
Santa Rita	Valley	C	34.9	D	36.4	D	36.4	E	69.2	E	70.0	F	88.4
Santa Rita	Black	C	25.3	C	26.6	C	26.3	C	28.0	C	32.5	C	28.7
Santa Rita	Stanley	B	17.5	B	12.3	B	12.6	C	23.3	B	14.3	B	15.6
Santa Rita	Ray	F	161.8	F	146.1	F	162.8	F	94.2	E	71.7	E	62.5
First	Stanley	B	14.2	B	12.8	B	12.8	C	24.9	B	12.6	B	11.5
First	Ray	D	45.6	D	47.1	D	40.2	F	81.7	E	66.2	E	79.8
First	Bernal	D	48.2	D	51.8	E	59.6	D	44.9	E	57.1	E	76.5
Springdale	Stoneridge	B	14.0	B	14.2	B	14.1	C	23.9	C	25.6	C	25.5
I-680 SB off	Stoneridge	B	11.7	B	12.0	B	11.9	B	11.4	A	9.4	A	9.7
I-680 NB off	Stoneridge	A	9.8	B	10.1	A	10.0	C	24.4	C	26.0	C	25.4
Johnson	Stoneridge	B	16.0	B	16.0	B	16.2	C	33.1	C	25.8	C	26.6
Franklin	Stoneridge	C	21.3	C	20.3	C	21.8	B	17.0	B	15.9	B	15.0
Valley	Bernal	D	42.1	D	47.0	D	48.2	D	47.0	D	44.1	D	45.4
Willow	Stoneridge	B	12.6	B	12.7	B	13.2	A	9.9	B	10.9	B	10.7
Hacienda	Owens	C	26.1	C	27.0	C	25.7	D	50.7	D	35.1	D	45.2
Hacienda	Stoneridge	C	23.8	C	24.1	C	24.4	C	30.2	C	27.9	C	28.3
Hacienda	W Las Positas	C	23.9	C	21.7	C	22.9	C	22.4	B	12.3	B	13.6
Gibraltar	Stoneridge	A	7.4	A	7.2	A	7.2	B	13.6	C	20.2	C	22.6
W Las Positas	Stoneridge	C	29.8	C	32.9	C	34.2	C	31.7	D	52.2	D	49.5
W Las Positas	Owens	B	13.6	B	13.8	B	13.2	C	20.9	B	17.9	C	21.3
Valley	Stanley	D	38.3	D	42.3	D	39.9	D	44.3	C	29.7	C	29.7
Foothill	Laurel Creek	A	9.4	B	11.8	B	12.0	A	8.7	B	14.0	B	13.3
Fallon	I-580 WB	A	5.3	A	9.6	B	11.2	A	5.7	A	7.2	A	7.7
El Charro	I-580 EB	F	120.6	C	33.3	D	54.3	C	27.4	A	8.6	B	11.3
Bernal	Vineyard	C	27.3	C	32.1	C	28.8	B	16.9	B	13.8	B	15.0
Hacienda	I-580 WB off	A	8.4	A	9.0	A	8.5	B	11.9	A	9.9	B	10.1
Hacienda	I-580 EB off	C	23.9	C	22.8	C	22.6	D	37.2	D	35.4	C	31.3
Chabot	Stoneridge	A	7.5	A	7.8	A	7.6	B	12.4	B	13.6	B	13.5
Busch	Valley	B	13.3	B	12.4	B	12.0	A	7.2	A	7.0	A	6.9
Kamp	Stoneridge	A	7.5	A	9.3	B	11.5	A	5.3	B	11.9	B	19.5
Kolln	Valley	B	15.5	B	13.4	B	14.8	B	13.0	B	12.9	B	12.0
First	Kottinger	C	33.0	D	54.0	D	53.3	C	34.5	D	39.1	D	42.7
Rosewood	Rose Pavillian	A	5.2	A	5.2	A	5.2	A	9.7	A	9.9	A	10.0
Rheem	Stoneridge	A	7.1	A	9.4	B	11.1	A	6.6	B	13.3	C	28.9
Main	St. John	B	17.7	B	15.6	B	13.5	E	76.3	F	93.1	F	104.8
El Charro	Stoneridge	C	22.5	C	21.0	C	20.3	D	36.8	C	31.0	C	23.7
Fallon	Central	C	31.2	C	31.2	C	31.1	D	35.8	C	31.2	C	31.9
Fallon	Dublin	D	36.8	D	38.3	E	56.8	F	167.0	F	126.7	F	152.7
Tassajara	Dublin	C	24.9	C	32.3	C	23.9	D	48.0	D	49.2	D	51.6
Tassajara	Central	D	47.6	D	48.3	D	46.9	D	51.4	D	44.6	D	50.8

This table identifies only the impacted intersections in Pleasanton for each of the scenarios.

