

# **Addendum**

To the Final Environmental Impact Report  
For the Main Street Cupertino Project (SCH# 2008082058)

# **Main Street Cupertino Modifications**

File No. M-2011-09, ASA-2011-24, TM-2011-04, EA-2011-18

Prepared by the  
City of Cupertino



March 22, 2012 (updated May 4, 2012)

**The following updates were made on May 4, 2012 to the March 22, 2012 Addendum to the Final Environmental Impact Report for the Main Street Cupertino Project (SCH# 2008082058):**

**Section 2.7 Changes to the Project Description**

- In Footnote 2, a reference to Appendices E and F was added.

**Section 2.8 2012 Scheme Variants**

- In Table 2, the development under Variant 3a(2) was revised downward and Option A(1) was added as a variant resulting in similar or less environmental impacts than 2012 Scheme 1. Option A(1) was prepared in response to input from the Planning Commission on March 27, 2012.

**Appendices**

- Appendix E, a memorandum analyzing Option A(1) and increased percentage of restaurant uses on-site, was added.
- Appendix F, which includes trip generation, level of service, and parking tables for project schemes with a greater proportion of restaurant use on-site, was added.

# PREFACE

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## PURPOSE OF AN ADDENDUM

The California Environmental Quality Act (CEQA) recognizes that between the date an environmental document is completed and the date the project is fully implemented, one or more of the following changes may occur: 1) the project may change; 2) the environmental setting in which the project is located may change; 3) laws, regulations, or policies may change in ways that impact the environment; and/or 4) previously unknown information can arise. Before proceeding with a project, CEQA requires the Lead Agency to evaluate these changes to determine whether or not they affect the conclusions in the environmental document.

In 2009, the City of Cupertino certified the Final Environmental Impact Report (EIR) for the Main Street Cupertino project (SCH# 2008082058) that evaluated the environmental effects of development of a mixed use project on an 18.7-acre site at the northwest quadrant of Stevens Creek Boulevard and Tantau Avenue in the City of Cupertino. Two mixed use development schemes were analyzed.

The purpose of this Addendum is to analyze the impacts of proposed modifications to the Main Street Cupertino project, which are changes to the mix and intensity of the various land uses on-site.

The CEQA Guidelines §15162 state that when an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
  - a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
  - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
  - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines §15164 state that the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in §15162 (see above) calling for preparation of a subsequent EIR have occurred.

Based on the proposed project modifications, knowledge of the project site (based on the environmental review prepared for the 2009 Main Street Cupertino Final EIR), and the attached analysis, the City has concluded that the proposed project modifications would not result in any new environmental impacts not previously disclosed in the 2009 Main Street Cupertino Final EIR and would not result in a substantial increase in the magnitude of any significant environmental impacts previously identified in the EIR. For these reasons, an addendum to the Main Street Cupertino EIR has been prepared for the proposed project modifications.

This Addendum is not required to be circulated for public review; however, it is available to the public for review at the City of Cupertino at 10300 Torre Avenue, Cupertino, California during normal business hours and will be attached to the Main Street Cupertino Final EIR, pursuant to CEQA Guidelines §15164(c).

# TABLE OF CONTENTS

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	<u>Page</u>
SECTION 1.0 INTRODUCTION AND PURPOSE .....	1
SECTION 2.0 PROJECT INFORMATION.....	2
2.1 PROJECT TITLE.....	2
2.2 PROJECT LOCATION .....	2
2.3 LEAD AGENCY CONTACT .....	2
2.7 CHANGES TO THE PROJECT DESCRIPTION.....	6
2.8 2012 SCHEME VARIANTS .....	12
SECTION 3.0 ENVIRONMENTAL SETTING, CHECKLIST, AND DISCUSSION OF IMPACTS .....	13
3.1 AESTHETICS.....	14
3.2 AGRICULTURE AND FORESTRY RESOURCES .....	18
3.3 AIR QUALITY .....	20
3.4 BIOLOGICAL RESOURCES .....	30
3.5 CULTURAL RESOURCES .....	34
3.6 GEOLOGY AND SOILS.....	36
3.7 GREENHOUSE GAS EMISSIONS.....	39
3.8 HAZARDS AND HAZARDOUS MATERIALS.....	41
3.9 HYDROLOGY AND WATER QUALITY .....	43
3.10 LAND USE .....	48
3.11 MINERAL RESOURCES .....	54
3.12 NOISE AND VIBRATION .....	55
3.13 POPULATION AND HOUSING.....	60
3.14 PUBLIC SERVICES .....	62
3.15 RECREATION .....	65
3.16 TRANSPORTATION.....	67
3.17 UTILITIES AND SERVICE SYSTEMS .....	83
3.18 MANDATORY FINDINGS OF SIGNIFICANCE.....	87
SECTION 4.0 REFERENCES .....	91
SECTION 5.0 LEAD AGENCY AND CONSULTANTS.....	92

## Figures

Figure 1: Regional Map .....	3
Figure 2: Vicinity Map.....	4
Figure 3: Aerial Photograph.....	5
Figure 4: 2012 Scheme 1 Conceptual Site Plan .....	7
Figure 5: 2012 Scheme 2 Conceptual Site Plan .....	8

# TABLE OF CONTENTS

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Page

## Tables

Table 1: Comparison of 2008 Development Schemes and 2012 Modifications.....	6
Table 2: 2012 Scheme Variants .....	12
Table 3: Changes in Air Quality Analysis Methodology or Thresholds Since the 2009 Final EIR ...	22
Table 4: Bay Area 2010 Clean Air Plan Applicable Control Measures .....	23
Table 5: Comparison of Average Operational Emissions Using 2011 BAAQMD Methodology .....	25
Table 6: Summary of Soil Cut, Fill, and Off-Haul .....	26
Table 7: Summary of Construction-Related Emissions .....	26
Table 8: Summary of Health Risk At Nearby Residence from Project Construction.....	28
Table 9: Summary of Health Risks from TAC Sources within 1,000 Feet of Proposed Residences .	29
Table 10: Summary of Project Operational Greenhouse Gas Emissions Using Current BAAQMD Methodology.....	40
Table 11: Summary of Impervious and Pervious Surfaces On-Site .....	45
Table 12: Summary of Project Trip Generation.....	70
Table 13: Comparison of Intersection Levels of Service Under Background and Project Conditions .....	72
Table 14: Summary of Significantly Impacted Intersections Under Project Conditions .....	74
Table 15: Freeway Segment Levels of Service Under Existing Conditions (2008) and Project Conditions.....	76
Table 16: Summary of Significantly Impacted Freeway Segments Operating at LOS F Under Project Conditions.....	77
Table 17: Summary of Parking Supply Estimates .....	80

## Appendices

Appendix A: Air Quality and Greenhouse Gas Emissions Modeling Results	
Appendix B: School Impact Study	
Appendix C: Traffic Studies	
Appendix D: Water Supply Assessment Amendment	
Appendix E: Memorandum Regarding Retail and Parking Options	
Appendix F: Additional Restaurant Sensitivity Analysis	

## SECTION 1.0 INTRODUCTION AND PURPOSE

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This Addendum of environmental impacts is being prepared to conform to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 *et. seq.*), and the regulations and policies of the City of Cupertino.

This Addendum to the City of Cupertino Final Environmental Impact Report for the Main Street Cupertino project (State Clearinghouse # 2008082058) prepared in 2008 and certified by the City Council in January 2009 (hereinafter referenced as the 2009 Final EIR) evaluates the potential environmental impacts which might reasonably be anticipated to result from the proposed modifications to the Main Street Cupertino project which include adjustments to the intensity of land uses on-site. The City of Cupertino is the Lead Agency under CEQA and has prepared this Addendum to address the impacts of implementing the revised project.

The land uses proposed (retail, office, residential, hotel, and park) are the same as the mix of land uses analyzed in the certified 2009 Final EIR. This Addendum evaluates the project specific environmental impacts of the revised project compared to the impacts addressed in the 2009 Final EIR. The CEQA Guidelines (§15164 and 15162) describe a process for evaluating the potential significance of new information. The process can reach one of three conclusions:

1. The new information does not result in the identification of a new significant environmental impact not already addressed in the EIR, and it does not identify a substantial increase in the magnitude of a previously-identified significant environmental impact. Therefore, no additional environmental review is required.
2. The new information does result in identification of a new significant environmental impact not previously disclosed in the EIR and/or it identifies a substantial increase in the magnitude of a previously-identified significant environmental impact. Therefore, preparation of a Supplemental EIR is required.
3. In order to make a determination of whether the existing EIR is adequate or whether preparation of a Supplemental EIR is warranted, further technical studies are required.

Preparation of an addendum to a previously certified EIR is appropriate if some changes or additions are necessary but none on the conditions described above calling for preparation of a subsequent EIR have occurred.

Because the previously certified Final EIR addressed the impacts of developing the entire Main Street Cupertino property, the scope of this Addendum focuses on determining the extent to which the impacts of the currently proposed modifications are the same or different than those addressed in the previous EIR.

## **SECTION 2.0 PROJECT INFORMATION**

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### **2.1 PROJECT TITLE**

Main Street Cupertino Project

### **2.2 PROJECT LOCATION**

The 18.7-acre project site is located at the northwest quadrant of Stevens Creek Boulevard and Tantau Avenue in the City of Cupertino. The project site is bounded by Stevens Creek Boulevard to the south, Tantau Avenue to the east, Vallco Parkway to the north, and a parking lot and residences to the west. Finch Avenue extends through the project site. Regional and vicinity maps of the project site are shown in Figures 1 and 2. An aerial photograph showing surrounding land uses is shown on Figure 3.

### **2.3 LEAD AGENCY CONTACT**

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Senior Planner  
Community Development Department  
City of Cupertino  
10300 Torre Avenue  
Cupertino, CA 95014  
(408) 777-3313

### **2.4 PROPERTY OWNER/PROJECT PROPONENT**

Sand Hill Property Company  
Kevin Dare, Project Manager  
489 South El Camino Real  
San Mateo, CA 94402  
(650) 344-1500

### **2.5 ASSESSOR'S PARCEL NUMBERS**

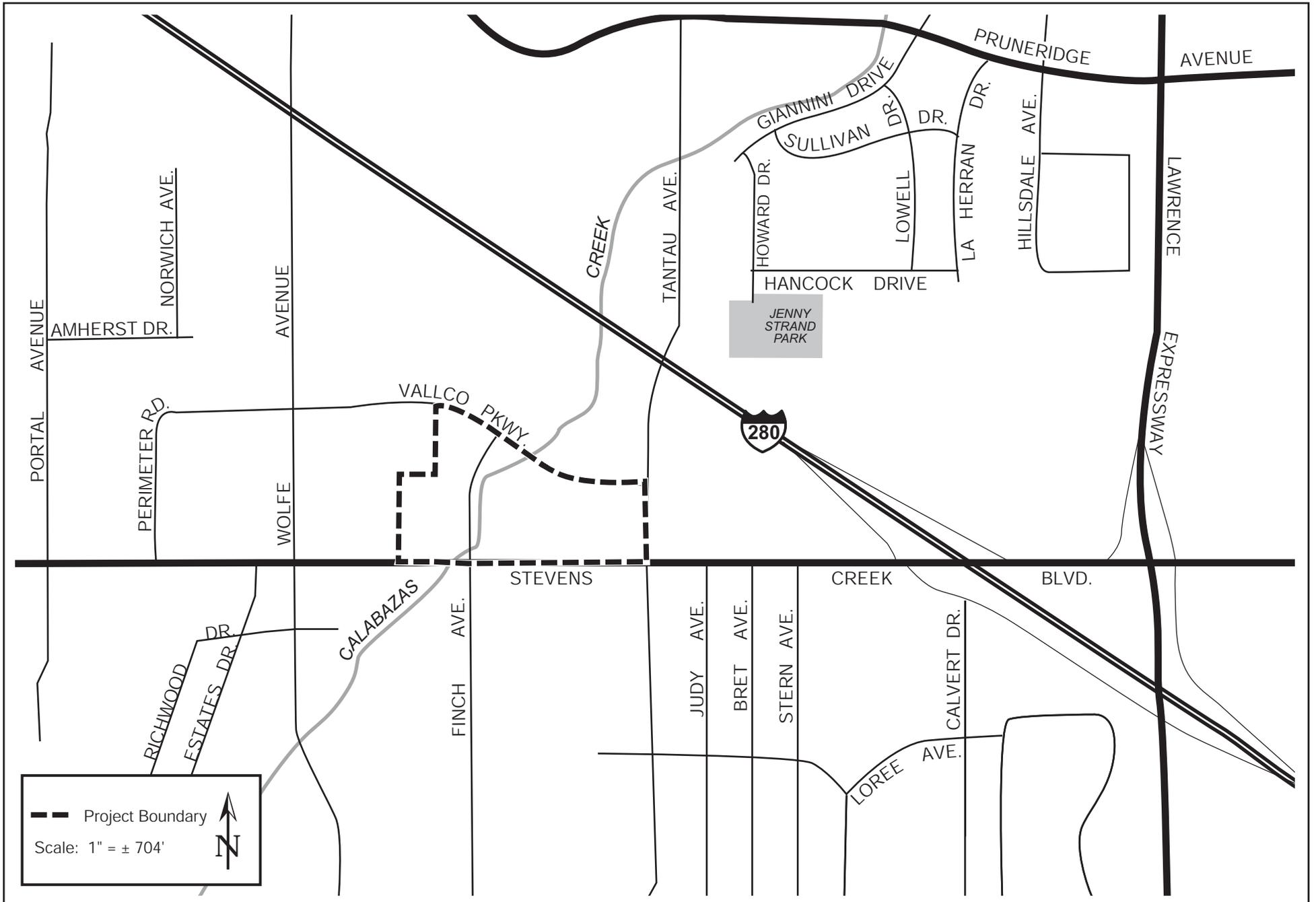
316-20-078, 316-20-079, and 316-20-085

### **2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT**

General Plan Designation: Heart of the City Specific Plan Area

Zoning District: *Planned Development (General Commercial, Professional Office, Light Industrial, and Residential), P(CG, OP, ML, Res) Heart of the City Specific Plan Area*





VICINITY MAP

FIGURE 2



## 2.7 CHANGES TO THE PROJECT DESCRIPTION

The project applicant is proposing modifications to the mixed use project analyzed in the certified 2009 Final EIR. These modifications are outlined in Table 1 below and compared to the project components analyzed in the 2009 Final EIR.<sup>1</sup> The proposed modifications do not change the land uses proposed on-site; however, the intensity of each land use is different when compared to the schemes analyzed in 2008. The following two development schemes were evaluated in the 2009 Final EIR to cover the mix of uses anticipated at the time:

- 2008 Scheme 1 allowed up to 295,000 square feet of retail uses (including 150,000 square feet of general commercial uses and a 145,000 square foot athletic club), 100,000 square feet of office uses, a hotel with 150 rooms, and 160 senior housing units.
- 2008 Scheme 2 allowed up to 146,500 square feet of retail uses, 205,000 square feet of office uses, a hotel with 250 rooms, and 160 senior housing units.

Like in the 2009 Final EIR, two 2012 Schemes are evaluated with variations in the square footage or residential units proposed on the site. In both of the 2012 Schemes, the amount of office use proposed would be greater than evaluated under either scheme in 2008. In the residential land use category, market rate apartments are a possible residential use under consideration in the 2012 schemes. Conceptual site plans of *2012 Scheme 1* and *2012 Scheme 2* are shown in Figures 4 and 5, respectively.

Scheme	General Commercial		Office (sf)	Residential (units)	Hotel (rooms)	Open Space with Public Easement (ac)
	Retail (sf)	Athletic Club or Additional Retail (sf)				
2008 Scheme 1	150,000	145,000	100,000	160 Senior	150	1.63
<i>2012 Scheme 1</i>	78,700	60,000	<b>292,000</b>	<i>143 Senior OR 120 Market Rate Apartments</i>	<b>180</b>	<i>1.55</i>
2008 Scheme 2	146,500	---	205,000	160 Senior	250	1.63
<i>2012 Scheme 2</i>	92,200	---	<b>292,000</b>	<i>143 Senior AND 105 Market-Rate Apartments</i>	<i>180</i>	<i>1.55</i>

Note: **Bold** indicates that the comparable 2012 Scheme would have increased square footage or units in a land use category. Development intensity in the other land use categories would be less or the same.

<sup>1</sup> The 2012 schemes outlined in Table 1 and evaluated in **Section 3.0** represent the maximum amount of trip generation and construction impacts envisions under the revised mixed-use project. Variations of the proposed modifications that have equal or less development in all land use categories would not result in greater environmental effects than those analyzed in this Addendum. In addition, the scheme variants identified in **Section 2.8** of this Addendum would result in essentially similar environmental effects as *2012 Scheme 1* or *2012 Scheme 2*.



TABULATION

OFFICE	289,750 SF
RETAIL	92,200 SF
HOTEL	180 ROOMS (134,568 SF)
MARKET RATE HOUSING	105 UNITS (104,348 SF)
SENIOR HOUSING	143 UNITS (121,156 SF)

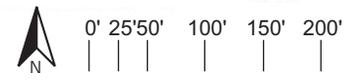
PARKING 2,075 STALLS

STREET	87 STALLS
SURFACE	248 STALLS
GARAGE 1	1,059 STALLS
GARAGE 2	328 STALLS
BELOW MARKET RATE HOUSING	210 STALLS
BELOW SENIOR HOUSING	143 STALLS
<b>TOTAL PARKING</b>	<b>2,075 STALLS</b>

OFFICE	1,150 STALLS	4 / 1000
RETAIL	347 STALLS	3.8 / 1000
HOTEL	225 STALLS	1.25 / ROOM
MARKET RATE HOUSING	210 STALLS	2 / UNIT
SENIOR HOUSING	143 STALLS	1 / UNIT
<b>TOTAL PARKING REQUIRED</b>	<b>2,075 STALLS</b>	



Source: Kenneth Rodrigues & Partners, Inc., 02-28-12



2012 SCHEME 2 CONCEPTUAL SITE PLAN

FIGURE 5

The 2012 schemes are the same in the area of the site east of Finch Avenue. The difference between the 2012 schemes is the mix of proposed development along the western boundary of the site, west of Finch Avenue. In *2012 Scheme 1*, an athletic club (or retail space) would occupy the northwest corner of Vallco Parkway and Finch Avenue. In *2012 Scheme 2*, the northwest corner of the project site would be occupied with a residential building with market-rate apartments and a retail building. A residential building with senior units, retail building(s), and open space would be located along the remainder of the site's western boundary, though the layout of these uses would be different between the two schemes. The approximate building footprints in this area are also shown on Figures 4 and 5.

### 2.7.1 Proposed Land Uses

The basic land uses proposed on the site are the same as those analyzed in the certified 2009 Final EIR. Market-rate apartments are a residential component in *2012 Scheme 2* that was not previously addressed in the 2009 Final EIR. A description of each proposed use is provided below.

- **Retail Uses** – Under both 2012 schemes, retail uses would be located throughout the site in stand-alone, one-story (up to 35 feet) buildings ranging from 1,500 to 40,000 square feet. The retail uses are generally proposed to front Vallco Parkway and Stevens Creek Boulevard, and surround the town square (refer to Figures 4 and 5).<sup>2</sup>
- **Athletic Club** (*2012 Scheme 1* only) – An athletic club, if developed under *2012 Scheme 1*, would be located at the northwest corner of the project site. The athletic club would be two stories (up to 45 feet) in height with one level of below ground parking underneath the building, and include two outdoor pools.
- **Office Uses** – Up to 292,000 square feet of office uses are proposed in each 2012 scheme. As shown on Figures 4 and 5, the office uses could be grouped into two, four-story buildings at the southeastern corner of the project site. Each office building could be 144,875 square feet in size.
- **Residential Uses** – The proposed *2012 Scheme 1* includes up to 143 senior housing units (and no market-rate apartment units). As shown on Figure 4, the senior housing units could be located in one, four-story (up to 60 feet) building with one level of below ground parking underneath the building.

*2012 Scheme 2* includes up to 143 senior housing units and up to 105 market-rate apartment units on the western side of the site. As shown on Figure 5, the senior housing units could be located in one, four-story (up to 60 feet) building with one level of below ground parking underneath the building. The market-rate apartment units could be grouped into one, four-story (up to 60 feet) building with one level of below ground parking underneath the building.

<sup>2</sup> The analysis in the 2009 Final EIR and this Addendum assume up to 10 percent restaurant use in the retail/commercial square footage. In the event more than 10 percent of restaurant uses is proposed in the future, supplementary environmental review would be required to evaluate environmental effects (including transportation level of service, air quality emissions, and greenhouse gas impacts). The analyses provided in Appendices E and F include possible project scenarios with increased percentage of restaurant use that would not result in new or more substantial transportation level of service, air quality emissions, or greenhouse gas impacts.

- **Hotel Use** – Both 2012 schemes include a hotel with up to 180 rooms. The hotel would be located at the southeast corner of Vallco Parkway and Finch Avenue. The hotel could be five stories (up to 60 feet) in height and include an outdoor pool area (refer to Figures 4 and 5).
- **Open Space with a Public Easement** – Both 2012 schemes include a 0.75-acre park and 0.8-acre town square. The town square is proposed on Finch Avenue. The 0.75-acre park would be located in the southwest corner of the project site fronting Stevens Creek Boulevard in *2012 Scheme 1* and set in from Stevens Creek Boulevard in the *2012 Scheme 2* (refer to Figures 4 and 5). The proposed park and town square would have public easements. The proposed open space is intended to be local serving and utilized by the proposed project and surrounding neighborhood. The specific design and uses within the open space are unknown at this time and will be reviewed and determined by the City prior to final occupancy release of the project. For this reason, the open space design and uses are not analyzed in this Addendum. It is anticipated that passive quasi-public uses would be proposed in the park and town square and would not require additional environmental review. In the event more intense or active uses are proposed, appropriate environmental review would be completed as applicable.

### **2.7.2 Plazas and Landscaping**

Both 2012 schemes include landscaped plazas on the south side of the hotel and on the north side of the retail uses proposed on Stevens Creek Boulevard. The proposed landscaping for both schemes includes trees and vines. The revised project (under either scheme) proposes to plant two field grown oak trees<sup>3</sup> on the project site at Stevens Creek Boulevard and Finch Avenue.

### **2.7.3 Green Building Features**

The revised project (under either scheme) includes design features outlined in the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system to be LEED certified. The landscape design and green building features proposed are the same as what was proposed in 2008.

### **2.7.4 Roadway Improvements**

The revised project includes similar roadway improvements as the 2008 project analyzed in the certified 2009 Final EIR. These roadway improvements include:

#### **Public Street Improvements**

- Narrowing the south side (eastbound direction) of Vallco Parkway along the project site frontage from three lanes to one lane and adding angled parking on the south side of Vallco Parkway along the project site frontage.
- Removing the existing landscape median in the north segment of Finch Avenue and adding angled parking spaces.

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<sup>3</sup> A field grown tree refers to a tree that is fully mature.

## **Public Street Abandonment and Private Street Improvements**

- Abandoning the middle segment of Finch Avenue as a public street and maintaining it as a part of the development. This segment would be replaced with a 0.8-acre town square bordered by driveways and parking (see Figures 4 and 5).

Both 2012 schemes include five driveways (versus six driveways proposed for the 2008 project) on Vallco Parkway and three driveways on Stevens Creek Boulevard. The number and location of driveways on Vallco Parkway east of Finch Avenue and on Stevens Creek Boulevard would shift slightly from conceptual site plans for Scheme 1 and Scheme 2 in the 2009 Final EIR.

### **2.7.5 Site Access**

Pedestrian access to the project site would be provided on sidewalks and paths around the perimeter of the site and throughout the project site, similar to the access addressed in the 2009 Final EIR. Vehicular access to the project site would be similar to that evaluated in the 2009 Final EIR. Access would be provided from five driveways on Vallco Parkway and three driveways on Stevens Creek Boulevard. The driveways lead to surface parking lots and parking garages (refer to Figure 4 and 5).

### **2.7.6 Parking**

In both 2012 schemes, parking for the retail, office, and hotel uses would be provided in surface parking lots and two parking garages. Parking garage 1 (see Figures 4 and 5) would have four levels of above ground parking (up to 40 feet tall) and one level of below ground parking. Parking garage 2 (see Figures 4 and 5) would have three levels of above ground parking (up to 30 feet tall) and one level of below ground parking.

Parking for the proposed athletic club (*2012 Scheme 1* only) and residences would be provided beneath their respective buildings in one level below ground parking garages.

A breakdown of the parking supply for each scheme is provided on Figures 4 and 5.

### **2.7.7 Utility Improvements**

The revised project includes the same utility improvements as identified in the certified 2009 Final EIR. The revised project proposes to connect to existing utility (e.g., water, storm drain, and sewer) lines and install two new 24-inch storm drain lines to the existing Calabazas Creek culvert. In addition, the revised project proposes to complete a sanitary sewer flow test prior to final recordation of the subdivision map. If it is determined that the project would exceed the capacity of the existing sewer lines at or downstream of the site, the project proposes to up-size the sewer lines and connections to provide capacity to serve the project in coordination with the City of Cupertino Department of Public Works and the Cupertino Sanitary District and sewer line improvements are anticipated to take place within existing street right-of-ways. This condition was also included in the 2009 Final EIR.

## 2.8 2012 SCHEME VARIANTS

The two schemes (*2012 Scheme 1* and *2012 Scheme 2*) specifically evaluated in the following section (**Section 3.0 Environmental Setting, Checklist, and Discussion of Impacts**) represent the maximum amount of trip generation and construction impacts envisioned under the revised mixed-use project. *2012 Scheme 1* would result in the maximum amount of trip generation and *2012 Scheme 2* would result in the maximum amount of construction emissions, primarily due to greater painted surface areas.

Other mixed use development variations that have been identified by the applicant or City staff that would result in the same or fewer impacts as *2012 Scheme 1* or *2012 Scheme 2* are noted in Table 2. Several of the variants listed in Table 2 [Variants 3a(1), 3a(2), and 3b] could have more hotel rooms (up to 250) than either 2012 schemes and the hotel could be one story taller, but would not exceed the maximum building height of 60 feet addressed in the 2009 Final EIR. The variants that do not propose market-rate apartment units would not generate students who would use school facilities.

Overall, these variants would not generate substantially more traffic or result in other environmental effects greater than either 2012 scheme (refer to Appendices A, C, and D). The environmental analysis in this Addendum to the 2009 Final EIR, therefore, could also apply for the scheme variants in Table 2. In other words, these variations would represent essentially similar environmental effects and none of the conditions described in Section 15162 of the CEQA Guidelines that would require preparation of a subsequent EIR would be met.

Table 2: 2012 Scheme Variants								
	Land Uses							Parking Spaces
	Retail (sf)	Athletic Club (sf)	Office (sf)	Residential (units)		Hotel (rooms)	Open Space with Public Easement (ac)	
				Senior	Market-Rate			
<b>Variants Resulting in Similar or Less Environmental Impacts Than 2012 Scheme 1:</b>								
<i>2012 Scheme 1</i>	78,700	60,000*	292,000		120*	180	1.55	1,956*
• Variant 1a	69,700	60,000	292,000	143	---	180	1.55	2,191
• Variant 1b	78,700	60,000	292,000	143	---	180	1.55	2,159
• Variant 3a(1)	78,700	60,000	289,000	143	---	250	1.55	2,159
• Variant 3a(2)	138,700	---	265,000	---	---	250	1.55	1,956
• Variant 3b	69,700	60,000	292,000	143	---	250	1.55	2,191
• Option A(1) <sup>†</sup>	138,700	---	292,000	143	---	180	1.55	2,131
<b>Variants Resulting in Similar or Less Environmental Impacts Than 2012 Scheme 2:</b>								
<i>2012 Scheme 2</i>	92,200	---	292,000	143	105	180	1.55	2,074
• Variant 2a	83,200	---	292,000	143	105	180	1.55	2,107
Notes: *Under <i>2012 Scheme 1</i> , the 60,000 square foot athletic club can be replaced with 60,000 square feet of additional retail space; and the 120 market-rate apartments can be replaced with 143 senior units. If 60,000 square feet of additional retail and 120 market-rate apartments are constructed, 1,956 parking spaces would be provided. If a 60,000 square foot athletic club and 143 senior housing units were constructed instead, 2,159 parking spaces would be provided. <sup>†</sup> Refer to Appendix E for a site plan and analysis of Option A(1).								

## **SECTION 3.0 ENVIRONMENTAL SETTING, CHECKLIST, AND DISCUSSION OF IMPACTS**

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In accordance with CEQA Guidelines Section 15162 and 15164, this Addendum tiers from the Main Street Cupertino Final EIR prepared in 2008 and certified in January 2009 and evaluates the extent to which the impacts of the currently proposed modifications are the same or different than those addressed in the previous EIR and whether a new significant environmental effect or a substantial increase in the severity of previously identified significant effects would occur. A copy of the 2009 Final EIR may be reviewed at the City of Cupertino Community Development Department at 10300 Torre Avenue, Cupertino, California during normal business hours.

This section, **Section 3.0 Environmental Setting, Checklist, and Discussion of Impacts**, describes the existing environmental conditions on and near the project site, as well as environmental impacts associated with the revised project. The environmental checklist, as recommended in the California Environmental Quality Act (CEQA) Guidelines, was used to compare the environmental impacts of the “Proposed Project” (i.e., revised project) with those of the “Approved Project” (i.e., development approved in the 2009 Final EIR) and to identify whether the revised project would likely result in new significant environmental impacts. The right-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified at the end of this section. Mitigation measures are identified for all significant project impacts. “Mitigation Measures” are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guideline 15370).

**3.1 AESTHETICS**

**3.1.1 Existing Setting**

The aesthetics of the project site and surrounding area have not substantially changed since the certification of the 2009 Final EIR. Most of the project site is undeveloped. An area west of Finch Avenue is paved. The project site is vacant with trees and minimal landscaping along the perimeter. Since the certification of the 2009 Final EIR, the large, dead valley oak tree and an Aleppo pine tree were removed from the site due to damage from inclement weather. Please refer to the 2009 Final EIR for a complete description of the existing aesthetic conditions.

**3.1.2 Environmental Checklist and Discussion of Impacts**

AESTHETICS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
3) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

Aesthetic values are, by their nature, very subjective. Opinions as to what constitutes a degradation of visual character will differ among individuals. One of the best available means for assessing what constitutes a visually acceptable standard for new buildings are the City’s design standards and implementation of those standards through the City’s design process. The following discussion addresses the proposed changes to the visual setting of the project area and factors that are part of the community’s assessment of the aesthetic values of a project’s design.

### 3.1.2.1 *Change in Visual Character*

Like the 2008 project, the revised 2012 project (both schemes) would replace the open, urban vacant project site with multiple one- to five-story structures up to 60 feet tall, surface parking areas, plazas, and urban landscaping. Some of the ash trees along the northern boundary of the site and other trees on-site are in poor health and/or within the footprint of with the development would be removed (refer to **Section 3.4 Biological Resources**). However, the project includes replacement trees and additional landscaping (refer to **Section 3.4 Biological Resources**).<sup>4</sup>

#### **Future Streetscape on Vallco Parkway and Tantau Avenue**

The streetscape on Vallco Parkway and Tantau Avenue under the revised project would be similar to that of the 2008 project analyzed in the 2009 Final EIR. As shown on Figure 4, *2012 Scheme 1* could have a two-story (up to 45 feet tall) athletic club (or a one-story, 35 foot tall retail building) at the northwest corner of the site, a five story (up to 60 foot tall) hotel, a four-story (up to 50 feet tall) parking garage with retail uses on the ground floor, a three-story (up to 40 feet tall) parking garage with retail uses on the ground floor, and a four-story (up to 60 feet tall) office building fronting Vallco Parkway. The four-story office building on Vallco Parkway would also front Tantau Avenue.

The streetscape on Vallco Parkway and Tantau under *2012 Scheme 2* would be similar to the streetscape under *2012 Scheme 1* except the three-story athletic club (or one-story retail building) would be replaced with a four-story (up to 60 feet) residential building (refer to Figure 5).

Under both 2012 schemes, the proposed buildings would be set back a minimum of 15 feet from Vallco Parkway and 35 feet from Tantau Avenue. New landscaping, including trees, would be planted along Vallco Parkway and Tantau Avenue for screening and to soften views of the development from public streets. In addition, parallel parking is proposed on Vallco Parkway along the project frontage.

#### **Future Streetscape on Stevens Creek Boulevard**

The streetscape on Stevens Creek Boulevard under the revised project would be similar to that of the 2008 project analyzed in the 2009 Final EIR. As shown on Figure 4, *2012 Scheme 1* includes open space (park), one-story (up to 35 feet tall) retail buildings, and two four-story (up to 60 feet tall) office buildings fronting Stevens Creek Boulevard.

The streetscape on Stevens Creek Boulevard under *2012 Scheme 2* would be similar to the streetscape under *2012 Scheme 1* except the park would switch locations with the proposed senior housing. Under *2012 Scheme 2*, a four-story (up to 60 feet tall) residential building for seniors would be located at the southwest corner of the site with an attached retail building fronting Stevens Creek Boulevard.

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<sup>4</sup> The ash trees to be removed are dead or are considered to be in poor condition and beyond recovery. Source: Arbor Resources. [A Tree Inventory and Review of the Proposed Development at Stevens Creek Boulevard and Finch Avenue](#). 30 April 2008.

Under both 2012 schemes, the proposed buildings would be set back a minimum of 35 feet from Stevens Creek Boulevard. New landscaping, including trees, would be planted along Stevens Creek Boulevard for screening and to soften views of the development from the street.

### **Future Streetscape on Finch Avenue**

The streetscape on Finch Avenue under the revised project would be similar to that of the 2008 project analyzed in the certified 2009 Final EIR. The revised project, under both schemes, would abandon the middle portion of the segment of Finch Avenue that passes through the project site and replace it with a 0.8-acre open space area (town square) that would have an easement for public use and access. Two one-story (up to 35 feet tall) retail buildings are proposed at the north and south end of the town square. In both schemes, a private drive with on-street parking would be constructed around the proposed town square. Vehicles traveling on Finch Avenue would enter this private drive and be circulated around the town square (refer to Figures 4 and 5). In addition, in both schemes, diagonal parking is proposed on the east side on the northern segment of Finch Avenue, north of the proposed town square and south of Vallco Parkway.

The final design of the revised project would be evaluated for consistency with the City's standards as a part of Design Review (Architectural and Site Approval) process required for approval of the specific project design, if the revised project is approved. This review considers the relationship of the proposed buildings with the surrounding land uses and the streets, compliance with adopted height limits, setbacks, architectural, and landscaping design guidelines (including those in the South Vallco Park Master Plan), and the overall quality and compatibility of the building materials and architecture with the surrounding area.

The revised project would not result in a new or more substantial significant impact to the visual character of the site and surroundings than disclosed in the certified 2009 Final EIR.

#### **3.1.2.2 *Impact to Scenic Views***

Scenic views from the project vicinity are limited. In addition, views of the site are limited to the immediate area. The foothills west and south of the site are generally obscured by existing development and landscape trees. As with the 2008 project, the development of the revised project (either scheme) would not substantially block scenic views or have a substantial effect on a scenic vista. The revised project would not result in a new or more substantial significant impact to scenic views than disclosed in the certified 2009 Final EIR.

### **3.1.2.3**      *Light and Glare*

The revised project (either scheme) does not include substantial reflective glass surfaces that could result in glare impacts. The project would have security lighting around buildings and surface parking areas similar to existing and approved lighting on other properties along Stevens Creek Boulevard. At the time of final design review, a lighting plan will be reviewed by the Director of Community Development to assure that lighting is directed downward and would not spill over onto adjacent properties. The revised project would not result in a new or more substantial significant light and glare impact than disclosed in the certified 2009 Final EIR.

### **3.1.3**      Conclusion

The revised project would not result in new significant or more substantial aesthetic impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.2 AGRICULTURE AND FORESTRY RESOURCES**

**3.2.1 Existing Setting**

The agricultural resources setting in the project area has not substantially changed since the certification of the 2009 Final EIR. The project site is not used for agricultural or forestry purposes, nor is it subject of a Williamson Act contract. The site is located within an urban area of Cupertino and there is no property used for agricultural or forestry purposes adjacent to the project site.

**3.2.2 Environmental Checklist and Discussion of Impacts**

AGRICULTURAL AND FOREST RESOURCES						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
4) Result in a loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1

AGRICULTURAL AND FOREST RESOURCES						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

As discussed above and in the 2009 Final EIR, the project site is not designated as farmland or used for agricultural or forestry purposes. The 2009 Final EIR did not identify any impacts to agricultural or forest resources.

### 3.2.3 Conclusion

The revised project would not result in new significant or more substantial impacts to agriculture or forestry resources than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.3 AIR QUALITY**

**3.3.1 Existing Setting**

The existing air quality conditions have not substantially changed since the certification of the 2009 Final EIR. Please refer to the 2009 Final EIR for a complete description of the existing air quality conditions. Since the certification of the 2009 Final EIR, however, the Bay Area Air Quality Management District (BAAQMD) has updated its CEQA Air Quality Guidelines (May 2011), which includes updated methodology and BAAQMD thresholds for analyzing air quality impacts. Specifically, BAAQMD has:

- Updated the methodology and thresholds for analyzing operational emission impacts;
- Identified a new numeric threshold for significant construction-related emissions;
- Identified a new methodology and numeric threshold for health risk from construction emissions; and
- Updated the methodology for determining toxic air contaminant impacts.

BAAQMD is the primary agency responsible for assuring that the National and California Ambient Air Quality Standards are attained and maintained in the Bay Area. BAAQMD’s most recently adopted Clean Air Plan is the 2010 Clean Air Plan (2010 CAP). The 2010 CAP provides an updated comprehensive plan to improve Bay Area air quality and protect public health, taking into account future growth projections to 2035.

**3.3.2 Environmental Checklist and Discussion**

AIR QUALITY						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3

AIR QUALITY						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
4) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,3
5) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

**3.3.2.1 2009 Final EIR Analysis and Impacts**

The 2009 Final EIR identified that the project would result in significant air quality impacts related to:

- Operational emissions of criteria pollutants (ROx, NOx and PM<sub>10</sub>); and
- Short-term construction-related emissions (dust and construction equipment exhaust).

Other air quality issues evaluated in the 2009 Final EIR and found to be less than significant included:

- Conflicts with the adopted Clean Air Plan;
- Local emissions of carbon monoxide;
- Toxic air contaminants from nearby roadways impacting new residents; and
- Odors.

As discussed in Section 3.3.1, since the certification of the 2009 Final EIR, BAAQMD has updated its methodology and thresholds for analyzing air quality impacts. The analysis completed in the 2009 Final EIR compared to the current BAAQMD methodology and thresholds is summarized in Table 3.

	<b>Evaluated in 2008</b>	<b>Updated Methodology</b>	<b>Updated Thresholds</b>	<b>New Thresholds</b>
Consistency with Clean Air Plan	✓	✓	✓	---
Operational Emissions	✓	✓	✓	---
Construction-Related Emissions	✓	✓	---	✓
Health Risk from Construction Emissions	✓	✓	---	✓
Toxic Air Contaminants Impacts to Project Residents from Roadways	✓	✓	---	---

### **Superior Court Case Regarding 2011 BAAQMD Guidelines**

In December 2010, the California Building Industry Association (BIA) filed a lawsuit in Alameda County Superior Court challenging toxic air contaminants and PM<sub>2.5</sub> thresholds adopted by BAAQMD in its CEQA Air Quality Guidelines (*California Building Industry Association v. Bay Area Air Quality Management District*, Alameda County Superior Court Case No. RG10548693). One of the identified concerns is inhibiting infill and smart growth in the urbanized Bay Area. On March 5, 2012, the Superior Court found that the adoption of thresholds by the BAAQMD in its CEQA Air Quality Guidelines is a CEQA project and BAAQMD is not to disseminate officially sanctioned air quality thresholds of significance until BAAQMD fully complies with CEQA. No further findings or rulings on the thresholds in the BAAQMD CEQA Air Quality Guidelines were made. At the time of publication of this Addendum, there is no indication whether BAAQMD would appeal any final adverse ruling, or instead comply with the writ directing it not to enforce its thresholds while it prepares an environmental review for the BAAQMD CEQA Air Quality Guidelines.

The City understands the effect of the lawsuit to be that BAAQMD may eventually have to prepare an environmental review document before adopting the same or revised thresholds. However, the ruling in the case does not equate to a finding that the quantitative metrics in the BAAQMD thresholds are incorrect or unreliable for meeting goals in the 2010 CAP. Moreover, as noted above, the determination of whether a project may have a significant effect on the environment is subject to the discretion of each lead agency, based upon substantial evidence. Notwithstanding the BIA lawsuit, which has no binding or preclusive effect on the City of Cupertino's discretion to decide on the appropriate thresholds to use for determining the significance of air quality impacts, the City has carefully considered the thresholds prepared by BAAQMD and regards the thresholds listed below to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and PM<sub>2.5</sub>. Evidence supporting these thresholds has been presented in the following documents: a) Bay Area Air Quality Management District. CEQA Air Quality Guidelines, Appendix D. May 2011; b) California Air Pollution Control Officers Association. Health Risk Assessments for Proposed Land Use Projects. July 2009; and c) California Environmental Protection Agency, California Air Resources Board. Air Quality and Land Use Handbook: A Community Health Perspective. 2005.

The following air quality impact discussion of project emissions, including construction –related emissions and toxic air contaminants impacts to project residents from roadways, uses the 2011 BAAQMD CEQA Air Quality Guidelines and methodology to provide a conservative assessment of whether any new significant impacts would result from the proposed revisions to the Main Street Cupertino project.

### 3.3.2.2 Consistency with the Clean Air Plan

Since the certification of the 2009 Final EIR, the Clean Air Plan (CAP) for the Bay Area, including emission control measures, has been updated.

As discussed in the 2009 Final EIR, determining consistency of an individual project with the current CAP involves assessing whether applicable control measures contained in the CAP are implemented. The 2010 Bay Area CAP includes updated control measures for the Bay Area. These control measures are organized into five categories: Stationary Source Measures, Mobile Source Measures, Transportation Control Measures (TCMs), Land Use and Local Impact Measures, and Energy and Climate Measures. Applicable control measures and the revised project’s consistency with them are summarized in Table 4. The revised project is consistent with the control measures and development of mixed uses at this urban infill site would not interfere with implementation of the 2010 CAP.

<b>Table 4: Bay Area 2010 Clean Air Plan Applicable Control Measures</b>		
<b>Control Measures</b>	<b>Description</b>	<b>Project Consistency</b>
<b><i>Transportation Control Measures</i></b>		
Implement Safe Routes to Schools and Safe Routes to Transit	Facilitate safe routes to schools and transit by providing funds and working with transportation agencies, local governments, schools, and communities to implement safe access for pedestrians and cyclists.	The traffic report completed for the project (Appendix C) analyzed the adequacy of pedestrian, bicycle, and transit facilities serving the site. As identified in <b>Section 3.16 Transportation</b> , the project will include measures to improve pedestrian connectivity and mitigate an impact to a bicycle facility. For these reasons, the project is consistent with this control measure.
Improve Bicycle Access and Facilities	Expand bicycle facilities serving transit hubs, employment sites, educational and cultural facilities, residential areas, shopping districts, and other activity centers.	The project site is served by existing bicycle lanes. The project includes bicycle parking per the requirements outlined in the City’s Municipal Code 19.100 (refer to <b>Section 3.16 Transportation</b> ). The project is consistent with this control measure.
Support Local Land Use Strategies	Promote land use patterns, policies, and infrastructure investments that support mixed-use, transit-oriented development that reduce motor	The project proposes a mix of retail, office, and residential uses on-site. As discussed in <b>Section 3.16 Transportation</b> , the project site is served by existing transit, pedestrian,

<b>Table 4: Bay Area 2010 Clean Air Plan Applicable Control Measures</b>		
<b>Control Measures</b>	<b>Description</b>	<b>Project Consistency</b>
	vehicle dependence and facilitate walking, bicycling, and transit use.	and bicycle facilities. Given the project’s proposed mix of land uses and existing transportation options, the project is consistent with this control measure.
<b><i>Land Use and Local Impacts Measures</i></b>		
Goods Movement	Reduce diesel PM and GHG emissions from goods movement in the Bay Area through measures such as increased signage indicating truck routes and anti-idling rules.	As discussed later on in this section, <b>Section 3.3 Air Quality</b> , the project would limit construction equipment idling to five minutes. For this reason, the project is consistent with this control measure.
<b><i>Energy and Climate Measures</i></b>		
Urban Heat Island Mitigation	Mitigate the “urban heat island” effect by promoting the implementation of cool roofing, cool paving, and other strategies.	The project includes planting of new trees, which would reduce the urban heat island effect. The project is consistent with these two control measures.
Tree-Planting	Promote planting of low-VOC-emitting shade trees to reduce urban heat island effects, save energy, and absorb CO2 and other air pollutants.	

### **3.3.2.2 Air Pollutant Emission Impacts of 2012 Scheme Modifications**

Estimates of air emission for the proposed revisions to the project using the current BAAQMD methodology have been prepared by *Illingworth & Rodkin, Inc.* These estimates are provided in Appendix A and summarized in the following discussions.

#### **Operational (Regional) Emissions**

Since the certification of the 2009 Final EIR, the BAAQMD methodology and thresholds for analyzing operational emissions were updated. The assumed build out year for the site has also changed from 2010 to 2015. In order to determine whether the revised project would result in new or more severe regional air emissions than were disclosed in the 2009 Final EIR, the emissions for the 2008 schemes and the 2012 schemes were calculated using the current BAAQMD methodology and assumptions for the revised year of buildout and operation. The results of the analysis are summarized in Table 5 below.

<b>Table 5: Comparison of Average Operational Emissions Using 2011 BAAQMD Methodology</b>				
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
	Average Daily Emissions (lbs/day)			
2008 Scheme 1	72.7	73.5	84.5	17.6
<i>2012 Scheme 1</i>	<i>61.6</i>	<i>60.9</i>	<i>69.5</i>	<i>14.5</i>
2008 Scheme 2	61.4	59.0	66.6	13.9
<i>2012 Scheme 2</i>	<i>66.8</i>	<i>57.0</i>	<i>62.2</i>	<i>13.0</i>
Current BAAQMD Thresholds of Significance	54	54	82	54
New Impact for 2012 Schemes?	No	No	No	No
Substantially More Severe Impact for 2012 Schemes?	No	No	No	No

As shown in Table 5, the operational emissions for the revised project (either scheme) exceed the current BAAQMD thresholds of significance for ROG and NO<sub>x</sub>, as it would for the 2008 project schemes. The operational emissions for both 2012 schemes, however, are lower than the operational emissions for *2008 Scheme 1*. The revised project would not result in a new significant operational emissions compared to the impacts disclosed in the certified 2009 Final EIR.

Consistent with the measures identified in the certified 2009 Final EIR and the current recommendations in the BAAQMD CEQA Air Quality Guidelines, the revised project includes the implementation of mitigation measures MM AIR – 2.1 through 2.11 in the 2009 Final EIR and the following additional measures to reduce operational air pollutant emissions:

**MM AIR – 2.12:** Site design shall include preferential carpool/vanpool parking.

**MM AIR – 2.13:** The project shall use low VOC architectural coatings (e.g., paint and other architectural finishes).

### **Construction-Related Emissions**

At the time the 2009 Final EIR was prepared, BAAQMD had not identified a methodology for calculating construction-related emissions or a numeric threshold of significance. The 2009 Final EIR analyzed the project's construction-related emissions impact, including impacts from construction dust and construction equipment exhaust, in a qualitative manner and concluded that the impact would be significant. In accordance with the BAAQMD guidelines at that time, the 2009 Final EIR identified the BAAQMD basic construction control measures and additional construction control measures (e.g., setting back construction staging areas from existing residences) to reduce the project's construction-related air quality impact to a less than significant level.

The project (i.e., land uses and amount of overall development, refer to Table 1) and the natural environment have not substantially changed since 2008. The amount of soil excavation for the revised project is greater than the amount of soil excavation assumed in 2008, however (refer to Table 6).

<b>Table 6: Summary of Soil Cut, Fill, and Off-Haul</b>			
	<b>Estimated</b>		
	<b>Cut</b>	<b>Fill</b>	<b>Off-Haul</b>
	<b>(cubic yards)</b>		
2008 Scheme 1	27,000	11,000	16,000
<i>2012 Scheme 1</i>	<i>127,500</i>	<i>32,500</i>	<i>95,000</i>
2008 Scheme 2	69,000	11,000	58,000
<i>2012 Scheme 2</i>	<i>125,000</i>	<i>32,000</i>	<i>93,000</i>

Since the certification of the 2009 Final EIR, new guidance for evaluating construction-related air quality impacts has been developed. BAAQMD has identified a methodology for analyzing construction-related criteria air pollutant emissions and quantitative thresholds of significance. Additional control measures were also identified for reducing construction-related air quality impacts.

In order to determine whether the 2012 schemes resulted in new or more severe construction-related criteria air pollutant emissions than the 2008 schemes, the construction emissions for the 2008 schemes and the 2012 schemes were calculated using the current BAAQMD methodology. The results of the analysis are summarized in Table 7 below.

<b>Table 7: Summary of Construction-Related Emissions</b>				
	<b>Criteria Air Pollutant Emissions</b>			
	<b>Average Daily Emissions (lbs/day)</b>			
	<b>ROG</b>	<b>NOx</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
2008 Scheme 1	19.0	31.6	1.7	1.5
<i>2012 Scheme 1</i>	<i>19.8</i>	<i>36.4</i>	<i>1.8</i>	<i>1.6</i>
2008 Scheme 2	19.1	33.3	1.8	1.6
<i>2012 Scheme 2</i>	<i>26.4</i>	<i>38.1</i>	<i>1.8</i>	<i>1.7</i>
<b>Current BAAQMD Thresholds of Significance</b>	54	54	82	54

The results in Table 7 show that the 2012 schemes would result in greater ROG and NOx emissions than the 2008 scheme; however, the construction emissions from the revised project are below the

new BAAQMD thresholds of significance used in this evaluation. The revised project, therefore, would not result in a new significant construction-related air quality impact.

For all proposed projects, BAAQMD recommends implementation of the updated Basic Construction Mitigation Measures whether or not construction-related emissions exceed applicable thresholds. Consistent with the mitigation measures identified in the 2009 Final EIR and with the current recommendations in the BAAQMD CEQA Air Quality Guidelines, the project includes the implementation of the following updated dust and construction equipment exhaust control measures to further reduce construction-related air pollutant emissions. These measures replace MM AIR – 5.1 and MM AIR – 5.2 identified in the 2009 Final EIR.

- MM AIR – 5.1:** The project shall implement the following dust control measures recommended by BAAQMD:
- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
  - All haul trucks transporting soil, sand, or other loose material on-site shall be covered.
  - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
  - All vehicle speeds on unpaved roads shall be limited to 15 mph.
  - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
  - Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District’s phone number shall also be visible to ensure compliance with applicable regulations.