Table 18Pleasanton LOS Summary Impacted Intersections

City Of Pleasanton - Approved + Project + Ice Center Conditions LOS Summary

NS Street	EW Street	AM PEAK						PM PEAK					
		APP + Proj + Ice no SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4		APP + Proj + Ice no SDE		APP + Proj + Ice SDE 2		APP + Proj + Ice SDE 4	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Hopyard	I-580 EB off	C	23.2	C	23.1	C	21.5	E	59.1	D	54.2	D	52.3
Hopyard	Owens	D	51.0	D	54.5	D	47.5	F	333.1	F	341.5	F	342.8
Hopyard	Stoneridge	D	51.1	D	45.9	D	47.9	F	102.2	D	54.9	E	69.9
Santa Rita	Stoneridge	D	49.7	E	56.1	F	82.9	D	39.4	E	57.5	F	98.0
Santa Rita	Valley	C	34.9	D	36.4	D	36.4	E	69.2	E	70.0	F	88.4
Santa Rita	Ray	F	161.8	F	146.1	F	162.8	F	94.2	E	71.7	E	62.5
First	Ray	D	45.6	D	47.1	D	40.2	F	81.7	E	66.2	E	79.8
First	Bernal	D	48.2	D	51.8	E	59.6	D	44.9	E	57.1	E	76.5
El Charro	I-580 EB	F	120.6	C	33.3	D	54.3	C	27.4	A	8.6	B	11.3
Main	St. John	B	17.7	B	15.6	B	13.5	E	76.3	F	93.1	F	104.8
El Charro	Stoneridge	C	22.5	C	21.0	C	20.3	D	36.8	C	31.0	C	23.7
Fallon	Dublin	D	36.8	D	38.3	E	56.8	F	167.0	F	126.7	F	152.7

Dublin Intersections

Table 19 Dublin LOS Summary

Dublin LOS - 2 Lane Stoneridge Drive Extension

Fallon Village Analysis Scenario	Additional Dublin Intersections	Project Without SDE		With 2-Lane SDE		With 4-Lane SDE	
		LOS	V/C	LOS	V/C	LOS	V/C
Scenario #2 - Interim Year 2015 with Fallon Village - Plus Staples Ranch & Ice Center	Dublin Blvd/Dougherty Rd (AM)	C	0.74	C	0.75	C	0.74
	Dublin Blvd/Dougherty Rd (PM)	D	0.88	D	0.86	D	0.87
	Dublin Blvd/Hacienda Dr (AM)	C	0.79	C	0.78	C	0.79
	Dublin Blvd/Hacienda Dr (PM)	C	0.73	B	0.65	B	0.69
	Central Pkwy/Hacienda Dr (AM)	C	0.78	C	0.78	C	0.78
	Central Pkwy/Hacienda Dr (PM)	A	0.33	A	0.33	A	0.33

Notes

1. LOS computed based on CCTA methodologies.
2. To be consistent with the Fallon Village report, significant figures are shown to the one hundredth place.

Livermore Intersections

Table 20 Livermore LOS Summary

Livermore LOS

Existing Plus Approved Conditions

El Charro Development Analysis Scenario	Critical Livermore Intersections	Plus Staples Ranch & Ice Center - without SDE			Plus Staples Ranch & Ice Center - w/2-In SDE			Plus Staples Ranch & Ice Center - w/4-In SDE		
		LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Baseline 2008 + Full Project El Charro Buildout with Southern Jack London Blvd. Roadway	# 5 Airway at I-580 EB (AM)	D	41.1	0.900	D	40.2	0.886	D	38.7	0.869
	# 6 Isabel/Kitty Hawk at Airway Blvd.(AM)	D	54.7	1.015	D	51.5	1.028	D	47.1	0.992
	# 8 Isabel at Jack London Blvd. (PM)	C	27.0	0.950	C	31.9	0.993	C	28.9	0.973
	# 9 Isabel at Stanley Blvd. (PM)	C	23.5	0.923	C	31.2	0.997	C	27.8	0.976
	#12 East Vallecitos at Isabel Ave. (AM)	C	31.9	0.929	C	24.8	0.848	C	29.3	0.906
	#13 Murrieta & East Jack Lond Blvd. (AM)	**E**	**59.9**	**1.002**	**E**	**71.8**	**1.064**	**E**	**67.7**	**1.044**
	#13 Murrieta & East Jack Lond Blvd. (PM)	**F**	**119.9**	**1.178**	**F**	**149.0**	**1.254**	**F**	**136.9**	**1.231**
	#42 Jack London Blvd/Road A(AM)	B	16.2	0.552	B	16.2	0.596	B	16.2	0.616
	#42 Jack London Blvd/Road A(PM)	C	28.6	0.904	C	26.9	0.851	C	28.3	0.900

LOS computed based on HCM 2000 methodologies., and obtained through Traffix software version 7.9.

CMP Roadway Segments

This section describes the impacts of the 3 scenarios on the I-580 freeway and the ACCMA MTS system of arterials in the vicinity.

Table 21 CMP Analysis AM North/East

AM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Northbound/Eastbound					
	Project (with Ice Center)		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
			v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	0.39	B	0.38	B	0.37	B
I-680 (Betn. Stoneridge and Las Positas)	0.50	B	0.50	B	0.50	B
SR84 (Betn. Portola & I-580)	0.17	A	0.17	A	0.16	A
SR84 (Betn. I-580 & Jack London)	0.76	D	0.76	D	0.72	D
SR84 (Betn. Jack London & Stanley)	0.97	E	0.97	E	0.90	E
SR84 (Betn. Stanley & Vineyard)	1.11	F	1.12	F	1.06	F
SR84 (Near Little Valley)	0.78	E	0.78	E	0.79	E
I-580 (Betn. El Charro & Airway Pkwy)	0.42	B	0.42	B	0.42	B
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	0.38	B	0.38	B	0.38	B
I-580 (Betn. Isabel Pkwy & Portola Ave)	0.47	B	0.48	B	0.48	B
I-580 (Betn. Portola Ave & N.Livermore Ave)	0.47	B	0.48	B	0.48	B
I-580 (Betn. N.Livermore Ave & First St.)	0.45	B	0.45	B	0.45	B
I-580 (Betn. First St & South Vasco Rd.)	0.47	B	0.47	B	0.47	B
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.38	B	0.38	B	0.38	B
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	0.81	E	0.81	D	0.78	D
Dublin Blvd. (East of Tassajara Rd.)	0.00	B	0.00	B	0.00	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.04	F	1.05	F	1.05	F
Las Positas (West of Santa Rita Rd.)	0.46	D	0.45	D	0.47	D
Santa Rita Rd. (South of I-580)	0.38	D	0.34	D	0.27	D
Stanley Blvd. (East of Valley Blvd.)	0.23	D	0.23	D	0.23	D
Stoneridge (East of Santa Rita Rd.)	0.25	D	0.24	D	0.36	D
Sunol Blvd. (North of I-680)	0.24	D	0.24	D	0.25	D
Tassajara Rd. (North of Dublin Blvd.)	0.15	B	0.15	B	0.16	B