- MM AIR – 5.2:** The project shall implement the following diesel exhaust control measures:
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
  - All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified visible emissions evaluator.
  - Construction equipment shall not be staged within 200 feet of existing residences.

In addition, the project proposes to use low VOC architectural coatings, as previously described (MM AIR – 2.12).

### Construction-Related Health Risks

The evaluation of air quality impacts in the 2009 Final EIR noted that diesel exhaust from construction equipment poses both a health and nuisance impact to nearby receptors. Although not identified as a significant impact, the 2009 Final EIR identified several measures designed to reduce exposure of nearby residents to construction exhaust emissions. These include limits on construction idling and minimum setbacks of construction staging areas from existing residences.

Since the certification of the 2009 Final EIR, BAAQMD updated its guidelines to require an assessment of health risk to sensitive receptors from construction emissions. This is a new methodology that was not under review or adopted at the time the 2009 Final EIR was certified. Using the current BAAQMD methodology, the health risk from the revised project was calculated. The results are summarized in Table 8 below.

	<b>Total Increased Cancer Risk</b>
Residences South of the Site	6.43 per million
Residences West of the Site	5.39 per million
<i>BAAQMD Threshold of Significance</i>	<i>&gt;10.0 per million</i>
New Significant Impact?	No

The construction emissions from the revised project (either scheme) would not result in a significant health risk to nearby sensitive receptors as assessed using the methodology in the current BAAQMD CEQA Air Quality Guidelines.

### Toxic Air Contaminants Impacts

Risks to future residents on-site from toxic air contaminants (TACs) from nearby roadways within 500 feet were analyzed in the 2009 Final EIR. Since the certification of the 2009 Final EIR, BAAQMD has updated its methodology for analyzing impacts from TACs to include additional sources within 1,000 feet of proposed residences. The project's risk from TACs was reassessed using the current BAAQMD methodology. The sources for TACs in the project area include vehicles traveling on Interstate 280 and Stevens Creek Boulevard, and three stationary sources within 1,000 feet of the proposed residences. A summary of the results are provided in Table 9 below.

The results show that the revised project (either scheme) would not result in a significant health risk to future residences on-site from TACs from nearby sources.

<b>Source</b>	<b>Distance to Closest Proposed Residence (feet)</b>	<b>Lifetime Cancer Risk</b>	<b>Annual PM<sub>2.5</sub> Concentration</b>	<b>Hazard Index</b>
Interstate 280 Traffic*	950	9.18	0.09	0.01
Stevens Creek Boulevard Traffic*	100	4.10	0.11	<0.03
Stationary Source 1 – Apple	670	2.79	0	0
Stationary Source 2 – JCPenny	840	0	0	0
Stationary Source 3 – Sears	880	0	0	0
<b>Maximum Single Source</b>		<b>9.2</b>	<b>0.1</b>	<b>0.01</b>
<i>Current BAAQMD Threshold of Significance for a Single Source</i>		<i>10</i>	<i>0.3</i>	<i>1.0</i>
<b>Cumulative Sources</b>		<b>16.1</b>	<b>0.2</b>	<b>&lt;0.05</b>
<i>Current BAAQMD Cumulative Threshold of Significance</i>		<i>100</i>	<i>0.8</i>	<i>10.0</i>
Note: * The health risks predicted from roadways using BAAQMD's screening tools are conservative given that the screening assumes twice as much roadway length as their guidelines recommend modeling. Modeling of actual risks would likely result in lower concentrations. Actual modeling was not completed because the conservative screening analysis did not indicate significant health risks.				

### 3.3.3 Conclusion

The revised project would not result in new significant or more substantial air quality impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.4 BIOLOGICAL RESOURCES**

**3.4.1 Existing Setting**

The existing biological setting, including regulatory framework, has not substantially changed since the certification of the 2009 Final EIR. The project site consists of ruderal, non-native grassland with ornamental trees and shrubs scattered throughout. Historically, Calabazas Creek, flowing south to north, meandered across the site. Around 1978, the creek was realigned to flow in an underground, double-box culvert that generally runs parallel to Finch Avenue between Stevens Creek Boulevard and Vallco Parkway. Since the certification of the 2009 Final EIR, the large, dead oak tree and an Aleppo pine on-site have been removed. Please refer to the 2009 Final EIR for a complete description of the existing biological resources conditions.

**3.4.2 Environmental Checklist and Discussion**

BIOLOGICAL RESOURCES						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

BIOLOGICAL RESOURCES						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

**3.4.2.1 Impacts to Habitat (Non-Native Ruderal Grassland)**

**Loss of Habitat for Native Wildlife**

Development of the revised project would result in the loss of approximately 18.7 acres of non-native/ruderal grasslands within a developed urban area. As discussed in the 2009 Final EIR, this habitat possesses minimal biotic value and provides only low-quality habitat for most species. The development of the revised project would result in the same impact to ruderal grassland habitat as disclosed in the certified 2009 Final EIR. The revised project would not result in a new significant or more substantial impact to ruderal habitat than disclosed in the certified 2009 Final EIR.

### **Interference with the Movement of Native Wildlife**

The movements of various species on- and off-site vary depending on the species in question. Wildlife movements generally are divided into three major behavioral categories: 1) movements within a home range or territory, 2) movements during migration, and 3) movements during dispersal.

The only habitat impacted by the revised project is non-native ruderal grassland. While native wildlife may move through this habitat, it does not represent a significant movement corridor for native wildlife, as the site is surrounded by urban development. The loss of this habitat would result in a less than significant impact on the movements of native wildlife. This impact is the same for the revised project as disclosed in the certified 2009 Final EIR. The revised project would not result in a new significant or more substantial impact to the movements of native wildlife.

#### **3.4.2.2 *Impacts to Special-Status Plant and Animal Species and Species Protected Under the Migratory Bird Treaty Act***

##### **Special-Status Plant Species**

As identified in the 2009 Final EIR, the development of the project site would not result in significant impacts to special-status plant species. The revised project would not result in new or more substantial significant impacts to special-status plant species than disclosed in the certified 2009 Final EIR.

##### **Special-Status Animal Species and Species Protected Under the Migratory Bird Treaty Act**

As described in the 2009 Final EIR, the trees on the site support potential habitat for tree nesting raptors and other migratory birds. In addition, it is possible that loggerhead shrikes and burrowing owls could locate on the site at any time.

Implementation of the mitigation measures previously identified in the 2009 Final EIR would reduce possible impacts to tree nesting birds and burrowing owls during construction to a less than significant level. The revised project includes the implementation of mitigation measures MM BIO – 1.1 through 1.4 as identified in the 2009 Final EIR to avoid significant impacts to nesting birds and burrowing owls.

#### **3.4.2.3 *Calabazas Creek***

##### **Direct Impacts to Riparian Habitat**

Like the 2008 project, the revised project includes the installation of two new 24-inch storm drain lines that would discharge directly to the Calabazas Creek culvert that crosses the site. These two storm water outlets would not require modification to existing open channel areas. The revised project, therefore, would not result in direct impacts to riparian habitat along Calabazas Creek. The

revised project would not result in a new significant or more substantial impact to riparian habitat than disclosed in the certified 2009 Final EIR.

### **Water Quality Impacts**

As discussed in the 2009 Final EIR, the deposition of pollutants and sediments in sensitive riparian and wetland habitats would be considered a significant impact. As discussed in **Section 3.9 Hydrology and Water Quality**, the revised project shall implement measures to reduce water quality impacts to Calabazas Creek to a less than significant level. The revised project would result in the same less than significant impact to water quality as disclosed in the certified 2009 Final EIR. The revised project would not result in new significant or more substantial water quality impacts to aquatic habitat than disclosed in the certified 2009 Final EIR.

#### **3.4.2.4 Trees**

The tree survey completed for the 2009 Final EIR evaluated impacts to trees based on tree health and the site design. As with the 2008 project, development of the revised project (either scheme) would result in the removal of a substantial number of trees (approximately 61 trees) on-site, depending on the building and parking structure footprints. Under the revised project (as well as the 2008 project), the dead specimen tree (#126) (which has been removed since the certification of the 2009 Final EIR) would be replaced by two field grown oak trees<sup>5</sup> on the project site at Stevens Creek Boulevard and Finch Avenue.

As identified in the 2009 Final EIR, the project proposes to implement mitigation measure MM BIO – 2.1 to reduce impacts to trees to a less than significant level. This measure includes tree protection measures during construction and replacement of removed trees per the City of Cupertino’s Municipal Code requirements.

#### **3.4.3 Conclusion**

The revised project (either scheme) would not result in new significant or more substantial biological resources impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

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<sup>5</sup> A field grown trees refers to a tree that is fully mature.

**3.5 CULTURAL RESOURCES**

**3.5.1 Existing Setting**

The existing cultural resources setting has not substantially changed since the certification of the 2009 Final EIR. There are no historic structures on-site, however, there is a potential for buried archaeological resources on-site. Please refer to the 2009 Final EIR for a complete description of the existing cultural resources conditions.

**3.5.2 Environmental Checklist and Discussion**

CULTURAL RESOURCES						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
2) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
3) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
4) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1

The 2009 Final EIR noted that development throughout the Santa Clara Valley adjacent to established water courses, has uncovered numerous buried archaeological sites and that prehistoric materials associated with aboriginal settlements along Calabazas Creek could be encountered during site grading and/or excavation. Buried historic archaeological deposits (dumps, filled in wells, privy pits, and cellars) associated with farming also could be encountered.

The potential for impacts to unknown buried archaeological impacts under the revised project is similar to that described for the 2008 project. The revised project would not result in a new significant or more substantial cultural resources impact than disclosed in the certified 2009 Final EIR.

As identified in the 2009 Final EIR, the project includes the implementation of mitigation measures MM CUL – 1.1 through MM CUL – 1.3 to reduce possible impacts to cultural resources during construction to a less than significant level.

**3.5.3            Conclusion**

The revised project would not result in new significant or more substantial cultural resources impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.6 GEOLOGY AND SOILS**

**3.6.1 Existing Setting**

The existing geology and soil conditions on-site have not changed since the certification of the 2009 Final EIR. The project site contains undocumented fill. The soils on-site have the potential for expansion. The project site is subject to seismic and seismic-related hazards including strong ground shaking and lateral spreading. Please refer to the 2009 Final EIR for a complete description of the existing geology and soils conditions.

**3.6.2 Environmental Checklist and Discussion**

GEOLOGY AND SOILS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
a) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
b) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
c) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
d) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
2) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
3) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

GEOLOGY AND SOILS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
4) Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

The 2009 Final EIR found that development could be exposed to soil hazards related to the undocumented fill and expansive soils on-site. The project, under any of the schemes, would also be subject to seismicity and seismic hazards, given the project site’s location in a seismically active region.

**3.6.2.1 Soils Hazards**

No buildings are proposed to be located over the existing Calabazas Creek box culvert. Landscaping and parking spaces are proposed on top of the culvert under the revised project schemes (as well as the project schemes addressed in the 2009 Final EIR).

The impacts from undocumented fill and expansive soils on buildings and pavement under both 2012 schemes are the same as disclosed in the certified 2009 Final EIR.

As documented in the 2009 Final EIR, the proposed project would not be exposed to substantial slope instability or landslide-related hazards due to the flat topography of the site.

The revised project would not result in new significant or more substantial soil hazards impacts than disclosed in the certified 2009 Final EIR.

As identified in the 2009 Final EIR, in conformance with standard practices in the City of Cupertino, the project includes the implementation mitigation measure MM GEO-1.1 to reduce adverse effects associated with soil conditions to a less than significant level. This measure calls for buildings to be designed and constructed in accordance with a final design-level geotechnical investigation.

### **3.6.2.2      *Seismicity and Seismic Hazards***

The project site is located in a seismically active region and, therefore, strong ground shaking would be expected during the lifetime of the proposed project. The revised project would be constructed on the same site and includes similar building types and improvements (e.g., three to four story buildings, a parking structure, and underground utilities). Seismic hazards to buildings and other proposed structures, therefore, would be the same as those disclosed in the 2009 Final EIR.

As identified in the 2009 Final EIR, in conformance with standard practices in the City of Cupertino, the project proposes to implement mitigation measure MM GEO – 2.1 to reduce seismic and seismic-related hazards to a less than significant level. To reflect changes in building code language, this measure would be revised as follows:

**MM GEO – 2.1:** The project shall be designed and constructed in conformance with standard engineering and building practices and techniques specified in the California Building Code applicable at the time of construction to avoid or minimize potential damage from seismic shaking and seismic-related hazards on the site.

### **3.6.3      Conclusion**

The revised project would be not result in new significant or more substantial geology and soil impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.7 GREENHOUSE GAS EMISSIONS**

**3.7.1 Existing Setting**

The existing greenhouse gas/global climate conditions have not substantially changed since the certification of the 2009 Final EIR. Please refer to the 2009 Final EIR for a complete description of the existing greenhouse gas/global climate change conditions. Since the certification of the 2009 Final EIR, however, the CEQA Guidelines have identified thresholds of significance for greenhouse gas emissions and the Bay Area Air Quality Management District (BAAQMD) has updated its CEQA Air Quality Guidelines (May 2011), which identifies a methodology evaluating greenhouse gas emission impacts and numeric thresholds of significance for greenhouse gas emissions.

**3.7.2 Environmental Checklist and Discussion**

GREENHOUSE GAS EMISSIONS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2,3
2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2,3

Using a methodology that models how new land use development in the San Francisco Bay area can meet AB 32 GHG reduction goals, the current BAAQMD CEQA Air Quality Guidelines identify a significance threshold of 1,100 metric tons of carbon dioxide equivalents per year.<sup>6</sup> In addition to this bright line threshold, the guidelines include an “efficiency” threshold to be used for urban high density, transit oriented development projects that are intended to reduce vehicle trips but may still result in overall emissions greater than 1,100 meter metric tons per year. This efficiency threshold is 4.6 metric tons of carbon dioxide equivalents per service population (e.g., residents and employees) per year.

<sup>6</sup> Refer to the discussion in **Section 3.3 Air Quality** regarding the BIA v. BAAQMD lawsuit. The determination of whether a project may have a significant effect on the environment is subject to the discretion of each individual lead agency, based upon substantial evidence. Notwithstanding the BIA lawsuit, the City of Cupertino has carefully considered the thresholds prepared by BAAQMD and considers them to be based on the best information currently available for the San Francisco Bay Area Air Basin.

Given the overwhelming scope of global climate change, it is not anticipated that a single development project would have an individually discernible effect on global climate change. It is more appropriate to conclude that the greenhouse gas emissions generated by the proposed project would combine with emissions across the state, nation, and globe to cumulatively contribute to global climate change.

It was the City’s position in the 2009 Final EIR, based on the nature and size of this redevelopment project, its location within an established urban area served by existing infrastructure (rather than a greenfield site), and the measures included in the project to reduce energy use, that the project would not impede the state’s ability to reach the emission reduction limits/\_standards set forth by the State of California by Executive Order S-3-05 and AB 32. For these reasons, it was concluded that the 2008 project would not make a cumulatively considerable contribution to global climate change associated with greenhouse gas emissions and global climate change.

In order to determine whether the revised project would result in a new significant or more substantial greenhouse gas emissions impact than were disclosed in the certified 2009 Final EIR, the greenhouse gas emissions (including emissions from transportation, area sources, electricity use, natural gas use, water use, wastewater generation, and solid waste generation) were calculated for the 2008 and 2012 schemes using the current BAAQMD methodology. The results of the analysis are summarized in Table 10 below.

<b>Table 10: Summary of Project Operational Greenhouse Gas Emissions Using Current BAAQMD Methodology</b>	
	<b>Greenhouse Gas Emissions (tons per year)</b>
2008 Scheme 1	15,668
<i>2012 Scheme 1</i>	<i>13,769</i>
2008 Scheme 2	13,067
<i>2012 Scheme 2</i>	<i>12,925</i>

As shown in Table 10 above, the revised project (either scheme) would not result in greater greenhouse gas emissions than the 2008 project analyzed in the certified 2009 Final EIR. Therefore, the revised project would not result in a new significant or more substantial greenhouse gas impact.

**3.7.3 Conclusion**

The revised project would not result in a new significant impact or more substantial greenhouse gas emissions than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.8 HAZARDS AND HAZARDOUS MATERIALS**

**3.8.1 Existing Setting**

The existing hazards and hazardous materials conditions on the project site have not substantially changed since the certification of the 2009 Final EIR. There are no on-site or off-site sources of contamination that could substantially impact the project site. Please refer to the 2009 Final EIR for a complete description of existing hazards and hazardous materials conditions.

**3.8.2 Environmental Checklist and Discussion of Impacts**

HAZARDS AND HAZARDOUS MATERIALS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

HAZARDS AND HAZARDOUS MATERIALS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
6) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
7) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
8) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

The revised project includes the same mix of land uses as analyzed in the certified 2009 Final EIR, including residences and private open space (town square and park). As documented in the 2009 Final EIR, there are no significant on-site or off-site sources of contamination, such as on-site soil or groundwater contamination, that would substantially affect the proposed uses on the project site. Therefore, like the 2008 project, the revised project would not result in significant hazards and hazardous materials impacts.

### 3.8.3 Conclusion

The revised project would not result in a new significant or more substantial hazards and hazardous materials impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

## **3.9 HYDROLOGY AND WATER QUALITY**

### **3.9.1 Existing Setting**

The existing hydrology and water quality conditions on-site have not substantially changed since the certification of the 2009 Final EIR. Please refer to the 2009 Final EIR for a complete description of the existing hydrology and water quality conditions.

#### **3.9.1.1 *Flooding***

The flood map for the project area has been updated since the certification of the 2009 Final EIR and the project site is located in Zone X.<sup>7</sup> Flood conditions on-site, however, are the same as described in the 2009 Final EIR. The one percent annual chance flood discharge is contained in the existing culvert on-site. The Calabazas Creek channel upstream of Miller Avenue remains inadequately sized to convey 100-year flood flows. Spills from the creek upstream of Miller Avenue would cause shallow flooding of the site during a 100-year flood event to a depth of less than one foot.

#### **3.9.1.2 *Stormwater Quality***

Since the certification of the 2009 Final EIR, the members of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), which is an association of thirteen cities – including the City of Cupertino – and towns in Santa Clara Valley, the County of Santa Clara, and the Santa Clara Valley Water District, share a common NPDES Municipal Stormwater Permit to discharge stormwater to South San Francisco Bay. The NPDES Municipal Stormwater Permit includes provisions requiring regulation of projects that create, add, or replace 10,000 square feet or more of impervious surface area are required to control post-development stormwater through source control and treatment control Best Management Practices (BMPs). As of December 1, 2011 LID Treatment Control Measures (TCMs) replaced formerly allowed post-construction/operation treatment control measures. LID is a stormwater management strategy designed to manage runoff as close to its source as possible. LID incorporates a variety of natural and built features to reduce the rate of surface water runoff, filter pollutants out of runoff, facilitate infiltration of water into the ground surface, and reuse the water on-site. TCMs will need to be comprised of bio-treatment, harvesting and re-use of runoff on-site, infiltration, and evapotranspiration.

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<sup>7</sup> Zone X is defined as areas of 0.2 percent annual chance flood; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood. Source: Federal Emergency Management Agency. [Flood Insurance Rate Map](#). Map Number 06085C0209H. May 18, 2009.

**3.9.2 Environmental Checklist and Discussion of Impacts**

HYDROLOGY AND WATER QUALITY						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
5) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2

HYDROLOGY AND WATER QUALITY						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
6) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2
7) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,4
8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,4
9) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,4
10) Be subject to inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

### 3.9.2.1 Hydrology and Drainage

A summary of the impervious and pervious surfaces on-site under existing and project conditions is provided in Table 11. As shown in the table, the revised project (as well as the 2008 project) would increase the amount of impervious surfaces on-site compared to existing conditions. The revised project would result in a greater increase in impervious surfaces compared to the 2008 project.

	Impervious Surfaces		Pervious Surfaces	
	Acres	Percentage	Acres	Percentage
Existing Conditions	3.2	17	15.5	83
2008 Scheme 1	11.9	64	6.8	36
<i>2012 Scheme 1</i>	<i>15.8</i>	<i>84</i>	<i>2.9</i>	<i>16</i>
2008 Scheme 2	12.3	66	6.4	34
<i>2012 Scheme 2</i>	<i>15.7</i>	<i>84</i>	<i>3.0</i>	<i>16</i>

The project site is located in an area subject to hydromodification controls, which are defined in the Hydromodification Management Plan (HMP). The HMP requires that runoff controls be designed so

that post-project runoff shall not exceed estimated pre-project rates, durations, and volumes from the development site (Provision C.3F.i). The revised project (either scheme) proposes to incorporate a bioretention area to comply with the HMP. As a result, the amount of runoff from the project site would be the same under project conditions as existing conditions.

Runoff from the project site (under existing and project conditions) flows to storm drain lines in Vallco Parkway and a storm drain line in Stevens Creek Boulevard. Under existing conditions, the 30-inch and 18-inch storm drain lines in Vallco Parkway (which both connect to the existing culvert) are over capacity. The project proposes to construct 24-inch storm drain lines parallel to the 30-inch and 18-inch storm drain lines in Vallco Parkway to divert site runoff from those lines. The proposed 24-inch storm drain lines would connect to the northern portion of existing box culvert in Finch Avenue. With the incorporation of the two proposed 24-inch storm drain lines, there would be sufficient storm drain system capacity to accommodate the runoff from the project site. This impact was disclosed in the certified 2009 Final EIR.

The project, as revised, would not result in a new significant or more substantial hydrology or drainage impact than disclosed in the certified 2009 Final EIR.

### **3.9.2.2**      *Flooding*

As discussed in the 2009 Final EIR, the project site is not located within a dam failure inundation area. The project site is not subject to seiches or mudflows. Shallow flooding (less than one foot) would occur at the entire project site in the event of a 100-year flood due to spill over from Calabazas Creek at Miller Avenue.

As identified in the 2009 Final EIR, the project includes the implementation of mitigation measures MM HYD – 1.1 through 1.3 to reduce flooding impacts to a less than significant level. The revised project would not result in a new significant or more substantial flood impact than disclosed in the certified 2009 Final EIR.

### **3.9.2.3**      *Water Quality*

#### **Construction Related Impacts**

Like the 2008 project, construction of the revised project, as well as grading and excavation activities, may result in temporary impacts to surface water quality. Project grading and construction activities would affect the water quality of storm water surface runoff. Construction of the proposed buildings and paving of streets, pathways, and parking lots would also result in a disturbance to the underlying soils, thereby increasing the potential for sedimentation and erosion. When disturbance to underlying soils occurs, the surface runoff that flows across the site may contain sediments that are ultimately discharged into the storm drainage system. This impact is the same as for the 2008 project.

As identified in the 2009 Final EIR, the project proposes to implement mitigation measure MM HYD – 2.1 to reduce construction-related water quality impacts to a less than significant level.

### **Post-Construction Impacts**

The amount of impervious surfaces on the site, including buildings and paved areas, would increase by 12.6 acres under *2012 Scheme 1* and 12.5 acres under *2012 Scheme 2* (refer to Table 11). The amount of pollution carried by runoff from buildings and pavement, therefore, would also increase accordingly.

As outlined in Section 3.9.2.1, the revised project would include runoff controls and LID measures consistent with updated requirements in the City’s Municipal NPDES permit. These measures would reduce peak runoff and provide for additional non-point source pollution controls. The revised project, therefore, would not result in new significant or more substantial water quality impacts than disclosed in the certified 2009 Final EIR.

As identified in the 2009 Final EIR, the project includes the implementation of mitigation measures MM HYD – 2.2 through 2.6. It is anticipated that the BMPs on-site will include bioretention areas.

#### **3.9.3 Conclusion**

The revised project (either scheme) would not result in new significant or more substantial hydrology and water quality impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.10 LAND USE**

**3.10.1 Existing Setting**

The existing land use setting, including regulatory framework, has not substantially changed since the certification of the 2009 Final EIR. Please refer to the 2009 Final EIR for a complete description of the existing land use conditions. Since the certification of the 2009 Final EIR, however, the City has rezoned the project site to *Planned Development (General Commercial, Professional Office, Light Industrial, and Residential)*, or P(CG, OP, ML, Res), in January 2012. This zoning designation allows for the same land uses as the previous zoning (I-Z-83). The zoning was updated on the project site to correspond the City’s current zoning ordinance.

**3.10.2 Environmental Checklist and Discussion of Impacts**

LAND USE						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

**3.10.2.1 *Consistency with General Plan and Zoning Ordinance***

**General Plan**

**Heart of the City Specific Plan and Vallco Park South Area**

The project site is located within the Heart of the City Specific Plan. The Heart of the City development allocations are the combined allocations of the Vallco Park South and City Center subareas. The available allocations for development in the Heart of the City Specific Plan are as follows: 105,870 square feet for commercial uses (zero square feet available in the Vallco Park South

subarea), 11,456 square feet for non-corporate office uses (zero square feet available in the Vallco Park South subarea), 308 units for residential uses (240 units available in the Vallco Park South subarea). The available allocations already reflect development approved for the project site in 2008. *2012 Scheme 1* would require additional allocations for 192,000 square feet of office uses. *2012 Scheme 2* would require additional allocations for 192,000 square feet of office uses and 88 residential units. There are not sufficient development allocations in the Heart of the City for the additional office space proposed by the revised project. There are sufficient residential allocations for the revised project in Heart of the City and Vallco Park South subarea.

Per General Plan Policy 2-20, Strategy 4, the City allows flexibility among the allocations assigned to each geographic area and allocations may be redistributed from one geographic area to another if necessary and if no significant environmental impacts, particularly significant traffic impact, are identified. The revised project (compared to the approved 2008 project) would require additional office allocation from other areas of the City. City-wide, there are approximately 170,591 square feet of available non-corporate office uses and 663,053 square feet of major employer office uses available. The project would require major employer office allocations. As a condition of the project, the City shall require the project applicant to demonstrate that the office user(s) on-site would provide General Plan defined fiscal benefits to the City. Like the 2008 project, the revised project would result in significant transportation and air quality impacts (refer to **Sections 3.3 Air Quality** and **3.16 Transportation**). However, as discussed in the 2009 Final EIR, these impacts would not be unique to this location. The traffic impacts occur under existing and background conditions (i.e., without project traffic). Development in a relatively wide area of Cupertino could result in traffic impacts at the same locations. Similar to the 2008 project, the revised project is generally consistent with General Plan Policy 2-20, Strategy 4.

The Heart of the City Specific Plan identifies a maximum residential density of 35 dwelling units per acre (du/ac) for the Vallco Park South Area. The residential density for *2012 Scheme 1* (143 senior units proposed) is 28 du/ac. The residential density for *2012 Scheme 2* (143 senior units and 105 market-rate units proposed) is 35 du/ac. The revised project, therefore, is consistent with the Heart of the City Specific Plan residential density requirement.

The Heart of the City Specific Plan also includes requirements for building height, setbacks, orientation, site development, parking, open space, landscaping, and screening. The project would meet the requirements of the Heart of the City Specific Plan including the following:

- Maximum building height of 60 feet;
- Minimum setback requirements, including a setback of 35 feet and a 1.5:1 (1.5 foot setback for every 1 foot of building height) building envelope along Stevens Creek and Tantau Avenue;
- No visible parking garages along Stevens Creek Boulevard;
- Minimum open space requirements; and
- Easement of 26 feet in width along Stevens Creek Boulevard for landscaping and sidewalks.

### South Vallco Park Master Plan

The South Vallco Park Master Plan sets forth recommendations for streetscape design, crosswalk enhancements, landscaping, lighting, way finding, signage, and street furniture to improve the overall character and identity of the Vallco Park South Area.

The revised project is consistent with the South Vallco Master Plan and its policies that promote automobile-alternative modes of transportation, sustainability and energy efficiency, use of drought-tolerant plants, orientation of retail uses to the street, modification of existing streets to be more pedestrian-friendly (i.e., the narrowing of Vallco Parkway), and land uses consistent with the General Plan.

### Land Use Designation

Overall, the revised project (both schemes) is generally consistent with the City's General Plan land use designation, which allows for a mix of uses including commercial, office, and residential uses.

The revised project is generally consistent with the City's General Plan as the 2008 project analyzed in the 2009 Final EIR.

## **Zoning Ordinance**

The project site is zoned P(CG, OP, ML, Res). The planned development zoning for the site allows the uses allowed under the *CG – General Commercial*, *OP – Professional Office*, *ML – Light Industrial*, and *Res – Residential* zoning designations. The proposed retail (including athletic club), office, residential, and hotel uses are allowed under the existing zoning designation on-site.

### **3.10.2.2 Land Use Compatibility**

Land use conflicts can arise from two basic causes: 1) conditions on or near the project site may have impacts on the persons or development introduced onto the site by the new project. Both of these circumstances are aspects of land use compatibility; or 2) a new development or land use may cause impacts to persons or the physical environment in the vicinity of the project site or elsewhere. Potential incompatibility may arise from placing a particular development or land use at an inappropriate location, or from some aspect of the project's design or scope. The discussion below distinguishes between potential impacts from the proposed project upon people and the physical environment, and potential impacts from the project's surroundings upon the project itself.

## Impacts From the Project

The surrounding land uses include office, commercial, and residential uses. The project site is separated from the office, commercial, and residential uses north, east, and south of the site by Vallico Parkway (which is proposed to be reduced from six to three lanes), Tantau Avenue (a four-lane roadway), and Stevens Creek Boulevard (a six-lane roadway). The project is adjacent to the west to an existing mixed residential and commercial development (Metropolitan Project) and a vacant site currently under construction for a mixed residential and commercial project (Rosebowl Project). The Metropolitan and Rosebowl sites are shown on Figure 3. The revised project (under either scheme) proposes land uses that are similar to the existing, surrounding land uses (see Figure 3); therefore, the revised project would not physically divide an established community.

### Interface with the Metropolitan Project

The Metropolitan project is a mixed residential and commercial project. There are three-story residential buildings on the Metropolitan site that abuts the project site. The proposed senior housing and open space located on the west side of the project site would be adjacent to the Metropolitan buildings, under both 2012 schemes. The Metropolitan residences would be located at least 40 feet from the proposed senior housing units on the project site. The proposed senior housing units would have windows and private outdoor balconies facing the Metropolitan site. Landscaping is proposed between the senior housing building and the property line shared with the Metropolitan site. Given the setback, landscape buffer, and similar land use (e.g., residential) interfacing between the adjacent Metropolitan site and the project site, implementation of the revised project would result in the same interface with the Metropolitan site as the 2008 project. The revised project, therefore, would not result in a new significant or more substantial land use compatibility impact at this location than identified in the certified 2009 Final EIR.

### Interface with the Rosebowl Project (Under Construction)

The Rosebowl project is a mixed residential and commercial development currently under construction west of the project site. The buildings will be up to six stories tall. The development on the Rosebowl site adjacent to the project site will consist of retail uses and parking on the ground floor and residential uses on the upper five floors. The Rosebowl residential uses would include balconies and windows facing the project site.

Under *2012 Scheme 1*, two one-story retail buildings (including a covered truck loading dock) or one two-story athletic club would abut the Rosebowl site. No windows are proposed on the west facade of the retail buildings facing the Rosebowl site. Windows, however, are proposed on the west facade of the athletic club if developed instead of the retail buildings at the northwest corner of the site under *2012 Scheme 1*.

Under *2012 Scheme 2*, a four-story residential building would be constructed adjacent to the Rosebowl site. The residential building would have windows and outdoor balconies on the western facade of the building facing the Rosebowl site.

In both 2012 schemes, the proposed uses (retail, athletic club, or residential) would be setback from the property by 10 feet. As shown on the conceptual site plans (see Figures 4 and 5), the project proposes to plant trees and landscaping within the 10-foot setback area. The total distance between the buildings on the Rosebowl site and the project site would be approximately 65 feet. These design elements (building setback, landscaping buffer, enclosed loading dock, no windows on the west facade of the retail buildings facing the Rosebowl site) would reduce noise and visual intrusion effects between the Rosebowl development and the revised project. A discussion of noise impacts is provided in **Section 3.12 Noise** of this Addendum. The revised project's interface with the Rosebowl site is similar to that disclosed in the certified 2009 Final EIR. The revised project, therefore, would not result in a new significant or more substantial land use compatibility impact at this location than identified in the certified 2009 Final EIR.

### **Impacts to the Project**

#### Roadways

Vallco Parkway is north of the site, Tantau is east of the site, Stevens Creek Boulevard is south of the site, and Finch Avenue extends through the site. The compatibility of the existing roadways and the proposed project is primarily a function of impacts from air pollutant emissions and noise from vehicular traffic. Air quality, noise, and transportation impacts are discussed in **Sections 3.3, 3.12** and **3.16**, respectively, in this Addendum. The revised project would result in similar air quality, noise, and transportation impacts as the 2008 project.

### **Impacts Within the Project**

It is not anticipated that land use compatibility issues would arise between the proposed retail/commercial, office, and hotel uses because they are similar in nature and not considered sensitive land uses. However, in both 2012 schemes, the project proposes residential uses near retail/athletic club and open space/park uses.

#### Residential Uses and Retail/Athletic Club Uses

A fully enclosed at-grade loading area is proposed at the northwest corner of the proposed retail building in *2012 Scheme 1*. The loading areas for all other retail uses would be through the front doors facing away from the proposed residential uses on-site and are intended for daytime package and mail delivery trucks (UPS/FedEx), not for heavy or early morning loading. Garbage and recycling for the residential and retail uses would be located in enclosed areas within each building.

The enclosure of the garbage and recycling collection area and the fact that deliveries to the retail uses would be in a fully enclosed loading area or through the front doors facing away from the residential uses would avoid and reduce possible land use compatibility impacts between the proposed residential and retail uses. This less than significant impact between the proposed residential and retail/athletic club uses on-site is similar to what was disclosed in the certified 2009 Final EIR.

### Residential Uses and Open Space/Park Use

Both 2012 project schemes include a private open space area adjacent to the proposed residential building(s) that would have an easement for public use and access and be utilized as a park. The park is intended to be local serving and utilized by the proposed project and the surrounding neighborhood. The specific design and uses of the park are unknown at this time and will be reviewed and determined by the City at a later date. For this reason, the park design and uses are not analyzed in this Addendum and require subsequent environmental review if other than passive uses are proposed.

In general, park uses are compatible with residential uses. The normal sounds of people interacting and/or playing in parks are a part of expected activities within residential areas. Examples of design and operational features of parks that can result in land use conflicts with adjacent residential uses include nighttime lighting of playing fields, amplified sound systems, extended hours of activities allowed by nighttime lighting, localized traffic congestion or operational issues associated with traffic generated by organized sports practices or games, and security or law enforcement issues.

Environmental and site design review of the City of Cupertino Parks and Recreational Commission, Environmental Review Committee, Planning Commission, and City Council will be required at the time specific uses and design are proposed. Any potential conflicts or impacts associated with lighting, parking and access, hours of operation, site visibility and security will need to be addressed through the City's environmental and architectural review process at that time.

Parks are compatible with residential land uses as reflected in the City's General Plan. The City's design review process will further ensure that the specific park design will not result in significant land use impacts to adjacent future residential uses or the adjacent Metropolitan mixed use project.

This less than significant impact between the proposed residential and open space/park uses on-site is similar to what was disclosed in the certified 2009 Final EIR.

### **3.10.3**      **Conclusion**

The revised project (either scheme) would not result in new significant or more substantial land use impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.11 MINERAL RESOURCES**

**3.11.1 Existing Setting**

The existing mineral resources conditions at the project site have not changed since the certification of the 2009 Final EIR. The project site does not contain known mineral resources.

**3.11.2 Environmental Checklist and Discussion of Impacts**

MINERAL RESOURCES						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2
2) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

As discussed in the 2009 Final EIR, the project site is not located within an identified mineral resources area and, therefore, development of the revised project would not result in the loss of availability of a known mineral resource. The revised project would not result in a new significant or more substantial mineral resources impact than disclosed in the certified 2009 Final EIR.

**3.11.3 Conclusion**

The revised project would not result in a new significant or more substantial mineral resources impact than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.12 NOISE AND VIBRATION**

**3.12.1 Existing Setting**

The existing noise setting, including regulatory framework, has not substantially changed since the certification of the 2009 Final EIR. Please refer to the 2009 Final EIR for a complete description of the existing noise conditions.

**3.12.2 Environmental Checklist and Discussion of Impacts**

NOISE AND VIBRATION						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project result in:						
1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

NOISE AND VIBRATION						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project result in:						
6) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2

**3.12.2.1 Noise Impacts to the Project**

**Exterior Noise Impacts**

The primary noise source in the project area is vehicular traffic on Stevens Creek Boulevard and other roadways in the area. The existing day/night average at the site is 60-61 dBA.

According to the City’s General Plan, office and commercial centers are considered “normally acceptable” in noise environments of up to 70 dBA DNL. Based on the existing noise levels and the noise analysis completed for the 2009 Final EIR, it is estimated that the proposed office and retail uses (both schemes) would be exposed to exterior noise levels of up to 65 dBA.<sup>8</sup> Therefore, the proposed office and retail uses would not be exposed to exterior noise levels above the City’s standards for those uses.

The City’s General Plan identifies noise levels of up to 65 dBA DNL for multi-family residential and transient lodging (motels and hotels) as “normally acceptable.” Based on the existing noise levels and the noise analysis completed for the 2009 Final EIR, it is estimated that the residential and hotel uses would be subject to noise levels of 63 dBA DNL on the first floor and 65 dBA DNL on the upper floors. The proposed residential and hotel uses, therefore, would not be exposed to exterior noise levels above the City’s standards for those uses. The interior courtyards proposed with the senior housing and market-rate apartment building is located interior to the buildings. Given the acoustical shielding provided by the proposed buildings, it is estimated that the noise levels at these interior courtyards would be less than 65 dBA DNL. The exterior noise level at these interior courtyards would not exceed the City’s standard of 65 dBA DNL for residential private outdoor use areas.

According to the City’s General Plan, playgrounds and neighborhood parks are considered “normally acceptable” in noise environments up to 70 dBA DNL. It is estimated that the proposed private open space in both schemes (see park and town square use on Figures 4 and 5) would be exposed to noise levels of up to 65 dBA, which is considered acceptable for this use by the City.

<sup>8</sup> It is estimated that the exterior noise level on the ground floor would be 62-63 dBA DNL and 64-65 dBA DNL at the upper floors of the office buildings.

The revised project would result in similar exterior noise impacts as disclosed in the certified 2009 Final EIR. The revised project would not result in new significant or more substantial exterior noise impacts than disclosed in the certified 2009 Final EIR.

### **Interior Noise Impacts**

Like the project schemes evaluated in the 2009 Final EIR, exterior noise levels at the facade of the residential and hotel buildings would be up to 65 dBA DNL on the upper floors. In exterior noise environments of 65 dBA DNL or less, interior noise levels can typically be maintained below City and State standards of 45 dBA DNL for residential and hotel uses with the incorporation of an adequate forced air mechanical ventilation system in each room.

As identified in the 2009 Final EIR, the project includes implementation of mitigation measures MM NOI – 1.1 through 1.3 to ensure interior noise impacts at the residential and hotel uses are 45 dBA DNL or less.

The revised project would result in similar interior noise impacts as disclosed in the certified 2009 Final EIR. The revised project would not result in a new significant or more substantial interior noise impact than disclosed in the certified 2009 Final EIR.

#### **3.12.2.2 Noise and Vibration Impacts From the Project**

### **Construction-Related Noise Impacts**

The construction of the revised project, if approved, is anticipated to take approximately 27 months. Noise resulting from project construction activities would be highest during the site preparation and infrastructure phases of construction when earth-moving equipment such as graders, loaders, and excavators operate over extended periods of time in areas adjoining the existing multi-family residences approximately 20 feet west of the project site (Metropolitan Project). Construction of the proposed uses (park, retail, and residential uses) adjacent to the existing multi-family residences would also result in high construction noise levels.

As stated in the 2009 Final EIR, a substantial temporary noise level increase would occur where noise from construction activities exceeds 60 dBA  $L_{eq}$  and the ambient noise environment by at least five dBA  $L_{eq}$  at noise-sensitive uses in the project vicinity for a period of one year or more. It is estimated that construction-related noise levels could exceed 60 dBA  $L_{eq}$  and ambient daytime noise conditions at the nearest receivers by five dBA  $L_{eq}$  or more when busy construction occurs within approximately 1,250 feet of the nearest receivers. As identified in the 2009 Final EIR, the ambient noise environment would be substantially increased on a temporary basis as a result of project construction.

The revised project would result in similar construction noise impacts as disclosed in the certified 2009 Final EIR because setbacks between existing residential uses and new structures and the total amount of development on the site would be similar. The revised project would not result in new

significant or more substantial construction noise impacts than disclosed in the certified 2009 Final EIR.

As identified in the 2009 Final EIR, the project includes the implementation of mitigation measures MM NOI – 2.1 through 2.14 would reduce construction-related noise impacts to a less than significant level.

### **Construction-Related Vibration Impacts**

As with the 2008 project, the construction of the revised project (either scheme) may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, pile drivers) are used in the vicinity of sensitive land uses (e.g., existing residential uses approximately 20 feet west of the project site). Groundborne vibration generated by construction activities would not be expected to result in cosmetic or structural damage due to the distance between construction equipment and existing buildings. For these reasons, the vibration generated by construction activities would remain a less than significant impact. The revised project would result in similar vibration impacts as disclosed in the certified 2009 Final EIR. The revised project would not result in new significant or more substantial vibration impacts than disclosed in the certified 2009 Final EIR.

### **Project-Generated Traffic Noise**

Noise levels in the project vicinity are projected to increase assuming the construction and operation of already approved projects in the area. The review of the traffic data indicates that the project would not substantially increase noise levels above background noise levels (noise levels generated by existing traffic and traffic generated by approved but not yet developed projects) without the project. As with the 2008 project, it is estimated that the revised project (either scheme) would result in traffic noise level increases on area roadways ranging from zero to two dBA DNL. A noise increase of three dBA or greater is considered a significant impact. Therefore, the up to two dBA DNL increase in ambient noise levels from project-generated traffic is a less than significant impact. The revised project would result in similar project-generated noise levels as disclosed in the certified 2009 Final EIR. The revised project would not result in new significant or more substantial project-generated traffic noise impacts than disclosed in the certified 2009 Final EIR.

#### **3.12.2.3      *Noise Impacts Within the Project***

### **Residential/Commercial Interface**

The City of Cupertino's Municipal Code restricts noise generated by non-transportation sources to a maximum level of 60 dBA  $L_{eq}$  during the daytime and 50 dBA  $L_{eq}$  at night when measured in a residential area. The Municipal Code also regulates noise from idling vehicles and commercial deliveries.

The proposed hotel and residential uses (both 2012 schemes) are in proximity to proposed retail uses (possibly including an athletic club) and parking garages. In addition, adjacent residential uses (existing and planned residences on the Metropolitan and Rosebowl sites) would also be in proximity

to retail uses proposed on-site. As identified in the 2009 Final EIR, noise levels in the vicinity of noise-generating uses (retail uses, possible athletic club, and parking garages) would exceed 60 dBA  $L_{eq}$  during the daytime or 50 dBA  $L_{eq}$  at night.

The proposed retail (including possible athletic club in *2012 Scheme 1* only) and parking garages would generate daytime and/or nighttime noise levels above the City's maximum noise standards of 60 dBA  $L_{eq}$  during the daytime and 50 dBA  $L_{eq}$  at existing, planned, and proposed residential uses on or adjacent to the project site.

The revised project would result in the same residential/commercial interface noise impacts as disclosed in the certified 2009 Final EIR. The revised project would not result in new significant or more substantial noise impacts within and adjacent to the project site than disclosed in the certified 2009 Final EIR.

As identified in the 2009 Final EIR, the project includes the implementation of mitigation measures MM NOI – 3.1 through 3.4 to reduce noise impacts between the proposed retail uses and parking garages and existing, planned, and proposes residential/hotel uses adjacent to and on-site to a less than significant level.

### **3.12.3            Conclusion**

The revised project would not result in new significant or more substantial noise or vibration impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.13 POPULATION AND HOUSING**

**3.13.1 Existing Setting**

The existing population and housing setting has not substantially changed since the certification of the 2009 Final EIR. Based on information from the Department of Finance, the City of Cupertino population was estimated to be approximately 56,300 in 2008 and 58,750 in 2011, which is a four percent increase in estimated population.<sup>9</sup>

The project site is located within the Vallco Park South subarea of the Heart of the City Specific Plan area. Based on the City’s General Plan development allocations, as well existing development and development allocations already distributed, 240 additional residential units are allowed in the Vallco Park South subarea. The remaining 240 residential allocations already reflect the distribution of 160 residential units for the previously approved 2008 project.

**3.13.2 Environmental Checklist and Discussion**

POPULATION AND HOUSING						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

<sup>9</sup> Source: 1) State of California, Department of Finance. E-4 Population Estimates for Cities, Counties and the State, 2001-2010, with 2000 & 2010 Census Counts. September 2011. Available here: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-4/2001-10/view.php>. 2) State of California, Department of Finance. E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2010 and 2011. May 2011. Available here: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/view.php>.

Both 2008 Schemes evaluated in the 2009 Final EIR included 160 units of senior housing. Residential uses under *2012 Scheme 1* could result in a slight decrease in residential units and residents if 143 senior units were constructed. If 120 market-rate apartments are built under *2012 Scheme 1*, the number of residential units would also decrease. The residential population could be slightly greater if the occupancy rate for the market rate housing approaches the citywide average of about 2.9 residents per household.<sup>10</sup> The residential population on the site would increase under *2012 Scheme 2* (143 senior units and 105 market rate units, or 248 residential units total) as the total number of units would exceed the 160 senior units previously addressed in the 2009 Final EIR.

As noted in Section 3.13.1, the distribution of 160 residential units for the previously approved project have already been accounted for in the Vallco Park South subarea of the Heart of the City Specific Plan Area. *2012 Scheme 1* would fall within the existing allocation for this planning area. *2012 Scheme 2* would require allocation of an additional 88 residential units in the Vallco Park South subarea. Residential populations under *2012 Scheme 2* would not exceed the available residential allocation of 240 additional residential units for the Vallco Park South subarea.

Under both *2012 Scheme 1* and *2012 Scheme 2*, retail uses would be reduced and office uses would be increased compared to the schemes evaluated in the 2009 Final EIR.<sup>11</sup> Overall, on-site jobs would decrease an estimated 15 percent under *2012 Scheme 1* and an estimated 17 percent under *2012 Scheme 2* compared to the 2008 project.

Although the housing and jobs growth associated with the project would be modified and could be incrementally higher (*2012 Scheme 2* only), the development and growth associated with the 2012 project schemes is already accounted for in the City's General Plan (2005) and therefore, the revised project would not induce unplanned growth in jobs or housing within the City.

The revised project would have a less than significant impact on population and housing, as disclosed for the 2008 project in the certified 2009 Final EIR. The revised project would not result in new significant or more substantial population and housing impacts than disclosed in the certified 2009 Final EIR.

### **3.13.3      Conclusion**

The revised project would not result in new significant or more substantial population and housing impacts than disclosed in the certified 2009 Final EIR. **(New Less Than Significant Impact)**

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<sup>10</sup> The average household size in Cupertino is 2.9 persons per household (Source: State of California, Department of Finance. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2010-2011, with 2010 Benchmark. May 2011. Available here: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php>.)

<sup>11</sup> The estimated number of jobs from the project were based on the following assumptions: 1) the average number of employees per office square footage is one employee per 300 square feet (Source: California Water Service Company. Addendum No. 1 SB 610 Water Supply Assessment for Main Street Cupertino Development Project. March 5, 2012.); 2) the average number of retail employees per square foot is one employee per 945 square feet (Source: U.S. Energy Information Administration. "Retail and Service Buildings." January 3, 2001. Available here: [http://www.eia.gov/emeu/consumptionbriefs/cbecs/pbawebsite/retailserv/retserv\\_howmanyempl.htm](http://www.eia.gov/emeu/consumptionbriefs/cbecs/pbawebsite/retailserv/retserv_howmanyempl.htm).); and 3) the average number of employees per hotel room is 13 employees per room.

**3.14 PUBLIC SERVICES**

**3.14.1 Existing Setting**

The existing public services setting has not substantially changed since the certification of the 2009 Final EIR in December 2008. Please refer to the 2009 Final EIR for a complete description of the existing public services conditions.

**3.14.2 Environmental Checklist and Discussion**

PUBLIC SERVICES						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
– Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
– Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
– Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,5
– Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
– Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

**3.14.2.1 Fire and Police Services**

The project site is located within an urbanized area of Cupertino that is served by the Santa Clara County Fire Department and the Santa Clara County Sheriff’s Office. As discussed in **Section 3.13 Population and Housing**, the revised project would result in an incrementally higher number of residents and employees on-site compared to the 2008 project. Therefore, the demand for fire and police services for the revised project would be incrementally higher compared to the 2008 project.

The additional service demands generated by the revised project, however, are not considered substantial and would not require construction of additional fire or police facilities. The revised project would not result in a new significant or more substantial impact to fire and police services than disclosed in the certified 2009 Final EIR.

### **3.14.2.2 Schools**

The following discussion is based upon a school impact analysis prepared by *Schoolhouse Services* in January 2012 (Appendix B).

The revised project would allow for the development of up to 120 market-rate apartments that would generate new students. Both schemes would also allow for 143 senior housing units, but the senior housing units would not generate school aged children.

The project site is located within the Cupertino Union School District and the Fremont Union High School District. Based on the school impact analysis completed for the project (refer to Appendix B), students from the project would likely attend Sedgwick Elementary School and Hyde Middle School which are in the Cupertino Union School District, and Cupertino High School which is in the Fremont Union High School District. It is estimated that 120 market-rate units would generate approximately 18 elementary school students, seven middle school students, and seven high school students.

Currently, the local schools that project students would attend are overcapacity. Improvements to Sedgwick Elementary School, Hyde Middle School, and Cupertino High School to accommodate future student enrollment (including project generated students) are being considered and/or approved but not yet constructed (refer to Appendix B for more detail).

In accordance with California Government Code Section 65996, the developer shall pay a school impact fee to the Cupertino Union Elementary School District and the Fremont Union High School District to offset the increased demands on school facilities caused by the proposed project. As analyzed and described in the school impact analysis (refer to Appendix B), the school impact fee and property tax the project would pay to the school districts would cover the combined cost of the facility improvements and operating cost for the project-generated students. The School Impact Fee program is considered under state law as an acceptable method of offsetting a project's effect on the adequacy of school facilities, with the individual school districts responsible for implementing school facilities improvements.

The revised project could generate new elementary, middle school, and high school students if market rate apartments are built and occupied. The effects of new students on local school facilities was not addressed in the 2009 Final EIR as only senior housing was proposed at that time. As described above, the school impact fees and property tax paid by the project would cover the cost of facility improvements and operating cost for the project-generated students. Inclusion of market rate apartments in the 2012 project schemes, therefore, would not result in a new significant impact to schools. The revised project would result in a new less than significant impact on school facilities.

### 3.14.2.3 *Parks*

According to the City’s parkland dedication requirements, the development of senior housing is required to provide 0.003 acres of parkland per unit and the development of market-rate housing (specifically apartments) is required to provide 0.0054 acres of parkland per unit (Municipal Code Section 18.24.060). *2012 Scheme 1* includes 143 senior housing units or 120 market-rate apartment units and would be required to provide approximately 0.43 acres of parkland if the senior units are developed or 0.648 acres of parkland if the market-rate units are developed. *2012 Scheme 2* proposed 143 senior housing units and 105 market-rate units and would be required to provide approximately 1.0 acres of parkland if developed.

The revised project proposes a total of 1.55 acres of private open space, including a 0.8-acre town square for public gatherings and 0.75-acre park. The proposed private open spaces are intended to be local serving by the proposed project and surrounding neighborhood. The private open space would have an easement that would allow public use and access. Because the project would provide open space for local uses, including public gatherings, it is not anticipated that the project would substantially increase use of existing park facilities, result in the physical deterioration (or degradation) of park facilities, or require the construction of new facilities other than that proposed by the project and evaluated in this Addendum.

Like the 2008 project, the revised project would mitigate its park facilities impacts by providing publicly accessible open space and town square to satisfy the City’s park requirements outlined in the Municipal Code (Section 18.24.060).

The revised project would result in similar impacts to park facilities as disclosed in the certified 2009 Final EIR. The revised project would not result in a new significant or more substantial impact to parks than disclosed in the certified 2009 Final EIR.

### 3.14.3 Conclusion

The revised project would not result in a new significant or more substantial impact to public services than disclosed in the certified 2009 Final EIR. **(Less Than Significant Impact)**

**3.15 RECREATION**

**3.15.1 Existing Setting**

The existing recreation setting has not substantially changed since the certification of the 2009 Final EIR. Please refer to the 2009 Final EIR for a complete description of the existing recreational conditions.

**3.15.2 Environmental Checklist and Discussion**

RECREATION						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

There are no public parks located within the project site area. The revised project includes a total of 1.55 acres of private open space, with an easement that would allow public use and access (see park and town square on Figures 4 and 5). The proposed 0.75-acre park is the same size park that was proposed by the 2008 project and approved by the City Council in January 2009.

The private open spaces on the project site is intended to be local serving and utilized by the proposed project and the surrounding neighborhood. The proposed private open spaces are a town square and park (refer to Figures 4 and 5). It is envisioned that the town square would be used for public gatherings and events and the park on Stevens Creek Boulevard would be open to the public. The impacts of construction if the town square portion of the private open space are addressed as part of this project in this Addendum. The uses of the proposed open space on Stevens Creek Boulevard are not known at this time. Environmental impacts of park uses at this location will be determined at a later date and will require subsequent environmental review if other than passive uses are proposed.

The proposed open space, as well as the common open space areas proposed within the residential buildings on-site, would reduce and avoid substantial physical impacts to existing public gathering

places in neighborhood parks. The proposed open space and the project's compliance with the City's parkland dedication/payment of in-lieu fees (refer to **Section 3.14 Public Services**) would off-set substantial recreational impacts.

The revised project would result in similar recreation impacts as disclosed in the certified 2009 Final EIR. The revised project would not result in a new significant or more substantial impact to recreational facilities than disclosed in the certified 2009 Final EIR.

### **3.15.3            Conclusion**

The revised project would not result in a new significant or more substantial impact to recreational facilities than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.16 TRANSPORTATION**

Revised traffic analyses were prepared by *Fehr & Peers* in February and March 2012 to evaluate if the revised project would have new significant transportation impacts or a substantial increase in severity of a previously identified impact in the certified 2009 Final EIR. Copy of these reports are included in Appendix C of this Addendum.

**3.16.1 Existing Setting**

The existing transportation setting, including thresholds of significance and existing (and background) level of service for study intersections, has not substantially changed since the certification of the 2009 Final EIR. Please refer to the 2009 Final EIR for a complete description of the existing transportation conditions.

**3.16.2 Environmental Checklist and Discussion of Impacts**

TRANSPORTATION/TRAFFIC						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,6,7

TRANSPORTATION/TRAFFIC						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
2) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,6
3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
5) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
6) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,6,7

### 3.16.2.1 *Project Condition Comparison*

This section evaluates traffic under project conditions. Project conditions are defined as existing traffic volumes plus trips from approved but not yet constructed developments (background conditions), plus traffic generated by the proposed project.

#### **Traffic Estimates**

The amount of traffic added to the roadway system by a proposed project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. The first step estimates the amount of added traffic to the roadway network. The second step estimates the direction of travel to and from the project site. The trips are assigned to specific street segments and intersection turning movements during the third step.

#### Trip Generation

The amount of traffic added to the surrounding roadway system by the revised project (both schemes) was estimated by applying appropriate AM and PM peak hour trip generation rates published in Trip Generation (8<sup>th</sup> Edition) by the Institute of Transportation Engineers (ITE).<sup>12</sup>

Table 12 provides a summary of the total average daily trips, as well as the AM and PM peak hour trips for the project under 2008 and 2012 schemes. Both 2012 schemes would generate more AM peak hour trips than the 2008 schemes. In the PM peak hour, the number of outbound trips under *2012 Scheme 1* would be slightly higher than 2008 Scheme 1. Detailed trip generation estimates are presented in Appendix C of this Addendum.

#### Trip Distribution and Assignment

Traffic generated by the 2012 schemes was added to the surrounding roadway network using the trip distribution and assignment assumptions used in the 2009 Final EIR, with minor adjustment to account for the driveway locations for the revised project. Refer to Appendix C for more detail.

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<sup>12</sup> The amount of traffic generated by the 2008 project schemes analyzed in the 2008 Final EIR were estimated using rates published in Trip Generation, 7<sup>th</sup> Edition by the ITE. The trip generation estimates for the health/athletic club analyzed in the 2008 Final EIR were based on trip generation data specifically for Lifetime Fitness Centers. The revised project includes a health/athletic club but not a Lifetime Fitness Center; therefore, ITE trip generation rates were used for this project of the revised project. ITE rates are for a typical health club facility with private ownership, indoor recreational activities and a membership which allows access to the general public.

Scheme	Average Daily Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
2008 Scheme 1	13,751	423	199	622	591	673	1,264
<i>2012 Scheme 1*</i>	<i>10,938</i>	<b>527</b>	<b>203</b>	<b>730</b>	476	<b>686</b>	<i>1,162</i>
2008 Scheme 2	10,692	450	133	583	408	628	1,036
<i>2012 Scheme 2**</i>	<i>9,821</i>	<b>501</b>	<b>171</b>	<b>672</b>	389	623	<i>1,012</i>

Notes: **Bold** text indicates a higher trip generation in a 2012 scheme than the 2008 schemes.  
 \* *2012 Scheme 1* allows for a 60,000 square foot athletic club or 60,000 square feet of additional retail and 143 senior units or 120 market-rate units (refer to Table 1). The trip generation for this scheme assumed the highest trip generating uses which are the athletic club and market-rate units. Refer to Appendix C for more detail.  
 \*\* *2012 Scheme 2* includes the development of 105 market-rate apartment units. The traffic report reflects 120 (instead of the proposed 105) apartment units. Therefore, the traffic impact analysis for *2012 Scheme 2* is conservative.

### Roadway Changes

Roadway changes under the 2012 schemes would be the same as the described in the 2009 Final EIR for the 2008 schemes. However, under the 2012 schemes, Vallco Parkway is proposed to be narrowed only on the south side (eastbound direction) from three lanes to one lane (versus being narrowed on the east- and westbound directions from a total of six lanes to two lanes as proposed in the 2008 schemes) and no on-street parking is proposed on the north side of Stevens Creek Boulevard along the project site frontage (as it was in the 2008 schemes).<sup>13</sup>

### Site Access

The revised project (both 2012 schemes) provides vehicular access to the site via driveways on Vallco Parkway and Stevens Creek Boulevard. In addition to the full-access driveways on Stevens Creek Boulevard at Finch Avenue, the project has two right-turn only driveways on Stevens Creek Boulevard, three stop-signed controlled full access driveways on Vallco Parkway, and one right-turn only driveway on Vallco Parkway. The driveways to the site and garages generally provide sufficient storage space for vehicle queues exiting the site or garages. The left-turn pockets in parking garages 1 and 2 from Vallco Parkway should be approximately 100 feet in length to accommodate the expected demand. Pedestrian and bicycle access in the project site vicinity are discussed later on in this section.

<sup>13</sup> The traffic study for the revised project (included in Appendix C of this Addendum) assumed narrowing of Vallco Parkway on both the south and north side (east- and westbound directions). The revised project, however, only proposes to narrow the south side (eastbound direction). Since the revised project would not narrow the north side (westbound direction) of Vallco Parkway, the westbound capacity of Vallco Parkway would be greater than assumed in the traffic study. This change in westbound capacity would not result in adverse traffic impacts. Source: Henry, Todd. Fehr & Peers. Personal communication. March 20, 2012.

### **Project Intersection Levels of Service**

The level of service operations at the study intersections were evaluated under the revised project conditions. Vehicle trips generated by the revised project were added to background traffic volumes identified in the 2009 Final EIR to determine the level of service at study intersections under project conditions. The results of the intersection level of service calculations for background and project conditions for both schemes are presented in Table 13.

Under background conditions, all study intersections operate at an acceptable level of service except for the intersection of Homestead Road and Lawrence Expressway which would operate at LOS F during both peak hours. As shown in Table 13, the revised project would not result in new significant impacts compared to the 2008 project. The revised project would impact the same intersections as the 2008 project evaluated in the 2009 Final EIR. The revised project (as well as the 2008 project) would result in significant impacts to the following intersections:

- Homestead Road/Lawrence Expressway (AM and PM peak hours – all 2008 and 2012 project schemes)
- Wolfe Road/Vallco Parkway (PM peak hour only – all 2008 and 2012 project schemes)
- Lawrence Expressway/I-280 SB Ramps (AM and PM peak hours – all 2008 and 2012 project schemes)
- Bollinger Road/Lawrence Expressway (PM peak hour only – *2008 Scheme 1* and *2012 Scheme 2* only)

Table 13: Comparison of Intersection Levels of Service Under Background and Project Conditions

Study Intersection	Peak Hour <sup>1</sup>	2008 Background Conditions		Project Conditions By Scheme															
				2008 Scheme 1				2012 Scheme 1				2008 Scheme 2				2012 Scheme 2			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>
1. Wolfe Road/ Homestead Road	AM PM	27.5 35.1	C D+	27.6 26.4	C D+	0.002 0.035	-0.1 2.6	27.6 36.5	C D+	0.003 0.036	0.0 2.8	27.6 36.3	C D+	0.000 0.030	-0.1 2.4	27.6 36.1	C D+	0.000 0.027	0.0 2.0
2. Homestead Road/ Tantau Avenue	AM PM	22.9 26.4	C+ C	23.4 28.0	C C	0.011 0.024	0.8 1.7	23.4 27.7	C C	0.012 0.019	0.9 1.4	23.2 27.6	C C	0.006 0.017	0.6 1.2	23.2 27.4	C C	0.007 0.014	0.6 1.0
3. Homestead Road/ Lawrence Expressway*	AM PM	<b>86.4</b> <b>111.1</b>	<b>F</b> <b>F</b>	<b>89.8</b> <b>118.6</b>	<b>F</b> <b>F</b>	<b>0.011</b> <b>0.019</b>	<b>6.3</b> <b>9.8</b>	<b>89.5</b> <b>118.6</b>	<b>F</b> <b>F</b>	<b>0.012</b> <b>0.017</b>	<b>5.8</b> <b>9.7</b>	<b>89.1</b> <b>117.5</b>	<b>F</b> <b>F</b>	<b>0.011</b> <b>0.015</b>	<b>5.2</b> <b>8.6</b>	<b>89.0</b> <b>117.4</b>	<b>F</b> <b>F</b>	<b>0.010</b> <b>0.015</b>	<b>4.6</b> <b>8.5</b>
4. Wolfe Road/ Pruneridge Avenue	AM PM	20.6 38.8	C+ D+	20.4 39.2	C+ D	0.006 0.021	0.0 1.0	20.4 39.3	C+ D	0.008 0.028	0.0 1.3	20.5 39.2	C+ D	0.004 0.026	0.0 1.2	20.5 39.1	C+ D	0.005 0.017	0.0 0.8
5. Pruneridge Avenue/ Tantau Avenue	AM PM	22.3 21.9	C+ C+	22.5 22.5	C+ C+	0.019 0.062	0.2 0.6	22.6 22.4	C+ C+	0.016 0.060	0.1 0.6	22.5 22.3	C+ C+	0.012 0.055	0.1 0.5	22.5 22.3	C+ C+	0.011 0.053	0.0 0.4
6. Wolfe Road/ I-280 NB Ramps*	AM PM	15.2 13.9	B B	15.3 14.3	B B	0.001 0.028	0.0 0.6	15.4 14.2	B B	0.004 0.024	0.1 0.5	15.3 14.2	B B	-0.001 0.020	0.0 0.4	15.4 14.2	B B	0.003 0.019	0.1 0.4
7. Wolfe Road/ I-280 SB Ramps	AM PM	14.0 9.4	B A	14.1 10.3	B B+	0.017 0.077	0.2 1.4	14.1 9.9	B A	0.016 0.066	0.2 0.9	14.1 9.9	B A	0.011 0.061	0.1 0.8	14.1 9.9	B A	0.014 0.059	0.2 0.9
8. Wolfe Road/ Vallco Parkway	AM PM	17.7 53.1	B D-	24.3 <b>68.4</b>	C <b>E</b>	0.054 <b>0.082</b>	5.4 <b>30.2</b>	21.4 <b>66.2</b>	C+ <b>E</b>	0.062 <b>0.079</b>	5.4 <b>17.4</b>	24.5 <b>65.6</b>	C <b>E</b>	0.057 <b>0.073</b>	5.8 <b>27.5</b>	20.8 <b>63.5</b>	C+ <b>E</b>	0.052 <b>0.068</b>	4.6 <b>14.2</b>
9. Vallco Parkway/ Finch Avenue (unsignalized)	AM PM	11.6 15.2	B C	13.5 26.8	B D			14.0 25.3	B C			13.6 23.9	B C			13.5 21.6	B C		
10. Vallco Parkway/ Tantau Avenue	AM PM	18.1 20.2	B- C+	19.6 25.3	B- C	0.008 0.267	1.0 6.3	18.8 22.8	B- C+	0.006 0.209	0.0 3.0	18.7 22.5	B- C+	0.002 0.200	-0.1 2.7	18.7 22.3	B- C+	0.002 0.193	-0.1 2.4
11. Stevens Creek Boulevard/ De Anza Boulevard*	AM PM	31.7 44.9	C D	32.2 46.5	C- D	0.013 0.017	0.7 2.5	32.2 46.2	C- D	0.015 0.012	0.8 1.8	32.1 46.1	C- D	0.011 0.011	0.6 1.6	32.1 45.9	C- D	0.011 0.009	0.6 1.4
12. Stevens Creek Boulevard/ Blaney Avenue	AM PM	29.0 29.9	C C	29.0 30.2	C C	0.010 0.037	0.2 0.9	29.1 30.3	C C	0.012 0.030	0.4 1.0	29.1 30.2	C C-	0.007 0.024	0.4 0.7	29.1 30.2	C C	0.008 0.022	0.3 0.7
13. Stevens Creek Boulevard/ Portal Avenue	AM PM	14.3 13.2	B B	13.9 12.8	B B	0.007 0.025	-0.2 -0.3	14.0 12.9	B B	0.008 0.019	-0.1 -0.1	14.0 12.9	B B	0.004 0.015	-0.1 -0.1	14.0 13.0	B B	0.005 0.013	-0.1 -0.1
14. Stevens Creek Boulevard/ Perimeter Road	AM PM	10.0 17.4	A B	9.8 16.9	A B	0.003 0.024	0.0 -0.4	9.8 16.9	A B	0.003 0.018	0.0 -0.3	9.8 17.0	A B	0.000 0.015	0.0 -0.1	9.8 17.0	A B	0.000 0.012	0.0 -0.2
15. Stevens Creek Boulevard/ Wolfe Road-Miller Avenue*	AM PM	38.7 40.1	D+ D	38.5 41.3	D+ D	0.009 0.044	0.1 1.9	38.8 41.9	D+ D	0.021 0.055	0.5 2.7	38.6 41.2	D+ D	0.005 0.039	0.1 1.6	38.7 41.4	D+ D	0.013 0.042	0.3 1.8
16. Stevens Creek Boulevard/ Finch Avenue	AM PM	37.6 27.0	D+ C	38.4 38.0	D+ D+	0.020 0.076	0.1 7.0	39.5 39.9	D+ D	0.031 0.076	1.3 8.6	37.9 36.0	D D+	0.019 0.067	-0.2 6.5	37.8 30.2	D+ C	0.023 0.033	-0.2 2.4
17. Stevens Creek Boulevard/ Tantau Avenue	AM PM	23.0 25.0	C+ C	23.7 29.8	C C	0.094 0.091	1.7 5.5	23.9 28.8	C C	0.100 0.087	2.1 5.1	23.8 28.5	C+ C	0.092 0.080	1.9 4.5	23.9 28.3	C C	0.094 0.075	2.0 4.3
18. Stevens Creek Boulevard/ I-280 Ramps*	AM PM	28.5 55.2	C E+	27.4 78.3	C E-	0.001 0.108	0.2 49.7	27.2 79.8	C E-	0.014 0.112	-3.9 51.6	27.6 77.9	C E-	-0.010 0.104	-0.1 47.4	27.6 76.9	C E-	-0.011 0.098	-0.1 44.9
19. Stevens Creek Boulevard/ Lawrence Expressway (W)*	AM PM	23.1 32.4	C C-	23.8 33.5	C C-	0.040 0.053	1.1 2.4	24.0 33.1	C C-	0.050 0.038	1.3 1.6	23.9 33.1	C C-	0.044 0.034	1.2 1.4	24.0 32.9	C C-	0.044 0.027	1.2 1.1
20. Stevens Creek Boulevard/ Lawrence Expressway (E)*	AM PM	37.9 33.7	D+ C-	38.7 34.9	D+ C-	0.024 0.043	0.8 1.0	38.9 34.6	D+ C-	0.031 0.034	1.1 0.8	38.7 34.5	D+ C-	0.025 0.029	0.8 0.7	38.7 34.3	D+ C-	0.025 0.024	0.8 0.5
21. Lawrence Expressway / I-280 SB Ramps*	AM PM	53.7 54.2	D- D-	<b>61.1</b> <b>69.6</b>	<b>E</b> <b>E</b>	<b>0.032</b> <b>0.069</b>	<b>8.9</b> <b>21.0</b>	<b>61.5</b> <b>71.2</b>	<b>E</b> <b>E</b>	<b>0.032</b> <b>0.073</b>	<b>9.0</b> <b>22.8</b>	<b>60.5</b> <b>69.6</b>	<b>E</b> <b>E</b>	<b>0.028</b> <b>0.067</b>	<b>7.9</b> <b>20.7</b>	<b>60.2</b> <b>68.8</b>	<b>E</b> <b>E</b>	<b>0.027</b> <b>0.064</b>	<b>7.5</b> <b>19.6</b>
22. Bollinger Road/	AM	20.0	C+	33.6	C-	0.051	3.2	19.9	B-	-0.002	-0.1	33.6	C-	0.049	3.2	19.9	B-	-0.002	-0.1

Table 13: Comparison of Intersection Levels of Service Under Background and Project Conditions

Study Intersection	Peak Hour <sup>1</sup>	2008 Background Conditions		Project Conditions By Scheme															
				2008 Scheme 1				2012 Scheme 1				2008 Scheme 2				2012 Scheme 2			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Change In Crit V/C <sup>4</sup>	Change in Crit Delay <sup>5</sup>
De Anza Boulevard*	PM	24.0	C	37.3	D+	0.013	0.5	24.1	C	0.007	0.2	37.0	D+	0.006	0.2	24.1	C	0.005	0.2
23. Bollinger Road/ Blaney Avenue	AM PM	20.0 21.2	B- C+	21.0 21.6	C+ C+	0.033 0.016	1.5 0.9	21.2 21.6	C+ C+	0.038 0.018	1.8 1.1	21.2 21.5	C+ C+	0.038 0.014	1.8 0.9	21.0 21.5	C+ C+	0.031 0.012	1.5 0.7
24. Bollinger Road/ Miller Avenue	AM PM	33.6 38.4	C- D+	33.9 39.3	C- D	0.013 0.019	0.5 0.7	34.0 39.2	C- D	0.016 0.020	0.6 0.7	33.9 38.9	C- D+	0.013 0.018	0.5 0.5	33.9 39.0	C- D+	0.013 0.017	0.5 0.5
25. Bollinger Road/ Tantau Avenue	AM PM	12.6 16.4	B B	12.8 17.2	B B	0.000 0.004	0.1 0.8	12.7 17.1	B B	0.001 0.003	0.1 0.7	12.7 17.1	B B	0.001 0.003	0.1 0.6	12.7 17.0	B B	0.001 0.002	0.1 0.5
26. Bollinger Road/ Lawrence Expressway*	AM PM	51.5 54.7	D- D-	53.5 <b>55.3</b>	D- <b>E+</b>	0.017 <b>0.014</b>	5.0 <b>1.6</b>	53.7 54.8	D- D-	0.015 0.008	6.0 0.3	53.7 54.9	D- D-	0.014 0.007	5.9 0.3	53.7 <b>55.2</b>	D- <b>E+</b>	0.014 <b>0.009</b>	6.1 <b>1.3</b>
27. Vallco Parkway/ Perimeter Road	AM PM	19.9 20.4	B- C+	16.2 21.0	B C+	-0.006 0.003	-2.7 1.2	16.2 20.0	B C+	0.027 0.018	-2.5 -0.4	16.0 20.3	B C+	-0.004 -0.014	-2.9 0.0	16.9 20.1	B C+	0.031 0.015	-1.8 -0.3

Notes: All intersections are signalized except for study intersection #9, Vallco Parkway and Finch Avenue.

\* Designated CMP intersection.

<sup>1</sup> AM = morning peak hour; PM = evening peak hour

<sup>2</sup> Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 Highway Capacity Manual, with adjusted saturation flow rates to reflect Santa Clara County conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented.

<sup>3</sup> LOS = Level of service

<sup>4</sup> Change in the critical volume-to-capacity ratio (V/C) between background and project conditions.

<sup>5</sup> Change in critical movement delay between background and project conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.

Unacceptable level of service operations are shown in **bold text**.

Table 14 provides a summary of the impacted intersections under project conditions. The results show that the revised project (2012 schemes) would not result in substantially more severe impacts than the 2008 schemes analyzed in the 2009 Final EIR. In comparison to the 2008 project, the revised project would change delays at impacted intersections by -4.9 seconds to +1.6 seconds (refer to Table 14). This change in delay is not considered substantial.

The revised project would not result in new significant or more substantial impacts to study intersections than disclosed in the certified 2009 Final EIR.

<b>Table 14: Summary of Significantly Impacted Intersections Under Project Conditions</b>						
<b>Intersection</b>	<b>Peak Hour<sup>1</sup></b>	<b>2008 Background Conditions</b>	<b>2008 Scheme 1</b>	<b>2012 Scheme 1</b>	<b>2008 Scheme 2</b>	<b>2012 Scheme 2</b>
		<b>Delay<sup>2</sup>/Level of Service</b>				
3. Homestead Road/ Lawrence Expressway*	AM	86.4/F	89.8/F	89.5/F	89.1/F	89.0/F
	PM	111.1/F	118.6/F	118.6/F	118.6/F	117.4/F
8. Wolfe Road/ Vallco Parkway	PM	53.1/D	68.4/E	66.2/E	65.6/E	63.5/E
21. Lawrence Expressway/ I-280 SB Ramps*	AM	53.7/D-	61.1/E	61.5/E	60.5/E	60.2/E
	PM	54.2/D-	69.6/E	71.2/E	69.6/E	68.8/E
26. Bollinger Road/ Lawrence Expressway*	PM	54.7/D-	55.3/E+	---	---	55.2/E+

Notes:  
 \* Designated CMP intersection.  
<sup>1</sup> LOS = Level of service  
<sup>2</sup> Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 Highway Capacity Manual, with adjusted saturation flow rates to reflect Santa Clara County conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented.

Mitigation for impacts to intersections would be the same as those disclosed in the 2009 Final EIR. Mitigation measures found to be infeasible in the 2009 Final EIR remain infeasible. No new or different mitigation measures have been identified since the 2009 Final EIR that would reduce the project’s intersection impacts. Therefore, the project’s impact to the intersections of Homestead Road/Lawrence Expressway, Lawrence Expressway/I-280 SB Ramps, Bollinger Road/Lawrence Expressway would remain significant and unavoidable, as identified in the 2009 Final EIR.

As identified in the 2009 Final EIR, the project includes the implementation of MM TRAN – 1.1 to reduce the project’s impact at the intersection of Wolfe Road/Vallco Parkway to a less than significant level.

### Freeway Segment Analysis

Project-generated traffic volumes were added to existing traffic volumes for each freeway mainline segment identified in the 2009 Final EIR. These volumes were then used to estimate density for each segment under project conditions. The resulting freeway segment operations are summarized in Table 15. All traffic associated with the revised project was assumed to use the mixed-flow lanes on the freeway; therefore, HOV lanes were not analyzed under project conditions. Under baseline existing conditions (2008 for the project), the following freeway segments operate at unacceptable levels of service:

- I-280 Eastbound, De Anza Boulevard to I-880 (five segments, PM peak hour);
- I-280 Westbound, I-880 to Winchester Boulevard (one segment, PM peak hour);
- I-280 Westbound, I-880 to Wolfe Road (four segments, AM peak hour);
- I-280 Westbound, De Anza Boulevard to SR 85 (one segment, AM peak hour);
- I-280 Westbound HOV, I-880 to Winchester Boulevard (AM peak hour).

As shown in Table 15, the revised project would not result in new significant impacts to freeway segments. The revised project would impact the same freeway segments as the 2008 project evaluated in the 2009 Final EIR. The project (2008 and 2012) would result in significant impacts to the following freeway segments:

- I-280 Eastbound, Lawrence Expressway to Saratoga Avenue (PM peak hour only – all 2008 and 2012 project schemes)
- I-280 Eastbound, Saratoga Avenue to Winchester Boulevard (PM peak hour only – all 2008 and 2012 project schemes)
- I-280 Eastbound, Winchester Boulevard to I-880 (PM peak hour only – all 2008 and 2012 project schemes)
- I-280 Westbound, I-880 to Winchester Boulevard (PM peak hour – *2008 Scheme 1* and *2012 Scheme 1*)
- I-280 Westbound, I-880 to Winchester Boulevard (AM peak hour – *2008 Scheme 2* and both 2012 schemes)
- I-280 Westbound, Winchester Boulevard to Saratoga Avenue (AM peak hour only – both 2008 schemes and *2012 Scheme 1*)
- I-280 Westbound, Saratoga Avenue to Lawrence Expressway (AM peak hour only – all 2008 and 2012 project schemes)

Table 15: Freeway Segment Levels of Service Under Existing Conditions (2008) and Project Conditions																				
From	To	Peak Hour <sup>1</sup>	2008 Existing Conditions		Project Conditions By Scheme															
			2008 Scheme 1				2012 Scheme 1				2008 Scheme 2				2012 Scheme 2					
			Density <sup>2</sup>	LOS <sup>3</sup>	Added Trips <sup>4</sup>	% Impact	Added Trips <sup>4</sup>	Density <sup>2</sup>	LOS <sup>3</sup>	% Impact	Added Trips <sup>4</sup>	Density <sup>2</sup>	LOS <sup>3</sup>	% Impact	Added Trips <sup>4</sup>	Density <sup>2</sup>	LOS <sup>3</sup>	% Impact	Added Trips <sup>4</sup>	Density <sup>2</sup>
Eastbound I-280																				
SR 85	De Anza Boulevard	AM	27	D	59	27	D	0.86	72	27	D	1.04	61	27	D	0.88	64	27	D	0.93
		PM	32	D	75	32	D	1.09	51	32	D	0.74	45	32	D	0.65	37	32	D	0.54
De Anza Boulevard	Wolfe Road	AM	32	D	52	32	D	0.75	65	32	D	0.94	55	32	D	0.80	58	32	D	0.84
		PM	<b>67</b>	<b>F</b>	66	68	F	0.96	46	68	F	0.67	41	68	F	0.59	34	67	F	0.49
Wolfe Road	Lawrence Expressway	AM	22	C	3	22	C	0.04	5	22	C	0.07	3	22	C	0.04	3	22	C	0.04
		PM	<b>76</b>	<b>F</b>	14	76	F	0.20	16	76	F	0.23	14	76	F	0.20	14	76	F	0.20
Lawrence Expressway	Saratoga Avenue	AM	38	D	30	38	D	0.43	36	38	D	0.52	26	38	D	0.38	27	38	D	0.39
		PM	<b>98</b>	<b>F</b>	<b>113</b>	<b>101</b>	<b>F</b>	<b>1.64</b>	<b>136</b>	<b>101</b>	<b>F</b>	<b>1.97</b>	<b>122</b>	<b>101</b>	<b>F</b>	<b>1.77</b>	<b>100</b>	<b>100</b>	<b>F</b>	<b>1.45</b>
Saratoga Avenue	Winchester Boulevard	AM	43	D	30	43	D	0.43	36	43	D	0.52	22	43	D	0.32	23	43	D	0.33
		PM	<b>86</b>	<b>F</b>	<b>113</b>	<b>88</b>	<b>F</b>	<b>1.64</b>	<b>136</b>	<b>88</b>	<b>F</b>	<b>1.97</b>	<b>104</b>	<b>88</b>	<b>F</b>	<b>1.51</b>	<b>84</b>	<b>87</b>	<b>F</b>	<b>1.22</b>
Winchester Boulevard	I-880	AM	27	D	26	27	D	0.38	31	27	D	0.45	19	27	D	0.28	20	27	D	0.29
		PM	<b>104</b>	<b>F</b>	<b>90</b>	<b>106</b>	<b>F</b>	<b>1.30</b>	<b>109</b>	<b>107</b>	<b>F</b>	<b>1.58</b>	<b>88</b>	<b>106</b>	<b>F</b>	<b>1.28</b>	<b>72</b>	<b>106</b>	<b>F</b>	<b>1.04</b>
Westbound I-280																				
I-880	Winchester Boulevard	AM	<b>94</b>	<b>F</b>	62	95	F	0.90	<b>93</b>	<b>96</b>	<b>F</b>	<b>1.35</b>	<b>71</b>	<b>95</b>	<b>F</b>	<b>1.03</b>	<b>99</b>	<b>96</b>	<b>F</b>	<b>1.43</b>
		PM	<b>73</b>	<b>F</b>	<b>74</b>	<b>74</b>	<b>F</b>	<b>1.07</b>	<b>116</b>	<b>75</b>	<b>F</b>	<b>1.68</b>	51	74	F	0.74	49	74	F	0.71
Winchester Boulevard	Saratoga Avenue	AM	<b>65</b>	<b>F</b>	<b>78</b>	<b>66</b>	<b>F</b>	<b>1.13</b>	<b>117</b>	<b>66</b>	<b>F</b>	<b>1.70</b>	<b>84</b>	<b>66</b>	<b>F</b>	<b>1.22</b>	67	66	F	0.97
		PM	55	E	87	56	E	1.26	136	56	E	1.97	60	56	E	0.87	59	56	E	0.86
Saratoga Avenue	Lawrence Expressway	AM	<b>74</b>	<b>F</b>	<b>78</b>	<b>75</b>	<b>F</b>	<b>1.13</b>	<b>117</b>	<b>76</b>	<b>F</b>	<b>1.70</b>	<b>99</b>	<b>75</b>	<b>F</b>	<b>1.43</b>	<b>78</b>	<b>75</b>	<b>F</b>	<b>1.13</b>
		PM	29	D	87	29	D	1.26	136	30	D	1.97	70	30	D	1.01	68	29	D	0.99
Lawrence Expressway	Wolfe Road	AM	<b>68</b>	<b>F</b>	15	68	F	0.22	26	68	F	0.38	23	68	F	0.33	25	68	F	0.36
		PM	27	D	11	27	D	0.16	10	27	D	0.14	11	27	D	0.16	8	27	D	0.12
Wolfe Road	De Anza Boulevard	AM	50	E	21	50	E	0.35	21	50	E	0.30	15	50	E	0.22	16	50	E	0.23
		PM	37	D	77	37	D	1.12	82	37	D	1.19	74	37	D	1.07	72	37	D	1.04
De Anza Boulevard	SR 85	AM	<b>60</b>	<b>F</b>	27	60	F	0.39	23	60	F	0.33	16	60	F	0.23	17	60	F	0.25
		PM	25	C	83	25	C	1.20	85	25	C	1.23	77	25	C	1.12	74	25	C	1.07

Notes:  
<sup>1</sup> AM = morning peak hour; PM = evening peak hour  
<sup>2</sup> Measured in passenger cars per mile per lane. Density is calculated by using the travel speed from the adjacent segment as well as the volume (flow) from the adjacent segment adjusted by the volume entering/exiting the freeway at the interchange.  
<sup>3</sup> LOS = Level of service  
<sup>4</sup> Project trips added during the peak hour.  
 Unacceptable level of service operations are shown in **bold text**.

In order to assess whether there would be a substantial increase in severity to impacted freeway segments under the 2012 schemes compared to the 2008 schemes, the density of the impacted freeway segments were compared. Table 16 provides a summary of the densities of the significantly impacted freeway segments operating at LOS F under project conditions. In comparison to the 2008 project, the revised project would increase the density on the impacted freeway segments by up to two additional cars per mile per lane (refer to Table 16). This increase in density is not considered substantial. Also, 2012 Scheme 2 would avoid the project’s significant impact at I-280 Westbound between Winchester Boulevard and Saratoga Avenue.

The revised project would not result in new significant or more substantial freeway impacts than disclosed in the certified 2009 Final EIR.

<b>Table 16: Summary of Significantly Impacted Freeway Segments Operating at LOS F Under Project Conditions</b>							
From	To	Peak Hour <sup>1</sup>	2008 Existing Conditions	Project Conditions By Scheme			
				2008 Scheme 1	2012 Scheme 1	2008 Scheme 2	2012 Scheme 2
Density <sup>2</sup>							
<b>Eastbound I-280</b>							
Lawrence Expressway	Saratoga Avenue	PM	98	101	101	101	100
Saratoga Avenue	Winchester Boulevard	PM	86	88	88	88	87
Winchester Boulevard	I-880	PM	104	106	107	106	106
<b>Westbound I-280</b>							
I-880	Winchester Boulevard	AM	94	---	96	95	96
		PM	73	74	75	---	---
Winchester Boulevard	Saratoga Avenue	AM	65	66	66	66	---
Saratoga Avenue	Lawrence Expressway	AM	74	75	76	75	75
Notes:							
<sup>1</sup> AM = morning peak hour; PM = evening peak hour							
<sup>2</sup> Measured in passenger cars per mile per lane. Density is calculated by using the travel speed from the adjacent segment as well as the volume (flow) from the adjacent segment adjusted by the volume entering/exiting the freeway at the interchange.							

As identified in the 2009 Final EIR, the project includes the implementation mitigation measure MM TRAN – 5.1 to reduce the project’s impact to freeway segments but not to a less than significant level. No new or different mitigation measures have been identified since the 2009 Final EIR that would reduce the project’s impacts to freeway segments to a less than significant level. Therefore,

the project's impact to the six identified freeway segments in Table 19 would remain significant and unavoidable, as identified in the 2009 Final EIR.

### **Pedestrian and Bicycle Facility Impacts**

Under the 2008 and 2012 project, sidewalks would be provided on Vallco Parkway, Tantau Avenue, Stevens Creek Boulevard, and Finch Avenue, and along the proposed town square to facilitate pedestrian circulation. As with the 2008 project, the final crosswalk improvement plan for the 2012 project will be reviewed and approved by the City prior to issuance of building permits.

Bicycle lanes are provided on Wolfe Road, Tantau Avenue, Stevens Creek Boulevard, and Vallco Parkway. The existing bicycle facilities can reasonably accommodate the increased demand; however, the proposed on-street parking along Vallco Parkway would result in the removal of the existing eastbound bike lane. The bike lane on Vallco Parkway provides connection between existing industrial and commercial uses located on Tantau Avenue, Vallco Parkway, and Wolfe Road. This impact is considered a significant impact of narrowing Vallco Parkway and was identified in the 2009 Final EIR.

The revised project would not result in new or more substantial impacts to pedestrian and bicycle facilities than disclosed in the certified 2009 Final EIR.

As identified in the 2009 Final EIR, the project includes the implementation of measures AM TRAN – 6.1 and MM TRAN 6.1 to reduce impacts to pedestrian and bicycle facilities to a less than significant level.

### **Transit Impacts**

The revised project's impacts on transit facilities are similar to those disclosed in the 2009 Final EIR regarding impacts to existing bus service and bus stops at Stevens Creek Boulevard/Finch Avenue, Stevens Creek Boulevard/Tantau Avenue, and Vallco Parkway/Perimeter Road. As identified in the 2009 Final EIR, the project includes the implementation of mitigation measure MM TRAN – 7.1 to reduce the project's impact to bus service and bus stops to a less than significant level.

The 2009 Final EIR identified that the 2008 project may impact a Caltrans commuter shuttle that used Finch Avenue. This Caltrans commuter shuttle no longer uses Finch Avenue. Therefore, the revised project would not result in this impact.

Since the certification of the Final EIR, plans for bus rapid transit have progressed. The revised project may impact plans for a future bus rapid transit corridor on Stevens Creek Boulevard. The bus rapid transit corridor would include a median busway and/or a reversible or viaduct transit lane, enhancements to mixed-flow transit operating segments, and new transit stations. To avoid impacts to future VTA plans for bus rapid transit along the Stevens Creek Boulevard corridor, the project proposes to implement the following mitigation measure:

**MM TRAN – 7.2:** The project applicant and the City shall coordinate with VTA to ensure that any changes to the project site frontage on Stevens Creek Boulevard does not conflict with future VTA plans along this corridor for bus rapid transit.

The revised project would not result in new significant or more substantial impacts to transit facilities than disclosed in the 2009 Final EIR.

## Parking Supply

### *Vehicular Parking*

In *2012 Scheme 1*, a total of 2,159 on-site parking spaces are proposed. Most of these spaces would be located in parking garages 1 and 2 (1,059 spaces in parking garage 1 and 328 spaces in parking garage 2). The senior housing building would include a below-ground parking garage with 143 spaces. A total of 87 angled parking spaces are also proposed on the south side of Vallco Parkway. If this scheme is developed with the athletic club, the club would be constructed with a 300-space below-ground parking garage. The remaining on-site parking space would be surface parking along the interior site roadways, including the area surrounding the town square (242 spaces). This scheme would only include 1,956 parking spaces if constructed with retail space (instead of the athletic club) and with the market-rate apartments (instead of the senior housing). The breakdown of the parking for this scheme is provided on Figure 4.

In *2012 Scheme 2*, a total of 2,075 on-site parking spaces are proposed. Most of these spaces would be located within the parking garages, as with *2012 Scheme 1*. The senior housing building would include a below-ground parking garage with 143 spaces. The remaining on-site parking spaces would be surface parking along the interior site roadways, including the area surrounding the town square (248 spaces). Like *2012 Scheme 1*, *2012 Scheme 2* includes 87 parallel parking spaces on the south side of Vallco Parkway. The breakdown of the parking for this scheme is provided on Figure 5.

To estimate future parking needs for the project, parking requirements outlined by the City's Municipal Code, ITE, and Urban Land Institute (ULI) were consulted (refer to Appendix C). The parking requirements per the City's Municipal Code assumed no shared parking between uses on-site. The ITE parking requirement is the sum of the average peak parking rates for all uses and does not account for time of day/day of week variations when the individual use peak occurs or any sharing of parking spaces. The ULI parking requirement reflects shared parking facilities based on the different parking characteristics of each land use. The ULI shared parking analysis reflects the temporal distribution of parking demand by hour, day, and month. The parking demand for the proposed land uses peak at different time during the day; therefore, combination of land uses on one site require a smaller total parking supply than the supply for each individual use added together.

Table 17 summarizes the parking supply estimates for the revised project schemes based on the different sources and methodologies consulted.

	<b>2012 Scheme 1</b>		<b>2012 Scheme 2</b>
	With Retail/Market-Rate Apartments	With Athletic Club/Senior Housing	
Proposed Supply	1,956	2,159	2,105
City Municipal Code	1,997	1,900	1,954
ITE Parking Demand	1,716	1,633	1,612
ULI Shared Parking Demand	1,659	1,581	1,512
Sources: City of Cupertino. City of Cupertino Municipal Code: Chapter 19.100 Parking Regulations, 2005. Parking Generation (Institute of Transportation Engineers (ITE), 4 <sup>th</sup> Edition); and Shared Parking, Urban Land Institute (ULI), 2005.			

Although the revised project includes more parking than the overall estimated demand, there may be locational shortages in certain areas of the site. For example, parking garage 2 would be located closest to the office uses on the site; however, the office uses would generate a parking demand greater than the proposed supply in parking garage 2. Also, some drivers to the retail portions of the site may prefer to park on the interior roads rather than the parking garages. The proposed parking garage adjacent to the office buildings (both schemes) does not provide sufficient parking to meet the office demand. In addition, during occasions (such as the Christmas shopping season), the demand for parking could be higher than the supply.

As identified in the 2009 Final EIR, the project includes the implementation of **MM TRAN – 8.1** to avoid a shortage of parking associated with operation of the proposed retail uses on the site, as well as the following mitigation measures to avoid conflicts between office parkers and others on-site and peak parking occasions (e.g., Christmas shopping season):

**MM TRAN – 8.2:** To reduce conflicts between office parkers and others on-site, the project shall:

- Dedicate spaces in parking garages for office workers; and/or
- Install electronic signage directing patrons to available garage spaces and/or the number of vacant spaces.

**MM TRAN – 8.3:** The developer, in coordination with the City shall develop a contingency plan for occasions when the demand for parking is higher than the supply, such as during the Christmas shopping season. This plan shall include measures that reduce the parking impact and balance the parking deficiency. Measures could include:

- Providing valet parking either on-site or at an off-site location;
- Providing off-site employee parking with a shuttle; or
- Entering into a shared-use agreement with surrounding land owners to use their parking lots during peak parking periods.

The revised project would not result in new or more substantial significant parking impacts than disclosed in the certified 2009 Final EIR.

### *Bicycle Parking*

As identified in the 2009 Final EIR, the project proposes to provide bicycle parking consistent with the City's requirements outlined in the Municipal Code 19.100, which states that the required number of Class I bicycle parking spaces should be 40 percent of the number of units and five percent of the total number of automobile parking spaces for office use; and the required number of Class II bicycle parking spaces should be five percent of the total number of automobile parking spaces for commercial and hotel uses.<sup>14</sup>

The revised project would not result in new or more substantial significant bicycle parking impacts than disclosed in the certified 2009 Final EIR.

### **Neighborhood Traffic**

The main access routes to the project site are Stevens Creek Boulevard to Finch and Tantau Avenues, and Wolfe Road to Vallco Parkway. Most of the project traffic is expected to use these streets to access the site. Neighborhood streets to which the project could add traffic include Finch, Tantau, Judy, Bret, or Stern Avenues. Currently, southbound traffic on Finch and Tantau Avenues north of Stevens Creek Boulevard are restricted to turning left or right onto Stevens Creek Boulevard. It is estimated that project trips on these streets would be generated by residents traveling to retail portions of the site or the proposed open space/park. Based on the project trip distribution (refer to Appendix C), up to 50 peak-hour trips could be distributed to all of these streets. With the addition of an average of 10 vehicles per street in the peak hour, the average increase would be an additional vehicle every six minutes. This increase in vehicles per street in the peak hour was identified in the 2009 Final EIR. The City does not consider this a substantial change in neighborhood traffic. The revised project would have the same impacts to neighborhood traffic as identified in the certified 2009 Final EIR.

### **Construction Traffic**

As discussed in the 2009 Final EIR, construction vehicles, including construction employee vehicles and trucks carrying construction materials or hauling excavated soil from the site, would travel to and from the site as a part of site development. Truck trips would be spread out over daytime hours. Compared to the 2008 project, the revised project requires more soil to be hauled off-site (refer to Table 7), therefore, the revised project may result in more construction truck trips for this task than the 2008 project. However, construction traffic would be well below the daily or peak hour traffic anticipated from build-out of the project. The construction activities, therefore, are not anticipated to result in new or more severe impacts to intersection or freeway segment level of service greater than those identified for the proposed project.

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<sup>14</sup> Class I bicycle parking facilities are long-term parking spaces that protect the entire bicycle and accessories from theft. These long-term facilities include bicycle lockers, restricted access rooms, and constantly monitored enclosed cages. Class II bicycle parking facilities are short-term parking spaces within constant view of adjacent buildings or located at street floor level. Class II facilities consist of a stationary object that users can secure the frame and both wheels with either U-shaped locks or padlocks.

As identified in the 2009 Final EIR, the project includes the implementation of measure AM TRAN – 11.1, which is the preparation and implementation of a Construction Management Plan, to avoid impacts from construction traffic.

The revised project would not result in new significant or more substantial construction-related traffic impacts than disclosed in the certified 2009 Final EIR.

**4.15.4        Conclusion**

The revised project would not result in new significant or more substantial transportation impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

**3.17 UTILITIES AND SERVICE SYSTEMS**

**3.17.1 Existing Setting**

The existing utilities and service systems conditions have not substantially changed since the certification of the 2009 Final EIR.

**3.17.2 Environmental Checklist and Impacts**

UTILITIES AND SERVICE SYSTEMS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
3) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
4) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2,8

UTILITIES AND SERVICE SYSTEMS						
	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
Would the project:						
5) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
6) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
7) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2

**3.17.2.1 Water Service and Supply**

Water service to the project site is supplied by the California Water Service Company (Cal Water), which also maintains the water system. An amendment to the Water Supply Assessment (WSA) completed in 2008 by CalWater was prepared and included in Appendix D of this Addendum. The amendment evaluated the changes in water demand that would result from the project modifications as well as changes to the overall CalWater water supply and demand. The analysis concluded that the revised project would not result in a greater water demand than the 2008 project analyzed in the 2009 Final EIR. Given the lower water demand anticipated from the development on the project site, and lower 20 year growth projections on water demand, CalWater concludes that there will be adequate water supplies to meet the projected demands estimated from the revised project (either scheme), existing customers, and future users for normal, single dry year, and multiple dry year conditions for the next 20 years.

The revised project would not result in a new significant or more substantial impact to water service and supply than disclosed in the 2009 Final EIR.

**3.17.2.2 Storm Drainage**

Runoff from the project site flows to storm drain lines in Vallico Parkway and a storm drain line in Stevens Creek Boulevard. These storm drain lines discharge to Calabazas Creek, and ultimately, the San Francisco Bay.

As discussed in **Section 3.8 Hydrology and Water Quality**, under existing conditions, the 30-inch and 18-inch storm drain lines in Vallco Parkway (which both connect to the existing culvert) are over capacity. The revised project includes bioretention areas that would control runoff from the site so that post-project runoff flows do not exceed pre-project flows. As a result, the amount of runoff from the project site would be the same under project conditions as existing conditions. The project proposes to construct 24-inch storm drain lines parallel to the above mentioned 30-inch and 18-inch storm drain lines in Vallco Parkway to divert site runoff from those lines. The proposed 24-inch storm drain lines would connect to the existing on-site Calabazas Creek culvert. With installation of the two proposed 24-inch storm drain lines, there would be sufficient storm drain system capacity to accommodate the runoff flows from the project site.

The revised project would not result in a new significant or more substantial impact to storm drain facilities than disclosed in the certified 2009 Final EIR.

### **3.17.2.3 Wastewater/Sanitary Sewer System**

The Cupertino Sanitary District provides sewer service to the project site. The Cupertino Sanitary District collects and transports wastewater to the San José/Santa Clara Water Pollution Control Plant (WPCP) located in north San José. The District purchases water treatment capacity from the plant and has purchased 8.6 million gallons per day of capacity. Currently, nearly five million gallons of wastewater per day is generated within the Cupertino Sanitary District and conveyed to the WPCP.

The wastewater generation for both schemes are similar to each other. *2012 Scheme 1* would generate approximately 93,500 gallons of sewage a day, and *2012 Scheme 2* would generate approximately 114,500 gallons of sewage a day.<sup>15</sup> The proposed project would connect to the existing eight-inch sewer line in Vallco Parkway and the existing 10-inch sewer line in Finch Avenue.

As described previously, the Cupertino Sanitary District is below its allotment for wastewater treatment at the WPCP. The Cupertino Sanitary District, therefore, has adequate wastewater treatment capacity for the proposed project.

It is unknown at this time, however, if the sewer line downstream of the site in Tantau Avenue between I-280 and Pruneridge Avenue has capacity to serve the revised project (either scheme). For this reason, it may be necessary to up-size a 3,000 foot long segment of the existing sanitary sewer line in Tantau Avenue from I-280 to Pruneridge Avenue from a 10-inch line to a 12-inch line to accommodate sewage flows from the proposed project. As discussed in **Section 3.0 Project Description**, the project proposes to complete sanitary sewer flow testing before recordation of the subdivision map to determine if the project would exceed the capacity of the existing sewer lines at or downstream of the site. If the results of the testing show that the project would exceed the capacity of the existing sewer lines, in coordination with the City of Cupertino Department of Public Works and the Cupertino Sanitary District, the project proposes to up-size the sewer lines and connections to provide adequate capacity to serve the project. Improvements would be installed within existing street right-of-way and are not anticipated to result in substantial environmental

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<sup>15</sup> BKF Engineers. Sanitary Demand Assessment Revisions. March 5, 2012.

effects. These possible improvements were identified in the 2009 Final EIR. The revised project (either scheme) would not result in new significant or more substantial impacts to the wastewater collection system than disclosed in the certified 2009 Final EIR.