Table 22 CMP Analysis AM South/West

AM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Southbound/Westbound					
	Project (with Ice Center)		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
			v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	1.28	F	1.22	F	1.25	F
I-680 (Betn. Stoneridge and Las Positas)	1.23	F	1.24	F	1.25	F
SR84 (Betn. Portola & I-580)	0.07	A	0.07	A	0.05	A
SR84 (Betn. I-580 & Jack London)	0.58	C	0.58	C	0.59	C
SR84 (Betn. Jack London & Stanley)	1.17	F	1.17	F	1.20	F
SR84 (Betn. Stanley & Vineyard)	1.16	F	1.17	F	1.20	F
SR84 (Near Little Valley)	1.24	F	1.24	F	1.28	F
I-580 (Betn. El Charro & Airway Pkwy)	1.20	F	1.22	F	1.20	F
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	1.31	F	1.31	F	1.30	F
I-580 (Betn. Isabel Pkwy & Portola Ave)	1.39	F	1.39	F	1.38	F
I-580 (Betn. Portola Ave & N.Livermore Ave)	1.39	F	1.39	F	1.38	F
I-580 (Betn. N.Livermore Ave & First St.)	1.27	F	1.27	F	1.27	F
I-580 (Betn. First St & South Vasco Rd.)	1.06	F	1.06	F	1.08	F
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	1.27	F	1.27	F	1.30	F
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	1.14	F	1.07	F	1.14	F
Dublin Blvd. (East of Tassajara Rd.)	1.09	F	0.94	E	1.06	F
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.10	F	1.10	F	1.07	F
Las Positas (West of Santa Rita Rd.)	1.08	F	0.97	E	0.79	D
Santa Rita Rd. (South of I-580)	1.13	F	0.94	E	0.69	D
Stanley Blvd. (East of Valley Blvd.)	1.45	F	1.44	F	1.50	F
Stoneridge (East of Santa Rita Rd.)	0.45	D	0.92	E	1.23	F
Sunol Blvd. (North of I-680)	0.44	D	0.45	D	0.46	D
Tassajara Rd. (North of Dublin Blvd.)	0.26	B	0.26	B	0.22	B

Table 23 CMP Analysis PM North/East

PM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Northbound/Eastbound					
	Project (with Ice Center)		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
			v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	1.04	F	0.96	E	0.98	E
I-680 (Betn. Stoneridge and Las Positas)	1.01	F	0.96	E	1.02	F
SR84 (Betn. Portola & I-580)	0.18	A	0.18	A	0.27	A
SR84 (Betn. I-580 & Jack London)	0.49	B	0.49	B	0.49	B
SR84 (Betn. Jack London & Stanley)	0.92	E	0.92	E	0.94	E
SR84 (Betn. Stanley & Vineyard)	0.92	E	0.92	E	0.95	E
SR84 (Near Little Valley)	0.96	E	0.96	E	0.98	E
I-580 (Betn. El Charro & Airway Pkwy)	1.01	F	1.01	F	1.03	F
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	1.05	F	1.05	F	1.08	F
I-580 (Betn. Isabel Pkwy & Portola Ave)	1.16	F	1.16	F	1.18	F
I-580 (Betn. Portola Ave & N.Livermore Ave)	1.15	F	1.15	F	1.16	F
I-580 (Betn. N.Livermore Ave & First St.)	1.00	F	1.00	F	1.01	F
I-580 (Betn. First St & South Vasco Rd.)	0.97	E	0.97	E	0.99	E
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.86	D	0.86	D	0.86	D
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	1.13	F	1.13	F	1.12	F
Dublin Blvd. (East of Tassajara Rd.)	0.75	B	0.74	B	0.44	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.06	F	1.05	F	0.91	E
Las Positas (West of Santa Rita Rd.)	0.86	E	0.69	D	0.87	E
Santa Rita Rd. (South of I-580)	0.86	E	0.63	D	0.65	D
Stanley Blvd. (East of Valley Blvd.)	1.24	F	1.23	F	1.25	F
Stoneridge (East of Santa Rita Rd.)	0.43	D	0.91	E	1.24	F
Sunol Blvd. (North of I-680)	0.71	D	0.71	D	0.61	D
Tassajara Rd. (North of Dublin Blvd.)	0.21	B	0.20	B	0.22	B