#### **3.17.2.4 Solid Waste**

Solid waste collected from the City is delivered to Newby Island Sanitary Landfill. Many types of recyclable materials are also delivered to the Sunnyvale Materials Recovery Station (SMART Station) for recycling. As of December 2011, NISL had approximately 6.3 million cubic yards of capacity remaining.<sup>16,17</sup>

The City has a contract with Newby Island Landfill until the year 2023, or until the cumulative tonnage delivered equals 2.05 million tons. To date, the City has delivered a total of approximately 1.4 million tons of waste to the landfill. The City generates approximately 31,500 tons of solid waste a year.<sup>18</sup>

The revised project would generate similar amounts of solid waste compared to the 2008 project. It is estimated that 2012 *Scheme 1* would generate approximately 1,725 tons of solid waste a year and 2012 *Scheme 2* would generate approximately 1,905 tons of solid waste a year.<sup>19</sup> Compared to the 2008 project, the revised 2012 project would generate about 300 more tons of solid waste a year. Given that there is sufficient allocation and landfill capacity to serve the project and recycling services will be available to future businesses and residences, the City does not consider an additional 300 tons per year a substantial increase.

Based on the project's estimated annual waste generation, the City's annual waste generation, and the City's remaining allocation at Newby Island landfill, there is sufficient capacity within the City's contract with Newby Island and at the landfill to serve the revised project (either scheme). The revised project would not result in a new significant or more substantial solid waste impact than disclosed in the 2009 Final EIR.

#### **3.17.3 Conclusion**

The revised project (either scheme) would not result in new significant or more substantial utility and service impacts than disclosed in the certified 2009 Final EIR. **(No New Impact)**

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<sup>16</sup> King, Rick. Personal communications with NISL General Manager. February 2012.

<sup>17</sup> Note that an application is on file (file no. PDC07-071) at the City of San José for a height expansion at Newby Island Sanitary Landfill, which would add approximately 15 million cubic yards to the capacity of the landfill.

<sup>18</sup> The estimate annual tonnage of solid waste generated by the City is based on an average of the last three years. Source: King, Rick. Personal communications with NISL General Manager. February 2012.

<sup>19</sup> Waste generation estimates were based on the following general waste generation rates confirmed with Los Altos Garbage Company: retail – 0.046 pounds per day per square foot; office – 6 pounds per 1,000 square feet per day; residential uses – 30 pounds per unit per week; and hotel – 2 pounds per day (Source: Candau, John. Los Altos Garbage Company Operations Manager. Email “Re: Waste generation rate request.” 8 September 2008). A waste generation rate of 2.5 pounds per 1,000 square feet per day for the athletic club use was used in the above calculation and was provided by Lifetime Fitness (2008).

**3.18 MANDATORY FINDINGS OF SIGNIFICANCE**

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as “Approved Project”	Less Impact Than “Approved Project”	Information Source(s)/ Discussion Location
1) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	p. 13-104
2) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	p.13-104
3) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	p.13-104*
4) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	p.13-104
Note: * While new mitigation measures (MM AIR-2.11 and 2.12, MM TRAN-7.2, -8.2, and 8.3) are identified to reduce impacts, the impacts were previously identified in the certified 2008 Final EIR and, therefore, not considered “new” impacts.						

### **3.18.1 Project Impacts**

The Main Street Cupertino Final EIR analyzed the development of a mixed use project with retail (including athletic club), office, residential, and hotel uses and was approved and certified by the City Council in 2009. The City Council also approved development of the project. The project applicant is proposing modifications to the Main Street Cupertino project analyzed in the certified 2009 Final EIR. The proposed modifications do not change the land uses proposed on-site; however, the intensity and amount of each land use is different when compared to the schemes analyzed in 2008. The proposed modifications would allow the development of within one of the two schemes outlined below:

- *2012 Scheme 1:* 78,700 square feet of retail uses, a 60,000 square foot athletic club (or 60,000 square feet of additional retail), 292,000 square feet of office uses, 143 senior housing units or 120 market-rate apartment units, and a 180-room hotel.
- *2012 Scheme 2:* 92,200 square feet of retail uses, 292,000 square feet of office uses, 143 senior housing units, 105 market-rate apartment units, and a 180-room hotel.

As discussed in **Section 2.0 Environmental Setting, Impacts, and Mitigation**, the revised project schemes would not result in new or more significant impacts to the environment compared to the impacts disclosed in the certified 2009 Final EIR with the implementation of the mitigation measures included in the project and described in the specific sections of this Addendum (refer to pages 13-104). Therefore, the revised project would not have new or more significant impacts to the quality of the environment for plant or animal wildlife or human beings, nor would the revised project have the new or more significant potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals compared to the project analyzed in the certified 2009 Final EIR.

### **3.18.2 Cumulative Impacts**

As discussed in the 2009 Final EIR, the project would result in cumulative traffic impacts to five study intersections (1. Wolfe Road/Vallco Parkway, 2. Lawrence Expressway/Homestead Road, 3. Stevens Creek Boulevard/I-280 SB Ramps, 4. Lawrence Expressway/I-280 SB Ramps, and 5. Bollinger Road/Lawrence Expressway) and a cumulative regional air quality impact. While the revised project results in slight increase in delay at several study intersections (compared to the 2008 project schemes), the increase in delay would be less than one second in most cases and the intersections would continue to operate under acceptable levels of service (refer to Table 13). It is not anticipated that the revised project would result in new significant or more substantial cumulative transportation impacts than identified in the 2009 Final EIR.

Given that the revised project would result in similar impacts as the 2008 project for aesthetics, air quality, biological resources, cultural resources, hydrology and water quality, land use, noise, population and housing, public services, recreation, and utilities and service systems, the revised project's contribution to cumulative impacts would also be similar to that of the 2008 project. For this reason, the revised project would not result in new significant or more substantial cumulative impacts than disclosed in the certified 2009 Final EIR.

**3.18.3      Short-Term vs. Long-Term Environmental Goals**

The revised project proposes the same land uses as the 2008 project and a similar amount of development that would result in similar impacts as the 2008 project. The modifications proposed to the 2008 project do not affect the project’s potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

### CHECKLIST INFORMATION SOURCES

1. Professional judgment and expertise of the environmental specialist preparing this assessment, based upon a review of the site and surrounding conditions, as well as a review of the project plans.
2. City of Cupertino. Final Environmental Impact Report for the Main Street Cupertino Project. December 2008.
3. Illingworth & Rodkin. Air Quality and Greenhouse Gas Modeling Results. March 2012.
4. Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 06085C0209H. May 18, 2009.
5. Schoolhouse Services. Enrollment and Fiscal Impact Analysis, Main Street Cupertino Project. January 2012.
6. Fehr & Peers. Main Street Cupertino Revised Traffic Analysis. February 23, 2012.
7. ---. Main Street Cupertino Revised Site Access and Parking Analysis. March 2, 2012.
8. California Water Service Company. Addendum No. 1 SB 610 Water Supply Assessment For Main Street Cupertino Development Project. March 5, 2012.

## SECTION 4.0 REFERENCES

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BKF Engineers. Sanitary Demand Assessment Revisions. March 5, 2012.

California Water Service Company. Addendum No. 1 SB 610 Water Supply Assessment For Main Street Cupertino Development Project. March 5, 2012.

City of Cupertino. Final Environmental Impact Report for the Main Street Cupertino Project. December 2008.

---. General Plan.

---. Heart of the City Specific Plan. As amended through March 2010.

---. South Vallco Master Plan. 2008.

---. Zoning Ordinance.

Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 06085C0209H. May 18, 2009.

Fehr & Peers. Main Street Cupertino Revised Site Access and Parking Analysis. March 2, 2012.

---. Main Street Cupertino Revised Traffic Analysis. February 23, 2012.

---. Table 1: Main Street Cupertino 2012 Trip Generation and Parking Comparison. March 16, 2012.

Illingworth & Rodkin. Air Quality and Greenhouse Gas Modeling Results. March 2012.

Schoolhouse Services. Enrollment and Fiscal Impact Analysis, Main Street Cupertino Project. January 2012.

State of California, Department of Finance. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2010-2011, with 2010 Benchmark. May 2011. Available here:  
<http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php>.

U.S. Energy Information Administration. "Retail and Service Buildings." January 3, 2001. Available here:  
[http://www.eia.gov/emeu/consumptionbriefs/cbecs/pbaweb site/retailserv/retserv\\_howmanyempl.htm](http://www.eia.gov/emeu/consumptionbriefs/cbecs/pbaweb site/retailserv/retserv_howmanyempl.htm).

### Persons Contacted:

- Brendan Goggins, Kenneth Rodrigues & Partners, Inc.
- Ken Rodrigues, Kenneth Rodrigues & Partners, Inc.
- Kevin Dare, SandHill Property Company
- Patrick Chan, BKF Engineers.
- Scott Schork, BKF Engineers.

## **SECTION 5.0 LEAD AGENCY AND CONSULTANTS**

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### **Lead Agency**

#### **City of Cupertino**

Community Development Department

Aarti Shrivastava, Director

Gary Chao, City Planner

Aki Honda Snelling, Senior Planner

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Nora Monette, Principal Project Manager

Kristy Weis, Project Manager

Stephanie Francis, Graphic Artist

#### **Fehr & Peers**

Transportation Consultants

Jane Bierstedt, Principal

Todd Henry, Project Manager

#### **Illingworth & Rodkin**

Acoustical and Air Quality Consultants

James Reyff, Project Manager

#### **Schoolhouse Services**

Economists

Dick Recht

## **Appendix A: Air Quality and Greenhouse Gas Emissions Modeling Results**

**Project: Main Street Development Operational Emissions**

Scenario	<u>Daily Emissions (lbs/day)</u>				Operational Emissions adjustments		URBEMIS VMT	Adjusted VMT
	ROG	NOx	PM10	PM2.5	URBEMIS trips	Project Traffic Trips		
<b>2008 Scheme 1</b>								
Area	11.2	5.5	0.0	0.0				
Operational	61.5	68.0	84.5	17.6	13748	13751	103,849.15	103,872
Operational Adjusted	61.6	68.0	84.5	17.6				
Total	72.7	73.5	84.5	17.6				
<b>2008 Scheme 2</b>								
Area	11.1	5.5	0.0	0.0				
Operational	50.4	53.5	66.6	13.9	10706	10692	82,066.50	81,959
Operational Adjusted	50.4	53.5	66.5	13.9				
Total	61.4	59.0	66.6	13.9				
<b>2012 Scheme 1b</b>								
Area	12.1	6.3	0.1	0.1				
Operational	50.7	53.7	66.9	13.9	10534	10676	82,345.87	83,456
Operational Adjusted	51.3	54.4	67.8	14.1				
Total	63.4	60.8	67.9	14.2				
<b>2012 Scheme 2b</b>								
Area	18.4	7.2	0.1	0.1				
Operational	47.0	48.3	60.2	12.5	9518	9821	74,948.70	77,335
Operational Adjusted	48.5	49.8	62.1	12.9				
Total	66.8	57.0	62.2	13.0				
<b>2012 Scheme 1c</b>								
Area	9.2	5.1	0.0	0.0				
Operational	50.3	53.5	66.7	13.9	10494	10938	74,948.70	78,122
Operational Adjusted	52.4	55.8	69.5	14.5				
Total	61.6	60.9	69.5	14.5				

\*\*\* Please note 2012 Scheme 2b is referred to as 2012 Scheme 2 in the Addendum.

\*\*\* Please note 2012 Scheme 1c is referred to as 2012 Scheme 1 in the Addendum.





## Main Street Development in Cupertino, CA

### 2012 Scheme 1c

\*\*\* Please note that 2012 Scheme 1c is referred to as 2012 Scheme 1 in the Addendum

#### Phase 1 Construction Emissions

Activity	Period	Aproximate No. of Work Days	ROG Coating URBEMIS	ROG tons	ROG lbs/day	NOx tons	NOx lbs/day	PM <sub>10</sub> tons	PM <sub>10</sub> lbs/day	PM <sub>2.5</sub> tons	PM <sub>2.5</sub> lbs/day	CO <sub>2</sub> tons	CO <sub>2</sub> metric tons
Trenching	Aug-Sep 2012	30		0.02	1	0.17	11	0.01	1	0.01	1	21	19
Mass Grading/Excavation	Oct-12	24		0.09	8	1.17	98	0.04	3	0.04	3	197	179
Fine Grading	Nov-12	12		0.01	2	0.07	12	0.01	2	0.01	2	8.11	7
Building - Exterior	Dec-12	20		0.07	7	0.49	49	0.02	2	0.02	2	169.33	154
Building - Exterior	Jan-Nov 2013	242		0.75	6	5.04	42	0.23	2	0.21	2	1927.69	1749
Building - Interior	Dec-13	20		0.07	7	0.46	46	0.02	2	0.02	2	177.44	161
Paving	Dec-13	18		0.02	2	0.09	10	0.01	1	0.01	1	12.74	12
Coating	13-Dec	20	1.67	1.00	100	0	0	0	0	0	0	4.15	4
Building - Interior	Jan-Feb 2014	38		0.12	6	0.81	43	0.04	2	0.03	2	346.91	315
Coating	Jan-Feb 2014	38	3.26	1.96	103	0	0	0	0	0	0	8.12	7

#### Phase 2 Construction Emissions

Activity	Period	Aproximate No. of Work Days	ROG Coating URBEMIS	ROG tons	ROG lbs/day	NOx tons	NOx lbs/day	PM <sub>10</sub> tons	PM <sub>10</sub> lbs/day	PM <sub>2.5</sub> tons	PM <sub>2.5</sub> lbs/day	CO <sub>2</sub> tons	CO <sub>2</sub> metric tons
Mass Grading/Excavation	Jan-14	12		0.05	8	0.7	117	0.03	5	0.02	3	152.88	32
Fine Grading	Jan-14	12		0.01	2	0.03	5	0.01	2	0.01	2	4.06	1
Building - Exterior	Feb-Dec 2014	242		0.26	2	1.27	10	0.07	1	0.07	1	368.8	76
Paving	Dec-14	18		0.01	1	0.08	9	0.01	1	0.01	1	9.89	2
Building - Interior	Dec-14	20		0.02	2	0.12	12	0.01	1	0.01	1	35.64	7
Coating	Dec-14	20	0.78	0.47	47	0	0	0	0	0	0	2.23	1
Building - Exterior	Jan-15	24		0.02	2	0.11	9	0.01	1	0.01	1	34.1	7
Building - Interior	Jan-Feb 2015	38		0.04	2	0.21	11	0.01	1	0.01	1	65.1	13
Coating	Jan-Feb 2015	38	1.42	0.85	45	0	0	0	0	0	0	4.07	2

## Main Street Development in Cupertino, CA

### 2012 Scheme 2b

\*\*Please note that 2012 Scheme 2b is referred to as 2012 Scheme 2 in the Addendum

#### Phase 1 Construction Emissions

Activity	Period	Aproximate No. of Work Days	ROG Coating URBEMIS	ROG tons	ROG lbs/day	NOx tons	NOx lbs/day	PM <sub>10</sub> tons	PM <sub>10</sub> lbs/day	PM <sub>2.5</sub> tons	PM <sub>2.5</sub> lbs/day	CO <sub>2</sub> tons	CO <sub>2</sub> metric tons
Trenching	Aug-Sep 2012	30		0.02	1	0.17	11	0.01	1	0.01	1	21	19
Mass Grading/Excavation	Oct-12	24		0.09	8	1.17	98	0.04	3	0.04	3	196.81	179
Fine Grading	Nov-12	12		0.01	2	0.07	12	0.01	2	0.01	2	8.11	7
Building - Exterior	Dec-12	20		0.07	7	0.49	49	0.02	2	0.02	2	170.49	155
Building - Exterior	Jan-Nov 2013	242		0.75	6	5.05	42	0.23	2	0.21	2	1940.84	1761
Building - Interior	Dec-13	20		0.07	7	0.47	47	0.02	2	0.02	2	178.65	162
Paving	Dec-13	18		0.02	2	0.1	11	0.01	1	0.01	1	13.01	12
Coating	13-Dec	20	1.67	1.00	100	0	0	0	0	0	0	4.15	4
Building - Interior	Jan-Feb 2014	38		0.12	6	0.82	43	0.04	2	0.03	2	349.28	317
Coating	Jan-Feb 2014	38	3.26	1.96	103	0	0	0	0	0	0	8.12	7

#### Phase 2 Construction Emissions

Activity	Period	Aproximate No. of Work Days	ROG Coating URBEMIS	ROG tons	ROG lbs/day	NOx tons	NOx lbs/day	PM <sub>10</sub> tons	PM <sub>10</sub> lbs/day	PM <sub>2.5</sub> tons	PM <sub>2.5</sub> lbs/day	CO <sub>2</sub> tons	CO <sub>2</sub> metric tons
Mass Grading/Excavation	Jan-14	12		0.05	8	0.68	113	0.02	3	0.02	3	146.81	30
Fine Grading	Jan-14	12		0.01	2	0.03	5	0.01	2	0.01	2	4.06	1
Building - Exterior	Feb-Dec 2014	242		0.32	3	1.53	13	0.09	1	0.08	1	623.93	129
Paving	Dec-14	18		0.01	1	0.08	9	0.01	1	0.01	1	9.78	2
Building - Interior	Dec-14	20		0.03	3	0.15	15	0.01	1	0.01	1	60.3	12
Coating	Dec-14	20	1.87	1.12	112	0	0	0	0	0	0	2.23	0
Building - Exterior	Jan-15	24		0.03	3	0.13	11	0.01	1	0.01	1	67.69	14
Building - Interior	Jan-Feb 2015	38		0.05	3	0.25	13	0.01	1	0.01	1	110.13	23
Coating	Jan-Feb 2015	38	3.41	2.05	108	0	0	0	0	0	0	4.07	1

# Main Street Development in Cupertino, CA

## 2008 Scheme 1

### Summary of Construction Emissions

Period	Maximum Emissions (pounds/day)				Total CO <sub>2</sub> (metric tons)
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	
	<b>Maximum Emissions (pounds/day)</b>				<b>Total</b>
Phase 1 - Year 2012	6.0	50.0	2.0	2.0	237
Phase 1 - Year 2013	81.6	39.0	2.0	2.0	1570
Phase 1 - Year 2014	84.0	36.3	2.1	1.6	268
Phase 2 - Year 2014	61.8	116.7	5.0	3.3	177
Phase 1 & 2 - Year 2014 (possible overlap)	0.0	0.0	0.0	0.0	
Phase 2 - Year 2015	59.4	11.6	0.8	0.8	38
Maximum Total	84.0	116.7	5.0	3.3	2,290
	<b>Average Emissions (pounds/day)</b>				
Year 2012	2.5	22.7	1.1	1.1	
Year 2013	14.1	42.9	2.1	1.9	
Year 2014	24.6	27.2	1.7	1.5	
Year 2015	62.5	17.9	1.1	1.1	
Average	19.0	31.6	1.7	1.5	
	<b>Annual Emissions (tons/year)</b>				<b>(metric tons)</b>
Year 2012	0.14	1.25	0.06	0.06	237.3
Year 2013	1.55	4.72	0.23	0.21	1570.3
Year 2014	2.71	2.99	0.19	0.16	444.9
Year 2015	1.19	0.34	0.02	0.02	37.7
					2,290

# Main Street Development in Cupertino, CA

## 2008 Scheme 2

### Summary of Construction Emissions

Period	Maximum Emissions (pounds/day)				Total CO <sub>2</sub> (metric tons)
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	
	<b>Maximum Emissions (pounds/day)</b>				<b>Total</b>
Phase 1 - Year 2012	6.7	89.2	3.3	3.3	314
Phase 1 - Year 2013	83.4	39.0	2.0	2.0	1578
Phase 1 - Year 2014	85.9	36.3	2.1	1.6	268
Phase 2 - Year 2014	60.6	116.7	5.0	3.3	177
Phase 1 & 2 - Year 2014 (possible overlap)	0.0	0.0	0.0	0.0	
Phase 2 - Year 2015	58.1	11.6	0.8	0.8	38
Maximum Total	85.9	116.7	5.0	3.3	2,374
	<b>Average Emissions (pounds/day)</b>				
Year 2012	3.1	31.3	1.5	1.5	
Year 2013	14.2	43.0	2.1	1.9	
Year 2014	24.8	27.2	1.7	1.5	
Year 2015	61.3	17.9	1.1	1.1	
Average	19.1	33.3	1.8	1.6	
	<b>Annual Emissions (tons/year)</b>				<b>(metric tons)</b>
Year 2012	0.2	1.7	0.1	0.1	314.1
Year 2013	1.6	4.7	0.2	0.2	1577.5
Year 2014	2.7	3.0	0.2	0.2	444.9
Year 2015	1.2	0.3	0.0	0.0	37.7
					2,374

# Main Street Development in Cupertino, CA

## 2012 Scheme 1c

### Summary of Construction Emissions

\*\*\* Please note that 2012 Scheme 1c is referred to as 2012 Scheme 1 in the Addendum

Period	Maximum Emissions (pounds/day)				Total
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
	<b>Maximum Emissions (pounds/day)</b>				<b>Total</b>
Phase 1 - Year 2012	7.5	97.5	3.3	3.3	179
Phase 1 - Year 2013	100.2	46.0	2.0	2.0	1749
Phase 1 - Year 2014	102.9	42.6	2.1	1.6	315
Phase 2 - Year 2014	46.8	116.7	5.0	3.3	76
Phase 1 & 2 - Year 2014 (possible overlap)	0.0	0.0	0.0	0.0	
Phase 2 - Year 2015	44.8	11.1	0.5	0.5	13
Maximum Total	102.9	116.7	5.0	3.3	2,332
	<b>Average Emissions (pounds/day)</b>				
Year 2012	3.5	34.5	1.5	1.5	
Year 2013	16.7	50.8	2.4	2.2	
Year 2014	26.3	27.4	1.5	1.4	
Year 2015	46.9	11.1	0.5	0.5	
Average	19.8	36.4	1.8	1.6	
	<b>Annual Emissions (tons/year)</b>				<b>(metric tons)</b>
Year 2012	0.2	1.9	0.1	0.1	358
Year 2013	1.8	5.6	0.3	0.2	1,925
Year 2014	2.9	3.0	0.2	0.2	441
Year 2015	0.9	0.2	0.0	0.0	15
					2,740

# Main Street Development in Cupertino, CA

## 2012 Scheme 2b

### Summary of Construction Emissions

\*\*\* Please note that 2012 Scheme 2b is referred to as 2012 Scheme 2 in the Addendum

Period	Maximum Emissions (pounds/day)				Total
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
	<b>Maximum Emissions (pounds/day)</b>				<b>Total</b>
Phase 1 - Year 2012	7.5	97.5	3.3	3.3	359
Phase 1 - Year 2013	100.2	47.0	2.0	2.0	1938
Phase 1 - Year 2014	102.9	43.2	2.1	1.6	324
Phase 2 - Year 2014	112.2	113.3	3.3	3.3	176
Phase 1 & 2 - Year 2014 (possible overlap)	0.0	0.0	0.0	0.0	
Phase 2 - Year 2015	107.7	13.2	0.8	0.8	38
Maximum Total	112.2	113.3	3.3	3.3	2,835
	<b>Average Emissions (pounds/day)</b>				
Year 2012	3.5	34.5	1.5	1.5	
Year 2013	16.7	51.1	2.4	2.2	
Year 2014	32.9	29.9	1.6	1.5	
Year 2015	111.9	20.0	1.1	1.1	
Average	26.4	38.1	1.8	1.7	
	<b>Annual Emissions (tons/year)</b>				<b>(metric tons)</b>
Year 2012	0.2	1.9	0.1	0.1	359
Year 2013	1.8	5.6	0.3	0.2	1,938
Year 2014	3.6	3.3	0.2	0.2	500
Year 2015	2.1	0.4	0.0	0.0	38
					2,835

**Figure 1 – Project Site, Modeling Area Sources, and Nearby Residential Receptor Locations**



**Table 1 – Construction DPM Emission Calculations for Modeling**

**Main Street Development, Cupertino, CA  
Area Source Construction Emissions**

Construction Year	Activity	DPM Emissions		Area Source	DPM Emissions			Modeled Area (m <sup>2</sup> )	DPM Emission Rate g/s/m <sup>2</sup>
		(ton/year)	(lb/yr)		(lb/yr)	(lb/hr)	(g/s)		
<b>2012</b>	Phase 1	0.0284	56.8	Area 11	18.9	0.00518	6.52E-04	17,856	3.65E-08
				Area 12	35.1	0.00961	1.21E-03	33,145	3.65E-08
				Area 13	2.8	0.00078	9.79E-05	2,680	3.65E-08
				<b>Total</b>	<b>56.8</b>	<b>0.01556</b>	<b>0.00196</b>	<b>53,681</b>	<b>3.65E-08</b>
<b>2013</b>	Phase 1	0.0807	161.4	Area 11	53.7	0.01471	1.85E-03	17,856	1.04E-07
				Area 12	99.7	0.02730	3.44E-03	33,145	1.04E-07
				Area 13	8.1	0.00221	2.78E-04	2,680	1.04E-07
				<b>Total</b>	<b>161.4</b>	<b>0.04422</b>	<b>0.00557</b>	<b>53,681</b>	<b>1.04E-07</b>
<b>2014</b>	Phase 1	0.011	22.0	Area 11	7.3	0.00200	2.53E-04	17,856	1.41E-08
				Area 12	13.6	0.00372	4.69E-04	33,145	1.41E-08
				Area 13	1.1	0.00030	3.79E-05	2,680	1.41E-08
				<b>Total</b>	<b>22.0</b>	<b>0.00603</b>	<b>0.00076</b>	<b>53,681</b>	<b>1.41E-08</b>
<b>2014</b>	Phase 2	0.0739	147.8	Area 21	87.2	0.02388	3.01E-03	9,667	3.11E-07
				Area 22	60.6	0.01661	2.09E-03	6,723	3.11E-07
				<b>Total</b>	<b>147.8</b>	<b>0.04049</b>	<b>0.00510</b>	<b>16,390</b>	<b>3.11E-07</b>
<b>2015</b>	Phase 2	0.0141	28.2	Area 21	16.6	0.00456	5.74E-04	9,667	5.94E-08
				Area 22	11.6	0.00317	3.99E-04	6,723	5.94E-08
				<b>Total</b>	<b>28.2</b>	<b>0.00773</b>	<b>0.00097</b>	<b>16,390</b>	<b>5.94E-08</b>

Notes:

Emissions assumed to be evenly distributed over each construction areas

hr/day = 10 (7am - 5pm)  
 days/yr = 365 2013 & 2014  
 hours/year = 3650

**Table 2 – Construction Cancer Risk Calculations - Maximum Risk South of Site**

**Main Street Development, Cupertino  
Maximum DPM Cancer Risk Calculations From Construction  
Offsite Receptor Locations - South of Project Site**

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

Inhalation Dose = C<sub>air</sub> x DBR x A x EF x ED x 10<sup>-6</sup> / AT

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

AT = Averaging time period over which exposure is averaged.

10<sup>-6</sup> = Conversion factor

**Values**

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

**Construction Cancer Risk by Year - Maximum Southern Receptor**

Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)
		DPM Conc (ug/m3)		Exposure Adjust Factor		Modeled		Exposure Adjust Factor	
			Annual				Annual		
0	0.25		0.0174	10	0.38		-	-	-
1	1		0.0255	10	2.23		0.0174	1	0.08
2	1		0.0405	10	3.54		0.0497	1	0.23
3	1		0.0098	3	0.26		0.0127	1	0.06
4	1		0.0008	3	0.02		0.0011	1	0.005
5	1		0.0000	3	0.00		0.0000	1	0.00
6	1		0.0000	3	0.00		0.0000	1	0.00
7	1		0.0000	3	0.00		0.0000	1	0.00
8	1		0.0000	3	0.00		0.0000	1	0.00
9	1		0.0000	3	0.00		0.0000	1	0.00
10	1		0.0000	3	0.00		0.0000	1	0.00
11	1		0.0000	3	0.00		0.0000	1	0.00
12	1		0.0000	3	0.00		0.0000	1	0.00
13	1		0.0000	3	0.00		0.0000	1	0.00
14	1		0.0000	3	0.00		0.0000	1	0.00
15	1		0.0000	3	0.00		0.0000	1	0.00
16	1		0.0000	3	0.00		0.0000	1	0.00
17	1		0.0000	1	0.00		0.0000	1	0.00
18	1		0.0000	1	0.00		0.0000	1	0.00
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
65	1		0.0000	1	0.00		0.0000	1	0.00
66	1		0.0000	1	0.00		0.0000	1	0.00
67	1		0.0000	1	0.00		0.0000	1	0.00
68	1		0.0000	1	0.00		0.0000	1	0.00
69	1		0.0000	1	0.00		0.0000	1	0.00
70	1		0.0000	1	0.00		0.0000	1	0.00
<b>Total Increased Cancer Risk</b>					<b>6.43</b>				<b>0.37</b>

Note: Maximum DPM concentrations occur south of the project site at residences on south side side of Stevens Creek Blvd.

**Table 3 – Construction Cancer Risk Calculations - Maximum Risk West of Site**

**Main Street Development, Cupertino  
Maximum DPM Cancer Risk Calculations From Construction  
Offsite Receptor Locations - West of Project Site**

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup>

Inhalation Dose = C<sub>air</sub> x DBR x A x EF x ED x 10<sup>-6</sup> / AT

Where: C<sub>air</sub> = concentration in air (µg/m<sup>3</sup>)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

AT = Averaging time period over which exposure is averaged.

10<sup>-6</sup> = Conversion factor

**Values**

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

**Construction Cancer Risk by Year - Maximum Western Receptor**

Year	Exposure Duration (years)	Child - Exposure Information			Child Cancer Risk (per million)	Adult - Exposure Information		Adult Cancer Risk (per million)
		DPM Conc (ug/m3)		Exposure Adjust Factor		Modeled		
		Annual	Annual			DPM Conc (ug/m3)	Exposure Adjust Factor	
0	0.25		0.0051	10	0.11	-	-	-
1	1		0.0075	10	0.65	0.0051	1	0.02
2	1		0.0306	10	2.68	0.0145	1	0.07
3	1		0.0629	3	1.65	0.0789	1	0.36
4	1		0.0111	3	0.29	0.0148	1	0.07
5	1		0.0000	3	0.00	0.0000	1	0.00
6	1		0.0000	3	0.00	0.0000	1	0.00
7	1		0.0000	3	0.00	0.0000	1	0.00
8	1		0.0000	3	0.00	0.0000	1	0.00
9	1		0.0000	3	0.00	0.0000	1	0.00
10	1		0.0000	3	0.00	0.0000	1	0.00
11	1		0.0000	3	0.00	0.0000	1	0.00
12	1		0.0000	3	0.00	0.0000	1	0.00
13	1		0.0000	3	0.00	0.0000	1	0.00
14	1		0.0000	3	0.00	0.0000	1	0.00
15	1		0.0000	3	0.00	0.0000	1	0.00
16	1		0.0000	3	0.00	0.0000	1	0.00
17	1		0.0000	1	0.00	0.0000	1	0.00
18	1		0.0000	1	0.00	0.0000	1	0.00
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
65	1		0.0000	1	0.00	0.0000	1	0.00
66	1		0.0000	1	0.00	0.0000	1	0.00
67	1		0.0000	1	0.00	0.0000	1	0.00
68	1		0.0000	1	0.00	0.0000	1	0.00
69	1		0.0000	1	0.00	0.0000	1	0.00
70	1		0.0000	1	0.00	0.0000	1	0.00
<b>Total Increased Cancer Risk</b>					<b>5.39</b>			<b>0.52</b>

Note: Maximum DPM concentrations west of the project site occur at residences adjacent to Senior Housing of Phase II of the development

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\SysOp\Application Data\Urbemis\Version9a\Projects\Main St Cupertino\2011 Schme 2b Phase 1 Rev022412.urb924

Project Name: Main St Development **2012 Scheme 2b (worst-case scheme) Phase 1**

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

**\*\*\*Note that 2012 Scheme 2b is referred to as 2012 Scheme 2 in the Addendum.**

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2012 TOTALS (tons/year unmitigated)	0.19	1.90	2.71	0.08	2.78	0.57	0.07	0.64	395.95
2013 TOTALS (tons/year unmitigated)	4.34	5.62	0.08	0.26	0.34	0.03	0.23	0.26	2,136.66
2014 TOTALS (tons/year unmitigated)	6.94	0.82	0.01	0.04	0.05	0.01	0.03	0.04	357.40

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	7.38	8.26	25.84	4.89	13,831.78

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	7.38	8.26	25.84	4.89	13,831.78

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	<u>ROG</u>	<u>NOx</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>	<b>2012 DPM</b>	
2012	0.19	1.90	2.71	0.08	2.78	0.57	0.07	0.64	395.95	<b>0.0284</b>	
Trenching 08/15/2012-09/30/2012	0.02	0.17	0.00	0.01	0.01	0.00	0.01	0.01	20.54		
Trenching Off Road Diesel	0.02	0.17	0.00	0.01	0.01	0.00	0.01	0.01	18.86	0.0074	
Trenching Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68		
Mass Grading 10/01/2012-10/31/2012	0.09	1.17	1.88	0.04	1.93	0.39	0.04	0.43	196.81		
Mass Grading Dust	0.00	0.00	1.88	0.00	1.88	0.39	0.00	0.39	0.00		
Mass Grading Off Road Diesel	0.02	0.17	0.00	0.01	0.01	0.00	0.01	0.01	17.48	0.0077	
Mass Grading On Road Diesel	0.07	1.00	0.01	0.04	0.04	0.00	0.03	0.03	178.15	0.0033	assumes 10% on site
Mass Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17		
Fine Grading 11/01/2012-11/14/2012	0.01	0.07	0.82	0.00	0.82	0.17	0.00	0.17	8.11		
Fine Grading Dust	0.00	0.00	0.82	0.00	0.82	0.17	0.00	0.17	0.00		
Fine Grading Off Road Diesel	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	7.60	0.0033	
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	assumes 10% on site
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51		

Building 12/01/2012-11/30/2013	0.07	0.49	0.01	0.02	0.03	0.00	0.02	0.02	170.49	
Building Off Road Diesel	0.02	0.10	0.00	0.01	0.01	0.00	0.01	0.01	11.44	0.0067
Building Vendor Trips	0.03	0.35	0.00	0.01	0.02	0.00	0.01	0.01	81.15	
Building Worker Trips	0.02	0.04	0.00	0.00	0.01	0.00	0.00	0.00	77.90	
2013	4.34	5.62	0.08	0.26	0.34	0.03	0.23	0.26	2,136.66	<b>2013 DPM</b>
Building 12/01/2012-11/30/2013	0.75	5.05	0.08	0.23	0.30	0.03	0.21	0.23	1,940.84	<b>0.0807</b>
Building Off Road Diesel	0.23	1.12	0.00	0.07	0.07	0.00	0.07	0.07	130.20	0.0687
Building Vendor Trips	0.28	3.51	0.03	0.13	0.16	0.01	0.12	0.13	923.59	
Building Worker Trips	0.25	0.43	0.04	0.02	0.07	0.02	0.02	0.03	887.05	
Asphalt 12/01/2013-12/23/2013	0.02	0.10	0.00	0.01	0.01	0.00	0.01	0.01	13.01	
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Paving Off Road Diesel	0.01	0.07	0.00	0.01	0.01	0.00	0.01	0.01	6.80	0.0056
Paving On Road Diesel	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	4.58	0.0001
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	assumes 10% on site
Building 12/01/2013-02/28/2014	0.07	0.47	0.01	0.02	0.03	0.00	0.02	0.02	178.65	
Building Off Road Diesel	0.02	0.10	0.00	0.01	0.01	0.00	0.01	0.01	11.98	0.0063
Building Vendor Trips	0.03	0.32	0.00	0.01	0.02	0.00	0.01	0.01	85.02	
Building Worker Trips	0.02	0.04	0.00	0.00	0.01	0.00	0.00	0.00	81.65	
Coating 12/01/2013-03/01/2014	3.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15	
Architectural Coating	3.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.15	
2014	6.94	0.82	0.01	0.04	0.05	0.01	0.03	0.04	357.40	<b>2014 DPM</b>
Building 12/01/2013-02/28/2014	0.12	0.82	0.01	0.04	0.05	0.00	0.03	0.04	349.28	<b>0.0110</b>
Building Off Road Diesel	0.04	0.19	0.00	0.01	0.01	0.00	0.01	0.01	23.42	
Building Vendor Trips	0.05	0.56	0.01	0.02	0.03	0.00	0.02	0.02	166.18	
Building Worker Trips	0.04	0.07	0.01	0.00	0.01	0.00	0.00	0.01	159.68	
Coating 12/01/2013-03/01/2014	6.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.12	
Architectural Coating	6.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.12	

Phase Assumptions

Phase: Fine Grading 11/1/2012 - 11/14/2012 - Foundations & some Grading

Total Acres Disturbed: 32.62

Maximum Daily Acreage Disturbed: 8.16

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.41 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.4 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.34 load factor for 8 hours per day

Phase: Mass Grading 10/1/2012 - 10/31/2012 - Type Your Description Here

Total Acres Disturbed: 32.62

Maximum Daily Acreage Disturbed: 8.16

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 3847.83

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.41 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.4 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.34 load factor for 8 hours per day

Phase: Trenching 8/15/2012 - 9/30/2012 - Type Your Description Here

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.38 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.34 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 0 hours per day

Phase: Paving 12/1/2013 - 12/23/2013 - Default Paving Description

Acres to be Paved: 8.16

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.37 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.41 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.36 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.37 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 7 hours per day

Phase: Building Construction 12/1/2012 - 11/30/2013 - Exterior Construction

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.29 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.2 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.5 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.3 load factor for 8 hours per day

Phase: Building Construction 12/1/2013 - 2/28/2014 - Interior Construction

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.29 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.2 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.5 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.3 load factor for 8 hours per day

Phase: Architectural Coating 12/1/2013 - 3/1/2014 - Type Your Description Here

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250



Paving Off Road Diesel	0.01	0.07	0.00	0.01	0.01	0.00	0.01	0.01	7.22	0.0055	
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.0000	assumes 10% on site
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74		
Building 12/01/2014-02/28/2015	0.03	0.15	0.00	0.01	0.01	0.00	0.01	0.01	60.30		
Building Off Road Diesel	0.02	0.09	0.00	0.01	0.01	0.00	0.01	0.01	11.90	0.0055	
Building Vendor Trips	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	11.34		
Building Worker Trips	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	37.05		
Coating 12/01/2014-03/01/2015	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23		
Architectural Coating	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23		
<b>2015</b>	<b>3.49</b>	<b>0.38</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>171.89</b>	<b>2015 DPM</b>	
Building 02/02/2014-01/31/2015	0.03	0.13	0.00	0.01	0.01	0.00	0.01	0.01	57.69	0.0141	
Building Off Road Diesel	0.02	0.08	0.00	0.01	0.01	0.00	0.00	0.00	11.38	0.0048	
Building Vendor Trips	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	10.85		
Building Worker Trips	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	35.45		
Building 12/01/2014-02/28/2015	0.05	0.25	0.00	0.01	0.02	0.00	0.01	0.01	110.13		
Building Off Road Diesel	0.03	0.16	0.00	0.01	0.01	0.00	0.01	0.01	21.73	0.0092	
Building Vendor Trips	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	20.72		
Building Worker Trips	0.02	0.03	0.00	0.00	0.01	0.00	0.00	0.00	67.68		
Coating 12/01/2014-03/01/2015	3.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.07		
Architectural Coating	3.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.07		

Phase Assumptions

Phase: Fine Grading 1/25/2014 - 2/1/2014 - Foundations & some Grading

Total Acres Disturbed: 5.5

Maximum Daily Acreage Disturbed: 1.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.41 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.4 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.34 load factor for 8 hours per day

Phase: Mass Grading 1/10/2014 - 1/24/2014 - Type Your Description Here

Total Acres Disturbed: 5.5

Maximum Daily Acreage Disturbed: 1.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 6227.27

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.41 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.4 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.34 load factor for 8 hours per day

Phase: Paving 12/1/2014 - 12/23/2014 - Default Paving Description

Acres to be Paved: 1.38

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.37 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.41 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.36 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.37 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 7 hours per day

Phase: Building Construction 2/2/2014 - 1/31/2015 - Exterior Construction

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.29 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.2 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.35 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.3 load factor for 8 hours per day

Phase: Building Construction 12/1/2014 - 2/28/2015 - Interior Construction

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.29 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.2 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.35 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.37 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.3 load factor for 8 hours per day

Phase: Architectural Coating 12/1/2014 - 3/1/2015 - Type Your Description Here

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

**Project:**

**Main Street Development  
Existing TAC Sources within 1,000 feet of Planned Residences**

<b>Source</b>	<b>Distance to Closest Planned Residence (feet)</b>	<b>Lifetime Cancer Risk</b>	<b>Annual PM2.5 Concentration</b>	<b>Hazard Index</b>
Interstate 280 Traffic <sup>1</sup>	950	9.18	0.09	0.01
Stevens Creek Blvd. Traffic <sup>2</sup>	100	4.10	0.11	<0.03
Source 18604 <sup>3</sup>	670	2.79	0	0
Source 16390 <sup>3</sup>	840	0	0	0
Source 16806 <sup>3</sup>	880	0	0	0
Maximum Single Source BAAQMD Significance Threshold		9.18 10	0.11 0.3	0.01 1.0
Cumulative Sources BAAQMD Significance Threshold		16.1 100	0.2 0.8	<0.05 10.0

<sup>1</sup> Based on BAAQMD Google Earth Roadway Screening Analysis Tool results for I-280 at 950 feet (using data for 750 and 1,000 feet south from the roadway).

<sup>2</sup> Based on BAAQMD Roadway Screening Risk Tools results for 100 feet from an East-West Roadway with ADT of 30,000.

<sup>3</sup> Based on BAAQMD Google Earth Stationary Source Screening Analysis Tool results for sources within 1,000 feet of sensitive receptors.

**Project Name:** Main Street Development - 2008 Scheme 1  
**Project Years:** 2014  
**Greenhouse Gas Operational Period Emissions in Metric Tons Per Year**

<b>Source Category</b>	<b>Unmitigated Project CO2e (metric tons/year)</b>	<b>Mitigated Project CO2e (metric tons/year)</b>	<b>Converted for PG&amp;E rates<sup>1</sup></b>	<b>Adjusted for Trips<sup>2</sup></b>	<b>Percent of Total</b>
Transportation:	15,270	13,690	<b>13,690</b>	<b>13,693</b>	87%
Area Source:	2	2	<b>2</b>	<b>2</b>	0%
Electricity:	2,435	1,948	<b>997</b>	<b>997</b>	6%
Natural Gas:	559	447	<b>447</b>	<b>447</b>	3%
Water & Wastewater:	53	53	<b>27</b>	<b>27</b>	0%
Solid Waste:	1,003	501	<b>501</b>	<b>501</b>	3%
<b>Total:</b>				<b>15,668</b>	

<sup>1</sup> PG&E reports a 2014 emission factor of 412 pounds of CO<sub>2</sub> per megawatt energy produced

<sup>2</sup> Emissions adjusted slightly to account for small differences in URBEMIS and F&P Trip forecasts

Notes: BGM modeling accounts for 20% reduction in energy usage to account for Project Green Measures and new State building codes  
Waste diversion of 50% used to represent regional recycling programs

**Project Name: Main Street Development - 2008 Scheme 2**  
**Project Years: 2014**  
**Greenhouse Gas Operational Period Emissions in Metric Tons Per Year**

Source Category	Unmitigated Project CO2e (metric tons/year)	Mitigated Project CO2e (metric tons/year)	Converted for PG&E rates <sup>1</sup>	Adjusted for Trips <sup>2</sup>	Percent of Total
Transportation:	12,080	10,804	<b>10,804</b>	<b>10,790</b>	83%
Area Source:	2	2	<b>2</b>	<b>2</b>	0%
Electricity:	2,494	1,996	<b>1,021</b>	<b>1,021</b>	8%
Natural Gas:	747	598	<b>598</b>	<b>598</b>	5%
Water & Wastewater:	60	60	<b>31</b>	<b>31</b>	0%
Solid Waste:	1,250	625	<b>625</b>	<b>625</b>	5%
<b>Total:</b>				<b>13,067</b>	

<sup>1</sup> PG&E reports a 2014 emission factor of 412 pounds of CO<sub>2</sub> per megawatt energy produced

<sup>2</sup> Emissions adjusted slightly to account for small differences in URBEMIS and F&P Trip forecasts

Notes: BGM modeling accounts for 20% reduction in energy usage to account for Project Green Measures and new State building codes  
Waste diversion of 50% used to represent regional recycling programs

**Main Street Development - 2012 Scheme 1c (referred to as  
2012 Scheme 1 in the Addendum)**

**Project Name:**

**Project Years:**

**2014**

**Greenhouse Gas Operational Period Emissions in Metric Tons Per Year**

Source Category	Unmitigated Project CO2e (metric tons/year)	Mitigated Project CO2e (metric tons/year)	Converted for PG&E rates <sup>1</sup>	Adjusted for Trips <sup>2</sup>	Percent of Total
Transportation:	12,138	10,870	<b>10,870</b>	<b>11,016</b>	80%
Area Source:	3	3	<b>3</b>	<b>3</b>	0%
Electricity:	2,916	2,332	<b>1,194</b>	<b>1,194</b>	9%
Natural Gas:	965	772	<b>772</b>	<b>772</b>	6%
Water & Wastewater:	79	79	<b>40</b>	<b>40</b>	0%
Solid Waste:	1,516	758	<b>758</b>	<b>758</b>	5%
<b>Total:</b>				<b>13,784</b>	

<sup>1</sup> PG&E reports a 2014 emission factor of 412 pounds of CO<sub>2</sub> per megawatt energy produced

<sup>2</sup> Emissions adjusted slightly to account for small differences in URBEMIS and F&P Trip forecasts

Notes:

BGM modeling accounts for 20% reduction in energy usage to account for Project Green Measures and new State building codes

Waste diversion of 50% used to represent regional recycling programs

**Main Street Development - 2012 Scheme 2b (referred to as 2012  
Scheme 2 in the Addendum)**

**Project Name:**

**Scheme 2 in the Addendum)**

**Project Years:**

**2014**

**Greenhouse Gas Operational Period Emissions in Metric Tons Per Year**

Source Category	Unmitigated Project CO2e (metric tons/year)	Mitigated Project CO2e (metric tons/year)	Converted for PG&E rates <sup>1</sup>	Adjusted for Trips <sup>2</sup>	Percent of Total
Transportation:	11,054	9,783	<b>9,783</b>	<b>10,095</b>	78%
Area Source:	4	4	<b>4</b>	<b>4</b>	0%
Electricity:	2,862	2,290	<b>1,172</b>	<b>1,172</b>	9%
Natural Gas:	1,095	876	<b>876</b>	<b>876</b>	7%
Water & Wastewater:	90	90	<b>46</b>	<b>46</b>	0%
Solid Waste:	1,465	732	<b>732</b>	<b>732</b>	6%
<b>Total:</b>				<b>12,925</b>	

<sup>1</sup> PG&E reports a 2014 emission factor of 412 pounds of CO<sub>2</sub> per megawatt energy produced

<sup>2</sup> Emissions adjusted slightly to account for small differences in URBEMIS and F&P Trip forecasts

Notes: BGM modeling accounts for 20% reduction in energy usage to account for Project Green Measures and new State building codes  
Waste diversion of 50% used to represent regional recycling programs

**Project Name:** Main Street Development  
**Project Years:** 2014  
**GHG Emissions for Plan Scenarios**

<b>Source Category</b>	<b>2008 Scheme 1</b>	<b>2008 Scheme 2</b>	<b>2012 Scheme 1c (referred to as 2012 Scheme 1 in the Addendum)</b>	<b>2012 Scheme 2b (referred to as 2012 Scheme 2 in the Addendum)</b>
Transportation:	13,693	10,790	11,016	10,095
Area Source:	2	2	3	4
Electricity:	997	1,021	1,194	1,172
Natural Gas:	447	598	772	876
Water & Wastewater:	27	31	40	46
Solid Waste:	501	625	758	732
<b>Total:</b>	<b>15,668</b>	<b>13,067</b>	<b>13,784</b>	<b>12,925</b>

## **Appendix B: School Impact Study**

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# ENROLLMENT AND FISCAL IMPACT ANALYSIS

## MAIN STREET CUPERTINO PROJECT

*Prepared for:*



**The City of Cupertino**

*Prepared by:*

**SCHOOLHOUSE SERVICES**

*Economists and Planners*

(650) 373-7373

[www.schoolhouseservices.com](http://www.schoolhouseservices.com)

January 2011

## TABLE OF CONTENTS

BRIEF SUMMARY .....	1
ENROLLMENT IMPACTS .....	2
Background	
Student Generation Rate Analysis	
Enrollment Impacts	
Enrollment Capacity of Schools	
CAPITAL FACILITIES COST AND REVENUE IMPACTS .....	11
Facilities Costs	
Main Street Cupertino Project	
Development Impact Fee Revenue	
Comparison of Capital Facilities Costs and Development Impact Fee Revenues	
OPERATING REVENUE AND COST IMPACTS .....	17
Operating Costs	
Operating Revenues	
Comparison of Operating Costs and Revenues	
SUMMARY .....	21
SUPPLEMENT - PROJECT ALTERNATIVE .....	23

## **BRIEF SUMMARY**

The apartments in the Main Street Cupertino project might be expected to generate about 32 students. (There would not be any students generated by the 143 senior units.) They generate a relatively small number of students for the number of housing units provided. While local schools are crowded, this number of students in itself is not a significant problem for the Cupertino Union and Fremont Union school districts. The problem is the total number of additional students coming both from all new development and due to increasing enrollment from existing housing.

The Cupertino Union School District (elementary and middle schools) and the Fremont Union High School District will need additional facilities to house the increased number of students. The Main Street project will pay development fees to be utilized for this purpose. Because the apartments are only a small part of the project and because their student generation rate is fairly low, for both districts these one-time fees will exceed the share of the costs of additional school facilities attributable to the Main Street project.

The state provides funds to the Cupertino District to supplement property tax revenues and, given additional students, will provide additional funds to maintain the same amount of annual financial resources per student from property taxes and state funding. Revenues from other sources, primarily the parcel tax, which are less than ten percent of the budget, will not increase significantly.

The Fremont High District depends primarily on the property tax for funding. Because the apartments are only a modest part of the total project, property tax revenues from the project will substantially exceed the share of the district's annual operating costs attributable to the Main Street project.

## **ENROLLMENT IMPACTS**

### **Background**

The City of Cupertino has contracted with Schoolhouse Services to conduct an analysis of the enrollment and fiscal impacts of the proposed Main Street Cupertino project on the local school districts. The land-owner and developer, 500 Forbes, LLC, has previously received approval for a multi-use project on the site. It is now requesting that the project include 120 apartment units and some additional retail space, with the athletic club no longer being part of the project. The project site consists of 18.4 acres located on the north side of Stevens Creek Boulevard, bounded by Vallco Parkway on the north, Tantau Avenue on the east side, and existing development on the west. The site has already been cleared and the developer is planning on completing most of the project, including occupancy of the apartments, in 2014.