Table 24 CMP Analysis PM South/West

PM - CMP Analysis 2 lane Stoneridge Drive

Link Location	Southbound/Westbound					
	Project (with Ice Center)		Project (with Ice Center)		Project (with Ice Center)	
	2015 with Jack London Extension but NO Stoneridge Drive Extension		2015 with Jack London and Stoneridge Drive Extensions (SDE= 2 lanes)		2015 with Jack London and Stoneridge Drive Extensions (SDE= 4 lanes)	
			v/c	LOS	v/c	LOS
Interstate/State Highways						
I-580 (Betn. Santa Rita & El Charro)	0.64	C	0.63	C	0.60	C
I-680 (Betn. Stoneridge and Las Positas)	0.55	C	0.55	C	0.55	C
SR84 (Betn. Portola & I-580)	0.13	A	0.13	A	0.12	A
SR84 (Betn. I-580 & Jack London)	0.66	C	0.66	C	0.68	C
SR84 (Betn. Jack London & Stanley)	0.87	E	0.88	E	0.88	E
SR84 (Betn. Stanley & Vineyard)	0.92	E	0.92	E	0.93	E
SR84 (Near Little Valley)	0.80	E	0.80	E	0.80	E
I-580 (Betn. El Charro & Airway Pkwy)	0.44	B	0.44	B	0.44	B
I-580 (Betn. Airway Pkwy & Isabel Pkwy)	0.46	B	0.46	B	0.46	B
I-580 (Betn. Isabel Pkwy & Portola Ave)	0.51	B	0.51	B	0.52	B
I-580 (Betn. Portola Ave & N.Livermore Ave)	0.51	B	0.51	B	0.52	B
I-580 (Betn. N.Livermore Ave & First St.)	0.42	B	0.42	B	0.42	B
I-580 (Betn. First St & South Vasco Rd.)	0.38	B	0.38	B	0.38	B
I-580 (Betn. South Vasco Rd. & Greenville Rd.)	0.44	B	0.44	B	0.43	B
Arterials						
Dougherty Rd. (Betn. Dublin Blvd. and I-580)	0.77	D	0.76	D	0.79	D
Dublin Blvd. (East of Tassajara Rd.)	0.00	B	0.00	B	0.00	B
Hopyard Rd. (Betn. I-580 & Owens Dr.)	1.06	F	1.05	F	1.04	F
Las Positas (West of Santa Rita Rd.)	0.61	D	0.60	D	0.52	D
Santa Rita Rd. (South of I-580)	0.46	D	0.42	D	0.33	D
Stanley Blvd. (East of Valley Blvd.)	0.28	D	0.28	D	0.28	D
Stoneridge (East of Santa Rita Rd.)	0.29	D	0.27	D	0.38	D
Sunol Blvd. (North of I-680)	0.25	D	0.26	D	0.26	D
Tassajara Rd. (North of Dublin Blvd.)	0.20	B	0.20	B	0.20	B

Project Intersections and Stoneridge Drive Intersections

As discussed in section 1 of this report, with both the 2 lane and 4 lane alternatives, traffic signals would need to be constructed at the three intersections on Stoneridge Drive between Santa Rita Road and the eastern terminus at Trevor parkway that are not signalized. These intersections include Newton Way, Guzman Parkway and Trevor Parkway. Additionally, the two intersections within the project area: CLC entrance and Automall would require traffic signals under the 2 lane and 4 lane alternatives.

The volumes on Stoneridge Drive under the no Stoneridge Extension scenario do not meet the volume threshold to require a traffic signal at Newton Way, Guzman Parkway or Trevor Parkway. The volumes are also insufficient to require a traffic signal at the CLC entrance, but the Automall volumes are sufficient to require a traffic signal.

Table 25 Stoneridge Drive Alternative Volumes

2015 AM Peak Volumes		Stoneridge east of Kamp		Stoneridge at new Bridge		Stoneridge east of Kamp	Stoneridge at new Bridge
		WB	EB	WB	EB	total	total
No Project	No SDE	497	351	0	0	848	0
Project	No SDE	549	397	52	46	946	98
Project+Ice	No SDE	585	438	88	87	1023	175
Project+Ice	2 Lane SDE	1581	708	1200	522	2289	1722
Project+Ice	4 Lane SDE	2037	770	1710	637	2807	2347

2015 PM Peak Volumes		Stoneridge east of Kamp		Stoneridge at new Bridge		Stoneridge east of Kamp	Stoneridge at new Bridge
		WB	EB	WB	EB		
No Project	No SDE	173	234	0	0	407	0
Project	No SDE	245	322	72	88	567	160
Project+Ice	No SDE	419	497	246	263	916	509
Project+Ice	2 Lane SDE	1249	1743	1254	1729	2992	2983
Project+Ice	4 Lane SDE	1328	2242	1412	2302	3570	3714