The scope of this report is an analysis of the project revised as the developer is proposing. The land uses include 120 apartments, 143 units of senior housing, a 180 room hotel, 83,200 square feet of retail, 292,000 square feet of office space, and 1,963 parking stalls. More information about the sizes and character of the uses is included in a later section of the report.

The project is located within the school district service areas of Cupertino Union Elementary School District (CUSD or Cupertino District) and Fremont Union High School District (FUHSD or Fremont District). It is within the Eisenhower Elementary attendance area, but on its border with the Sedgwick Elementary attendance area. At the middle school level, also part of CUSD, it is located in the Hyde Middle School attendance area. The project is in the Cupertino High School attendance area, located to the south only a couple of blocks away from the project. This report considers the enrollment impacts on these schools and the fiscal impacts on the two districts.

### **Student Generation Rate Analysis**

A projection of new student enrollment resulting from the Main Street project is necessary for identification of the potential impact of development on the impacted schools. Student generation rates (SGRs), the average number of students per new housing unit, are the key factor for the projection of enrollment into the future. Multiplying the number of new units by an appropriate SGR results in a projection of students from the units.

Different housing types generate different SGRs. Single family detached units, houses with a surrounding yard, usually generate the most students, typically approximately two to three times the amount of students generated by most apartment units and condominiums (individually owned units in a multi-unit building, often referred to as single family attached). However, if located in a highly rated school district, relatively large ground floor apartments and condominiums (townhomes), especially if they are in a family-friendly setting and affordable, can generate almost as many students as single family detached units.

The majority of condominiums and apartments, however, are usually not targeted toward families. Most of these units are smaller, ranging from studio and loft units to predominantly one and two-bedroom units. They are usually in multi-story buildings and lack private yards. Within the range of apartments and condos, however, student generation can vary significantly, with the sizes and the design and marketing of the units being major factors; this topic is addressed in more detail below.

These student generation comparisons are present in Cupertino. What is different in Cupertino is that student generation in essentially every category is greater than it is in almost all other California districts. The high performance of Cupertino school students and the reputation of the schools make the city an extremely desirable place for families with children to reside. As a result, developments are more likely to design housing to be attractive to young families. The combination of the desire of young families to reside where the children can attend Cupertino schools and the targeting of new housing to these young families results in the high SGRs.

It should be noted that, for both single family units and units in multi-family buildings, when the buildings are new, younger families tend to be over-represented and student generation is generally greater at the elementary school level. As the units begin to age, the students present begin to enter the higher grade levels and eventually high school. While some families move and are replaced by younger families, other families become longer term residents and over a number of years the average age increases. Eventually a more stabilized SGR evolves as the subdivision ages, with the spreading of students amongst the elementary, middle, and high school being more equally apportioned than in the first decade after the project is constructed.

#### SGRs of Recent Residential Development In Cupertino

Enrollment Projection Consultants (EPC) has been the demographer for both the Cupertino District (elementary and middle schools) and the Fremont District (high schools) for many years. As part of its work the firm determines student generation (counts the number of students) for a large number of relatively new housing units of various housing types. The student generation rate (SGR) is the number of students counted divided by the number of units. The SGRs are then multiplied by the number of projected new units of each housing type to project future enrollment from new housing.

The most recent EPC studies available when the first draft of this report was written were completed 12 months ago. Since then the firm has updated its student generation survey and prepared forecasts based on the recently completed official enrollment counts for the current school. The findings and forecasts in this year's studies are fairly consistent with those of last year, with the exception of some modest enrollment increases due to higher SGRs and to this year's higher than expected kindergarten enrollment.

The EPC surveys are the logical place to start to estimate the SGRs for the Main Street project. They cover 590 attached units, including both apartments and condominiums. One and two-

bedroom units dominate on the sample, though it includes some studios and some larger units. Multi-family buildings with generally larger units and/or designed to accommodate families are not included in this sample; they are grouped in a 329 unit sample with single family projects for the SGR analysis.

The survey by Enrollment Projection Consultants found an average SGR for the CUSD (kindergarten through eighth grade) of 0.27 students per multi-family residential unit, a little more than one student in every four homes. The average SGR for the Cupertino District portion of FUHSD, the high school grades, was 0.08 per unit in multi-family buildings. (This is about four times the 0.02 high school SGR in the remainder of the Fremont District.) Tables 1 and 2 summarize the SGR findings for both CUSD and FUHSD for the residential projects analyzed. (The SGRs for single family units are included for comparison.)

**Table 1**  
**Average SGRs by Housing Type**  
**Cupertino Union School District**

<i>Housing Type</i>	<i>Average SGR</i>
<i>Apartments and Most Condominiums</i>	<b>0.27</b>
<i>Single Family and Some Condominiums</i>	<b>0.64</b>

*Source: Enrollment Projection Consultants.*

**Table 2**  
**Average SGRs by Housing Type**  
**Fremont Union High School District**

<i>Housing Type</i>	<i>Average SGR</i>
<i>Apartments and Most Condominiums</i>	<b>0.08</b>
<i>Single Family and Some Condominiums</i>	<b>0.21</b>

*Source: Enrollment Projection Consultants.*

### Main Street Cupertino SGRs

The next step is to choose an appropriate SGR to use in the analysis of the Main Street units. The developer has indicated that they plan to design and market the apartments for sophisticated adult living. We know from many studies that certain characteristics are often associated with adult oriented complexes (and hence few students). These include:

The units generally are studios or have only one bedroom;

The units are small, in particular lacking larger kitchen/family eating areas;

Though small, the apartments are expensive; families can usually get more for their money in alternative locations;

They tend to be in taller buildings, with a minimal number of the units at ground level;

They lack yards with limited access and play structures for pre-school children, and lack lawns in the complex for the play of elementary school-age children;

There is only one assigned parking space per unit;

They are marketed for their sophisticated adult life style;

To make living at such a high density attractive, they include features such as physical fitness centers, party lounges, business centers, gated entrances, etc., all oriented to adult preferences, but adding to the price.

The developer has indicated its intention of designing for and marketing to single persons or couples, rather than to family units. It does not plan on any apartments with more than one bedroom; there will probably be a limited number of studios. Much of the apartment building will be four stories tall and thus there will be a limited number of units at ground level. The number of parking spaces reserved for each unit is unknown. The developer indicates that amenity features in the complex, e.g. a fitness center, will be oriented to the preferences of adults. And, given the high cost of land and of development in this area and the cost of the amenities, the rental rates will be high, often a problem for young families. The name of the project, itself, offers the image of adult-oriented activities – shopping, offices, a hotel, etc. The only outdoor space oriented to the apartments is a small courtyard, unlikely to be designed to accommodate children's outdoor play. There are a park and a town square, each less than one acre in size, nearby but separated from the apartments by retail and parking. The average SGR from the survey would appear to be an upper end of the range of possible Main Street student generation if the units are designed and marketed as adult one-bedroom units. However, if they have a den or other space that could be used as a bedroom and have two usable parking spaces, the SGRs could be at the upper end of the range or possibly even higher.

It is almost certain that there will be some students residing in the apartment complex. The units may average as large as 1,200 square feet. That provides room for a larger kitchen/eating area and is a size more typical for two-bedroom units. The size could easily accommodate a room which a working couple would value as a “den/office,” but which a couple or individual with one or two children would value as a second bedroom. If there are two parking spaces for each unit, that would result in more families. And, of course, Main Street is located in very desirable school districts. The attraction of the schools is such that some households with children will choose to live there no matter how adult the orientation of the units. In some cases a single separated or divorced person will be living in an apartment and a son or daughter will move in with the parent, either because the parents desire to have the child in Cupertino schools or simply because a son or daughter wants to live with “the other parent.”

The Montebello development at the corner of Stevens Creek and De Anza Boulevards offers an example of units designed and marketed for adult living in a very urban setting. The development was built in 2003 as apartments oriented to adults, but a strong ownership market at that time led to the units being sold as condominiums, though a large number of the units are rented. The units are one and two bedrooms, with a relatively few townhouses. They are of modest size for condominiums, typically 850 square feet for one-bedroom units and 1,100 square feet for two-bedroom units. These unit sizes are below the tentative one-bedroom size of the Main Street units; that suggests the Main Street project could have higher SGRs than the Montebello units. The Montebello includes a pool, a spa, a fitness center, and an entertainment center. There is a Le Boulanger on the ground floor and a Starbucks across the street. The only out-door space oriented to the development is an interior courtyard entirely filled with trees and shrubbery, thus providing no play space. The urban orientation is emphasized with the title of the complex of which Montebello is a part, City Center.

The 207 Montebello units are not sufficient to be a reliable statistical sample, but sufficient to serve as a useful indicator. A total of 43 students, 27 elementary school, 10 middle school and six high school students, reside in the 207 units in the project. (This is six more than resided there one year ago.) The SGRs are thus 0.18 and 0.03 for CSUD and FUHSD students respectively. These SGRs can be seen as reasonable estimates of the lower end of the range of reasonable SGRs for the Main Street units, with one adjustment. The project is located only a couple of blocks from Cupertino High School, a very high achieving school; it should be expected that that will result in a higher high school SGRs.

In summary, our perspective is that the Main Street SGRs could be as high as the averages of apartments and condominiums units (omitting complexes with larger family oriented units), 0.27 and 0.08 students per unit, and as low as 0.18 and 0.03 (or a little higher) students per unit for CUSD and FUHSD respectively. Given the similarities between the Montebello and Main Street settings, we are using SGRs closer to the elementary and middle school SGRs for the Montebello units in the calculations in this report, knowing that the SGRs could be higher or lower depending on factors not yet known. The high school SGR used is closer to the average

for units in the CUSD portion of the district. Table 3 below shows these SGRs by grade level for CUSD and FUHSD.

**Table 3**  
**Main Street Development**  
**Projected SGRs**

	<i>Main Street Project</i>
<i>Elementary (K-5) SGR</i>	0.15
<i>Middle (6-8) SGR</i>	0.06
<b><i>Total CUSD SGR</i></b>	<b>0.21</b>
<b><i>High School (FUHSD) SGR</i></b>	<b>0.06</b>

*Source: Schoolhouse Services.*

### Enrollment Impacts

With appropriate SGRs we can proceed with the calculation of the enrollment generated from the 120 apartments. (No students will be generated by the 143 senior units.) We can also assess the impact of that development on the current enrollment at the impacted schools, which are expected to be Sedgwick Elementary, Lawson Middle, and Cupertino High. Table 4 shows the calculated student enrollment impact resulting from the project.

**Table 4**  
**Estimated Enrollment Impact\***

	<i>Elementary</i>	<i>Middle</i>	<i>High</i>	<i>Total</i>
<i>Apartments</i>	120	120	120	
<i>SGR</i>	0.15	0.06	0.06	
<b><i>Students Subtotal</i></b>	<b>18</b>	<b>7</b>	<b>7</b>	<b>32</b>

\* *Three to ten years after construction of the units.*

*Source: Schoolhouse Services.*

Given the assumptions described above, the Main Street development is projected to generate approximately 32 students. They will impact the three schools to which they will be assigned. It is anticipated that 18 students will be assigned to Sedgwick Elementary School, seven will attend Lawson Middle School, and five will attend Cupertino High School.

It was pointed out earlier that the distribution skewed towards the early grades will be reduced over time. After a decade a more even distribution is to be expected. Overall enrollment could well be at approximately the same level or not too far below. It should be remembered that these estimates are reasonable for the proposed units; however, many characteristics of the units are unknown and the actual enrollment generated could vary moderately up or down from these numbers. In any case, the number of students is modest given the number of units and the overall size of the project.

## **Enrollment Capacity of Schools**

### Elementary Schools

A discussion of the capacity of the elementary schools needs to start with a consideration of the pattern of capacity versus enrollment of the district as a whole. Cupertino Union is a rapidly growing school district. Enrollment has increased every year in the last decade, going from 15,571 in the fall of 2001 to 18,645 this fall, an increase of 20% accommodated in the same schools in the District. This increase is overcrowding many of these schools. Most of the schools are housing more students than their design capacity, primarily by adding modular classrooms. School classroom support facilities - cafeteria/general purpose spaces, administrative offices, support classrooms for music/art or for students with targeted needs, playground space and facilities, etc. - are over-crowded or unavailable.

The Enrollment Projection Consultants fall 2011 study projects an increase of 180 elementary students district-wide by next fall. Then, assuming that the rapid addition of young families in the district begins to abate, enrollment will probably begin a significant decline reflecting a downward trend from a level of growth that EPC sees as unlikely to be sustained.

However, and most important, the trends over the last few years and as projected to continue for the next few years are different in the three areas of the district. The schools north and northeast of I-280 are experiencing strong growth resulting in very serious capacity shortfalls. Schools in the central tier lying below I-280 are crowded, though not to the extent of the northern schools, and are experiencing increases in enrollment for another year or two. The schools in the southern portion of the district have already passed their peak enrollment and have a continued decline projected in the future.

Main Street Cupertino is located in the Eisenhower School attendance area, but on the south side of I-280 and on the boundary of the Sedgwick School attendance area. Eisenhower is located north of the freeway and is one of the seriously overcrowded schools. It is therefore to be anticipated that students from Main Street would be assigned to Sedgwick School. This is the case with enrollment from the condominium complex adjacent to and on the west side of the Main Street project. There are advantages to this other than the capacity issue. Sedgwick School is closer to the Main Street project and is on the same side of the freeway.

The State of California funds a class size reduction program that subsidizes a portion of the cost of class size reduction in kindergarten through third grade and the Cupertino District participates in this program. The standard built into the program is a maximum of 20 students per homeroom. Under this standard both Sedgwick and Eisenhower Schools would be impossibly overcrowded. Due to financial and classroom capacity constraints, however, the district has increased the maximum size in the kindergarten through third grade class size reduction program in this school year, raising class sizes in these grades up to a non-to-exceed maximum of 24 students. This increase was possible because the penalties built into the state program are being waived. However, the waiver sunsets after the 2013-14 school year. This increase provided a

sufficient increase in capacity for Sedgwick, and Eisenhower, to accommodate their assigned students this year. However, the Cupertino community values education and it is likely the district will make a strong effort to return to smaller classes in the lower grades if at all possible.

Even with the increased capacity resulting from larger classes, Sedgwick and Eisenhower can accommodate their current enrollment only because many students living in these two attendance areas attend other schools. Sedgwick has 230 more students, a total of 752 students, living in its attendance area than the 522 that attend the school. Eisenhower has 820 students living in its attendance area; its enrollment is 742 students.

The relationship between a school's enrollment and the count of students residing in the school's attendance area needs to be explained. The Cupertino District has developed programs that are located in schools with available capacity; CLIP, the Chinese Language Immersion Program, is an example. Many students participating in the program are drawn from attendance areas in the northern/northeastern and central tiers of the district, lessening the pressure on these overcrowded schools. Also, Special Day Class (SDC) programs are located in the southern schools, again drawing some students from the more crowded schools. Finally, there are numerous situations in which students are directed to a school in a nearby attendance area, shifting enrollment south and lessening the pressure on the over-crowded schools. All of these practices have some inherent disadvantage, but it is a much more favorable resolution than either having the northern schools even more crowded or having students forced to attend schools distant from where they live.

Future enrollment at Sedgwick is projected to peak at slightly about 570 students, even if 230 students residing in its attendance area continue to attend other schools. (This count is based on adding the projected increase in students residing in the attendance area to current enrollment.) This enrollment is significantly in excess of current capacity, even if the district continues K-3 class size reduction at the higher level. Possible options to providing additional capacity are addressed in the section entitled "Facility Costs" below.

### Middle Schools

The situation of growing enrollment overwhelming capacity in the local schools is even worse in the middle schools. Enrollment Projection Consultants is expecting an increase of about 600 students between now and the fall of 2015. Main Street Cupertino is in the Hyde attendance area, though close to the Lawson attendance area, with the two schools approximately equidistant from the project. Each of these schools already has an enrollment over 1,000 students. They are also affected by the overload at Cupertino Middle. That school has an enrollment of 1,293 students and would have an enrollment of well over 1,400 except for students from its attendance area being assigned to other schools, including about 50 to Hyde Middle. Adding the projected increase in students residing in the Hyde and Lawson attendance areas, these schools are projected to have enrollments above 1,100 students by 2015 and Cupertino Middle is projected to have almost 1,700 students. The current facilities at these

schools are overloaded at their current enrollment. They could not accommodate their future projected enrollment.

### High Schools

The Fremont Union High School District currently has an enrollment of 10,469 attending its five comprehensive high schools. The enrollment capacity of these five schools is 9,850 students; enrollment exceeds capacity by 619 students. Per EPC's latest report in November 2010, District enrollment is expected to grow, moderately in the next two years and then at a faster rate. The projected increase over the next two years, 2011 to 2013, is about 150 students; the increase in the following two years is projected to be about 400 more students, with strong further increases projected over the remainder of the decade as the larger classes already in the elementary and middle school grades enter in to the high school.

Main Street Cupertino is located only a couple of blocks from Cupertino High School. Cupertino High is calculated to have an enrollment capacity of 1,767 students. Its fall 2011 enrollment is 1,893 students, 126 above the capacity. The bigger problem, however, is the forecast that in the fall of 2013 the attendance area will have about 200 more students in its attendance area and by 2015 an additional 200 plus students, bringing its enrollment to more than 500 students above the current capacity of its facilities.

## **CAPITAL FACILITIES COST AND REVENUE IMPACTS**

A school district adding a significant number of students usually needs to incur one-time upfront costs for capital facilities to house the students. California law provides for development fees, usually paid at the time a building permit is issued, as a source of funding for such expenditures. This section addresses the cost of accommodating students from Main Street and compares the cost with the development fees the project will generate.

### **Facilities Costs**

#### **Elementary School Costs**

The analysis of elementary school capacity above shows that neither Eisenhower Elementary, in whose attendance area the project is located, or Sedgwick Elementary, the school to which the students from the Main Street Cupertino project are likely to be assigned because of a more severe shortage of capacity at Eisenhower, will have capacity available in its present facilities in 2014 when enrollment from the project is first expected to attend. Eighteen elementary students, the projected number of students generated by the project, is not, by itself, a large number of students. If these were the only students CUSD needed to accommodate, the crowding effect would be minimal. The problem, however, is the total number of students from all new projects and, even more, the increased enrollment from already existing housing.

The district's preferred option for housing the increased enrollment would be a new school in the northern portion of the district. However, there seems to be no possibility of a new school. The primary reasons are the lack of a suitable site and, if one were available, its astronomical cost. The assumption made here is therefore that the increased enrollment at Sedgwick will be housed by construction of one or more classroom wings at one or more over-crowded schools, along with improvements in the support facilities to allow the campus to function with a significantly larger enrollment than the design of the campus anticipated.

It will be a challenge to add additional classrooms on the Eisenhower or Sedgwick campuses. They were designed for smaller enrollments and the sites are only 9.8 and 8.8 acres in size respectively. The School Facilities Planning Division of the California Department of Education makes available a "Guide to School Site Analysis and Development" which includes recommendations for size of campus for various enrollments. The guide recommends 13.1 acres for an elementary school of 750 students without a class size reduction program and 13.8 acres with class size reduction.

Accommodating about 750 students on a much smaller campus involves placing classrooms on areas the state guide plans for other uses, such as recreation (6-7 acres recommended). The assumption used here is that the classroom wings would have two stories to minimize the ground area required and that the enlargement of support facilities would also be designed to minimize the compromise with recreational space.

The State Allocation Board uses a cost of educational facilities for state 50% funding grants for new school facilities. The current grant amount for elementary students is \$9,112 per student, based on a total cost of \$18,224 (land costs not included). California law directs the State Allocation Board to review school costs annually, with the next review coming at the Board's meeting in January 2012. The specific Class B cost of construction index that the Board uses to adjust for changes in cost is not available, but an Engineering News Record cost of construction index has increased 3.2% in the 12 months ending in September. It could be expected that the SAB is likely to increase the grant amount about three percent in January, raising the cost basis to about \$18,800, which is used here because the existing cost is almost a year out-of-date.

It can be noted that a two-story classroom building would be expected to cost about \$300,000 per classroom. (An elevator would be required.) Assuming 24 students per room, the classroom cost is \$12,500 per student, two-thirds of the State Allocation Board cost. This figure is likely to be an understatement of the costs the Cupertino District would incur in making such improvements. The State Allocation Board cost is estimated assuming a new school and single story construction. Adding space to an existing campus is usually more expensive.

Additional students on the campus require enlarging of some of the support facilities as well, e.g., the cafeteria and multipurpose rooms. A rough rule of thumb is that about 40% of elementary school costs are for support facilities. In this report the state figure of \$18,800 per student is used as the cost of adding capacity to the Sedgwick or Eisenhower campuses.

### Middle School Costs

Main Street Cupertino is located in the Hyde Middle School attendance area and there is no reason to anticipate that its students will not attend that school. As noted above, enrollment is already above capacity and is expected to grow in the next few years.

The other middle schools in the northern and northeastern part of the district, Lawson and Cupertino, are also projected to have enrollments substantially in excess of the capacity of their current facilities. The Cupertino District has plans for expansions at all three middle schools. Plans for the Cupertino campus include a two-story 22 room classroom building. Plans for Lawson include two two-story classroom buildings, one with 16 rooms and the other with eight rooms. Because of the other support and recreational space improvements included, the total cost of the improvements for both campuses is \$50 million. The site plan for Hyde shows a single-story four unit classroom addition; the staff has recognized the need for it to be two stories on the same footprint. Again, these plans have not been formally Board reviewed or funded.

All three schools have a problem with limited campus space due to their enrollments being above the level for which they were designed. The "Guide to School Site Analysis and Development" published by the Department of Education has a standard of 20.9 acres for a school of 900 students and 23.1 acres for a school of 1,200 students. Hyde has a current enrollment of 1,005 students and a site size of 14.0 acres; Cupertino has a current enrollment of 1,293 students and

the size of its campus is 20.4 acres; and Lawson's enrollment is 1,030 and its campus is 13.4 acres in size. The picture is even more unsatisfactory, if projected future enrollments are considered. These size constraints are a factor contributing to the relatively high costs of the planned improvements. (It should be noted that the CUSD Board of Education has not reviewed or adopted plans for construction of any of these improvements.)

It seems appropriate to again use the state cost figures to calculate the cost impact of the students from Main Street. The state 50% grant amount as of January 1, 2011 is \$9,637; increasing this amount three percent for the expected January 2012 adjustment for inflation brings the cost to \$9,926. The full cost rounded is thus \$19,900.

### High School Costs

Fremont District enrollment exceeds capacity district-wide and at the Cupertino campus, where Main Streets students would attend. The district has already approved two projects that will add capacity to Cupertino High School and has plans for two other, as of yet unapproved and unfunded, projects. The first project is construction of a new cafeteria/library/administration building; construction is planned to begin in January of 2013 and be finished for the start of school in 2014. The cost of construction and all related costs is \$18.2 million. The second project is the refurbishment of the vacated support buildings into 11 classrooms; construction is planned to begin in July 2014 and be finished prior to the start of school in 2015. Its budgeted cost is \$3.1 million. One of the other projects is the construction of four or six science classrooms near the existing science building. This project would replace four modular classrooms now located there; it is being planned because of the need for additional science classrooms and would add, at most, the capacity for two classrooms worth of students. The last project, still tentative and in the initial planning phase, is the construction of a classroom wing. The location identified as a possibility for the building would accommodate 10 single story classrooms; it is possible that the 20 classrooms that could be accommodated on the site in a two-story building will be needed. At \$300,000 per classroom, the cost of the classrooms would be \$3.0 and \$6.0 million for the 10 room and 20 room buildings respectively.

The total cost of the three projects that result in significant additional capacity, including the 20 room alternative for the classroom wing, is \$27.3 million. The state funding programs measure capacity assuming 27 students per classroom. Thirty-one classrooms at 27 students per room is capacity for 837 students. The cost per student for these expenditures is thus \$32,600 per student. (The cost is perhaps \$42,800 if the 10 room classroom building is assumed.) The cost based on the assumptions in the state grant program became \$24,520 as of January 1, 2011; increasing this three percent for the coming January adjustment results in a cost of \$25,300. In summary, FUHSD anticipates incurring per student costs for the additional capacity at a cost significantly above that assumed in the state grant program, reflecting the higher cost of adding capacity at an already developed (and crowded) campus. Given the advantages of the new cafeteria, library, administration building, however, the state figure is used in the calculations here, as it is for the elementary and middle school improvements.

Table 5 lists the per student cost and the cost of facilities for Main Street students for each of the grade levels.

**Table 5**  
**Per Student Cost of Additional Capacity**  
**Fremont Union High School District**

<i>Grade Level</i>	<i>Per Student Cost</i>	<i>Number of Students</i>	<i>Grade Level Cost</i>
<i>Elementary School</i>	<b>\$18,800</b>	<b>18</b>	<b>\$338,400</b>
<i>Middle School</i>	<b>\$19,900</b>	<b>7</b>	<b>\$139,300</b>
<i>High School</i>	<b>\$25,300</b>	<b>7</b>	<b>\$177,100</b>

*Source: Schoolhouse Services.*

### The Main Street Cupertino Project

The impact fee revenue, the source of school capital improvements funding, will depend on the nature of the buildings in the Main Street project. Other documents provide much more information about the buildings than is included in this report. However, the projection of development fee revenues and property tax revenues that will accrue to the two school districts requires that some critical assumptions about the project be included in this report. Table 6 lists the various types of development in the project with the assumed square footage of each.

The number of apartments, senior units and hotel rooms, the square footage of the retail and office space, and the number of parking stalls comes from the description of the application before the City of Cupertino. The developer and Schoolhouse staff jointly estimated the sizes of the apartments, senior units and hotel rooms; they should be viewed as estimates, rather than specifications of development, at this stage. Schoolhouse prepared the estimates of “Other Space” with input from knowledgeable Silicon Valley/Peninsula developers; they should be considered to be simply reasonable scenarios, as the square footage will depend primarily on decisions the developer will make whether or not to include certain types of space.

**Table 6**  
**Square Feet of Development**

	<i>Number of Units</i>	<i>Square Feet per Unit</i>	<i>Square Feet</i>	<i>Other Space*</i>	<i>Total Square Feet</i>
<i>Apartments</i>	120	1,200	144,000	20,000	164,000
<i>Senior Units</i>	143	900	128,700	25,000	153,700
<i>Hotel Rooms</i>	180	580	104,400	35,000	139,400
<i>Retail Space</i>				83,200	83,200
<i>Office Space</i>				292,000	292,000
<i>Parking Stalls</i>	1,963				
<b><i>Total</i></b>			<b>377,100</b>	<b>455,200</b>	<b>832,300</b>

*\* Includes lobby, administration, fitness, storage, general purpose meeting room, hallways, etc.*

*Source: Schoolhouse Services.*

As discussed above, the apartments are assumed to be targeted towards adult living; the common areas would likely include rooms such as a fitness center. The senior units are presumed to have dining facilities and common room space, but not assisted living facilities. The hotel rooms are quite large. This suggests either an upper end facility or an extended stay facility. The other space estimate includes some meeting rooms, but not extensive meeting/conference facilities.

### **Development Impact Fee Revenues**

Both CUSD and FUHSD are eligible to levy Level 1 development impact fees on new residential development and the majority of commercial/industrial development. California law sets forth maximum fee amounts; both districts have documents justifying their need to levy the maximum amounts, as do most California school districts. The maximum Level 1 residential fee that CUSD and FUHSD together are currently allowed to levy is \$2.97 per square foot of development. Fees can usually be levied on non-residential development because of the role of employment in causing a need for residences where employees and their children live. The maximum fee for commercial/industrial (non-residential) development is \$0.47 per square foot.

The preceding section where the costs of additional capacity were addressed noted that the State Allocation Board adjusts grant amounts annually in January for changes in the cost of construction. It does the same for development fee amounts, but only biennially. The Class B cost of construction index used by the state board rose 4.3% in 2010; adding about three percent for 2011 projects a seven percent increase in January 2012. This will increase the fees to about \$3.18 and \$0.50 per square foot for residential and commercial/industrial development respectively. Since the existing fees are almost two years out-of-date and will soon be adjusted, the increased fee amounts are used here.

FUHSD and its elementary feeder districts have an agreement as to how fee revenues are to be shared. Per this agreement, CUSD will be allowed to collect up to 60% of the maximum fee amount, projected to be \$1.91 per square foot of residential development. FUHSD is allowed to collect 40% of the maximum, projected to be \$1.27 per square foot of residential development. The maximum fees on commercial/industrial development are projected to be \$0.30 and \$0.20 per square foot for CUSD and FUHSD respectively. The maximum fees are scheduled to be adjusted again in January 2014.

California Government Code section 65995.1(a) stipulates that residential units for senior housing will be charged only the commercial/industrial rate; the 143 Main Street senior units will be charged \$0.50 per square foot, with the revenue being allocated between the districts according to the agreed upon shares. It can be noted that, since the parking facilities will likely involve few employees, that development fees levied on construction of the parking space will be small.

The information about the square footage of the various components of the project shown in Table 6 can be multiplied by the development impact fee amounts to calculate the fee revenue that would be generated by the Main Street project, as shown in Table 7.

**Table 7**  
**Development Impact Fee Revenue**

	<i>Total Square Feet</i>	<i>CUSD Fee</i>	<i>CUSD Fee Revenue</i>	<i>FUHSD Fee</i>	<i>FUHSD Fee Revenue</i>	<i>Total Revenue</i>
<i>Apartments</i>	164,000	\$1.91	\$313,000	\$1.27	\$208,000	\$521,000
<i>Senior Units</i>	153,700	\$0.30	\$46,000	\$0.20	\$31,000	\$77,000
<i>Hotel Rooms</i>	139,400	\$0.30	\$42,000	\$0.20	\$28,000	\$70,000
<i>Retail Space</i>	83,200	\$0.30	\$25,000	\$0.20	\$17,000	\$42,000
<i>Office Space</i>	292,000	\$0.30	\$88,000	\$0.20	\$58,000	\$146,000
<b><i>Total</i></b>	<b>832,300</b>		<b>\$514,000</b>		<b>\$342,000</b>	<b>\$856,000</b>
<i>Number of Students</i>			25		7	
<i>Revenue per Student</i>			<b>\$21,000</b>		<b>\$49,000</b>	

*Source: Schoolhouse Services.*

### Comparison of Capital Facilities Costs and Development Impact Fee Revenue

Table 8 shows the calculation of the difference between the development impact fees likely to be generated by the Main Street projects given the current project proposal and the Construction Cost Index adjusted facilities costs per student for each of the districts. The table shows a modest positive capital cost impact for CUSD and a significantly more sizable positive impact for FUHSD. If the number of students used were from a decade or more later when the enrollment will be more balanced among the age levels, the cost impact would be more equal among the districts. The positive impacts reflect the preponderance of non-residential components in the Main Street Cupertino project.

**Table 8**  
**Development Impact Fees Versus Facilities Costs\***

	<i>Fee Revenue Per Student</i>	<i>Facilities Cost Per Student</i>	<i>Per Student Cost Difference</i>	<i>Students</i>	<i>Total Facilities Cost Impact</i>
<i>CUSD - elem</i>	\$21,000	\$18,800	<b>\$2,200</b>	18	\$39,600
<i>CUSD - middle</i>	\$21,000	\$19,900	<b>\$1,100</b>	7	\$7,700
<i>CUSD - total</i>				25	<b>\$47,840</b>
<i>FUHSD</i>	\$49,000	\$25,300	<b>\$23,700</b>	7	<b>\$165,900</b>

\* Both fee revenue and facilities costs are one-time, rather than annual, estimates.

*Source: Schoolhouse Services.*

## OPERATING REVENUE AND COST IMPACTS

### **Operating Costs**

Almost all operating costs tend to increase with enrollment if educational standards are to be maintained. Operating costs are annual costs and are matched with revenues received annually. These costs include personnel costs like salaries and benefits for certificated and classified employees, which generally comprise a large majority of a district's budget. Therefore, the cost per student estimate is simply a calculation of the operating expenditures divided by the number of students, as shown in Table 9.

**Table 9  
Operating Costs**

	<i>Operating Budget</i>	<i>Number of Students</i>	<i>Per Student Cost</i>
<i>CUSD</i>	\$136,474,000	18,645	<b>\$7,320</b>
<i>FUHSD</i>	\$100,843,000	10,346	<b>\$9,747</b>

*Sources: CUSD and FUHSD 2011-12 budgets and Schoolhouse Services.*

### **Operating Revenues**

The Main Street Cupertino project will affect the revenues and costs for the two districts in very different ways. CUSD is a "revenue limit" district. Like other revenue limited districts in the state, its property tax revenues are not sufficient to reach the per student amounts guaranteed under the State of California school funding program. Therefore, the state supplies the additional funds necessary to fill the gap up to the guaranteed level. The result is that the revenues from property taxes plus the revenue limit program increases proportionately as enrollment increases. Another reality for a revenue limit district is that the increase in property tax revenue from new homes is offset by a comparable reduction in the money from the state; thus higher property taxes do not affect the total of property tax and state revenue limit funding.

The "revenue limit" total in CUSD's 2010-2011 budget is \$87.75 million or \$4,706 per student. (The "revenue limit" total five years ago was almost exactly the same; because of the smaller enrollment at that time, the amount per student was \$5,300.) The 2011-2012 state budget is subject to a mid-year adjustment if revenues are lower than assumed in its budget and at least some of the adjustment will take place. However, CUSD's budget assumes that an adjustment of this magnitude would be necessary. Further reductions are scheduled for the next two years. The annual reduction is projected at \$4.6 million, but only if the measure to increase taxes is passed; if not, the reduction is projected to be \$11.4 million.

Governments also supply other funding, generally for categorical programs, and these also tend to increase as enrollment increases. The operating revenues from these sources total \$32.20 million, or \$1,727 per student for CUSD for the 2011-2012 fiscal year. Thus, the revenue impact

coming from sources that will increase approximately proportionate to the addition of new students resulting from the Main Street project is \$6,433 per student.

Local revenues to CUSD (other than the property taxes) constitute a far smaller source of funds; primarily parcel tax revenues, they total \$9.34 million or \$501 per student. Parcel taxes flow from two measures approved by the voters. However, there will not be a large number of parcels in the project so its contribution to parcel tax revenue will be negligible. In sum, these local revenues are not likely to increase with additional enrollment or as a result of the project.

FUHSD is one of the relatively few districts in the state that is not a revenue limit district. The District's per student property tax is moderately above the amount of per student revenue limit funding guaranteed by the state. Because there is no state supplement to property tax revenues, state revenue does not increase when additional students are enrolled. However, new development generates additional property taxes, increasing the District's revenues. The property tax revenues will be equal to the District's share of the property tax rate times the fair market value established by the Santa Clara County Assessor at the time each building is completed.

Table 10 shows the calculation of the assumed assessed valuation for the Main Street project as proposed. The assessed values are calculated based on per unit or per square foot market values estimated by Schoolhouse with input from experienced developers.

**Table 10**  
**Assessed Value**

	<i>Number of Units</i>	<i>Square Feet</i>	<i>Assessed Value per Unit/Foot</i>	<i>Assessed Value</i>
<i>Apartments</i>	120		\$400,000	\$48,000,000
<i>Senior Units</i>	143		\$250,000	\$35,750,000
<i>Hotel Rooms</i>	180		\$200,000	\$36,000,000
<i>Retail Space</i>		83,200	\$450	\$37,440,000
<i>Office Space</i>		292,000	\$400	\$116,800,000
<b><i>Total</i></b>				<b>\$273,990,000</b>

*Assumes assessed value of parking facilities is included with that of the buildings.*

*Source: Schoolhouse Services.*

The district's share of the base one percent property in the 13-003 tax code area in which the project is located is 16.71% of the total one percent base tax rate. The property tax generated by the total Main Street Cupertino complex is estimated to be \$458,000; if seven high school students reside in the 120 apartments, this amounts to \$65,000 for per student. It should be understood that this large number reflects the fact that residential development is a relatively small part of the total Main street development.

**Table 11**  
**Property Tax**

	<i>Assessed Valuation</i>
<i>Estimated Assessed Valuation</i>	\$273,990,000
<i>Property Tax at 1.0% Tax Rate</i>	\$2,740,000
<i>FUHSD Share of Tax Rate (16.71%)</i>	<b>\$458,000</b>
<i>FUHSD Share of Tax Rate per FUHSD Student</i>	<b>\$65,000</b>

*Sources: Santa Clara County Tax Collector, Controller, and Schoolhouse Services.*

The voters of both CUSD and FUHSD have approved bond issues for campus improvements. Debt service on the bond issues is spread among property tax payers proportional to assessed value. The current tax rate for CUSD is 0.000290 per dollar of assessed value; the revenue thus paid by Main Street property owners for debt service on CUSD bonds is projected to be \$79,000. Similarly, the current tax rate for the Fremont District is 0.000415 per dollar of assessed value and the revenue paid for debt service on the district's bonds is projected to be \$114,000. It should be understood, however, that these revenues do not increase the funds available to the two districts. The bond issues and associated debt service are fixed amounts. The assessed value of new development increases the total assessed value, spreading the debt service among a larger tax base; it does not increase the revenue to the districts. It does decrease by almost \$200,000 annually the amount other tax-payers in the districts have to pay.

Voters in the Fremont Union High School District, like voters in the Cupertino Union School District, have approved a parcel tax. The tax is \$98 per parcel and generates about \$5.2 million per year, but again the small number of parcels involved will make parcel tax revenue from the project negligible.

Other government support to the FUHSD totals \$4.7 million, or \$455 per student. As with the CUSD, local revenues (other than the property and parcel tax revenues) constitute a far smaller source of funds and are not likely to increase with additional enrollment. Thus, the per student revenue impact is calculated to be the \$6,928 per student received from property taxes plus the \$455 per student in other government support. Table 12 shows the calculation of the operational revenue anticipated for additional students as a result of the Main Street project. The large Fremont District revenues reflect the substantial property taxes, the majority from the non-residential components of the project.

**Table 12**  
**Operational Costs Versus Operational Revenues\***

	<i>CUSD</i>	<i>FUHSD</i>
<b><i>Projected Enrollment</i></b>		
Students	<b>25</b>	<b>7</b>
<b><i>Per Student Revenues</i></b>		
State Revenue Limit Funding	\$4,706	
Other State and Federal Funding	\$1,727	\$455
FUHSD Share of Property Tax		\$65,000
Total per Student Revenues	\$6,433	\$65,455
<b>Total Operational Revenues</b>	<b>\$160,823</b>	<b>\$458,186</b>
<b><i>Per Student Costs</i></b>		
Average Cost per Student	\$7,320	\$9,747
<b>Total Operation Costs</b>	<b>\$183,000</b>	<b>\$68,229</b>
<b><i>Net Fiscal Impact</i></b>		
Per Student Impact	(\$887)	\$55,708
<b>Total Impact</b>	<b>(\$22,177)</b>	<b>\$389,957</b>

\* All costs and revenues shown are annual costs and revenues.

Sources: Revenues and costs from the CUSD and FUHSD 2011-2012 budgets, Schoolhouse Services.

### Comparison of Operating Costs and Revenues

Table 12 also shows the operational costs anticipated for both districts as a result of the Main Street project, which allows for a comparison with the revenues resulting from the project. There is a net fiscal deficit of \$887 per student for CUSD as a result of the additional students from the Main Street project. This reflects the assumption that state and federal revenues will increase along with the increased enrollment, but revenues from the parcel tax will not. On the cost side, the current operational cost assumption of \$7,320 per student is an average cost per pupil for all expenditures. The total deficit is estimated at \$22,177.

At the estimated assessed valuation of the project, there is a net fiscal surplus of \$55,708 per student for FUHSD. After providing services to an additional seven students as a result of the Main Street project, the surplus is projected to be almost \$400,000, a substantial amount.

## SUMMARY

The projected enrollment and fiscal impacts resulting from the development of 120 rental housing units (Main Street Cupertino) have been analyzed. These impacts were analyzed using current financial information for both districts and current enrollment information for the affected schools, specifically, Sedgwick Elementary, Hyde Middle, and Cupertino High.

All of the dollar amounts in the report should be considered approximations rather than precise amounts.

Below is a summary of the significant findings contained in this report.

- ❑ The demand for housing in the CUSD and in the Cupertino High attendance area is very high, to a large extent because of the quality of the schools. The Main Street Cupertino apartments are likely to have total SGRs between 0.21 and 0.44 students per household depending primarily on whether the size and design of the units allows them to be used as two-bedroom units. SGRs used for the analysis here are 0.21 for CUSD, and 0.06 for FUHSD, a total SGR of 0.27.
- ❑ Based on the SGRs, an enrollment impact of 32 total students is estimated as a result of the Main Street project: 18 students at Sedgwick Elementary; seven students in the Hyde Middle attendance area, and seven students in the Cupertino High attendance area.
- ❑ The enrollment impacts analyzed in this report describe the expected impact within three to ten years of the Main Street housing completion. The number of students after a couple of decades is unlikely to be higher than the number projected in this report; they are likely to be distributed more equally across the grades.
- ❑ The number of students from the Main Street project is very small; they are not a problem in themselves. The problem is additional students from all new projects and, even more, an increasing number of students from existing homes.
- ❑ The principal problem at the elementary level is the distribution of students in the District, with schools increasingly overloaded with students in the northern portion of the District and gradually emerging capacity in the southern portion. Hyde Middle School and Cupertino High are already loaded beyond capacity and badly need additional capacity to accommodate future enrollment. Improvements to provide this capacity have been planned, but additional funding is needed. Some bond financing is designated for improvements at Cupertino High, but some more will probably eventually be needed. No funding has been designated for improvements at Sedgwick Elementary or Hyde Middle.
- ❑ For both districts one-time development fee revenue from the Main Street Cupertino project is anticipated to exceed the share of facilities costs attributable to the project.

Using costs based on the state grant program, the surplus at CUSD is a little less than \$2,000 per student, while FUHSD has a projected surplus of over \$20,000 per student. The total CUSD surplus is projected at \$47,800 while FUHSD enjoys a projected total surplus of \$165,900.

- The share of CUSD annual operational costs attributable to the Main Street project are anticipated to exceed operational revenue from the project by a small amount, \$887 per student. In contrast, FUHSD operational revenues from the project will exceed operational costs attributable to the project by a large amount, about \$55,000 per student. Operational costs are projected to result a deficit of about \$22,000 for CUSD, and possibly a surplus of about \$400,000 for FUHSD.

## SUPPLEMENT

An alternative to the project as analyzed above is now under consideration in the planning process. Copies of Tables 7, 8, 11 and 12 reflecting the components of the alternative project are shown here with the table number followed by “alt”.

The components of the alternative project are as follows:

120 market rate apartments (same as in the project as analyzed),  
 no senior housing (compared with 143 units of senior housing as analyzed),  
 292,000 square feet of office space (unchanged),  
 a 180 room hotel (unchanged),  
 78,700 square feet of retail (a small decrease from 83,200 square feet), and  
 an athletic club (not included in the project as analyzed; or could instead be  
 another 60,000 square feet of retail).

Including the senior units rather than the apartments in the project is also a possibility, but that modification is not shown here. The athletic club is treated here as having the same floor area and assessed value as 60,000 square feet of retail.

**Table 7 - alt**  
**Development Impact Fee Revenue**

	<i>Total Square Feet</i>	<i>CUSD Fee</i>	<i>CUSD Fee Revenue</i>	<i>FUHSD Fee</i>	<i>FUHSD Fee Revenue</i>	<i>Total Revenue</i>
<i>Apartments</i>	164,000	\$1.91	\$313,000	\$1.27	\$208,000	\$521,000
<i>Senior Units</i>	0	\$0.30	\$0	\$0.20	\$0	\$0
<i>Hotel Rooms</i>	139,400	\$0.30	\$42,000	\$0.20	\$28,000	\$70,000
<i>Retail Space</i>	78,800	\$0.30	\$24,000	\$0.20	\$16,000	\$40,000
<i>Additional Retail</i>	60,000	\$0.30	\$18,000	\$0.20	\$12,000	\$30,000
<i>Office Space</i>	292,000	\$0.30	\$88,000	\$0.20	\$58,000	\$146,000
<b><i>Total</i></b>	734,200		<b>\$485,000</b>		<b>\$322,000</b>	\$807,000
<i>Number of Students</i>			25		7	
<b><i>Revenue per Student</i></b>			<b>\$19,000</b>		<b>\$46,000</b>	

*Source: Schoolhouse Services.*

**Table 8 - alt  
Development Impact Fees Versus Facilities Costs\***

	<i>Fee Revenue Per Student</i>	<i>Facilities Cost Per Student</i>	<i>Per Student Cost Difference</i>	<i>Students</i>	<i>Total Facilities Cost Impact</i>
<i>CUSD - elem</i>	\$19,000	\$18,800	<b>\$200</b>	18	\$3,600
<i>CUSD - middle</i>	\$19,000	\$19,900	<b>(\$900)</b>	7	<b>(\$6,300)</b>
<i>CUSD - total</i>				25	<b>(\$2,700)</b>
<i>FUHSD</i>	\$46,000	\$25,300	<b>\$20,700</b>	7	<b>\$144,900</b>

\* Both fee revenue and facilities costs are one-time, rather than annual, estimates.

Source: Schoolhouse Services.

**Table 11 - alt  
Property Tax**

	<i>Assessed Valuation</i>
<i>Estimated Assessed Valuation</i>	\$263,260,000
<i>Property Tax at 1.0% Tax Rate</i>	\$2,633,000
<i>FUHSD Share of Tax Rate (16.71%)</i>	\$440,000
<i>FUHSD Share of Tax Rate per FUHSD Student</i>	<b>\$63,000</b>

Sources: Santa Clara County Tax Collector, Controller, and Schoolhouse Services.

The apartments were the only component generating students; since they are unchanged in the alternative the enrollment impacts are unchanged. This means that one-time facility costs and annual operating costs are unchanged for both districts.

Because the net increase in retail space (including the athletic club if it is part of the project) is less than the square feet lost from not including the senior units, fee revenue is lowered by about six percent, as shown in Table 7 - alt. This brings the impact on the elementary district to an insignificant level and lowers the surplus to the high school district about 13% to about \$145,000; the calculations are in Table 8 - alt.

The substitution of more retail for the senior units reduces the property tax income to FUHSD by about three percent, lowering the district's surplus about four percent to \$376,000, as shown in Tables 11 - alt and 12 - alt. CUSD is not impacted by changes in the property tax.

**Table 12 - alt**  
**Operational Costs Versus Operational Revenues\***

	<i>CUSD</i>	<i>FUHSD</i>
<b><i>Projected Enrollment</i></b>		
Students	25	7
<b><i>Per Student Revenues</i></b>		
State Revenue Limit Funding	\$4,706	
Other State and Federal Funding	\$1,727	\$455
FUHSD Share of Property Tax		\$63,000
Total per Student Revenues	\$6,433	\$63,455
<b>Total Operational Revenues</b>	<b>\$160,823</b>	<b>\$444,186</b>
<b><i>Per Student Costs</i></b>		
Average Cost per Student	\$7,320	\$9,747
<b>Total Operation Costs</b>	<b>\$183,000</b>	<b>\$68,229</b>
<b><i>Net Fiscal Impact</i></b>		
Per Student Impact	(\$887)	\$53,708
<b>Total Impact</b>	<b>(\$22,177)</b>	<b>\$375,957</b>

\* All costs and revenues shown are annual costs and revenues.

Sources: Revenues and costs from the CUSD and FUHSD 2011-2012 budgets, Schoolhouse Services.

## **Appendix C: Traffic Studies**

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\*\*\* Please note that 2012 Scheme 1d in this memorandum is 2012 Scheme 1 in the Addendum and 2012 Scheme 2b in this memorandum is 2012 Scheme 2 in the Addendum.

## MEMORANDUM

Date: February 23, 2012  
To: Kristy Weis, David J. Powers  
From: Todd Henry and Jane Bierstedt  
**Subject: *Main Street Cupertino Revised Traffic Analysis***

SJ11-1292.01

The purpose of this memorandum is to present the results of the revised traffic analysis (i.e., intersection and freeway segment analysis) prepared for the Main Street Cupertino Project located at Finch Avenue and Stevens Creek Boulevard in Cupertino, California (herein the "Proposed Project"). The Proposed Project was previously evaluated in a transportation impact analysis (TIA) and environmental impact report (EIR) certified in 2008. Since the certification of the EIR, the project applicant has modified the project's proposed site plan and land use mix with two new development schemes (herein 2012 Scheme 1a and 2a). The two new schemes also have variants: 2012 Scheme 1 has two variants (1b and 1c) and 2012 Scheme 2 has one variant (2b).

This memorandum discusses traffic impacts associated with the revised project schemes and variants and evaluates whether or not the revised land uses would result in new or more severe traffic impacts than those disclosed in the 2008 TIA and EIR.

### RESULTS SUMMARY

The previous project description for the Proposed Project contained two schemes (Schemes 1 and 2) with a mix of retail, athletic club, office space, housing, and a hotel. The revised project description maintains the same mix of land uses and two project schemes; however, the amount of retail and athletic club space has been reduced by approximately 50 percent and the amount of office space and housing has been increased. One variant for each scheme (1b and 2b) would increase the amount of retail on the site by 9,000 square feet. A second variant on Scheme 1 (Scheme 1c) would provide the option to convert a portion of the retail space to an athletic club and construct senior housing or market rate housing.

#### ***Trip Generation Summary***

The 2012 schemes would generate between 9,490 (Scheme 2a) and 10,938 (Scheme 1c) new daily trips. Between 665 and 730 of these trips would occur during the AM peak travel hour and between 982 and 1,162 of these trips would occur during the PM peak travel hour. Compared to the 2008 project, the 2012 Proposed Project would generate fewer daily and PM peak hour trips compared to 2008 Scheme 1. The 2012 schemes would all, in general, generate more peak hour trips than 2008 Scheme 2.

### ***Intersection Impact Summary***

The 2008 TIA and EIR identified significant impacts and feasible mitigation at five study intersections in the project study area. The 2012 project would result in significant impacts at the same locations, which follow:

- Lawrence Expressway/Homestead Road (2012 Schemes 1 and 2, Project and Cumulative)
- Wolfe Road/Vallco Parkway (2012 Schemes 1 and 2, Project and Cumulative)
- Stevens Creek Boulevard/I-280 Ramps (2012 Schemes 1 and 2, Cumulative Only)
- Lawrence Expressway/I-280 Southbound Ramp (2012 Schemes 1 and 2, Project and Cumulative)
- Lawrence Expressway/Bollinger Road (2012 Scheme 1 and 2, Project and Cumulative)

These intersections were also impacted under the 2008 project description; therefore, the 2012 project would not result in different intersection impacts. Project levels of service under project conditions at these intersections would be the same under the 2012 project schemes as those described in the 2008 TIA and Final EIR. The 2012 project description would result in lower delay in the AM peak hour at the impacted intersections than what was identified in the 2008 studies. There would be a slight increase in delay at some of the intersections during the PM peak hour under the 2012 schemes compared to the 2008 schemes, but the increases in delay would not be considered substantial.

### ***Freeway Impact Summary***

The Proposed Project would result in significant and unavoidable impacts on the following freeway segments:

- I-280 Eastbound:
  - Lawrence to Saratoga (PM, Scheme 1 and 2)
  - Saratoga to Winchester (PM, Scheme 1 and 2)
  - Winchester to I-880 (PM, Scheme 1c only and Scheme 2)
- I-280 Westbound:
  - I-880 to Winchester (PM, Scheme 1; AM, Scheme 1c only and 2)
  - Saratoga to Winchester (AM, Scheme 1)
  - Saratoga to Lawrence (AM, Scheme 1 and 2)

These segments were also impacted under the 2008 project description; therefore, the revised project would not result in different freeway impacts.

## **PROJECT DESCRIPTION**

The Project site is located at Finch Avenue at Stevens Creek Boulevard in Cupertino, California. The project site is contained within the South Vallco Master Plan area and is bounded by Vallco Parkway to the north, Tantau Avenue to the east, Stevens Creek Boulevard to the south, and residential and commercial land uses to the west. Finch Avenue bisects the site; however, the proposed development would realign Finch Avenue.

A comprehensive TIA and EIR for the mixed-use development was prepared and certified in 2008. The 2008 studies examined two project schemes (i.e., Scheme 1 and Scheme 2). The 2008 project was approved by the City of Cupertino City Council in 2008; however, construction of the project did not begin.

Since the previous studies, the project applicant has revised the project site plan to accommodate additional office space. The revised project description maintains the same mix of land uses and two project schemes; however, the amount of retail and athletic club space has been reduced and the amount

of office space and housing has been increased. Market-rate housing has also been added to Scheme 1c and 2. **Table 1** presents the currently proposed land uses and compares the two new schemes to the 2008 project description in the EIR.

**TABLE 1: SUMMARY OF DEVELOPMENT SCHEMES**

Land Use		Units <sup>1</sup>	2008 Project Description		2012 Project Description				
			Scheme 1	Scheme 2	Scheme 1a	Scheme 1b	Scheme 1c	Scheme 2a	Scheme 2b
General Commercial	Retail	sf	150,000	146,500	69,700	78,700	138,700 <sup>3</sup>	83,200	92,200
	Athletic Club <sup>2</sup>	sf	145,000	0	60,000	60,000		0	0
Office		sf	100,000	205,000	292,000	292,000	292,000	292,000	292,000
Senior Housing		du	160	160	143	143	120 <sup>4</sup>	143	143
Market-Rate Housing		du	0	0	0	0		120	120
Hotel		rooms	150	250	180	180	180	180	180

Notes:

1. sf = square feet, du = dwelling units
2. 2008 TIA/EIR analyzed special trip generation characteristics associated with a Lifetime Fitness Center. The 2011 project description assumes a general health and fitness club.
3. Scheme 1c would retain the flexibility to construct up to 60,000 sf of athletic club space in lieu of general retail space.
4. Scheme 1c would retain the flexibility to construct up to 143 senior housing units in lieu of 120 market-rate housing units.

Source: Fehr & Peers, 2012

## TRIP GENERATION

Trip generation forecasts for the Proposed Project with the revised land use plan were developed using the Institute of Transportation Engineers (ITE) *Trip Generation, 8<sup>th</sup> Edition*<sup>1</sup>. Where appropriate, trip reductions for the mix of uses on the site and nearby bus service were applied according to the Santa Clara Valley Transportation Authority *Transportation Impact Analysis Guidelines* (VTA Guidelines). **Table 2** provides a summary of the total net new trips associated with the land use schemes evaluated in the original TIA and proposed modifications. Detailed trip generation estimates are presented in the memorandum “Main Street – Cupertino Revised Trip Generation Estimates” dated October 13, 2011, which is attached. While 2012 Scheme 1c allows for a 60,000-sf athletic club or 60,000 sf of additional retail and 143 senior units or 120 market-rate units, to be conservative, the trip generation for this scheme assumed the highest trip generating uses which are a 60,000-sf athletic club and 120 market-rate units. Trip generation for 2012 Scheme 1c is included in the attachments to this memo.

<sup>1</sup> The amount of traffic generated by the two proposed schemes for the 2008 TIA and EIR were estimated using rates published in *Trip Generation, 7<sup>th</sup> Edition* (Institute of Transportation Engineers, 2002). The original trip generation estimates for the health club/athletic portion of the site were based on trip generation data specifically for Lifetime Fitness Centers. The revised project description includes a health club/athletic club and not necessarily a Lifetime Fitness Center; therefore, ITE trip generation rates were used for this portion of the project. ITE rates are for a typical health club facility with private ownership, indoor recreational activities and a membership which allows access to the general public.

**TABLE 2: PROJECT TRIP GENERATION COMPARISON**

	2008 Project Description		2012 Project Description				
	Scheme 1	Scheme 2	Scheme 1a	Scheme 1b	Scheme 1c <sup>1</sup>	Scheme 2a	Scheme 2b
<b>Daily Vehicle Trips</b>	13,751	10,692	10,345	10,676	10,938	9,490	9,821
<b>AM Peak Hour Vehicle Trips</b>	622	583	690	697	730	665	672
<i>Inbound</i>	423	450	524	528	527	497	501
<i>Outbound</i>	199	133	166	169	203	168	171
<b>PM Peak Hour Vehicle Trips</b>	1,264	1,036	1,086	1,117	1,162	982	1,012
<i>Inbound</i>	591	408	427	443	476	374	389
<i>Outbound</i>	673	628	569	674	686	608	623

Notes:

1. Based on the trip generation characteristics of the proposed land uses, Scheme 1c was analyzed assuming that a 60,000-square foot athletic club and 120 market-rate residential units are constructed. These land uses result in a higher, therefore more conservative trip generation forecast.

Source: Fehr & Peers, 2012

The 2012 schemes would generate between 9,490 (Scheme 2a) and 10,938 (Scheme 1c) new daily trips. Between 665 and 730 of these new trips would occur during the AM peak travel hour and between 982 and 1,162 of these new trips would occur during the PM peak travel hour. The 2012 Proposed Project would generate fewer daily and PM peak hour trips compared to 2008 Scheme 1. The 2012 schemes, in general, would all generate more peak hour trips than 2008 Scheme 2.

### ***Project Trip Distribution and Assignment***

Traffic generated by the current Proposed Project was added to the surrounding roadway network using the same trip distribution and assignment assumptions used in the 2008 studies.

## **INTERSECTION IMPACT ANALYSIS**

Traffic impacts associated with the revised project description schemes and the variants were evaluated to determine whether or not the revised land uses would result in new or more severe traffic impacts than those disclosed in the Proposed Project's 2008 TIA and EIR. Traffic impacts are evaluated using intersection levels of service (LOS)<sup>2</sup> and a freeway segment analysis. This section discusses the LOS operations of the 27 study intersections evaluated in the 2008 studies and identifies both background and cumulative impacts associated with the Proposed Project.

Background Conditions comprise existing traffic volumes plus traffic generated from surrounding development projects that have been approved but are not yet constructed or occupied from the 2008 TIA and EIR traffic analysis. In the 2008 TIA and EIR Background Conditions serve as the basis for identifying project impacts.

<sup>2</sup> The operations of roadway facilities are described with the term level of service. Level of Service (LOS) is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, representing congestion-free conditions, to LOS F, when volumes exceed capacity and stop-and-go conditions occur. LOS E represents "at-capacity" operations.

Cumulative Conditions were taken from the 2008 studies and represent intersection operations with the addition of traffic from both approved and unoccupied projects and from pending projects in the study area. Cumulative Conditions serve as the basis for identifying cumulative project impacts.

### ***Background and Project Conditions Results***

Vehicle trips generated by the revised land use assumptions for both Schemes 1 and 2 were added to Background Conditions traffic volumes presented in the 2008 TIA and EIR to represent Project Conditions. The Proposed Project's trip distribution to the surrounding roadway network was consistent with the 2008 TIA; however, trip assignment to the project's driveways was adjusted slightly to account for the revised site plan.

**Tables 3a** and **4** present the intersection LOS calculation results under Background Conditions and Project Conditions for Schemes 1 and 2, respectively. Under Background Conditions, the intersection of Lawrence Expressway and Homestead Road degrades to LOS F during both peak hours. The remaining study intersections operate acceptably.

The Proposed Project under both schemes would exacerbate unacceptable operations at the intersection of Homestead Road/Lawrence Expressway (both AM and PM peak hours). The Proposed Project under both schemes would degrade operations from acceptable to unacceptable LOS at the intersections of Wolfe Road/Vallco Parkway (PM peak hour) and Lawrence Expressway/I-280 Southbound Ramps (both AM and PM peak hours). Scheme 2 would result in unacceptable LOS E conditions at Lawrence Expressway/Bollinger Road during the PM peak hour. All of the intersections would operate at the same or similar levels of service as the Proposed Project with the retail variant.

### ***Cumulative Conditions Results***

Vehicle trips generated by the 2012 land use assumptions for both Schemes 1 and 2 were added to Cumulative Conditions traffic volumes presented in the 2008 TIA and EIR to represent Cumulative Plus Project Conditions. **Tables 3b** and **4** present the intersection LOS calculation results under Cumulative Plus Project Conditions for Schemes 1 and 2, respectively. Under Cumulative Conditions, the intersection of Lawrence Expressway and Homestead Road degrades to LOS F during both peak hours. The remaining study intersections operate acceptably.

The Proposed Project under both schemes would exacerbate unacceptable operations at the intersection of Homestead Road/Lawrence Expressway (AM and PM peak hours). The Proposed Project under both schemes would degrade operations from acceptable to unacceptable LOS at the intersections of Wolfe Road/Vallco Parkway (PM peak hour), Lawrence Expressway/I-280 Southbound Ramps (AM and PM peak hours), and at Lawrence Expressway/Bollinger Road (PM peak hour). All of the intersections would operate at the same or similar levels of service as the Proposed Project with the retail variant.

### ***Intersection Impact Criteria***

The impacts of the project were evaluated by comparing the results of the level of service calculations under Project Conditions to the results under Background Conditions. Cumulative impacts are identified using the same general criteria as project impacts; however, the significance of cumulative impacts where the project exacerbates already unacceptable operations would be based on the change in critical delay and volume-to-capacity between Cumulative No Project and Cumulative Plus Project conditions. Criteria to determine significant impacts from the 2008 studies are as follows:

#### City of Cupertino, City of San Jose, and City of Santa Clara Intersections

A significant project impact to a City of Cupertino, City of San Jose, City of Santa Clara, or County of Santa Clara signalized intersection occurs if the project results in one of the following:

- Operations at a signalized intersection deteriorate from LOS D or better under Background Conditions to LOS E or F under Project Conditions; or
- Exacerbation of unacceptable operations (LOS E or F) at a signalized intersection by increasing the average critical delay by four seconds or more and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.
- Operations at the De Anza Boulevard/Stevens Creek Boulevard or De Anza Boulevard/Bollinger Road intersection to be LOS E or worse with more than 55.0 seconds of average vehicle weighted delay; or
- Exacerbation of unacceptable operations (LOS E or F) at the De Anza Boulevard/Stevens Creek Boulevard or De Anza Boulevard/Bollinger Road intersection by increasing the average critical delay by four seconds or more and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.

A significant project impact occurs at an unsignalized intersection when the addition of project traffic causes:

- Intersection operations to deteriorate from an acceptable level under Background Conditions (LOS E or better) to an unacceptable level (LOS F or worse) and the MUTCD Peak Hour Warrant is met under Project Conditions; or
- The exacerbation of operations at an unsignalized intersection already operating at an unacceptable level (LOS F or worse) under Background Conditions and the MUTCD Peak Hour Warrant is met under Project Conditions.

#### Valley Transportation Authority (CMP) Intersection

A significant impact at a CMP intersection located within the City of Santa Clara occurs when the addition of project traffic causes one of the following<sup>3</sup>:

- Operations to degrade from an acceptable level (LOS E or better) under Background Conditions to an unacceptable level (LOS F) under Project Conditions.
- Unacceptable operations are exacerbated by increasing the critical delay by more than four seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.
- The V/C ratio increases by 0.01 or more at an intersection with unacceptable operations (LOS E or F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

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<sup>3</sup> The Cities of Cupertino and San Jose follow their respective impact criteria for CMP intersections.

**TABLE 3A: SCHEME 1 INTERSECTION LEVELS OF SERVICE (PROJECT CONDITIONS)**

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Scheme 1a				2012 Scheme 1b				2012 Scheme 1c			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
1. Wolfe Road / Homestead Road	AM PM	27.5 35.1	C D+	27.6 36.4	C D+	0.002 0.033	0.0 2.6	27.6 36.4	C D+	0.001 0.034	0.0 2.6	27.6 36.5	C D+	0.003 0.036	0.0 2.8
2. Homestead Road / Tantau Avenue	AM PM	22.9 26.4	C+ C	23.4 27.6	C C	0.011 0.018	0.8 1.3	23.4 27.7	C C	0.011 0.018	0.9 1.3	23.4 27.7	C C	0.012 0.019	0.9 1.4
3. Homestead Road / Lawrence Expy <sup>6</sup>	AM PM	<b>86.4</b> <b>111.1</b>	<b>F</b> <b>F</b>	<b>89.4</b> <b>118.2</b>	<b>F</b> <b>F</b>	<b>0.012</b> <b>0.016</b>	<b>5.8</b> <b>9.3</b>	<b>89.4</b> <b>118.4</b>	<b>F</b> <b>F</b>	<b>0.012</b> <b>0.016</b>	<b>5.8</b> <b>9.5</b>	<b>89.5</b> <b>118.6</b>	<b>F</b> <b>F</b>	<b>0.012</b> <b>0.017</b>	<b>5.8</b> <b>9.7</b>
4. Wolfe Road / Pruneridge Avenue	AM PM	20.6 38.8	C+ D+	20.4 39.2	C+ D	0.006 0.027	0.0 1.2	20.4 39.2	C+ D	0.006 0.027	0.0 1.3	20.4 39.3	C+ D	0.008 0.028	0.0 1.3
5. Pruneridge Avenue / Tantau Avenue	AM PM	22.3 21.9	C+ C+	22.5 22.4	C+ C+	0.013 0.058	0.1 0.5	22.5 22.4	C+ C+	0.013 0.059	0.1 0.5	22.6 22.4	C+ C+	0.016 0.060	0.1 0.6
6. Wolfe Road / I-280 Northbound Ramps <sup>6</sup>	AM PM	15.2 13.9	B B	15.4 14.2	B B	0.002 0.022	0.1 0.5	15.4 14.2	B B	0.003 0.023	0.1 0.5	15.4 14.2	B B	0.004 0.024	0.1 0.5
7. Wolfe Road / I-280 SB Ramps <sup>6</sup>	AM PM	14.0 9.4	B A	14.1 9.8	B A	0.013 0.062	0.1 0.8	14.1 9.9	B A	0.013 0.064	0.2 0.9	14.1 9.9	B A	0.016 0.066	0.2 0.9
8. Wolfe Road / Vallco Parkway	AM PM	17.7 53.1	B D-	21.2 <b>65.4</b>	C+ <b>E</b>	0.060 <b>0.076</b>	5.2 <b>16.6</b>	21.2 <b>65.8</b>	C+ <b>E</b>	0.060 <b>0.078</b>	5.2 <b>17.1</b>	21.4 <b>66.2</b>	C+ <b>E</b>	0.062 <b>0.079</b>	5.4 <b>17.4</b>
9. Vallco Parkway / Finch Avenue	AM PM	11.6(SB) 15.2(NB)	B C	13.9(SB) 24.1(NB)	B C			13.9(SB) 24.6(NB)	B C			14.0(SB) 25.3(NB)	B C		
10. Vallco Parkway / Tantau Avenue	AM PM	18.1 20.2	B- C+	18.8 22.6	B- C+	0.003 0.204	-0.1 2.8	18.8 22.7	B- C+	0.003 0.206	-0.1 2.9	18.8 22.8	B- C+	0.006 0.209	0.0 3.0
11. Stevens Creek Blvd / De Anza Blvd <sup>6</sup>	AM PM	31.7 44.9	C D	32.2 46.1	C- D	0.014 0.011	0.7 1.7	32.2 46.2	C- D	0.014 0.011	0.7 1.8	32.2 46.2	C- D	0.015 0.012	0.8 1.8
12. Stevens Creek Blvd / Blaney Avenue	AM PM	29.0 29.9	C C	29.1 30.2	C C	0.011 0.027	0.5 0.9	29.1 30.2	C C	0.011 0.028	0.4 0.9	29.1 30.3	C C	0.012 0.030	0.4 1.0

**TABLE 3A: SCHEME 1 INTERSECTION LEVELS OF SERVICE (PROJECT CONDITIONS)**

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Scheme 1a				2012 Scheme 1b				2012 Scheme 1c			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>
13. Stevens Creek Blvd / Portal Avenue	AM	14.3	B	14.0	B	0.007	-0.1	14.0	B	0.007	0.0	14.0	B	0.008	-0.1
	PM	13.2	B	12.9	B	0.016	-0.2	13.0	B	0.018	-0.1	12.9	B	0.019	-0.1
14. Stevens Creek Blvd / Perimeter Road	AM	10.0	A	9.8	A	0.002	0.0	9.8	A	0.002	0.0	9.8	A	0.003	0.0
	PM	17.4	B	17.0	B	0.016	-0.3	17.0	B	0.016	-0.2	16.9	B	0.018	-0.3
15. Stevens Creek Blvd / Wolfe Rd-Miller <sup>6</sup>	AM	38.7	D+	38.5	D+	0.019	0.5	38.8	D+	0.019	0.5	38.8	D+	0.021	0.5
	PM	40.1	D	41.7	D	0.051	2.4	41.8	D	0.053	2.5	41.9	D	0.055	2.7
16. Stevens Creek Blvd / Finch Avenue	AM	37.6	D+	39.0	D+	0.028	0.8	39.0	D+	0.028	0.7	39.5	D+	0.031	1.3
	PM	27.0	C	39.2	D	0.073	8.2	39.5	D	0.075	8.4	39.9	D	0.076	8.6
17. Stevens Creek Blvd / Tantau Avenue	AM	23.0	C+	23.9	C	0.099	2.0	23.9	C	0.099	2.1	23.9	C	0.100	2.1
	PM	25.0	C	28.6	C	0.084	4.9	28.7	C	0.085	4.9	28.8	C	0.087	5.1
18. Stevens Creek Blvd / I-280 Ramps <sup>6</sup>	AM	28.5	C	27.2	C	0.014	-3.9	27.2	C	0.014	-3.9	27.2	C	0.014	-3.9
	PM	55.2	E+	79.2	E-	0.109	50.0	79.6	E-	0.111	50.9	79.8	E-	0.112	51.6
19. Stevens Creek Blvd / Lawrence Expy(W) <sup>6</sup>	AM	23.1	C	24.0	C	0.050	1.3	24.0	C	0.050	1.3	24.0	C	0.050	1.3
	PM	32.4	C-	33.0	C-	0.034	1.4	33.1	C-	0.035	1.5	33.1	C-	0.038	1.6
20. Stevens Creek Blvd / Lawrence Expy(E) <sup>6</sup>	AM	37.9	D+	38.9	D+	0.030	1.0	38.9	D+	0.030	1.1	38.9	D+	0.031	1.1
	PM	33.7	C-	34.5	C-	0.030	0.7	34.6	C-	0.031	0.7	34.6	C-	0.034	0.8
21. Lawrence Expy / I-280 SB Ramps <sup>6</sup>	AM	53.7	D-	<b>60.8</b>	<b>E</b>	<b>0.030</b>	<b>8.3</b>	<b>61.0</b>	<b>E</b>	<b>0.030</b>	<b>8.4</b>	<b>61.5</b>	<b>E</b>	<b>0.032</b>	<b>9.0</b>
	PM	54.2	D-	<b>70.4</b>	<b>E</b>	<b>0.070</b>	<b>21.7</b>	<b>70.7</b>	<b>E</b>	<b>0.072</b>	<b>22.2</b>	<b>71.2</b>	<b>E</b>	<b>0.073</b>	<b>22.8</b>
22. Bollinger Road / De Anza Boulevard <sup>6</sup>	AM	20.0	C+	19.9	B-	-0.002	-0.1	19.9	B-	-0.001	-0.1	19.9	B-	-0.002	-0.1
	PM	24.0	C	24.1	C	0.006	0.2	24.1	C	0.007	0.3	24.1	C	0.007	0.2
23. Bollinger Road / Blaney Avenue	AM	20.0	B-	21.1	C+	0.038	1.8	21.1	C+	0.037	1.8	21.2	C+	0.038	1.8
	PM	21.2	C+	21.5	C+	0.016	1.0	21.6	C+	0.017	1.1	21.6	C+	0.018	1.1
24. Bollinger Road / Miller Avenue	AM	33.6	C-	33.9	C-	0.016	0.6	33.9	C-	0.015	0.6	34.0	C-	0.016	0.6
	PM	38.4	D+	39.1	D	0.019	0.7	39.1	D	0.020	0.7	39.2	D	0.020	0.7
25. Bollinger Road / Tantau Avenue	AM	12.6	B	12.7	B	0.001	0.1	12.7	B	0.001	0.1	12.7	B	0.001	0.1
	PM	16.4	B	17.1	B	0.003	0.6	17.1	B	0.002	0.7	17.1	B	0.003	0.7

**TABLE 3A: SCHEME 1 INTERSECTION LEVELS OF SERVICE (PROJECT CONDITIONS)**

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Scheme 1a				2012 Scheme 1b				2012 Scheme 1c			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>
26. Bollinger Road / Lawrence Expy <sup>6</sup>	AM	51.5	D-	53.7	D-	0.014	6.0	53.7	D-	0.015	6.1	53.7	D-	0.015	6.0
	PM	54.7	D-	54.8	D-	0.008	0.3	54.8	D-	0.008	0.3	54.8	D-	0.008	0.3
27. Vallco Parkway / Perimeter Road	AM	19.9	B-	16.2	B	0.027	-2.5	16.2	B	0.028	-2.5	16.2	B	0.027	-2.5
	PM	20.4	C+	20.1	C+	0.017	-0.4	20.0	C+	0.017	-0.4	20.0	C+	0.018	-0.4

Notes:

- 1 AM = morning peak-hour, PM = evening peak-hour.
- 2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX 7.9 level of service analysis software package.
- 3 LOS = Level of service
- 4 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.
- 5 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.
- 6 Designated CMP intersection.

Unacceptable operations are shown in **bold** typeface

Source: Fehr & Peers, 2012

**TABLE 3B: SCHEME 1 INTERSECTION LEVELS OF SERVICE (CUMULATIVE CONDITIONS)**

Intersection	Peak Hour <sup>1</sup>	2008 Background		Cumulative + 2012 Scheme 1a				Cumulative + 2012 Scheme 1b				Cumulative + 2012 Scheme 1c			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
1. Wolfe Road / Homestead Road	AM	27.5	C	27.8	C	0.017	0.4	27.8	C	0.018	0.4	27.8	C	0.019	0.3
	PM	35.1	D+	37.1	D+	0.040	3.0	37.2	D+	0.041	3.1	37.3	D+	0.042	3.3
2. Homestead Road / Tantau Avenue	AM	22.9	C+	23.5	C	0.021	1.0	23.5	C	0.021	1.0	23.5	C	0.022	1.1
	PM	26.4	C	28.2	C	0.035	2.1	28.2	C	0.036	2.1	28.3	C	0.037	2.2
3. Homestead Road / Lawrence Expy <sup>6</sup>	AM	<b>86.4</b>	<b>F</b>	<b>92.8</b>	<b>F</b>	<b>0.057</b>	<b>2.8</b>	<b>92.8</b>	<b>F</b>	<b>0.057</b>	<b>2.8</b>	<b>92.8</b>	<b>F</b>	<b>0.056</b>	<b>2.8</b>
	PM	<b>111.1</b>	<b>F</b>	<b>122.3</b>	<b>F</b>	<b>0.078</b>	<b>10.0</b>	<b>122.5</b>	<b>F</b>	<b>0.079</b>	<b>10.2</b>	<b>122.7</b>	<b>F</b>	<b>0.079</b>	<b>10.4</b>
4. Wolfe Road / Pruneridge Avenue	AM	20.6	C+	20.9	C+	0.016	0.8	20.9	C+	0.016	0.8	20.9	C+	0.018	0.8
	PM	38.8	D+	40.3	D	0.039	2.6	40.3	D	0.039	2.6	40.3	D	0.040	2.6
5. Pruneridge Avenue / Tantau Avenue	AM	22.3	C+	22.6	C+	0.022	0.2	22.6	C+	0.022	0.2	22.7	C+	0.025	0.2
	PM	21.9	C+	22.9	C+	0.079	1.3	22.9	C+	0.081	1.3	22.9	C+	0.081	1.4
6. Wolfe Road / I-280 Northbound Ramps <sup>6</sup>	AM	15.2	B	15.4	B	0.006	0.2	15.4	B	0.006	0.2	15.4	B	0.008	0.2
	PM	13.9	B	14.3	B	0.035	0.8	14.4	B	0.036	0.8	14.4	B	0.037	0.8
7. Wolfe Road / I-280 SB Ramps <sup>6</sup>	AM	14.0	B	14.1	B	0.015	0.2	14.1	B	0.015	0.2	14.1	B	0.018	0.2
	PM	9.4	A	9.9	A	0.068	0.9	9.9	A	0.070	0.9	9.9	A	0.072	0.9
8. Wolfe Road / Vallco Parkway	AM	17.7	B	21.1	C+	0.061	5.1	21.1	C+	0.061	5.2	21.3	C+	0.064	5.4
	PM	53.1	D-	<b>67.2</b>	<b>E</b>	<b>0.091</b>	<b>20.2</b>	<b>67.5</b>	<b>E</b>	<b>0.092</b>	<b>20.6</b>	<b>67.9</b>	<b>E</b>	<b>0.093</b>	<b>20.9</b>
9. Vallco Parkway / Finch Avenue	AM	11.6(SB)	B	13.9(SB)	B			13.9(SB)	B			14.0(SB)	B		
	PM	15.2(NB)	C	24.1(NB)	C			24.6(NB)	C			25.3(NB)	C		
10. Vallco Parkway / Tantau Avenue	AM	18.1	B-	18.8	B-	0.003	-0.1	18.8	B-	0.003	-0.1	18.8	B-	0.006	0.0
	PM	20.2	C+	22.6	C+	0.206	2.9	22.7	C+	0.208	3.0	22.8	C+	0.212	3.1
11. Stevens Creek Blvd / De Anza Blvd <sup>6</sup>	AM	31.7	C	32.6	C-	0.028	1.2	32.7	C-	0.028	1.2	32.7	C-	0.029	1.3
	PM	44.9	D	50.5	D	0.051	7.9	50.6	D	0.052	8.0	50.6	D	0.053	8.1
12. Stevens Creek Blvd / Blaney Avenue	AM	29.0	C	29.0	C	0.027	0.4	29.0	C	0.027	0.4	29.0	C	0.028	0.3
	PM	29.9	C	30.3	C	0.060	1.4	30.4	C	0.061	1.5	30.4	C	0.062	1.6

**TABLE 3B: SCHEME 1 INTERSECTION LEVELS OF SERVICE (CUMULATIVE CONDITIONS)**

Intersection	Peak Hour <sup>1</sup>	2008 Background		Cumulative + 2012 Scheme 1a				Cumulative + 2012 Scheme 1b				Cumulative + 2012 Scheme 1c			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
13. Stevens Creek Blvd / Portal Avenue	AM	14.3	B	13.6	B	0.019	-0.3	13.6	B	0.019	-0.3	13.6	B	0.020	-0.4
	PM	13.2	B	12.5	B	0.041	-0.5	12.6	B	0.042	-0.4	12.5	B	0.043	-0.4
14. Stevens Creek Blvd / Perimeter Road	AM	10.0	A	9.7	A	0.014	0.0	9.7	A	0.014	0.0	9.7	A	0.015	0.0
	PM	17.4	B	16.5	B	0.040	-0.6	16.5	B	0.040	-0.6	16.5	B	0.042	-0.6
15. Stevens Creek Blvd / Wolfe Rd-Miller <sup>6</sup>	AM	38.7	D+	38.9	D+	0.035	0.7	38.9	D+	0.035	0.7	38.9	D+	0.037	0.8
	PM	40.1	D	42.9	D	0.080	4.1	43.0	D	0.082	4.2	43.1	D	0.084	4.4
16. Stevens Creek Blvd / Finch Avenue	AM	37.6	D+	38.3	D+	0.042	0.1	38.3	D+	0.042	0.1	38.8	D+	0.046	0.7
	PM	27.0	C	38.2	D+	0.098	7.4	38.5	D+	0.100	7.6	39.0	D+	0.098	14.4
17. Stevens Creek Blvd / Tantau Avenue	AM	23.0	C+	24.0	C	0.116	2.3	24.0	C	0.116	2.3	24.1	C	0.116	2.2
	PM	25.0	C	29.9	C	0.113	6.9	30.0	C	0.114	7.0	30.1	C	0.116	7.2
18. Stevens Creek Blvd / I-280 Ramps <sup>6</sup>	AM	28.5	C	27.4	C	0.028	-3.6	27.4	C	0.028	-3.6	27.5	C	0.028	-3.6
	PM	55.2	E+	<b>84.0</b>	<b>F</b>	<b>0.135</b>	<b>62.8</b>	<b>84.4</b>	<b>F</b>	<b>0.137</b>	<b>63.7</b>	<b>84.6</b>	<b>F</b>	<b>0.139</b>	<b>64.4</b>
19. Stevens Creek Blvd / Lawrence Expy(W) <sup>6</sup>	AM	23.1	C	24.5	C	0.068	2.0	24.5	C	0.069	2.0	24.5	C	0.069	2.0
	PM	32.4	C-	34.1	C-	0.069	3.3	34.1	C-	0.070	3.3	34.2	C-	0.073	3.5
20. Stevens Creek Blvd / Lawrence Expy(E) <sup>6</sup>	AM	37.9	D+	39.4	D	0.046	-0.1	39.4	D	0.046	1.9	39.4	D	0.047	2.0
	PM	33.7	C-	35.4	D+	0.070	2.4	35.5	D+	0.071	2.5	35.5	D+	0.073	2.6
21. Lawrence Expy / I-280 SB Ramps <sup>6</sup>	AM	53.7	D-	<b>59.9</b>	<b>E+</b>	<b>0.039</b>	<b>8.1</b>	<b>60.1</b>	<b>E</b>	<b>0.039</b>	<b>8.3</b>	<b>60.7</b>	<b>E</b>	<b>0.042</b>	<b>9.1</b>
	PM	54.2	D-	<b>125.5</b>	<b>F</b>	<b>0.285</b>	<b>103.7</b>	<b>126.0</b>	<b>F</b>	<b>0.286</b>	<b>104.3</b>	<b>126.6</b>	<b>F</b>	<b>0.287</b>	<b>105.1</b>
22. Bollinger Road / De Anza Boulevard <sup>6</sup>	AM	20.0	C+	19.8	B-	0.010	0.3	19.8	B-	0.010	0.3	19.8	B-	0.010	0.3
	PM	24.0	C	23.9	C	0.037	1.3	23.9	C	0.037	1.3	23.9	C	0.038	1.3
23. Bollinger Road / Blaney Avenue	AM	20.0	B-	21.2	C+	0.042	1.8	21.2	C+	0.042	1.8	21.2	C+	0.042	1.9
	PM	21.2	C+	22.0	C+	0.026	1.3	22.0	C+	0.027	1.4	22.0	C+	0.028	1.4
24. Bollinger Road / Miller Avenue	AM	33.6	C-	34.0	C-	0.020	0.6	34.0	C-	0.020	0.6	34.0	C-	0.020	0.6
	PM	38.4	D+	39.3	D	0.028	1.0	39.4	D	0.029	1.0	39.4	D	0.029	1.0

**TABLE 3B: SCHEME 1 INTERSECTION LEVELS OF SERVICE (CUMULATIVE CONDITIONS)**

Intersection	Peak Hour <sup>1</sup>	2008 Background		Cumulative + 2012 Scheme 1a				Cumulative + 2012 Scheme 1b				Cumulative + 2012 Scheme 1c			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
25. Bollinger Road / Tantau Avenue	AM	12.6	B	12.7	B	0.002	0.1	12.7	B	0.002	0.1	12.7	B	0.002	0.1
	PM	16.4	B	17.0	B	0.005	0.6	17.1	B	0.005	0.7	17.1	B	0.006	0.7
26. Bollinger Road / Lawrence Expy <sup>6</sup>	AM	51.5	D-	54.0	D-	0.036	2.5	54.0	D-	0.036	2.5	54.0	D-	0.036	2.5
	PM	54.7	D-	<b>55.9</b>	<b>E+</b>	<b>0.066</b>	<b>2.1</b>	<b>55.9</b>	<b>E+</b>	<b>0.066</b>	<b>2.1</b>	<b>55.9</b>	<b>E+</b>	<b>0.066</b>	<b>2.1</b>
27. Vallco Parkway / Perimeter Road	AM	19.9	B-	16.7	B	-0.066	-2.0	16.7	B	0.035	-2.0	16.7	B	0.034	-2.0
	PM	20.4	C+	20.1	C+	-0.188	-2.1	20.0	C+	0.017	-0.4	20.0	C+	0.018	-0.4

Notes:

- 1 AM = morning peak-hour, PM = evening peak-hour.
- 2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX 7.9 level of service analysis software package.
- 3 LOS = Level of service
- 4 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.
- 5 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.
- 6 Designated CMP intersection.

Unacceptable operations are shown in **bold** typeface

Source: Fehr & Peers, 2012

**TABLE 4: SCHEME 2 INTERSECTION LEVELS OF SERVICE**

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Scheme 2a				2012 Scheme 2b				Cumulative + 2012 Scheme 2a				Cumulative + 2012 Scheme 2b			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
1. Wolfe Road / Homestead Road	AM PM	27.5 35.1	C D+	27.6 36.1	C D+	0.000 0.025	0.0 1.9	27.6 36.1	C D+	0.000 0.027	0.0 2.0	27.7 36.8	C D+	0.015 0.032	0.3 2.3	27.7 36.8	C D+	0.015 0.034	0.3 2.4
2. Homestead Road / Tantau Avenue	AM PM	22.9 26.4	C+ C	23.2 27.4	C C	0.007 0.014	0.6 1.0	23.2 27.4	C C	0.007 0.014	0.6 1.0	23.3 27.9	C C	0.017 0.032	0.8 1.8	23.3 27.9	C C	0.017 0.032	0.8 1.8
3. Homestead Road / Lawrence Expy <sup>6</sup>	AM PM	<b>86.4</b> <b>111.1</b>	<b>F</b> <b>F</b>	<b>89.0</b> <b>117.3</b>	<b>F</b> <b>F</b>	<b>0.010</b> <b>0.014</b>	<b>4.6</b> <b>8.3</b>	<b>89.0</b> <b>117.4</b>	<b>F</b> <b>F</b>	<b>0.010</b> <b>0.015</b>	<b>4.6</b> <b>8.5</b>	<b>92.2</b> <b>121.5</b>	<b>F</b> <b>F</b>	<b>0.055</b> <b>0.076</b>	<b>1.6</b> <b>9.0</b>	<b>92.2</b> <b>121.6</b>	<b>F</b> <b>F</b>	<b>0.055</b> <b>0.077</b>	<b>1.6</b> <b>9.2</b>
4. Wolfe Road / Pruneridge Avenue	AM PM	20.6 38.8	C+ D+	20.5 39.1	C+ D	0.005 0.016	0.0 0.8	20.5 39.1	C+ D	0.005 0.017	0.0 0.8	21.0 40.1	C+ D	0.015 0.035	0.8 2.4	20.9 40.2	C+ D	0.015 0.036	0.8 2.4
5. Pruneridge Avenue / Tantau Avenue	AM PM	22.3 21.9	C+ C+	22.5 22.3	C+ C+	0.010 0.051	0.0 0.4	22.5 22.3	C+ C+	0.011 0.053	0.0 0.4	22.6 22.8	C+ C+	0.019 0.073	0.1 2.2	22.6 22.8	C+ C+	0.020 0.074	0.2 1.3
6. Wolfe Road / I-280 Northbound Ramps <sup>6</sup>	AM PM	15.2 13.9	B B	15.4 14.2	B B	0.003 0.018	0.1 0.4	15.4 14.2	B B	0.003 0.019	0.1 0.4	15.4 14.3	B B	0.005 0.029	0.1 0.7	15.4 14.3	B B	0.005 0.030	0.1 0.7
7. Wolfe Road / I-280 SB Ramps <sup>6</sup>	AM PM	14.0 9.4	B A	14.1 9.9	B A	0.013 0.058	0.2 0.9	14.1 9.9	B A	0.014 0.059	0.2 0.9	14.1 9.8	B A	0.013 0.058	0.2 0.7	14.1 9.8	B A	0.014 0.060	0.2 0.7
8. Wolfe Road / Vallco Parkway	AM PM	17.7 53.1	B D-	20.8 <b>63.2</b>	C+ <b>E</b>	0.052 <b>0.066</b>	4.6 <b>13.8</b>	20.8 <b>63.5</b>	C+ <b>E</b>	0.052 <b>0.068</b>	4.6 <b>14.2</b>	20.7 <b>64.9</b>	C+ <b>E</b>	0.053 <b>0.081</b>	4.6 <b>16.4</b>	20.7 <b>65.2</b>	C+ <b>E</b>	0.054 <b>0.082</b>	4.6 <b>17.7</b>
9. Vallco Parkway / Finch Avenue	AM PM	11.6(SB) 15.2(NB)	B C	13.5(SB) 21.2(NB)	B C			13.5(SB) 21.6(NB)	B C			13.5(SB) 21.2(NB)	B C			13.5(SB) 21.6(NB)	B C		
10. Vallco Parkway / Tantau Avenue	AM PM	18.1 20.2	B- C+	18.7 22.2	B- C+	0.001 0.191	-0.1 2.3	18.7 22.3	B- C+	0.002 0.193	-0.1 2.4	18.7 22.3	B- C+	0.001 0.193	-0.1 2.4	18.7 22.3	B- C+	0.002 0.196	-0.1 2.5
11. Stevens Creek Blvd / De Anza Blvd <sup>6</sup>	AM PM	31.7 44.9	C D	32.1 45.9	C- D	0.011 0.008	0.6 1.3	32.1 45.9	C- D	0.011 0.009	0.6 1.4	32.6 50.2	C- D	0.025 0.049	1.1 7.4	32.6 50.3	C- D	0.026 0.049	1.1 7.5
12. Stevens Creek Blvd / Blaney Avenue	AM PM	29.0 29.9	C C	29.1 30.1	C C	0.008 0.021	0.3 0.7	29.1 30.2	C C	0.008 0.022	0.3 0.7	29.0 30.2	C C	0.024 0.053	0.3 1.2	29.0 30.2	C C	0.024 0.054	0.3 1.2

**TABLE 4: SCHEME 2 INTERSECTION LEVELS OF SERVICE**

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Scheme 2a				2012 Scheme 2b				Cumulative + 2012 Scheme 2a				Cumulative + 2012 Scheme 2b			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
13. Stevens Creek Blvd / Portal Avenue	AM	14.3	B	14.0	B	0.005	-0.1	14.0	B	0.005	-0.1	13.6	B	0.017	-0.4	13.6	B	0.017	-0.4
	PM	13.2	B	13.0	B	0.012	-0.1	13.0	B	0.013	-0.1	12.6	B	0.037	-0.4	12.6	B	0.037	-0.4
14. Stevens Creek Blvd / Perimeter Road	AM	10.0	A	9.8	A	0.000	0.0	9.8	A	0.000	0.0	9.7	A	0.012	0.0	9.7	A	0.013	0.0
	PM	17.4	B	17.1	B	0.011	-0.2	17.0	B	0.012	-0.2	16.6	B	0.036	-0.5	16.6	B	0.036	-0.5
15. Stevens Creek Blvd / Wolfe Rd-Miller <sup>6</sup>	AM	38.7	D+	38.7	D+	0.012	0.3	38.7	D+	0.013	0.3	38.8	D+	0.028	0.5	38.8	D+	0.029	0.6
	PM	40.1	D	41.3	D	0.040	1.8	41.4	D	0.042	1.8	42.5	D	0.069	3.3	42.5	D	0.071	3.4
16. Stevens Creek Blvd / Finch Avenue	AM	37.6	D+	37.7	D+	0.023	-0.3	37.8	D+	0.023	-0.2	37.1	D+	0.037	-0.7	37.1	D+	0.037	-0.7
	PM	27.0	C	29.8	C	0.031	2.2	30.2	C	0.033	2.4	36.1	D+	0.087	6.2	36.5	D+	0.089	6.4
17. Stevens Creek Blvd / Tantau Avenue	AM	23.0	C+	23.9	C	0.094	2.0	23.9	C	0.094	2.0	24.0	C	0.110	2.2	24.0	C	0.110	2.2
	PM	25.0	C	28.2	C	0.073	4.2	28.3	C	0.075	4.3	29.4	C	0.103	6.0	29.5	C	0.105	6.2
18. Stevens Creek Blvd / I-280 Ramps	AM	28.5	C	27.6	C	-0.011	-0.1	27.6	C	-0.011	-0.1	27.4	C	0.023	-3.7	27.4	C	0.023	-3.7
	PM	55.2	E+	76.5	E-	0.096	44.0	76.9	E-	0.098	44.9	<b>81.3</b>	<b>F</b>	<b>0.123</b>	<b>56.7</b>	<b>81.8</b>	<b>F</b>	<b>0.125</b>	<b>57.7</b>
19. Stevens Creek Blvd / Lawrence Expy(W) <sup>6</sup>	AM	23.1	C	24.0	C	0.045	1.2	24.0	C	0.044	1.2	24.4	C	0.063	1.8	24.4	C	0.063	1.8
	PM	32.4	C-	32.9	C-	0.026	1.0	32.9	C-	0.027	1.1	33.8	C-	0.060	2.8	33.9	C-	0.062	2.9
20. Stevens Creek Blvd / Lawrence Expy(E) <sup>6</sup>	AM	37.9	D+	38.7	D+	0.025	0.8	38.7	D+	0.025	0.8	39.2	D	0.041	1.7	39.2	D	0.041	1.7
	PM	33.7	C-	34.3	C-	0.023	0.5	34.3	C-	0.024	0.5	35.2	D+	0.062	2.2	35.2	D+	0.063	2.2
21. Lawrence Expy / I-280 SB Ramps <sup>6</sup>	AM	53.7	D-	<b>60.2</b>	<b>E</b>	<b>0.027</b>	<b>7.5</b>	<b>60.2</b>	<b>E</b>	<b>0.027</b>	<b>7.5</b>	<b>59.2</b>	<b>E+</b>	<b>0.036</b>	<b>7.3</b>	<b>59.2</b>	<b>E+</b>	<b>0.036</b>	<b>7.3</b>
	PM	54.2	D-	<b>68.5</b>	<b>E</b>	<b>0.063</b>	<b>19.1</b>	<b>68.8</b>	<b>E</b>	<b>0.064</b>	<b>19.6</b>	<b>122.8</b>	<b>F</b>	<b>0.277</b>	<b>100.1</b>	<b>123.2</b>	<b>F</b>	<b>0.278</b>	<b>100.7</b>
22. Bollinger Road / De Anza Boulevard <sup>6</sup>	AM	20.0	C+	19.9	B-	-0.002	-0.1	19.9	B-	-0.002	-0.1	19.8	B-	0.009	0.3	19.8	B-	0.010	0.3
	PM	24.0	C	24.1	C	0.005	0.2	24.1	C	0.005	0.2	23.8	C	0.036	1.2	23.8	C	0.036	1.2
23. Bollinger Road / Blaney Avenue	AM	20.0	B-	21.0	C+	0.031	1.5	21.0	C+	0.031	1.5	21.2	C+	0.042	1.8	21.2	C+	0.042	1.8
	PM	21.2	C+	21.5	C+	0.012	0.7	21.5	C+	0.012	0.7	21.9	C+	0.022	1.0	21.9	C+	0.022	1.0
24. Bollinger Road / Miller Avenue	AM	33.6	C-	33.9	C-	0.013	0.5	33.9	C-	0.013	0.5	33.9	C-	0.017	0.5	33.9	C-	0.018	0.5
	PM	38.4	D+	39.0	D+	0.016	0.5	39.0	D+	0.017	0.5	39.2	D	0.025	0.8	39.2	D	0.025	0.8
25. Bollinger Road / Tantau Avenue	AM	12.6	B	12.7	B	0.001	0.1	12.7	B	0.001	0.1	12.7	B	0.002	0.1	12.7	B	0.002	0.1
	PM	16.4	B	17.0	B	0.002	0.5	17.0	B	0.002	0.5	16.9	B	0.005	0.5	16.9	B	0.005	0.5

**TABLE 4: SCHEME 2 INTERSECTION LEVELS OF SERVICE**

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Scheme 2a				2012 Scheme 2b				Cumulative + 2012 Scheme 2a				Cumulative + 2012 Scheme 2b			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
26. Bollinger Road / Lawrence Expy <sup>6</sup>	AM	51.5	D-	53.7	D-	0.014	6.1	53.7	D-	0.014	6.1	54.0	D-	0.036	2.6	54.0	D-	0.036	2.6
	PM	54.7	D-	<b>55.2</b>	<b>E+</b>	<b>0.009</b>	<b>1.3</b>	<b>55.2</b>	<b>E+</b>	<b>0.009</b>	<b>1.3</b>	<b>55.9</b>	<b>E+</b>	<b>0.065</b>	<b>2.0</b>	<b>55.9</b>	<b>E+</b>	<b>0.065</b>	<b>2.0</b>
27. Vallco Parkway / Perimeter Road	AM	19.9	B-	16.9	B	0.030	-1.7	16.9	B	0.031	-1.8	16.9	B	-0.066	-1.7	16.9	B	0.031	-1.8
	PM	20.4	C+	20.2	C+	0.015	-0.3	20.1	C+	0.015	-0.3	20.1	C+	-0.188	-0.3	20.1	C+	0.014	-0.3

Notes:

- 1 AM = morning peak-hour, PM = evening peak-hour.
- 2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX 7.9 level of service analysis software package.
- 3 LOS = Level of service
- 4 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.
- 5 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.
- 6 Designated CMP intersection.

Unacceptable operations are shown in **bold** typeface

Source: Fehr & Peers, 2011

**Intersection Impacts**

**Table 5** summarizes the significant intersection impacts for Project and Cumulative Conditions under the two 2012 worst-case schemes/variants identified using the significance criteria discussed in the previous section compared to the 2008 analysis results. The impacted intersections are the identical. The two schemes will have a **less-than-significant** impact at the other study intersections.

TABLE 5: PROJECT INTERSECTION IMPACTS					
Intersection	Peak Hour	2008 Project Description		2011 Project Description	
		Scheme 1	Scheme 2	Scheme 1c	Scheme 2b
<b>Project Conditions</b>					
Lawrence / Homestead	AM	89.8 / F	89.1 / F	89.5 / F	89.0 / F
	PM	118.6 / F	117.5 / F	118.6 / F	117.4 / F
Wolfe / Vallco	AM	--	--	--	--
	PM	68.4 / E	65.6 / E	66.2 / E	63.5 / E
Lawrence / I-280 SB Ramp	AM	61.4 / E	60.5 / E	61.5 / E	60.2 / E
	PM	69.6 / E	69.6 / E	71.2 / E	68.8 / E
Lawrence / Bollinger	AM	--	--	--	--
	PM	55.3 / E+	--	--	55.2 / E+
<b>Cumulative Conditions</b>					
Lawrence / Homestead	AM	--	--	--	--
	PM	122.8 / F	121.9 / F	122.7 / F	121.6 / F
Wolfe / Vallco	AM	--	--	--	--
	PM	73.4 / E	71.3 / E	67.9 / E	65.2 / E
Stevens Creek/I-280	AM	--	--	--	--
	PM	83.3 / F	82.7 / F	84.6 / F	81.8 / F
Lawrence / I-280 SB Ramp	AM	60.2 / E	59.5 / E+	60.7 / E	59.2 / E+
	PM	124.2 / F	124.5 / F	126.6 / F	123.2 / F
Lawrence / Bollinger	AM	--	--	--	--
	PM	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>

Note:

1. Less-than-Significant Impact between Cumulative No Project and Plus Project Scenarios

Source: Fehr & Peers, 2008 and 2011

In general, the increase in critical delay and volume-to-capacity ratio associated with the Proposed Project is lower than the increases identified in the 2008 studies. In fact, even though the revised Proposed Project would generate more trips during the AM peak hour compared to what was analyzed in 2008, the impacted intersections would actually operate with less delay. The revised project description has more office space and less retail space. Since retail and office uses have different project trip distribution characteristics, the revised project trip assignment results more project vehicle trips being assigned to most intersections, but fewer trips being assigned to others including the impacted intersections.

### ***Intersection Mitigation Measures***

Improvements were identified in the 2008 TIA and EIR to mitigate intersection impacts to a less-than-significant level. These mitigation measures are presented below:

#### Project-Level Mitigation

*Lawrence Expressway / Homestead Road* – Both project schemes increase the AM and PM peak-hour delays by more than four seconds to this intersection operating at unacceptable LOS F under Background Conditions. The addition of a third westbound through lane would improve overall delay and reduce the impact to a less-than-significant level.<sup>4</sup> Intersection operations would return to LOS E in the AM peak hour under both schemes. During the PM peak hour overall delay would be reduced to less than Background Conditions in both schemes but the intersection would still operate at LOS F. This mitigation would require significant right-of-way acquisition and the relocation of existing utilities at the intersection. This intersection is controlled and maintained by the County of Santa Clara and any improvements need to be approved and implemented by the County. Therefore, the impact at this intersection is considered ***significant and unavoidable***.

*Vallco Parkway / Wolfe Road* – Both project schemes degrade the level of service at this intersection to LOS E during the PM peak hour. The following two mitigation measures were identified as potential improvements to return intersection operations to acceptable levels of service.

Mitigation Option #1 – Maintaining the existing intersection configuration, but installing a westbound right-turn overlap phase would mitigate the project-level impact under both schemes to a ***less-than-significant*** level. The intersection would operate at LOS D under either scheme.

Mitigation Option #2 – The addition of a second, westbound right-turn lane would improve project-level intersection operations to an acceptable level of service and mitigate the project-level impact to a ***less-than-significant*** level. The additional turn lane could be accommodated by re-striping the existing westbound through lane as a shared through/right-turn lane. The intersection would operate at LOS D under either scheme.

*Lawrence Expressway / I-280 Southbound Ramps-Calvert Drive* – Major improvements at this intersection were identified in the Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2008, including a Caltrans Project Study Report (PSR) for this interchange (Tier 1A project). The completion of a PSR, however, would not mitigate the project's impact at this location to a less-than-significant level, since no physical changes would occur at the intersection to either increase capacity or improve traffic operations. This intersection is controlled by the County and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered ***significant and unavoidable*** because the City of Cupertino has no authority to implement any improvements at this location.

*Bollinger Road-Moorpark Avenue/Lawrence Expressway* – The Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2003 identified the widening of Lawrence Expressway from six lanes to eight lanes between Moorpark/Bollinger and Calvert as a Tier 1A improvement. This improvement would mitigate the project's impact to a less-than-significant level of service. However, this intersection is controlled by the County of Santa Clara and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this

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<sup>4</sup> The addition of a third eastbound lane on Homestead Road was identified as a Tier 1C improvement in the Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2003. The report footnoted that the improvement would not improve projected 2025 LOS from F to LOS E or better.

impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

#### Cumulative Level Mitigation Measures

Improvements were identified at the impacted intersections to mitigate cumulative plus project impacts to less-than-significant levels. The following mitigation measures identified under Project Conditions mitigate the cumulative impact to **less-than-significant** levels:

*Lawrence Expressway/Homestead Road* – The addition of a third westbound or a third eastbound through lane would improve cumulative plus project intersection levels of service to acceptable LOS E; however, this improvement would require significant right-of-way acquisition. This intersection is controlled and maintained by the County of Santa Clara and any improvements need to be approved and implemented by the County. Therefore, the impact at this intersection is considered **significant and unavoidable**.

*Vallco Parkway / Wolfe Road* – The mitigation measures identified under Project Conditions (a westbound right overlap phase; a second westbound right-turn lane; or permitted phasing on the eastbound and westbound approaches) also mitigate the potential cumulative plus project impact to **less-than-significant**

*Stevens Creek Boulevard / I-280 Southbound Ramps-Calvert Drive* – Addition of an eastbound right-turn overlap phase mitigates the impact to a less-than-significant level. This intersection is not located within the City of Cupertino; therefore, the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

*Lawrence Expressway/I-280 Southbound Ramps-Calvert Drive* – An additional northbound and southbound through lane would improve overall delay; however, the intersection would still operate unacceptably. Therefore the impact is considered **significant and unavoidable**. This intersection is not controlled by the City of Cupertino and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

#### **FREEWAY SEGMENT LEVELS OF SERVICE**

Project-generated traffic volumes were added to the existing traffic volumes for each freeway mainline segment from the 2008 studies. These volumes were then used to estimate density for each segment under Project Conditions. The resulting freeway segment operations are presented in **Tables 6** and **7**. All traffic associated with the two schemes was assumed to use the mixed-flow lanes on the freeway (a conservative assumption); therefore, HOV lanes were not analyzed under Project Conditions.

TABLE 6: SCHEME 1 PROJECT FREEWAY SEGMENT LEVELS OF SERVICE

From	To	Peak Hour	2008 Existing		2012 Scheme 1a				2012 Scheme 1b				2012 Scheme 1c			
			Density <sup>1</sup>	LOS <sup>2</sup>	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact
<b>Eastbound I-280</b>																
SR 85	De Anza	AM	27	D	71	27	D	1.03%	72	27	D	1.04%	72	27	D	1.04%
		PM	32	D	46	32	D	0.67%	48	32	D	0.70%	51	32	D	0.74%
De Anza	Wolfe	AM	32	D	64	32	D	0.93%	65	32	D	0.94%	65	32	D	0.94%
		PM	67	F	41	68	F	0.59%	43	68	F	0.62%	46	68	F	0.67%
Wolfe	Lawrence	AM	22	C	4	22	C	0.06%	4	22	C	0.06%	5	22	C	0.07%
		PM	76	F	16	76	F	0.23%	16	76	F	0.23%	16	76	F	0.23%
Lawrence	Saratoga	AM	38	D	36	38	D	0.52%	37	38	D	0.54%	36	38	D	0.52%
		PM	98	F	<b>85</b>	<b>100</b>	<b>F</b>	<b>1.23%</b>	<b>87</b>	<b>100</b>	<b>F</b>	<b>1.26%</b>	<b>136</b>	<b>101</b>	<b>F</b>	<b>1.97%</b>
Saratoga	Winchester	AM	43	D	36	43	D	0.52%	37	43	D	0.54%	36	43	D	0.52%
		PM	86	F	<b>85</b>	<b>87</b>	<b>F</b>	<b>1.23%</b>	<b>87</b>	<b>87</b>	<b>F</b>	<b>1.26%</b>	<b>136</b>	<b>88</b>	<b>F</b>	<b>1.97%</b>
Winchester	I-880	AM	27	D	31	27	D	0.45%	32	27	D	0.46%	31	27	D	0.45%
		PM	104	F	68	106	F	0.99%	69	106	F	1.00%	<b>109</b>	<b>107</b>	<b>F</b>	1.58%
<b>Westbound I-280</b>																
I-880	Winchester	AM	94	F	60	95	F	0.87%	61	95	F	0.88%	<b>93</b>	<b>96</b>	<b>F</b>	<b>1.35%</b>
		PM	73	F	<b>74</b>	<b>74</b>	<b>F</b>	<b>1.07%</b>	<b>76</b>	<b>74</b>	<b>F</b>	<b>1.10%</b>	<b>116</b>	<b>75</b>	<b>F</b>	<b>1.68%</b>
Winchester	Saratoga	AM	65	F	<b>75</b>	<b>66</b>	<b>F</b>	<b>1.09%</b>	<b>76</b>	<b>66</b>	<b>F</b>	<b>1.10%</b>	<b>117</b>	<b>66</b>	<b>F</b>	<b>1.70%</b>
		PM	55	E	87	56	E	1.26%	89	56	E	1.29%	136	56	E	1.97%
Saratoga	Lawrence	AM	74	F	<b>75</b>	<b>75</b>	<b>F</b>	<b>1.09%</b>	<b>76</b>	<b>75</b>	<b>F</b>	<b>1.10%</b>	<b>117</b>	<b>76</b>	<b>F</b>	<b>1.70%</b>
		PM	29	D	87	29	D	1.26%	89	29	D	1.29%	136	30	D	1.97%
Lawrence	Wolfe	AM	68	F	26	68	F	0.38%	26	68	F	0.38%	26	68	F	0.38%
		PM	27	D	10	27	D	0.14%	10	27	D	0.14%	10	27	D	0.14%
Wolfe	De Anza	AM	50	E	18	50	E	0.26%	18	50	E	0.26%	21	50	E	0.30%
		PM	37	D	79	37	D	1.14%	80	37	D	1.16%	82	37	D	1.19%
De Anza	SR 85	AM	60	F	19	60	F	0.28%	20	60	F	0.29%	23	60	F	0.33%
		PM	25	C	82	25	C	1.19%	84	25	C	1.22%	85	25	C	1.23%

Notes:

- <sup>1</sup> Measured in passenger cars per mile per lane. Density is calculated by using the travel speed from the adjacent segment, as well as the volume (flow) from the adjacent segment adjusted by the volume entering/exiting the freeway at the interchange.
  - <sup>2</sup> LOS = level of service.
  - <sup>3</sup> Project trips added during the peak hour.
- Significant impacts are shown in **bold** typeface.  
 Source: VTA, April 2008; and Fehr & Peers, 2012

**TABLE 7: SCHEME 2 PROJECT FREEWAY SEGMENT LEVELS OF SERVICE**

From	To	Peak Hour	2008 Existing		2012 Scheme 2a				2012 Scheme 2b			
			Density <sup>1</sup>	LOS <sup>2</sup>	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact
<b>Eastbound I-280</b>												
SR 85	De Anza	AM	27	D	64	27	D	0.93%	64	27	D	0.93%
		PM	32	D	36	32	D	0.52%	37	32	D	0.54%
De Anza	Wolfe	AM	32	D	58	32	D	0.84%	58	32	D	0.84%
		PM	67	F	32	67	F	0.46%	34	67	F	0.49%
Wolfe	Lawrence	AM	22	C	3	22	C	0.04%	3	22	C	0.04%
		PM	76	F	13	76	F	0.19%	14	76	F	0.20%
Lawrence	Saratoga	AM	38	D	27	38	D	0.39%	27	38	D	0.39%
		PM	98	F	<b>98</b>	<b>100</b>	<b>F</b>	<b>1.42%</b>	<b>100</b>	<b>100</b>	<b>F</b>	<b>1.45%</b>
Saratoga	Winchester	AM	43	D	23	43	D	0.33%	23	43	D	0.33%
		PM	86	F	<b>83</b>	<b>87</b>	<b>F</b>	<b>1.20%</b>	<b>84</b>	<b>87</b>	<b>F</b>	<b>1.22%</b>
Winchester	I-880	AM	27	D	20	27	D	0.29%	20	27	D	0.29%
		PM	104	F	<b>70</b>	<b>106</b>	<b>F</b>	<b>1.01%</b>	<b>72</b>	<b>106</b>	<b>F</b>	<b>1.04%</b>
<b>Westbound I-280</b>												
I-880	Winchester	AM	94	F	<b>99</b>	<b>96</b>	<b>F</b>	<b>1.43%</b>	<b>99</b>	<b>96</b>	<b>F</b>	<b>1.43%</b>
		PM	73	F	48	74	F	0.70%	49	74	F	0.71%
Winchester	Saratoga	AM	65	F	67	66	F	0.97%	67	66	F	0.97%
		PM	55	E	57	56	E	0.83%	59	56	E	0.86%
Saratoga	Lawrence	AM	74	F	<b>78</b>	<b>75</b>	<b>F</b>	<b>1.13%</b>	<b>78</b>	<b>75</b>	<b>F</b>	<b>1.13%</b>
		PM	29	D	66	29	D	0.96%	68	29	D	0.99%
Lawrence	Wolfe	AM	68	F	25	68	F	0.36%	25	68	F	0.36%
		PM	27	D	8	27	D	0.12%	8	27	D	0.12%
Wolfe	De Anza	AM	50	E	16	50	E	0.23%	16	50	E	0.23%
		PM	37	D	70	37	D	1.01%	72	37	D	1.04%
De Anza	SR 85	AM	60	F	17	60	F	0.25%	17	60	F	0.25%
		PM	25	C	73	25	C	1.06%	74	25	C	1.07%

Notes:

<sup>1</sup> Measured in passenger cars per mile per lane. Density is calculated by using the travel speed from the adjacent segment, as well as the volume (flow) from the adjacent segment adjusted by the volume entering/exiting the freeway at the interchange.

<sup>2</sup> LOS = level of service.

<sup>3</sup> Project trips added during the peak hour.

Significant impacts are shown in **bold** typeface.

Source: VTA, April 2008; and Fehr & Peers, 2011

### Project Freeway Impacts and Mitigation Measures

The impacts of the two project schemes were evaluated by comparing the results of the level of service calculations under Projects Conditions to the results under Existing Conditions. Significant impacts to freeway segments are defined to occur when the addition of project-related traffic causes one of the following:

- A segment to drop below its acceptable CMP operating standard (LOS E); or,
- The project traffic added to a segment operating at LOS F is more than one percent of its capacity.

Based on the significance criteria, the proposed schemes will have significant impacts on several freeway segments summarized in **Table 8**. The freeway segments impacted are not greater than the 2008 project; and, the revised Schemes 1a and 1b would no longer impact I-280 Eastbound between Winchester and I-880. 2012 Scheme 2 would no longer impact the I-280 Westbound between Winchester and Saratoga.

**TABLE 8: PROJECT FREEWAY IMPACTS**

Segment Limits	2008 Project Description		2012 Project Description				
	Scheme 1	Scheme 2	Scheme 1a	Scheme 1b	Scheme 1c	Scheme 2a	Scheme 2b
<b>Eastbound I-280</b>							
Lawrence Expressway to Saratoga	PM	PM	PM	PM	PM	PM	PM
Saratoga to Winchester	PM	PM	PM	PM	PM	PM	PM
Winchester to I-880	PM	PM	--	--	PM	PM	PM
<b>Westbound I-280</b>							
I-880 and Winchester Boulevard	PM	AM	PM	PM	AM/PM	AM	AM
Winchester Boulevard to Saratoga	AM	AM	AM	AM	AM	--	--
Saratoga to Lawrence	AM	AM	AM	AM	AM	AM	AM

Source: Fehr & Peers, 2008 and 2011

According to VTA policy direction, the mitigation measure for regional freeway impacts is participation in the Countywide Deficiency Plan (CDP) prepared by the VTA. The CDP has not received final approval; therefore, the mitigation of freeway impacts cannot be guaranteed since Cupertino does not have legal authority to mitigate freeway impacts. Pending adoption of the CDP, the Lead Agency for a development project must include programs or facilities delineated in the "Immediate Implementation Action List" (Appendix D to the Draft CDP) as part of the project's approval if the freeway impact cannot be reduced to a less-than-significant level. Measures from the list that are appropriate for this project include:

- Improve Pedestrian Facilities (A-4)
- Bus Stop Improvements (B-8)
- HOV parking preference program (G-1)
- Bike facilities at development projects (G-2)
- Pedestrian circulation system (G-4)

While implementation of these measures would incrementally reduce traffic, they would not reduce the identified impact to a less-than-significant level. Full mitigation of freeway impacts is considered beyond the scope of an individual project; thus, the addition of project traffic results in a ***significant and unavoidable*** impact to the all of the freeway segments listed above.

## CONCLUSION

The 2012 Proposed Project description for the Main Street Cupertino project would generally result in fewer daily and PM peak hour vehicle trips, but slightly more AM peak hour vehicle trips; however, 2012 Scheme 1c would generate more trips during both peak hours and on a daily basis. Although the trip generation characteristics would change, the revised Proposed Project would not result new or substantially more severe significant intersection and freeway impacts than were identified in the 2008 TIA and EIR. The severity of the AM peak period impacts would be slightly less, since the revised Proposed Project would result in slightly lower intersection delay at the study intersections and slightly lower freeway densities on the study segments due to the different traffic patterns caused by the changes in use. In addition, the project's significant impact at the freeway segment of Winchester Boulevard and I-280 in the PM peak hour for 2008 Scheme 1 would not occur under the 2012 Scheme 1a and 1b, and the project's significant impact at the freeway segment of Winchester Boulevard and Saratoga Avenue in the PM peak hour for 2008 Scheme 2 would not occur under the 2012 Scheme 2a or 2b.

We hope that you have found the data contained in this memorandum helpful. If you have any questions, please contact Todd Henry at (415) 348-0300.

## MEMORANDUM

Date: March 2, 2012  
To: Kristy Weis, David J. Powers  
From: Todd Henry and Jane Bierstedt

**Subject: Main Street Cupertino Revised Site Access and Parking Analysis**

SJ11-1292.01

\*\*\* Please note that 2012 Scheme 1c in this memorandum is 2012 Scheme 1 in the Addendum and 2012 Scheme 2b in this memorandum is 2012 Scheme 2 in the Addendum.

This memorandum discusses the Main Street Cupertino project's site plan, including vehicle, loading, bicycle, pedestrian and transit access, and potential impacts to roadway operations along the key travel corridors near the project site – Stevens Creek Boulevard, Wolfe Road, and Vallco Parkway. On-site parking is also discussed, including a summary of a shared parking analysis.

### VEHICLE CIRCULATION

The site plans showing the location of the project driveways and the internal circulation system are presented on Figures A3 and A10 and A11 for Schemes 1 and 2 (and their variants), respectively. Finch Avenue will be abandoned to consolidate the project site creating a "town square" surrounded by on-street angled parking. Both site plans are similar; therefore, the recommendations in this review are generally consistent for both schemes.

#### **Site Driveways**

The site has vehicular access with driveways on Vallco Parkway and Stevens Creek Boulevard. In addition to the signalized full-access driveway on Stevens Creek Boulevard at Finch Avenue, the project has two right-turn only driveways on Stevens Creek Boulevard, three stop-signed controlled full access driveways on Vallco Parkway, and one right-turn only driveway on Vallco Parkway. The driveways to the site and garages generally provide sufficient storage space for vehicle queues exiting the site or garage. Left-turn pockets in the Garages 1 and 2 from Vallco Parkway should be approximately 100 feet in length to accommodate the expected demand.

#### **Finch Avenue Abandonment**

The existing volumes along Finch Avenue are low (less than 100 vehicles during the peak hours); therefore, its realignment is not expected to significantly alter existing traffic patterns in the area. Intersections adjacent to Finch Avenue currently operate at acceptable levels of service and can reasonably accommodate any additional traffic re-routed from Finch Avenue.



TABULATION		
OFFICE	289,750 SF	
RETAIL	69,700 SF	
HOTEL	180 ROOMS (134,568 SF)	
HOUSING	143 UNITS (121,156 SF)	
ATHLETIC CLUB	60,000 SF	
PARKING	2,191 STALLS	
STREET	87 STALLS	
SURFACE	242 STALLS	
GARAGE 1	1,074 STALLS	
GARAGE 2	345 STALLS	
BELOW ATHLETIC CLUB	300 STALLS	
BELOW HOUSING	143 STALLS	
TOTAL PARKING	2,191 STALLS	
OFFICE	1,245 STALLS	4.3 / 1000
RETAIL	278 STALLS	4 / 1000
HOTEL	225 STALLS	1.25 / ROOM
HOUSING	143 STALLS	1 / UNIT
ATHLETIC CLUB	300 STALLS	5 / 1000
TOTAL PARKING REQUIRED	2,191 STALLS	

# MAIN STREET CUPERTINO

## SAND HILL PROPERTY COMPANY

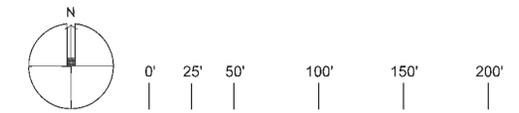
CUPERTINO, CALIFORNIA

SEE SHEET A5 FOR ALL DIMENSIONS AND SETBACKS  
 SEE LANDSCAPE PLAN FOR ALL WALKWAYS, LANDSCAPING,  
 AND HARDSCAPE AREAS.

### MASTER SITE PLAN

**KENNETH RODRIGUES & PARTNERS, INC**  
 445 N. Whisman Road, Suite 200  
 Mountain View, CA 94043  
 Phone: 650.965.0700  
 Fax: 650.960.0707

NO. 22.559
12.22.11
02.28.12





OUTLINE OF 60,000 SF RETAIL SCHEME - SEE SHEET A9.1 FOR PLAN

60,000 SF OF ATHLETIC CLUB OR 60,000 SF OF ADDITIONAL RETAIL

143 SENIOR UNITS OR 120 MARKET RATE UNITS.

**TABULATION (RETAIL / MARKET RATE)**

OFFICE	289,750 SF
RETAIL	138,700 SF
HOTEL	180 ROOMS
MARKET RATE HOUSING	120 UNITS
<b>PARKING :</b>	<b>1,956 STALLS</b>
STREET	87 STALLS
SURFACE	242 STALLS
GARAGE 1	1,059 STALLS
GARAGE 2	328 STALLS
BELOW MKT. RATE HOUSING	240 STALLS
<b>TOTAL PARKING</b>	<b>1,956 STALLS</b>

OFFICE	1,011 STALLS	3.5 / 1000
RETAIL	480 STALLS	3.5 / 1000
HOTEL	225 STALLS	1.25 / ROOM
MKT. RATE HOUSING	240 STALLS	2 / UNIT
<b>TOTAL PARKING REQUIRED</b>	<b>1,956 STALLS</b>	

**TABULATION (ATHLETIC CLUB / SENIOR)**

OFFICE	289,750 SF
RETAIL	78,700 SF
HOTEL	180 ROOMS (134,568 SF)
SENIOR HOUSING	143 UNITS (121,156 SF)
ATHLETIC CLUB	60,000 SF

**PARKING 2,159 STALLS**

STREET	87 STALLS
SURFACE	242 STALLS
GARAGE 1	1,059 STALLS
GARAGE 2	328 STALLS
BELOW ATHLETIC CLUB	300 STALLS
BELOW HOUSING	143 STALLS
<b>TOTAL PARKING</b>	<b>2,159 STALLS</b>

OFFICE	1,213 STALLS	4.2 / 1000
RETAIL	278 STALLS	3.5 / 1000
HOTEL	225 STALLS	1.25 / ROOM
SENIOR HOUSING	143 STALLS	1 / UNIT
ATHLETIC CLUB	300 STALLS	5 / 1000
<b>TOTAL PARKING REQUIRED</b>	<b>2,159 STALLS</b>	

EXISTING HOUSING PROJECT

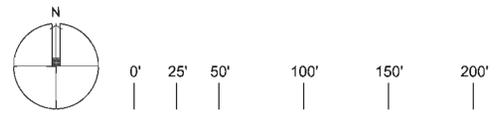
TANTAU AVENUE

STEVENS CREEK BOULEVARD

**MAIN STREET CUPERTINO**  
**SAND HILL PROPERTY COMPANY**  
 CUPERTINO, CALIFORNIA

**2012 SCHEME 1C**  
**ALTERNATIVE SITE PLAN**

KENNETH RODRIGUES & PARTNERS, INC  
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NO. 22.559  
 02.08.12  
 02.28.12

**A10**



**TABULATION (SCHEME 2A)**

OFFICE	289,750 SF
RETAIL	83,200 SF
HOTEL	180 ROOMS (134,568 SF)
MARKET RATE HOUSING	120 UNITS (119,258 SF)
SENIOR HOUSING	143 UNITS (121,156 SF)
<b>PARKING</b>	<b>2,137 STALLS</b>
STREET	87 STALLS
SURFACE	248 STALLS
GARAGE 1	1,074 STALLS
GARAGE 2	345 STALLS
BELOW MARKET RATE HOUSING	240 STALLS
BELOW SENIOR HOUSING	143 STALLS
<b>TOTAL PARKING</b>	<b>2,137 STALLS</b>

OFFICE	1,150 STALLS	4 / 1000
RETAIL	379 STALLS	3.8 / 1000
HOTEL	225 STALLS	1.25 / ROOM
MARKET RATE HOUSING	240 STALLS	2 / UNIT
SENIOR HOUSING	143 STALLS	1 / UNIT
<b>TOTAL PARKING REQUIRED</b>	<b>2,137 STALLS</b>	

**TABULATION (SCHEME 2B)**

OFFICE	289,750 SF
RETAIL	92,200 SF
HOTEL	180 ROOMS (134,568 SF)
MARKET RATE HOUSING	120 UNITS (119,258 SF)
SENIOR HOUSING	143 UNITS (121,156 SF)
<b>PARKING</b>	<b>2,105 STALLS</b>
STREET	87 STALLS
SURFACE	248 STALLS
GARAGE 1	1,059 STALLS
GARAGE 2	328 STALLS
BELOW MARKET RATE HOUSING	240 STALLS
BELOW SENIOR HOUSING	143 STALLS
<b>TOTAL PARKING</b>	<b>2,105 STALLS</b>

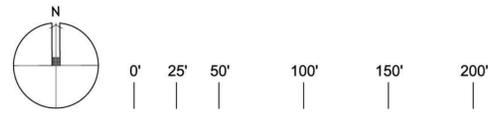
  

OFFICE	1,150 STALLS	4 / 1000
RETAIL	347 STALLS	3.8 / 1000
HOTEL	225 STALLS	1.25 / ROOM
MARKET RATE HOUSING	240 STALLS	2 / UNIT
SENIOR HOUSING	143 STALLS	1 / UNIT
<b>TOTAL PARKING REQUIRED</b>	<b>2,105 STALLS</b>	

**MAIN STREET CUPERTINO**  
**SAND HILL PROPERTY COMPANY**  
 CUPERTINO, CALIFORNIA

**2012 SCHEME 2B**  
**ALTERNATIVE SITE PLAN**

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### ***On-Site Circulation***

Based on the current site plan, vehicles would be able to circulate in both directions around the town square. The interior roadways would be approximately 24 feet wide, which should sufficiently accommodate expected vehicle maneuvers and emergency access; however, the City Public Works department should review the site plan during subsequent design stages to ensure that proper drive aisle width is provided and that trucks (including fire vehicles) can maneuver through the site.

As an alternative to a two-way drive loop around the square, the site plan could be modified to reflect a one-way loop. A one-way loop would evenly distribute traffic around the square, would minimize conflicting vehicle movements at its intersections, and would allow the inner drive aisle to be narrower. This would allow for larger pedestrian bulb-outs at the interior intersections in the parking lot, increase pedestrian visibility, decrease pedestrian crossing distances, and generally make the site more pedestrian-oriented.

### **LOADING CIRCULATION**

Site plans for both project schemes indicate a loading hotel trash area along Vallco Parkway at the central driveway to Parking Garage 1. When a final site plan is provided, turning templates should be applied to ensure that trucks using this loading dock, as well as the hotel trash area, will have sufficient space to make the turn without affecting the median or surrounding curbs. The site plan does not indicate a general loading and unloading area for commercial uses on the site. The site plan should accommodate those types of deliveries a loading area for larger trucks, if expected, or consider restricting the time periods when on-site delivery by large vehicles is permitted.

### **PEDESTRIAN CIRCULATION**

The existing site is currently vacant and sidewalks exist only along the project's frontage along Stevens Creek Boulevard. Sidewalks are provided along the north side of Vallco Parkway, as well as on the east side of Tantau Avenue. The project is proposing to construct sidewalks along the south side Vallco Parkway and the west side of Tantau Avenue.

The General Plan for the City of Cupertino identifies existing pedestrian networks and identifies improvements and/or related policies necessary to ensure that these facilities are safe and effective for City residents. Using the General Plan as a guide, significant impacts to pedestrian facilities would occur when a project or an element of the project:

- creates a hazardous condition that currently does not exist for pedestrians, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- creates substantial increase in demand for pedestrian facilities where none currently exist or creates conditions that would lead to overcrowding on existing facilities; or
- conflicts with an existing or planned pedestrian facility; or
- conflicts with policies related to pedestrian activity adopted by the City of Cupertino for their respective facilities in the study area.

In addition to providing sidewalks along the entire project frontage, the site plan should include well-defined pedestrian pathways within the site, including sidewalks along all interior roadways, as well as a sidewalk connecting the site to an adjacent condominium development.

The project will create demand for pedestrian facilities at the intersection of Vallco Parkway and Finch Avenue. Crosswalks should be provided on all approaches to this intersection. Additional pedestrian treatments and/or traffic controls may be desired to slow traffic along Vallco Parkway and accommodate the additional pedestrian demand. The intersection of Finch Avenue and Vallco Parkway was analyzed as an all-way stop control intersection and is projected to operate at LOS B or better during both peak hours under either scheme. This intersection would also operate at LOS C or better with two-way stop control. With either traffic control device, a highly visible pedestrian crosswalk on Vallco Parkway should be provided to give pedestrians a designated pathway.

The project will likely increase the number of pedestrians crossing Stevens Creek Boulevard and Wolfe Road. The City could consider improving the pedestrian crossings at these locations. Some improvements that could be made to the intersections near the project site include:

- Install pedestrian call buttons and crosswalks on the east leg of the intersections of Stevens Creek Boulevard at Finch Avenue and Tantau Avenue.
- Install countdown pedestrian heads on all crosswalks.
- Re-timing signals to include a leading pedestrian call in the north- and southbound directions.

Additionally, the sidewalk along the west side of Tantau Avenue should be extended north across I-280 to encourage walk trips to the project site between Vallco Parkway and Pruneridge Avenue. This will require construction of a raised sidewalk on the existing bridge. The improvement should be coordinated with other proposed developments in the area.

Improvements and enhancements to pedestrian facilities will improve general pedestrian safety in and around the project site.

## **BICYCLE CIRCULATION**

The site has bicycle access via the bike lanes on Wolfe Road, Tantau Avenue, Stevens Creek Boulevard, and Vallco Parkway.

The General Plan for the City of Cupertino identifies existing and planned bicycle networks and identifies improvements and/or related policies necessary to ensure that these facilities are safe and effective for City residents. Using the General Plan as a guide, significant impacts to bicycle facilities would occur when a project or an element of the project:

- creates a hazardous condition that currently does not exist for bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- creates substantial increase in demand for bicycle facilities where none currently exist or creates conditions that would lead to overcrowding on existing facilities; or
- conflicts with an existing or planned bicycle facility; or
- conflicts with policies related to bicycle activity adopted by the City of Cupertino for their respective facilities in the study area.

The existing bicycle facilities in the area can reasonably accommodate the increased demand from the proposed project; however, the applicant's proposed on-street parking along Vallco Parkway would require relocation/redesign of the existing eastbound bike lane.

A five-foot bike lane should be located five feet from the end of the angled parking stalls. Signage and pavement legends alerting motorists to the presence of bicyclists would be included. The current recommended design for streets with on-street angled parking and bike lanes is to configure parking spaces as back-in/head-out angled spaces. As with parallel parking, the driver enters the stall by stopping and backing in, and leaves the stall by simply pulling out. This gives the driver a better view of oncoming bicycles and creates a safer environment for bicyclists. An alternative would be to convert the angled spaces to parallel spaces.

The bicycle lanes on Vallco Parkway should be maintained. At Finch Avenue the bike lane should transition from being adjacent to the curb to between the through and right-turn lane. The intersection of Tantau Avenue and Vallco Parkway should include a bike lane between the left-turn lane and through lane that is exclusively for bicyclists turning left. This lane should include a bicycle detector. Bicyclists continuing through the intersection or turning right would still use the curb lane.

These improvements would reduce the impact to bicycle facilities to a ***less-than-significant*** level. In addition to the existing bicycling facilities, the project should provide Class I and Class II bike parking facilities (per Municipal Code Chapter 19.100) on-site and in highly visible locations to encourage biking and discourage theft.

## TRANSIT

The proposed project is not proposing any changes to existing transit service to the project site. However, the project will likely create new demand for transit service in the area, as well as make changes to facilities used by the existing transit providers (i.e. VTA, Caltrain, and private employer shuttles) in the area. Significant impacts to transit service would occur if the project or any part of the project:

- creates a substantial increase in transit demand that could not be accommodated by existing adjacent transit capacity, measured by comparing the expected transit capacity with the expected project demand for transit service; or
- causes a substantial increase in delay or operating cost to a transit provider; or
- conflicts with transit policies adopted by the City of Santa Clara, Santa Clara County, VTA, or Caltrans for their respective facilities in the study area.

To determine potential impacts to transit service in the project area, average load factors were obtained from VTA. These numbers reflect the average passenger load of bus routes at specific stops. Fixed-route bus service operates adjacent to the site with stops located at Vallco Parkway/Perimeter Road, Stevens Creek Boulevard/Tantau Avenue, and Wolfe Road/Vallco Parkway. **Table 1** summarizes the average load factors for VTA bus routes serving South Vallco Master Plan area. The actual load factors along other portions of the lines may be higher or lower.

TABLE 1: AVERAGE PASSENGER LOAD VALUES OF BUS ROUTES SERVING PROJECT SITE				
Route	Direction	Average Load / Capacity	VTA Route Performance Standard <sup>2</sup>	Route Performance <sup>3,4</sup>
<b>23</b>	EB	11/38	27	31
	WB	12/38		
<b>81</b> <sup>1</sup>	EB	3/38	27	<b>26</b>
<b>101</b>	NB	16/38	60%	<b>31%</b>
	SB	9/38		
<b>182</b>	NB	14/38	60%	<b>54%</b>
	SB	15/38		

Notes:

- 1 Route 81 does not operate in the westbound direction at the project site.
- 2 Performance for core network routes (23/81) is measured in boardings per revenue hour; this standard measures how well service is utilized given the hours of service provided. Performance for express routes (101/182) is measured as average peak load factor. Average peak load factor is a measure of the supply of seats available on a bus versus the average peak number of on-board passengers at any given time during the peak period.
- 3 For core network routes: Boardings per Revenue Hour; for express routes: average peak load factor.
- 4 **BOLD** text indicates standards that are not being met.

Source: VTA, January 2008; VTA Short Range Transportation Plan, January 2008.

VTA evaluates bus routes using standards for average weekday boardings. These values are reported in the VTA Short Range Transit Plan (2007) and are used to make recommendations for service changes, new lines, and capital projects. For existing routes, recommendations for improvement are identified for under-performing lines. The standard for core network routes (23 and 81) is 27 boardings per revenue hour. The standard for express routes (101 and 182) is an average peak load factor of 60 percent.

Based on these values, bus routes should be able to accommodate the additional demand created by the project. VTA guidelines allow up to a two percent reduction if vehicle trips generated by projects with certain land uses that are located within 2,000 feet of a major bus stops. Using this methodology, up to nine peak-hour and 61 daily office trips could be made on bus routes serving the area. The average loads of buses near the project site indicate that the existing transit service can readily accommodate the increase in demand.

The proposed project will likely increase transit use on the routes serving the project site. Only Route 23 is operating above its current standard; therefore, any increase in transit use would improve route performance closer to the designated standard for operation. Therefore, impacts to existing transit service are expected to be **less-than-significant**.

The project may disrupt bus service if existing bus stops at the project site are not incorporated into the street design along the project frontage. The applicant should work with VTA, the City, and Caltrain to determine the appropriate location of the existing bus stops at Stevens Creek Boulevard/Finch Avenue and Stevens Creek Boulevard/Tantau Avenue to ensure that bus service is not disrupted by the addition of on-street parking along those areas. These bus stops should be incorporated into the site's streetscape plan as 22 foot curb lanes or bus duckouts to minimize disruption to traffic flow along Stevens Creek Boulevard and should provide a bus stop

pavement pad per VTA standards. In addition, the site plan should include passenger waiting areas to replace those removed during construction of the proposed on-street parking, as well as a minimum 8-foot side sidewalk adjacent to the bus stop per ADA requirements. If the City wishes to narrow Vallco Parkway at Perimeter Road, the bus stop at Vallco Parkway/Perimeter Road would need to be incorporated into the final roadway design.

The proposed project may impact plans for a bus rapid transit corridor being planned for Stevens Creek Boulevard. VTA has already developed operating plans and cost estimates, and they are currently developing an infrastructure strategy for the West San Carlos Stevens Creek line that would run along Stevens Creek Boulevard, i.e. the existing 23 line/future 523 line. The corridor would have a median busway and/or a reversible or viaduct transit lane, enhancements to mixed-flow transit operating segments, and 15 new bus rapid transit stations. Conceptual engineering is expected to begin in the winter of 2012, final design would occur in 2015, and revenue service would begin in 2018. The City of Cupertino's General Plan and VTA identified a potential transit station in the Vallco area. The City should coordinate with VTA to ensure that any changes proposed for the project's frontage on Stevens Creek Boulevard does not conflict with future VTA plans along this corridor.

## **ROADWAY ANALYSIS**

For the 2008 transportation study, City staff requested that the corridors on Vallco Parkway, Stevens Creek Boulevard (between Wolfe Road and Tantau Avenue), and Wolfe Road (between I-280 and Stevens Creek Boulevard), be assessed to determine if operational improvements will be needed. This qualitative analysis: 1) identifies improvements that could be made based on field observations and existing data and 2) notes operational issues that may occur with the addition of traffic from the two project schemes.

### Vallco Parkway

The proposed project consists of narrowing of Vallco Parkway with left-turn lanes and angled parking between the western edge of the project and Tantau Avenue. The reduction in road width together with the proposed land uses would help create a pedestrian-friendly mixed-use corridor in this area. Increasing parking maneuvers and reducing the roadway width typically reduce travel speeds and can help accomplish this goal.

The existing daily roadway volume along Vallco Parkway is approximately 3,100 vehicles, based on 72-hour roadway volume counts collected in 2008. The traffic from approved projects in the area would increase the volume by approximately 2,500 vehicles per day (vpd), increasing the total background roadway volume to 5,600 vpd. A two-lane roadway with angled parking can accommodate approximately 10,000 to 12,000 vpd before traffic flow is substantially affected. However, the operations of the roadway are typically controlled at the local intersections. Therefore, the LOS of a given segment is generally similar to that of the nearby intersections. The levels of service at the intersections of Perimeter Road, Finch Avenue, and Tantau Avenue on Vallco Parkway are acceptable, and it is projected that the operations of the roadway would also be acceptable (LOS D or better) with angled parking and the proposed lane reduction.

The estimated daily volume on Vallco Parkway under project conditions will be approximately 12,000 and 16,000 vehicles per day. Drivers experiencing delays along Vallco Parkway would likely enter and exit the project site using driveways along Stevens Creek Boulevard and at the intersection of Stevens Creek Boulevard/Finch Avenue. The redistribution of traffic was not

studied quantitatively; however, because the surrounding intersections operate at acceptable levels of service and can reasonably accommodate any traffic diversion that might occur.

#### Wolfe Road

In general, vehicle progression on this segment of Wolfe Road was good during both peak hour observations. Some southbound queuing occurred between the I-280 Northbound Ramps and Pruneridge Avenue intersections; however, the queued traffic cleared within one cycle and operations at Wolfe Road and Pruneridge Avenue were not substantially affected.

Based on a survey of vehicles making southbound left-turns at the intersection of Wolfe Road and Vallco Parkway during the PM peak hour, approximately 50 percent made U-turns, of which several accessed the parking areas at the Cupertino Square shopping center. Any signal modifications that would require a restriction on this u-turn movement (i.e., the westbound right turn overlap phase recommended as project-level impact mitigation at this intersection) should consider the impact this restriction would have on how vehicles enter the parking garage on the east side of Wolfe Road. Vehicles would likely choose to either use the right-in/right-out only driveway to Perimeter Road or chose to make a left turn onto Vallco Parkway and enter the garage on that roadway.

This segment of Wolfe Road generally operates with no major congestion or queuing that substantially affects vehicle operations. The corridor has capacity to accommodate added traffic assuming that improvements are implemented at the intersection of Wolfe Road and Vallco Parkway. The signal timings at the intersections along this corridor are adequate for the existing volumes. The intersections are also expected to operate acceptably with additional traffic under Background and Project Conditions. City staff should continue monitor the intersections on this corridor and modify the timings to maximize traffic progression.

#### Stevens Creek Boulevard

Traffic moves generally well along this segment of Stevens Creek Boulevard. Eastbound left-turns at Wolfe Road are heavy during the PM peak hour; however, this movement usually clears in one signal cycle and no significant delay or queuing was observed on this approach. The existing LOS for this movement during the PM peak hour is LOS D.

Out-of-pocket queuing was observed in the westbound left-turn pocket at the intersection of Stevens Creek Boulevard and Finch Avenue. This peak queue occurred during the 15-minute period before school began at Cupertino High School. This delay is brief; therefore, the improvement is to lengthen the left-turn pocket to accommodate this demand volume. Furthermore, this queuing occurs prior to when most traffic associated with the project is expected to occur. Therefore, no conflict is expected. The intersection of Stevens Creek Boulevard and Finch Avenue is expected to operate at an acceptable LOS D or better under project conditions for either scheme.

The project schemes are not expected to have a significant impact to the other intersection facilities on this section of Stevens Creek Boulevard based on the level of service calculations conducted for the individual schemes.

### ***Neighborhood Traffic Analysis***

The main access routes to the project site are Stevens Creek Boulevard to Finch and Tantau Avenues, and Wolfe Road to Vallco Parkway. Most of the project traffic is expected to use these streets to access the project site. Neighborhood streets to which the project could add traffic include Finch, Tantau, Judy, Bret or Stern Avenues. Currently, southbound traffic on Finch and Tantau Avenues north of Stevens Creek Boulevard are restricted to turning left or right onto Stevens Creek Boulevard. Most project trips on these streets south of the project site would be generated by area residents traveling to the retail portion of the project or the park. Based on the project trip distribution, up to 50 peak-hour trips could be distributed among all of these streets. With the addition of an average of 10 vehicles per street in the peak hour, the average increase would be one additional vehicle every six minutes. Therefore, the project is not expected to substantially affect traffic on neighborhood streets.

The City of Cupertino has a neighborhood traffic management program (NTMP); however, the program is currently unfunded. The objective of these programs is to address vehicle speed, increase pedestrian safety, reduce the need for police enforcement, enhance the street environment, increase access for all modes of transportation, and reduce cut-through motor vehicle traffic. Typically, the NTMP includes the installation of traffic calming and roadway design features that address vehicle speed and traffic volume.

If the City decides to fund the program in the future, neighborhood residents would have the opportunity to petition the City to conduct a neighborhood traffic calming study to determine if traffic management issues need to be addressed. To implement a NTMP, two-thirds of residents (by petition) must be in favor of the study.

### **PARKING**

This section presents the results of the parking analysis performed for the proposed project schemes. This analysis includes a comparison of the proposed parking supply to City Code requirements and to the estimated future parking demand.

#### ***Proposed Parking Supplies***

Scheme 1 includes 2,191 on-site parking spaces. The majority of these spaces would be located within two parking structures situated in the north-central area of the site (1,074 spaces in Garage 1 and 345 spaces in Garage 2). The senior housing building would include a below-grade garage with 143 spaces. This site plan also shows on-street parking along Vallco Parkway (87 angled spaces). If developed with an athletic club, the club who be constructed with a 300-space below-grade garage. The remaining on-site parking spaces would be surface parking along the interior site roadways, including the area surrounding the town square (242 spaces).

In Scheme 2, the project includes 2,137 on-site parking spaces. The majority of these spaces would be located within a parking structure situated in the north-central area of the site, similar to Scheme 1. The senior housing building would include a below-grade garage with 143 spaces. The remaining on-site parking spaces would be surface parking along the interior site roadways, including the area surrounding the town square (242 spaces). Scheme 2 would also provide additional parking along Vallco Parkway (87 spaces).

### ***Parking Demand and Supply Rate Sources and Estimates***

To estimate future parking needs for the two schemes, the following sources were reviewed:

- City of Cupertino Municipal Code (including the City's shared parking code);
- *Parking Generation (4<sup>th</sup> Edition)* by the Institute of Transportation Engineers; and
- *Shared Parking* published by Urban Land Institute (ULI).

Parking demands and recommended supplies for Scheme 1 and Scheme 2 are presented in the following sections.

#### City of Cupertino Parking Code Requirements

City of Cupertino code rates for the project land uses are as follows:

- General Commercial/Retail space requires 1 parking space/250 s.f. of gross retail space
- Office space requires 1 parking space/285 s.f. of gross office space
- Hotel space requires 1 parking space/room and 1 parking space/employee (0.33 employees per room)
- Athletic club does not have a designated rate in the code, so a general retail rate of 1 parking space/250 s.f. was used
- Senior housing does not have a designated rate in the code, so a rate of 1 parking space per dwelling unit was used. This requirement was based on ITE parking generation rates for senior housing and city staff recommendations.
- Market-Rate housing requires 2 parking spaces per unit.

Using the City of Cupertino rates would result in a total required supply of 1,900 parking spaces needed for Scheme 1b and 1,997 spaces needed for Scheme 1c. Scheme 2a would require 1,918 parking spaces and Scheme 2b would require 1,954 parking spaces. Thus, the project provides sufficient parking to meet the City code.

#### ITE Demand Rates

Parking demands for the two schemes were estimated using information published in ITE's *Parking Generation 4<sup>th</sup> Edition*. ITE land use codes for Shopping Center, Senior Housing, Senior Housing, Hotel, Low-Rise Condominium, and Office were used to identify the parking demand rates for the land uses included in the project.

Based on ITE demand rates, the estimated parking demand for Scheme 1 is 1,617 spaces for Scheme 1a, 1,633 spaces for Scheme 1b, and 1,600 spaces for Scheme 1c. The estimated parking demand for Scheme 2 is 1,596 spaces for Scheme 2a and 1,612 spaces for Scheme 1b. These demand estimates are the sums of the average peak parking rates for the individual uses and do not account for time of day/week variations when the individual use peaks occur or any sharing of parking facilities.

### ***Shared Parking Analysis***

The parking supply was evaluated using a shared-parking analysis since the proposed project contains a mix of uses, each with different parking characteristics. The shared parking analysis estimates the number of parking spaces needed to accommodate the overall peak demand of all the uses on the site. Since the shared parking analysis takes into account the unique time distribution and peaking characteristics of each use on the site, the resulting peak shared parking

demand typically differs from the parking supply calculated using the parking rates required by the City Code for the individual land uses. A shared parking analysis using Urban Land Institute methodology (temporal distributions, non-captive ratios) was completed using parking rates included in the ITE *Parking Generation*.

The Urban Land Institute (ULI) provides parking information for an assortment of land uses to help determine the appropriate number of parking spaces needed to adequately serve mixed-use projects, as well as single use projects with common parking facilities. Shared parking analyses illustrate the temporal distribution of parking demand by hour, day, and month. The parking demand for the land uses within the Main Street Cupertino development peak at different times during the day; therefore, combinations of these land uses on a common site require a smaller total parking supply than the supply for each individual land use added together.

The shared parking analysis for the proposed project uses the base parking ratios identified by ITE plus a 10 percent factor to account for circulating vehicles, as parking facilities are considered “full” even though maximum capacity is not reached. The base ratios are adjusted by month and hour using the daily temporal distributions identified by ULI.

The ULI shared parking analysis also accounts for mode split and factors in a non-captive ratio. The mode split reduces the parking demand proportionate to the number of customers and employees accessing the project by public transit, bicycle, and foot. A 100% automobile mode split was used for this analysis to provide a conservative estimate of the number of needed parking spaces.

The non-captive ratio reduces the parking demand proportionate to the number of customers and employees visiting land uses within the project from other uses within the project and adjacent properties where no new car trips are added. The non-captive ratio does not necessarily correspond to the pass-by and diverted-link trip generation reductions sometimes taken for projects. A 100% non-captive ratio was used applied to the retail components of the project to be conservative.

**Table 2** presents the parking supply estimates for the project schemes. As shown, all of the schemes would provide more parking than what is required or demanded for the proposed mix of uses, even if none of the parking is shared. The shared parking analysis also assumes that the office uses, athletic club uses, and senior housing do not share spaces with the other uses.

<b>TABLE 2: ESTIMATED SHARED PARKING SUPPLY</b>					
	<b>Scheme 1</b>			<b>Scheme 2</b>	
	<b>1a</b>	<b>1b</b>	<b>1c<sup>4</sup></b>	<b>2a</b>	<b>2b</b>
Proposed Supply	2,191	2,159	1,956	2,137	2,105
City Requirement	1,864	1,900	1,997	1,918	1,954
ITE Parking Demand <sup>1</sup>	1,617	1,633	1,716	1,596	1,612
Shared Parking Demand <sup>2</sup>	1,567	1,579	1,659	1,497	1,512
<b>Surplus/Deficit<sup>3</sup></b>	<b>+624</b>	<b>+580</b>	<b>+297</b>	<b>+640</b>	<b>+593</b>

Notes:  
 1 Includes a 10% circulation factor.  
 2 Based on ULI time-of-day factors and ITE parking demand forecasts (including 10% factor). Shared parking analysis assumed that one residential parking space is reserved per unit. Peak parking occurs at 2:00PM on a weekday.  
 3 Surplus or deficit between shared parking demand and proposed supply.  
 4 Table presents a worst-case analysis of this scheme since the project sponsor is proposing to construct retail or athletic club and market-rate housing or senior housing. If an athletic club and market rate housing is constructed, the total parking supply provided would be 2,191 spaces. The analysis in the column shows the higher parking demand uses (market rate housing and athletic club) compared to the smaller supply proposed if only retail and senior housing is constructed.  
 Source: *City of Cupertino Municipal Code*, 2005. *ITE Parking Generation*, 4<sup>th</sup> Edition; *Shared Parking*, Urban Land Institute, 2005.

This analysis was performed for a generic shopping center that would include some restaurant space because specific tenants have not been identified. The City of Cupertino should monitor the percentage of restaurant to retail space because restaurants generate a much higher parking demand than retail space. We recommend that if the restaurant to retail space exceeds 10 percent, that the City re-evaluate parking at the site to verify that the projected parking demand will not exceed the parking supply<sup>1</sup>.

If the project would like to reduce the number of provided spaces, we recommend:

- Eliminate the below-grade parking garage under the residential building and/or unbundle residential parking spaces;
- Reduce the size of the parking garages;
- Eliminate the parking spaces along the driveways on the interior of the site;
- Eliminate on-street parking along Vallco Parkway

<sup>1</sup> ITE parking generation rates for shopping centers assume a portion of a general retail site would be occupied by restaurant uses. Based on a sensitivity test conducted for the project, up to 30 percent of the retail space could be occupied by restaurant uses before any scheme has a shared parking deficit.

Although the site provides more parking than the overall estimated demand, there may be locational shortages in certain areas of the site. For example, Garage 2 would be located closest to the office uses on the site; however, the office uses would generate a parking demand greater than the proposed supply in Garage 2. . Also, some drivers to the retail portions of the site may prefer to park on the interior roads rather than in the garages.

The proposed garage adjacent to the office buildings does not provide sufficient parking to meet the office demand. To reduce conflicts between office parkers and others on-site, we recommend the following:

- Dedicate spaces in the garage for the office building and in the larger parking structure to office workers; and/or
- Install electronic signage directing patrons to available garage spaces and/or the number of vacant spaces;

The developer in coordination with the City should develop a contingency plan for occasions when the demand for parking is higher than the supply, such as during the Christmas shopping season. This plan could include measures that reduce the parking impact and potentially balance the parking deficiency. Measures could include:

- Providing valet parking either on-site or at an off-site location;
- Providing off-site employee parking with a shuttle; or
- Entering into a shared-use agreement with surrounding land owners to use their parking lots during peak parking periods.

On-site parking could be monitored as project elements are constructed and occupied. The purpose of this monitoring would be to survey the actual parking demand. If adequate parking supply is available, then the remainder of the project could be developed without changes being made to the parking plan.

The final determination of the necessary parking supply will be made by City staff.

**TABLE 1: MAINSTREET CUPERTINO 2012 TRIP GENERATION AND PARKING COMPARISON**

	Parking				Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
	City Code	Unshared Demand	Shared Demand	Supply		Total	In	Out	Total	In	Out
<b>2012 Schemes and Variants</b>											
<b>Variant 1a</b> Retail: 69,700sf; Athletic Club: 60,000sf; Office: 292,000sf; Senior Housing: 143 units; Hotel: 180 rooms	1,864	1,617	1,567	2,191	10,345	690	524	166	1,086	427	569
<b>Variant 1b</b> Retail: 78,700sf; Athletic Club: 60,000sf; Office: 292,000sf; Senior Housing: 143 units; Hotel: 180 rooms	1,900	1,633	1,579	2,159	10,676	697	528	169	1,117	443	674
<b>2012 Scheme 1</b> Retail: 138,700sf; Office: 292,000sf; Market Housing: 120 units; Hotel: 180 rooms	1,997	1,716	1,659	1,956	<b>10,938</b>	<b>730</b>	<b>527</b>	<b>203</b>	<b>1,162</b>	<b>476</b>	<b>686</b>
<b>Variant 2a</b> Retail: 83,200sf; Office: 292,000sf; Senior Housing: 143 units; Market Housing: 120 units; Hotel: 180 rooms	1,918	1,596	1,497	<b>2,107</b>	9,490	665	497	168	982	374	608
<b>2012 Scheme 2</b> Retail: 92,200sf; Office: 292,000sf; Senior Housing: 143 units; Market Housing: 120 units; Hotel: 180 rooms	1,954	1,612	1,512	<b>2,075</b>	9,821	672	501	171	1,012	389	623
<b>Additional Variants</b>											
<b>Variant 3a</b> Retail: 78,700sf; Athletic Club: 60,000sf; Office: 289,000sf; Senior Housing: 143 units; Hotel: 250 rooms	1,959	1,709	1,637	<b>2,159</b>	10,787	729	547	183	1,129	461	688
<b>Variant 3a</b> Retail: 138,700sf; Office: 292,000sf; Senior Housing: 143 units; Hotel: 250 rooms	1,970	1,559	1,524	<b>1,956</b>	10,776	691	537	153	1,110	432	697
<b>Variant 3b</b> Retail: 69,700sf; Athletic Club: 60,000sf; Office: 292,000sf; Senior Housing: 143 units; Hotel: 250 rooms	1,934	1,702	1,631	<b>2,191</b>	10,480	726	547	180	1,102	446	676

Source: Fehr & Peers, 2012

## **Appendix D: Water Supply Assessment Amendment**

**California Water Service Company**  
**Addendum No. 1**  
**SB 610 Water Supply Assessment**  
**For**  
**Main Street Cupertino Development Project**  
**City of Cupertino, California**  
**March 9, 2012 (V2)**

**Introduction**

In a February 29, 2012, letter, the City of Cupertino requested that Cal Water review its SB 610 Water Supply Assessment (WSA) dated August 12, 2008 with respect to two proposed alternative development options that differ from the two assessed in the WSA.

The following compares the revised water demand forecasts for Option 1D (base scheme) with Plan A and Option 2B with Plan B in the 2008 WSA.

**Revised Project Water Demand Forecast:**

**Option 1D (Base Scheme):**

Senior Residential Dwelling Units:

Estimated indoor use for senior dwelling units is:

137.2 gallons/day/dwelling unit x 143 units = 19,620 gallons/day (gpd)

Commercial Office Space:

Estimated indoor water use is:

292,000 sq ft/300 sq ft/employee x 120 gallons/day/employee = 116,800 gpd

Retail Space (restaurants, retail goods and services):

Estimated water use is:

78,700 square feet x 0.28 gallon/day/sq ft = 22,040 gpd

Athletic Club:

Estimated water is:

60,000 square feet x 0.85 gallons/day/sq ft = 51,000 gpd

Hotel:

Estimated water use for the hotel with a restaurant is:

180 rooms at 400 square feet/room = 72,000 square feet x 0.50 gallons/day/sq ft =  
36,000 gpd

Landscape Irrigation:

Estimated water use is:

2.5 acres x 3,650 gallons/day/acre = 9,120 gpd.

Total estimated water demand for Option 1D (Base Scheme) is 254,580 gpd.

In the August 12, 2008 WSA, estimated total demand for Plan A (higher water using option) was 265,400 gallons/day.

The difference between Plan A as presented in the August 12, 2008 WSA and Option 1D is that Option 1D uses 10,800 gpd less water.

**Option 2B:**

Using the same assumptions for calculating water demand by activity, estimated water demands for Option 2B are:

Senior Residential Dwelling Units:

Estimated indoor use for senior dwelling units is:

137.2 gallons/day/dwelling unit x 143 units = 19,620 gpd

Residential Apartments:

Estimated indoor use is:

137.2 gallons/day/dwelling unit x 120 units = 16,460 gpd

Commercial Office Space:

Estimated indoor water use is:

292,000 sq ft/300 sq ft/employee x 120 gallons/day/employee = 116,800 gpd

Retail Space (restaurants, retail goods and services):

Estimated water use for various retail activities is:

92,200 square feet x 0.28 gallon/day/sq ft = 25,760 gpd

Hotel:

Estimated water use for the hotel with a restaurant is:

180 rooms at 400 square feet/room = 72,000 square feet x 0.50 gallons/day/sq ft = 36,000 gpd

Landscape Irrigation:

2.5 acres x 3,615 gallons/day/acre = 9,040 gpd.

Total estimated water demand for Option 2B: 223,680 gpd

In the August 12, 2008 WSA, estimated total demand for Plan B (lower water using option) was 204,010 gpd

The difference between Plan B as presented in the August 12, 2008 WSA and Option 2B is that Option 2B uses 19,670 gpd less water. The difference between Plan A as presented in the August 12, 2008 WSA and Option 2B is that Option 2B uses 41,720 gpd less water.

## **Conclusion**

The August 12, 2008 WSA document shows that with slightly higher project water demands the LAS District has an adequate water supply to meet forecasted water demands for the District and the Main Street development project. Although the 20 year period for this WSA Addendum is now 2012 to 2022, the 3 additional years do not change the conclusion for the following reasons. The 10-year average growth rate in demand used in the 2008 WSA was 0.32%/year and was based on data for the 1997 to 2006 period. Cal Water's 2010 Adopted Urban Water Management Plan (UWMP) uses a five-year average growth rate from 2005 to 2009 of 0.13%/year. The 2010 UWMP estimated growth rate is 40.6% of the rate used in the 2008 WSA.

Based on both lower Main St project demands and lower 20 year LAS District growth in demand which has further been substantially reduced by Cal Water's planned implementation of an enhanced water conservation program in compliance with SB 7x7,

Cal Water concludes that for the next 20 years, the LAS District will have more than adequate water supplies to meet projected demands associated with the Main St development project along with those of all existing customers and other anticipated future users for normal, single dry year and multiple dry year conditions.

## **Appendix E: Memorandum Regarding Retail and Parking Options**



## MEMORANDUM

**To:** Aki Honda Snelling, Senior Planner  
City of Cupertino

**From:** Kristy Weis, Project Manager

**Date:** April 20, 2012

**SUBJECT:** Main Street Cupertino Modifications – Retail and Parking Options

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This memorandum has been prepared to provide additional information on the possible environmental effects of modifications to the Main Street Cupertino mixed use project under consideration by the City of Cupertino. The Main Street Cupertino project, a mixed use project on an 18.7-acre site at the northwest quadrant of Stevens Creek Boulevard and Tantau Avenue in the City of Cupertino, was originally approved in January 2009. The certified Final Environmental Impact Report (2009 Final EIR) for the Main Street Cupertino project (SCH# 2008082058) evaluated the environmental effects of development on the site. Subsequently, the project applicant put forth possible changes to the mix and intensity of the retail, office, residential, hotel and park land uses on-site which were evaluated in an Addendum to the 2009 Final EIR (March 22, 2012). The project schemes analyzed in the certified 2009 Final EIR and the March 2012 Addendum to the 2009 Final EIR (March 2012 Addendum) are summarized in Table 1.

The project modifications identified in the March 2012 Addendum were reviewed by the City's Environmental Review Committee (ERC) and Planning Commission in March 2012 and several recommendations were made for additional modifications to the mixed use project. The following discussion focuses on determining the extent to which the impacts of the project modifications recommended by the Planning Commission and City Staff, which may be considered by the City Council, are the same or different than those addressed in the certified 2009 Final EIR.

<b>Table 1: Project Schemes Analyzed in the Certified 2009 Final EIR and March 2012 Addendum</b>							
<b>Project Schemes</b>	<b>Land Uses</b>						
	<b>Retail (sf)</b>	<b>Athletic Club (sf)</b>	<b>Office (sf)</b>	<b>Residential (units)</b>		<b>Hotel (rooms)</b>	<b>Open Space with Public Easement (ac)</b>
				<b>Senior</b>	<b>Market- Rate</b>		
<b>2009 Final EIR</b>							
2008 Scheme 1	150,000	145,000	100,000	160	---	150	1.63
2008 Scheme 2	146,500	---	205,000	160	---	250	1.63
<b>March 2012 Addendum</b>							
2012 Scheme 1	78,700	60,000*	292,000	---	120*	180	1.55
• Variant 1a	69,700	60,000	292,000	143	---	180	1.55
• Variant 1b	78,700	60,000	292,000	143	---	180	1.55
• Variant 3a(1)	78,700	60,000	289,000	143	---	250	1.55
• Variant 3a(2)**	138,700	---	265,000	---	---	250	1.55
• Variant 3b	69,700	60,000	292,000	143	---	250	1.55
2012 Scheme 2	92,200	---	292,000	143	105	180	1.55
• Variant 2a	83,200	---	292,000	143	105	180	1.55
<p><u>Notes:</u> * Under 2012 Scheme 1, the 60,000 sf athletic club can be replaced with 60,000 sf of additional retail space; and the 120 market-rate apartments can be replaced with 143 senior units.</p> <p>** The amount of development under Variant 3a(2) has been revised as shown since the March 2012 Addendum. Refer to <b>Section 3.0</b>.</p>							

## 1.0 OVERVIEW

At the March 27, 2012 Planning Commission meeting, the Planning Commission provided feedback to the project applicant on proposed project modifications, including the following recommendations:

- Undergrounding more of the parking;
- Reducing the parking garage frontage on Vallco Parkway;
- Locating the 0.75-acre park at an interior location on-site;
- Shifting more retail uses to front onto Stevens Creek Boulevard;
- Increasing the amount of retail on-site;
- Allowing up to a 250-room hotel; and
- A desire for more than 10 percent of the retail uses to be restaurant uses.

## 1.1 Additional Retail Uses, Hotel Rooms, and Underground Parking Options

In response to the above suggestions, the project applicant developed four project scheme variations. These variant schemes are outlined in Table 2 below.

<b>Project Scheme Variations</b>	<b>Retail</b> (square feet)	<b>Athletic Club</b> (square feet)	<b>Office</b> (square feet)	<b>Senior Housing</b> (units)	<b>Hotel</b> (rooms)	<b>Open Space w/Public Easement</b> (acres)
Option A(1)	138,700	---	292,000	143	180	1.55
Option A(2)	138,700	---	292,000	143	250	1.55
Option B(1)	102,300	60,000	292,000	143	180	1.55
Option B(2)	102,300	60,000	292,000	143	250	1.55

Note: Option A(1) is specifically addressed in this memorandum.

Options B(1) and B(2) include a 60,000 square foot athletic club and overall more retail (including the athletic club) compared to Options A(1) and A(2). Options A(2) and B(2) would increase the number of hotel rooms to 250 compared to the 180 rooms included in Options A(1) and B(1).

Based on a level of service analysis completed by *Fehr & Peers* in April 2012, Option A(1) would not result in new or more substantial impacts to intersections and freeway segments than disclosed in the certified 2009 Final EIR (refer to Attachment A and **Section 2.1** of this memorandum for the level of service analysis). Option A(2), which would have more hotel rooms than Option A(1), would result in a new significant level of service impact that was not previously disclosed in the certified 2009 Final EIR. The new significant level of service impact would be at the intersection of Stevens Creek Boulevard and Interstate 280 (I-280) Ramps in the PM peak hour. Compared to the project schemes analyzed in the certified 2009 Final EIR and the 2012 Addendum, the Option A(2) site plan proposes a greater amount of retail and hotel uses that would use this intersection. Since Options B(1) and B(2) propose even greater amounts of development than Option A(2), Options B(1) and B(2) would also result in a new significant level of service impact at the Stevens Creek Boulevard and I-280 Ramps intersection. Because these modifications would result in a new significant transportation impact, Options A(2), B(1), and B(2) are not further considered or evaluated in this memorandum. Option A(1) is the only one of the four schemes variations in Table 2 that would not result in a new significant traffic impact.

The conceptual site plan for Option A(1) is shown in Figure 1 and is similar to the conceptual site plans included in the certified 2009 Final EIR and March 2012 Addendum, but the amount of parking garage fronting on Vallco Parkway has been reduced. As a result, the parking garage shown on Figure 1 has a smaller footprint and levels of parking above ground and below ground have been added to accommodate additional parking spaces.



TABULATION		
OFFICE	289,750 SF	
RETAIL	138,700 SF	
HOTEL	180 ROOMS (134,568 SF)	
SENIOR HOUSING	143 UNITS (121,156 SF)	
<b>PARKING 2,131 STALLS</b>		
STREET	91 STALLS	
SURFACE	374 STALLS	
GARAGE 1	1,523 STALLS	
UNDER SENIOR HOUSING	143 STALLS	
<b>TOTAL PARKING</b>	<b>2,131 STALLS</b>	
OFFICE	1,086 STALLS	3.75 / 1000
RETAIL	677 STALLS	5 / 1000
HOTEL	225 STALLS	1.25 / ROOM
HOUSING	143 STALLS	1 / UNIT
<b>TOTAL PARKING REQUIRED</b>	<b>2,131 STALLS</b>	

Source: Kenneth Rodrigues & Partners, Inc., 04-04-12



OPTION A(1)-1

FIGURE 1

## **1.2 Increased Restaurant Percentage**

Planning Commissioners and members of the public identified a desire to include a greater proportion of restaurants in the retail component of the project. The analysis in the certified 2009 Final EIR (as well as the March 2012 Addendum) assumed up to 10 percent of restaurant use in the retail/commercial square footage. Restaurants typically generate more vehicle trips than general retail/commercial uses. A sensitivity analysis was completed by *Fehr & Peers* in April 2012 to determine the maximum percentage of restaurant use that could be allowed under the project schemes considered without resulting in new or more substantial significant environmental impacts than analyzed in the certified 2009 Final EIR. This was assessed by a comparison of the daily average vehicle trips and vehicle trips in and out of the site during each peak hour period. The analysis is included in Attachment A and the results are discussed in **Section 2.2** of this memorandum.

## **1.3 CEQA Environmental Review of Main Street Modifications**

In March 2012, an Addendum to the certified 2009 Final EIR for the Main Street Cupertino project was prepared and reviewed by the City's ERC and Planning Commission. The March 2012 Addendum evaluated several modifications to the previously approved project and found that proposed modifications would not result in new or more substantial significant impacts than disclosed in the certified 2009 Final EIR. The following discussion in **Section 2.0** below addresses whether the subsequently identified Option A(1) listed in Table 1 and/or additional restaurant uses under any of the 2012 schemes would result in environmental impacts greater than those addressed in the certified 2009 Final EIR.

## **2.0 ENVIRONMENTAL IMPACTS OF OPTION A(1) AND INCREASED RESTAURANT USES**

### **2.1 Environmental Impacts of Option A(1)**

#### **Transportation**

The amount of development under Option A(1) is similar, but less than, that evaluated under 2012 Scheme 1 (refer to Table 3) in the March 2012 Addendum. 2012 Scheme 1, unlike Option A(1), includes the development of a 60,000 square foot athletic club in lieu of 60,000 square feet of retail space and 120 market-rate apartment units<sup>1</sup> in lieu of 143 senior housing units. The trip generation for 2012 Scheme 1 would be greater than Option A(1) as the athletic club and market-rate apartments uses would generate more vehicle trips than general retail uses and senior housing.

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<sup>1</sup> The trip generation evaluated for 2012 Scheme 1, therefore, is conservative in that 120 market-rate apartments would generate more peak hour traffic than 143 senior apartments.

**Table 3: Summary of Development and Trip Generation for 2012 Scheme 1 and Option A(1)**

	Land Uses					Average Daily Trips	AM Peak Hour			PM Peak Hour		
	Retail (sf)	Office (sf)	Residential (units)		Hotel (rooms)		In	Out	Total	In	Out	Total
			Senior	Market- Rate								
2012 Scheme 1*	138,700*	292,000	---	120*	180	10,938	527	203	730	476	686	1,162
Option A(1)	138,700	292,000	143	---	180	10,642	514	141	655	411	682	1,093

*Note:* \* Under 2012 Scheme 1, a 60,000 square foot athletic club could be developed in lieu of 60,000 square feet of retail space and the 120 market-rate apartments could be developed in lieu with 143 senior units. The trip generation for 2012 Scheme 1 evaluated by *Fehr & Peers* conservatively assumed the development of an athletic club and market-rate housing. These uses would generate the most vehicle trips. At the March 27, 2012 Planning Commission meeting, the project applicant indicated that market-rate apartments are no longer proposed on the site.

Level of Service Impacts

A level of service analysis for Option A(1) was completed and is included in Attachment A. This level of service analysis considered the trip generation, trip assignment, and trip distribution anticipated for the Option A(1) site plan.

*Study Intersections*

As disclosed in the certified 2009 Final EIR, implementation of the Main Street Cupertino project would result in significant impacts to four study intersections. Option A(1) would result in the same level of service impacts at the same four intersections as disclosed in the certified 2009 Final EIR. A comparison of the level of service and delay for the significantly impacted intersections under project conditions are summarized in Table 4. Option A(1) would not result in new significant or more substantial significant impacts to study intersections than disclosed in the certified 2009 Final EIR.

*Freeway Segments*

As disclosed in the certified 2009 Final EIR, implementation of the Main Street Cupertino project would result in significant impacts to six freeway segments. Option A(1) would significantly impact the same freeway segments during the same peak period as disclosed in the certified 2009 Final EIR. A comparison of the densities of the significantly impacted freeway segments operating at LOS F under project conditions is provided in Table 5. Option A(1) would not result in new significant or more substantial impacts to freeway segments than disclosed in the certified 2009 Final EIR.

<b>Table 4: Comparison of Project Conditions at Significantly Impacted Intersections</b>					
Intersection	Peak Hour	2008	Project Schemes		
		Background Conditions	2008 Scheme 1	2012 Scheme 1	2012 Option A(1)
		Delay <sup>1</sup> /Level of Service			
3. Homestead Road/ Lawrence Expressway*	AM	86.4/F	89.8/F	89.5/F	89.2/F
	PM	111.1/F	118.6/F	118.6/F	118.3/F
8. Wolfe Road/ Vallco Parkway	PM	53.1/D	68.4/E	66.2/E	65.7/E
21. Lawrence Expressway/ I-280 SB Ramps*	AM	53.7/D-	61.1/E	61.5/E	60.4/E
	PM	54.2/D-	69.6/E	71.2/E	70.8/E
26. Bollinger Road/ Lawrence Expressway*	PM	54.7/D-	55.3/E+	---	---

Notes: \* Designated CMP intersection.  
<sup>1</sup> Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 Highway Capacity Manual, with adjusted saturation flow rates to reflect Santa Clara County conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented.

<b>Table 5: Comparison of Significantly Impacted Freeway Segments Operating at LOS F Under Project Conditions</b>						
From	To	Peak Hour	2008	Project Conditions By Scheme		
			Existing Conditions	2008 Scheme 1	2012 Scheme 1	2012 Option A(1)
			Density <sup>1</sup>			
<b>Eastbound I-280</b>						
Lawrence Expressway	Saratoga Avenue	PM	98	101	101	101
Saratoga Avenue	Winchester Boulevard	PM	86	88	88	88
Winchester Boulevard	I-880	PM	104	106	107	107
<b>Westbound I-280</b>						
I-880	Winchester Boulevard	AM	94	---	96	96
		PM	73	74	75	---
Winchester Boulevard	Saratoga Avenue	AM	65	66	66	66
Saratoga Avenue	Lawrence Expressway	AM	74	75	76	76

Note: <sup>1</sup> Measured in passenger cars per mile per lane. Density is calculated by using the travel speed from the adjacent segment as well as the volume (flow) from the adjacent segment adjusted by the volume entering/exiting the freeway at the interchange.

## Parking Impacts

Table 6 summarizes the parking supply and demand for Option A(1) based on the City's Municipal Code, ITE, and Urban Land Institute (ULI) requirements. As shown in Table 6, Option A(1) would have a surplus of parking of at least 231 parking spaces compared to the projected demand.

While Option A(1) provides more parking than the overall estimated demand, there may be locational shortages in certain areas of the site similar to what is discussed in the March 2012 Addendum. Locational shortages in parking for the project are not considered a significant environmental impact.

Option A(1) would not result in new or more substantial significant parking impacts than disclosed in the certified 2009 Final EIR and March 2012 Addendum.

	<b>Proposed Parking Supply</b>	<b>Parking Demand</b>		
		<b>City Municipal Code<sup>1</sup></b>	<b>ITE<sup>2</sup></b>	<b>ULI Shared Parking<sup>3</sup></b>
Option A(1)	2,131	1,900	1,475	1,367

**Notes:** <sup>1</sup> The City's Municipal Code parking requirement assumes no shared parking between uses on-site. <sup>2</sup> The ITE parking requirement is the sum of the average peak parking rates for all uses and does not account for time of day/day of week variations when the individual use peak occurs or any sharing of parking spaces. <sup>3</sup> The ULI parking requirement reflects shared parking facilities based on the different parking characteristics of each land uses. The ULI shared parking demand reflects the temporal distribution of parking demand by hour, day, and month.

**Sources:** 1) City of Cupertino. City of Cupertino Municipal Code: Chapter 19.100 Parking Regulations, 2005; 2) Parking Generation (Institute of Transportation Engineers (ITE), 4<sup>th</sup> Edition); and 3) Shared Parking, Urban Land Institute (ULI), 2005.

## Other Transportation Impacts

Because Option A(1) proposes a similar amount of development and would generate fewer vehicle trips compared to what was analyzed in the certified 2009 Final EIR and 2012 Addendum, Option A(1) would have similar pedestrian, bicycle, and transit facilities, neighborhood traffic, and construction traffic impacts as disclosed in the certified 2009 Final EIR and March 2012 Addendum.

**Conclusion for Transportation Impacts:** Option A(1) would not result in new or more substantial significant transportation impacts than those disclosed in the certified 2009 Final EIR.

## Air Quality

The air quality impacts of the project are associated with its operational emissions (including vehicle trips to and from the site), construction-related emissions (including construction-related health risks), and exposure of future residences to toxic air contaminants from nearby roadways and stationary sources.

### Operational Emissions

Operational emissions include mobile and area source emissions, including vehicle emissions from trips to and from the site and evaporative emissions from architectural coatings (e.g., paint). As discussed previously, the development proposed under Option A(1) would be within the development assumptions for 2012 Scheme 1 and would result in fewer vehicle trips (see Table 3). Option A(1) would result in less operational emissions from mobile sources (e.g., vehicle trips) than disclosed for 2012 Scheme 1 in the March 2012 Addendum. The March 2012 Addendum concluded that the 2012 Scheme 1 would not result in new or more substantial operational emissions than the project analyzed in the certified 2009 Final EIR. Therefore, operational air quality impacts for Option A(1) would not result in new or more substantial operational emissions than those disclosed in the certified 2009 Final EIR.

### Construction-Related Emissions

Construction-related emissions include exhaust, fugitive dust, and off-gas emissions from construction activities such as hauling material off-site, grading (including soil excavation), and paving. Option A(1) proposes a similar amount of development and construction activities as 2012 Scheme 1. Compared to 2012 Scheme 1, Option A(1) would involve less soil excavation and soil off-haul (refer to Table 7). Option A(1), therefore, would result in less construction-related air quality emissions of criteria pollutants and construction dust than disclosed for 2012 Scheme 1 in the March 2012 Addendum. The March 2012 Addendum concluded that 2012 Scheme 1 would not result in a significant construction-related emissions impact. Therefore, Option A(1) would also not result in a significant construction-related emissions impact.

	<b>Table 7: Summary of Soil Cut, Fill, and Off-Haul for 2012 Scheme 1 and Option A(1)</b>		
	<b>Estimated Amount (Cubic Yards)</b>		
	<b>Cut</b>	<b>Fill</b>	<b>Off-Haul</b>
2012 Scheme 1	127,500	32,500	95,000
Option A(1)	109,300	35,000	74,300

### Construction-Related Health Risks

Diesel particulate and PM<sub>2.5</sub> emissions from mobile construction equipment for Option A(1) would be less than 2012 Scheme 1 because less soil is required to be excavated and hauled from the site (refer to Table 7 above). As described in the March 2012 Addendum, construction-related health risk impacts to nearby sensitive receptors under 2012 Scheme 1 would be less than significant. The construction-related health risks of Option A(1), therefore, would also be less than significant.

### Toxic Air Contaminants Impacts to the Project

The toxic air contaminants (TACs) impacts (including health risks for new residents associated with existing TAC sources) of Option A(1) would be the same as what was disclosed in the 2012 Addendum because the location of future sensitive receptors on-site (i.e., residences) are not closer to existing TAC sources than was assumed in the 2012 Addendum. The 2012 Addendum concluded that the project would not result in a significant TAC impact. Option A(1), therefore, would also not result in a significant TAC impact.

***Conclusion for Air Quality Impacts:*** Option A(1) would not result in new or more substantial significant air quality impacts than those disclosed in the certified 2009 Final EIR.

### **Greenhouse Gas Emissions**

A project's greenhouse gas emissions include emissions from transportation, area sources, electricity use, natural gas use, water use, wastewater generation, and solid waste generation. Option A(1) proposes a similar amount of development as 2012 Scheme 1 and would result in fewer vehicle trips (refer to Table 3). Therefore, the greenhouse gas emissions under Option A(1) would be less than the greenhouse gas emissions for 2012 Scheme 1 disclosed in the March 2012 Addendum. As discussed in the March 2012 Addendum, 2012 Scheme 1 would result in fewer greenhouse gas emissions than the project analyzed in the certified 2009 Final EIR. For these reasons, Option A(1) would not result in new or more substantial significant greenhouse gas emissions than those disclosed in the certified 2009 Final EIR.

***Conclusion for Greenhouse Gas Emissions Impacts:*** Option A(1) would not result in new or more substantial significant greenhouse gas emissions than those disclosed in the certified 2009 Final EIR.

### **Other Impacts**

The conceptual site plan of Option A(1) shown in Figure 1 is slightly different than the conceptual site plan for 2012 Scheme 1 in the 2012 Addendum in that the location of uses at the east and west ends of the project site have shifted. All of the building heights for the different uses would be the same as under 2012 Scheme except two retail buildings (one south of the parking garage and the other on Stevens Creek Boulevard) under Option A(1) would be one story taller than assumed for retail building in 2012 Scheme 1 (50 feet instead of 35 feet) and the parking garage under Option A(1) would be one level taller than the parking garage in 2012 Scheme 1 (60 feet instead of 40 feet).

All buildings, however, would be within the maximum building height of 60 feet allowed by the Heart of the City Specific Plan. The final design of the revised project would be evaluated for consistency with the City's standards as a part of Design Review (Architectural and Site Approval) process required for approval of the specific project design, if the revised project is approved. This review considers the relationship of the proposed buildings with the surrounding land uses and the streets, compliance with adopted height limits, setbacks, architectural, and landscaping design guidelines (including those in the South Vallco Park Master Plan), and the overall quality and compatibility of the building materials and architecture with the surrounding area. With implementation of the City's Design Review process, the difference in building heights under Option A(1) would not result in a new or more substantial significant impact to the visual character of the site and surroundings than disclosed in the certified 2009 Final EIR.

Given the similarities between the amount of development and site plan of Option A(1) and 2012 Scheme 1, Option A(1) would result in similar impacts as 2012 Scheme 1 in regards to aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, mineral resources, noise and vibration, population and housing, public services, recreation, and utilities and service systems.

***Conclusion for Other Impacts:*** Option A(1) would result in the same or lesser environmental impacts than disclosed in the March 2012 Addendum for 2012 Scheme 1 and the other environmental impacts would not be greater than those disclosed in the certified 2009 Final EIR.

## **2.2 Environmental Impacts of Increased Restaurant Uses**

As discussed in **Section 1.2**, a sensitivity analysis was completed to determine the maximum percentage of restaurant use that could be allowed under the project without resulting in new or more substantial significant environmental impacts than analyzed in the certified 2009 Final EIR. The restaurant sensitivity analysis is included in Attachment A and the results are summarized in Table 8.

The increase in proportion of restaurants in the retail component of the project, as outlined in Table 8, would primarily affect the project's traffic, air quality, and greenhouse gas emissions. The environmental impacts of increasing the assumed percentage of restaurant uses on-site are discussed below.

**Table 8: Summary of the Retail Component of the Proposed Project and Trip Generation**

	Commercial Square Footage		% of Restaurant Use Assumed in Commercial Square Footage	Average Daily Trips of Entire Project (including other uses)	AM Peak Hour Trips			PM Peak Hour Trips		
	General Commercial	Restaurant			In	Out	Total	In	Out	Total
<b>Project Schemes Evaluated in the certified 2009 Final EIR and March 2012 Addendum Assuming 10% Restaurant Use</b>										
2008 Scheme 1	135,000	15,000	10	13,751	423	199	622	591	673	1,264
2008 Scheme 2	131,850	14,650	10	10,692	450	133	583	408	628	1,036
2012 Scheme 1	77,900	7,870	10	10,938	527	203	730	476	686	1,162
2012 Scheme 2	84,200	9,220	10	9,821	501	171	672	389	623	1,012
<b>2012 Project Schemes and Variants with the Maximum Restaurant Percentage</b>										
2012 Scheme 1	70,030	8,670	11	10,918	529	201	730	470	689	1,159
• Variant 1a	59,230	10,470	15	10,546	537	181	729	437	665	1,102
• Variant 1b	66,630	12,070	15	10,923	543	187	730	456	682	1,138
• Variant 3a(1)	70,430	8,270	11	11,178	545	186	730	459	689	1,148
• Variant 3a(2)	115,830	22,870	16	11,517	541	188	730	458	687	1,145
• Option A(1)	120,330	18,370	13	10,937	532	159	691	429	689	1,118
• Variant 3b	62,030	7,670	11	10,888	546	185	730	446	676	1,122
2012 Scheme 2	74,980	17,220	19	10,221	532	197	729	408	638	1,046
• Variant 2a	65,980	17,220	21	9,952	532	198	730	397	625	1,019

## **Transportation**

### Level of Service Impacts

Restaurants typically generate more vehicle trips than general commercial uses. Increasing the proportion of restaurants in the retail component of the project would increase the project's trip generation (i.e., average daily trips and peak hour trips). To determine the project's maximum allowable restaurant square footage (which is identified in Table 8), the amount of retail space was incrementally reduced and analyzed as restaurant space until the number of trips generated by each project scheme was no greater than what was previously analyzed and/or would not result in a new significant level of service impact. For this reason, the increase in proportion of restaurants in the retail component of the project as outlined in Table 8 would not result in new or more substantial significant level of service impacts than disclosed in the certified 2009 Final EIR.

### Parking Impacts

Parking demand would also rise with an increase in the restaurant proportion on-site. Table 9 below summarizes the proposed parking supply for each project scheme and the parking demand assuming the increase in restaurant proportion (as outlined in Table 8) based on the City's Municipal Code, ITE, and ULI requirements.

The increase in restaurant uses on-site would result in the same locational parking shortages as discussed in the March 2012 Addendum. Locational shortages in parking for the project are not considered a significant environmental impact.

The increase in restaurant uses on-site outlined in Table 9 would not result in new or more substantial significant parking impacts than disclosed in the certified 2009 Final EIR and March 2012 Addendum.

### Other Transportation Impacts

While the percentage of restaurant uses on-site would increase over what was analyzed in the certified 2009 Final EIR and March 2012 Addendum, the total amount of development and trip generation for the project would not exceed what was analyzed previously in the certified 2009 Final EIR and March 2012 Addendum. The March 2012 Addendum concluded that the modified project would not result in new or more substantial significant impacts regarding pedestrian, bicycle, and transit facilities, neighborhood traffic, and construction traffic than disclosed in the certified 2009 Final EIR. For this reason, the increase in percentage of restaurant uses outlined in Table 8 would also not result in new or more substantial significant impacts regarding pedestrian, bicycle, and transit facilities, neighborhood traffic, and construction traffic impacts than disclosed in the certified 2009 Final EIR.

**Conclusion for Transportation Impacts:** Increasing the proportion of restaurant uses in the retail component of the project, as outlined in Table 8, would not result in new or more substantial significant transportation impacts than those disclosed in the certified 2009 Final EIR.

<b>Table 9: Summary of Parking Supply and Demand for Increased Restaurant Uses</b>				
	<b>Proposed Parking Supply</b>	<b>Parking Demand</b>		
		<b>City Municipal Code<sup>1</sup></b>	<b>ITE<sup>2</sup></b>	<b>ULI Shared Parking<sup>3</sup></b>
2012 Scheme 1	1,956*	2,001	1,725	1,517
• Variant 1a	2,191	1,882	1,657	1,473
• Variant 1b	2,159	1,922	1,681	1,493
• Variant 3a(1)	2,159	1,961	1,714	1,498
• Variant 3a(2)	1,956	1,779	1,495	1,333
• Option A(1)	2,131	1,923	1,526	1,390
• Variant 3b	2,191	1,937	1,710	1,495
2012 Scheme 2	2,074	1,995	1,661	1,467
• Variant 2a	2,107	1,964	1,656	1,462

**Notes:**  
 \* Under 2012 Scheme 1, 1,956 parking spaces would be provided if 60,000 square feet of additional retail space and 120 market-rate apartments are constructed. Alternatively, if a 60,000 square foot athletic club and 143 senior units are constructed, 2,159 parking spaces would be provided.  
<sup>1</sup> The City's Municipal Code parking requirement assumes no shared parking between uses on-site.  
<sup>2</sup> The ITE parking requirement is the sum of the average peak parking rates for all uses and does not account for time of day/day of week variations when the individual use peak occurs or any sharing of parking spaces.  
<sup>3</sup> The ULI parking requirement reflects shared parking facilities based on the different parking characteristics of each land uses. The ULI shared parking demand reflects the temporal distribution of parking demand by hour, day, and month.  
**Sources:** 1) City of Cupertino. City of Cupertino Municipal Code: Chapter 19.100 Parking Regulations, 2005; 2) Parking Generation (Institute of Transportation Engineers (ITE), 4<sup>th</sup> Edition); and 3) Shared Parking, Urban Land Institute (ULI), 2005.

### Air Quality

In terms of air quality, increasing the proportion of restaurant uses in the retail component on the site would affect the project's operational emissions only. The project's estimated construction-related and TAC impacts would remain the same because the amount of development proposed and the location of uses remains the same as analyzed in the March 2012 Addendum.

While the increase in restaurant uses on-site would affect the project's trip generation, the amount of daily trips would not exceed what was analyzed in the certified 2009 Final EIR for 2008 Scheme 1. Therefore, the increase in proportion of restaurant uses as outlined in Table 8 would result in less operational emissions from mobile sources (e.g., vehicle trips) than disclosed in the certified 2009 Final EIR.

***Conclusion for Air Quality Impacts:*** Increasing the proportion of restaurant uses in the retail component of the project, as outlined in Table 8, would not result in new or more substantial significant air quality impacts than those disclosed in the certified 2009 Final EIR.

### **Greenhouse Gas Emissions**

Increasing the restaurant uses on-site would result in similar greenhouse gas emissions because the amount of development, utility use and services, and number of average daily trips from the project (refer to Table 8) would be similar to what was analyzed in the March 2012 Addendum. The March 2012 Addendum concluded that the modified project would not result in new or more substantial greenhouse gas emissions impacts than disclosed in the certified 2009 Final EIR. For this reason, increasing the proportion of restaurant uses on-site, as outlined in Table 8, would also not result in new or more substantial significant greenhouse gas emissions than disclosed in the certified 2009 Final EIR.

***Conclusion for Greenhouse Gas Impacts:*** Increasing the proportion of restaurant uses in the retail component of the project, as outlined in Table 8, would not result in new or more substantial significant greenhouse gas emission impacts than those disclosed in the certified 2009 Final EIR.

### **Other Impacts**

The increase in proportion of restaurant uses in the retail component of the project would result in similar impacts as disclosed in the 2012 Addendum in regards to aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, mineral resources, noise and vibration, population and housing, public services, recreation, and utilities and service systems, because these resources are not affected by the change in proportion of restaurant uses to general commercial uses on-site.

***Conclusion for Other Impacts:*** Increasing the proportion of restaurant uses in the retail component of the project, as outlined in Table 8, would result in the same or lesser environmental impacts as disclosed in the March 2012 Addendum for 2012 Scheme 1 and the other environmental impacts would not be greater than those disclosed in the certified 2009 Final EIR.

## **3.0 REVISIONS TO THE MARCH 2012 ADDENDUM**

Based on the analysis completed for Option A(1), as discussed in this memorandum, Section 2.8 of the 2012 Addendum will be updated to include Option A(1) as a 2012 scheme variant that would not result in environmental effects greater than disclosed in the certified 2009 Final EIR. In other words, Option A(1) would represent essentially similar environmental effects and none of the conditions described in Section 15162 of the CEQA Guidelines that would require preparation of a subsequent EIR would be met.

In addition, based upon a review of trip assignment and trip distribution, Variant 3a(2) as identified in the 2012 Addendum would result in a new significant level of service impact that was not

previously disclosed in the certified 2009 Final EIR. The amount of development allowed under Variant 3a(2) has been revised to be within the impacts analysis completed in the certified 2009 Final EIR. To avoid a new significant project transportation impact, development under Variant 3a(2) would be reduced to 138,700 square feet of retail uses, 265,000 square feet of office uses, and a 250 room hotel.

#### **4.0 REVISIONS TO 2012 SCHEME 1 CONCEPTUAL SITE PLAN**

In response to the City's recommendations to underground more parking, locate the 0.75-acre park at a more interior location on-site, and shift more retail uses to front onto Stevens Creek Boulevard, the applicant revised the conceptual site plan for 2012 Scheme 1, as shown in Figure 2. The amount of development proposed under 2012 Scheme 1 in the revised conceptual site plan is the same as analyzed in the March 2012 Addendum.

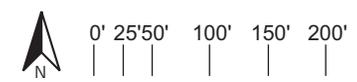
The primary differences between the revised conceptual site plan shown in Figure 2 and the initial conceptual site plan included in the March 2012 Addendum are that the location of uses at the east and west end of the project site have shifted, garage 1 in the revised conceptual site plan would be two stories taller (60 feet instead of 40 feet) with an additional level of below ground parking, and garage 2 is no longer proposed in the revised conceptual site plan. The increased height for garage 1 would be within the maximum building height of 60 feet allowed by the Heart of the City Specific Plan. The environmental impact that would be different with the revised conceptual site plan is aesthetics. All other environmental impacts would be the same as disclosed for 2012 Scheme 1 in the March 2012 Addendum.

The final design of the revised project would be evaluated for consistency with the City's standards as a part of Design Review (Architectural and Site Approval) process required for approval of the specific project design, if the revised project is approved. This review considers the relationship of the proposed buildings with the surrounding land uses and the streets, compliance with adopted height limits, setbacks, architectural, and landscaping design guidelines (including those in the South Valco Park Master Plan), and the overall quality and compatibility of the building materials and architecture with the surrounding area. With implementation of the City's Design Review process, the difference in the garage height and the shifting of uses on-site would not result in a new or more substantial significant impact to the visual character of the site and surroundings than disclosed in the certified 2009 Final EIR.



TABULATION		
OFFICE	292,000 SF	
RETAIL	78,500 SF	
HOTEL	180 ROOMS (134,568 SF)	
SENIOR HOUSING	143 UNITS (121,156 SF)	
ATHLETIC CLUB	60,000 SF	
<b>PARKING</b>		
2,392 STALLS		
STREET	91 STALLS	
SURFACE	335 STALLS	
GARAGE 1	1,523 STALLS	
BELOW SENIOR HOUSING	143 STALLS	
BELOW ATHLETIC CLUB	300 STALLS	
<b>TOTAL PARKING</b>	<b>2,392 STALLS</b>	
OFFICE	1,086 STALLS	3.75 / 1000
RETAIL	638 STALLS	8 / 1000
HOTEL	225 STALLS	1.25 / ROOM
HOUSING	143 STALLS	1 / UNIT
ATHLETIC CLUB	300 STALLS	5 / 1000
<b>TOTAL PARKING REQUIRED</b>	<b>2,392 STALLS</b>	

Source: Kenneth Rodrigues & Partners, Inc., 04-13-12



REVISED 2012 SCHEME 1 CONCEPTUAL SITE PLAN

FIGURE 2

## 5.0 REFERENCES

City of Cupertino. Addendum to the Final Environmental Impact Report For the Main Street Cupertino Project (SCH# 2008082058). March 22, 2012.

---. Final Environmental Impact Report for the Main Street Cupertino Project (SCH# 2008082058). January 2009.

Fehr & Peers. Memorandum: Main Street Cupertino Options A and B. April 18, 2012.

### **ATTACHMENT A: Fehr and Peers**

## MEMORANDUM

Date: April 18, 2012

To: Kristy Weis, David J. Powers

From: Todd Henry and Jane Bierstedt, P.E.

**Subject: Main Street Cupertino – Options A and B**

*SJ11-1292.01*

The purpose of this memorandum is to present the trip generation and parking forecasts prepared for the revised land use options being considered for the Main Street Cupertino Project located at Finch Avenue and Stevens Creek Boulevard in Cupertino, California (herein the "Proposed Project"). The Proposed Project was previously evaluated in a transportation impact analysis (TIA) and environmental impact report (EIR) certified in 2008. Since the certification of the EIR, the project applicant modified the project's proposed site plan and land use mix with two development schemes and subsequent variants, as summarized in **Table 1**. The scenarios under 2012 Scheme 1 and 2012 Scheme 2 were analyzed in an addendum to the EIR prepared in March 2012. The City and the applicant are now considering two additional options – Option A and Option B – and two variants on those options.

The purpose of this analysis is to evaluate whether or not the revised land uses would potentially result in new or more severe traffic impacts than those disclosed in the 2008 TIA and EIR and 2012 EIR Addendum. In summary:

- Options A(1) and B(1) generate fewer vehicle trips on a daily basis and during the AM and PM peak hours than any scheme or variant analyzed to date. Although Option B(1) generates fewer total trips on a daily basis and during the AM and PM peak hour, the PM peak hour inbound/outbound trip split in this option results in more outbound vehicle trips from the site than were previously analyzed. Therefore, Option B(1) may result in new or substantially different traffic impacts. As discussed later, Option A1 does not generate new or substantially different traffic impacts than were previously disclosed.
- Option B(2) generates fewer vehicle trips on a daily basis and during the PM peak hour when compared to the schemes and variants analyzed to date; however, this variant generates 18 more AM peak hour vehicle trips than previously analyzed. It also generates more outbound PM peak hour trips, similar to Option B(1). Thus, this Option could potentially generate new or more severe traffic impacts than those identified to date.
- Option A(2) results in a new project impact at Stevens Creek Boulevard/I-280 Southbound Ramp during the PM peak hour. This impact was previously identified as a cumulative impact.

This memorandum also discusses the results of a trip generation sensitivity analysis conducted for the project schemes and options to identify the amount of retail space that could be occupied by full-service restaurant uses in lieu of general retail commercial uses without additional traffic analysis<sup>1</sup>. In summary:

- In 2012 Scheme 1, if a 60,000-square foot (sf) athletic club is developed, approximately 7,500 sf of general retail space could be developed for full service restaurant uses under the proposed 10 percent maximum. If the athletic club square footage is used for general retail space (Variant 3a(2)), then approximately 13,800 square feet of the commercial space could be developed as full-service restaurant space.
- Under Variants 1a, 1b, and 3a(2), between 3,500 and 9,000 additional square feet of general commercial space could be used for full-service restaurant uses – for a total of between 11,900 sf and 22,870 sf of restaurant uses on the site. Under Scheme 1c or Variants 3a(1) and 3b, then only about 600 additional square footage of restaurant space could be developed in lieu of general retail – for a total of between 7,600 sf and 8,600 sf of full-service restaurant space on the site.
- Under 2012 Scheme 2 (Scheme 2b) and Variant 2a, an additional 8,000 sf and 8,900 sf of general commercial space could be developed as full-service restaurant uses – for a total of approximately 17,200 sf of restaurant uses on the site under both the Scheme and the Variant.
- Under Option A(1), approximately 18,000 sf of the general commercial space could be occupied by restaurant uses.

## LAND USE DESCRIPTIONS

**Table 1** presents the two new options and two new variants on the Proposed Project's land uses and compares them to the schemes and variants analyzed in the 2008 EIR and 2012 EIR Addendum. In general, the Proposed Project includes the following land uses:

- General commercial space occupied by a mix of retail uses, restaurants, "incubator"-type space for smaller businesses, and a potential athletic club – up to 160,300 sf
- General office space – up to 292,000 sf
- Residential – up to 143 senior housing units or 120 market-rate apartments
- Hotel – 180-rooms or 250-rooms

This analysis assumes that the general commercial space contains a mix of commercial uses, including general retail shops, restaurants, coffee shops, and anchor stores, similar to other shopping centers and malls. Some commercial uses, particularly full-service restaurants, generate more traffic than other general retail uses; however, by assuming a mix of general commercial uses, the analysis accounts for this. The trip generation rates applied to the retail square footage, as discussed later, is based on national surveys of shopping centers that contain a mix of commercial uses (including restaurants) that generate peak

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<sup>1</sup> The original development agreement limited the amount of restaurant space on the site to no more than 10 percent of the general commercial square footage proposed due to the traffic analysis assumptions.

traffic at different times of day and visitors that go to multiple places on the site (e.g. a visitor to a retail shop also stops for coffee, or a lunch guest also goes into a shop, etc.).

A higher intensity of restaurants than a typical shopping center could generate a greater number of trips. Therefore, the City placed a 10 percent “cap” on the amount of general commercial space that could be occupied by restaurant uses. Thus, **Table 1** includes a column for “Maximum Restaurant” representing the amount of general commercial space that could accommodate either general retail or full-service restaurants without exceeding the number of trips analyzed for the commercial space, as discussed later in this memorandum.

Table 1. Main Street Cupertino Land Use Plan Summary

Scheme/Option/Variant	Land Uses								
	General Commercial Space			Office (sf)	Residential (units)		Hotel (rooms)	Open Space (ac)	Parking Spaces
	Retail (sf)	Maximum Restaurant <sup>2,3</sup>	Athletic Club (sf)		Senior	Market-Rate			
2008 Scheme 1	150,000	10%	145,000	100,000	160	0	150	1.63	1,520
2008 Scheme 2	146,500	10%	0	205,000	160	0	250	1.63	1,830
Scheme 1 (Scheme 1c) <sup>1</sup>	78,700	11%	60,000	292,000	0	120	180	1.55	1,956
Variant 1a	69,700	15%	60,000	292,000	143	0	180	1.55	2,191
Variant 1b	78,700	15%	60,000	292,000	143	0	180	1.55	2,159
Variant 3a(1)	78,700	11%	60,000	289,000	143	0	250	1.55	2,159
Variant 3a(2)	138,700	16%	0	265,000	0	0	250	1.55	1,956
Variant 3b	69,700	11%	60,000	292,000	143	0	250	1.55	2,191
Scheme 2 (Scheme 2b)	92,200	19%	0	292,000	143	120	180	1.55	2,074
Variant 2a	83,200	21%	0	292,000	143	120	180	1.55	2,107
Option A(1)	138,700	13%	0	292,000	143	0	180	1.55	2,131
Option A(2)	138,700	10%	0	292,000	143	0	250	1.55	2,131
Option B(1)	102,300	10%	60,000	292,000	143	0	180	1.55	2,392
Option B(2)	102,300	10%	60,000	292,000	143	0	250	1.55	2,392

Notes:

(1) Under 2012 Scheme 1, the 60,000 sf athletic club can be replaced with 60,000 sf of additional retail space; and the 120 market-rate apartments can be replaced with 143 senior units. If 60,000 sf of additional retail and 120 market-rate apartments are constructed, 1,956 parking spaces would be provided. If a 60,000 sf athletic club and 143 senior housing units were constructed instead, 2,159 parking spaces would be provided.

(2) Assumes that Market Rate Housing is constructed to 105 units with additional restaurant space.

(3) Restaurant uses would also generate higher parking demand; therefore, the parking supply shown in this table may need to be adjusted to reflect an increased restaurant occupancy of the commercial space.

Source: David J. Powers, April 2012; Fehr & Peers, 2012.

### TRIP GENERATION

Trip generation forecasts for the Proposed Project land uses were developed using the Institute of Transportation Engineers (ITE) *Trip Generation, 8<sup>th</sup> Edition*<sup>2</sup>. Where appropriate, trip reductions for the mix

<sup>2</sup> The amount of traffic generated by the two proposed schemes for the 2008 TIA and EIR were estimated using rates published in *Trip Generation, 7<sup>th</sup> Edition* (Institute of Transportation Engineers, 2002). The original trip generation estimates for the health club/athletic portion of the site were based on trip generation data specifically for Lifetime Fitness Centers. The revised project

of uses on the site and nearby bus service were applied according to the Santa Clara Valley Transportation Authority *Transportation Impact Analysis Guidelines* (VTA Guidelines). For this analysis, trip generation rates for shopping center were applied to the space proposed for shops and “incubator”-type uses and athletic club rates were used for the proposed athletic club space. This results in a greater number of trips, since the incubator-type uses would likely generate trips at a lower rate similar to the office uses on the site.

**Table 2** provides a summary of the total net new trips associated with the land use schemes evaluated in the original TIA and the proposed modifications. Detailed trip generation tables separating trip generation by land use are attached. Red cells in the table indicate the maximum number of trips for each land use comparison set (e.g., 2008 Scheme 1 versus 2012 Scheme 1) by trip designation (e.g., AM Outbound, PM Total).

Table 2. Main Street Cupertino Trip Generation Summary

Scheme/Option/Variant	Weekday	AM Peak-Hour Trips			PM Peak-Hour Trips		
	Trips	In	Out	Total	In	Out	Total
2008 Scheme 1	13,751	423	199	622	591	673	1,264
2008 Scheme 2	10,692	450	133	583	408	628	1,036
Scheme 1 (Scheme 1c)	10,938	526	204	730	472	690	1,162
Variant 1a	10,345	523	167	701	425	661	1,086
Variant 1b	10,676	527	170	697	441	676	1,117
Variant 3a(1)	11,154	543	185	727	458	688	1,146
Variant 3a(2)	10,928	505	151	657	424	672	1,096
Variant 3b	10,847	543	182	724	443	676	1,119
Scheme 2 (Scheme 2b)	9,802	501	171	672	382	630	1,012
Variant 2a	9,490	497	168	665	367	615	982
Option A(1)	10,642	514	141	655	411	682	1,093
Option A(2)	11,144	533	155	689	429	697	1,126
Option B(1)	11,486	537	177	714	479	716	1,195
Option B(2)	11,988	557	192	748	497	731	1,228

Source: Fehr & Peers, April 2012

The 2012 schemes would generate between 9,490 (Variant 2a) and 11,988 (Option B2) new daily trips. Between 665 and 748 of these new trips would occur during the AM peak travel hour and between 982 and 1,228 of these new trips would occur during the PM peak travel hour. The 2012 schemes, variants, and options would generate fewer daily and PM peak hour trips compared to 2008 Scheme 1. The 2012 schemes, in general, would all generate more AM peak hour trips than the 2008 schemes. Options A(1), A(2), and B(1) would generate fewer AM peak hour trips than were analyzed in the 2012 EIR Addendum. Option B(2) would generate 18 more AM peak hour trips than were previously analyzed. Options B(1) and B(2) would generate more PM peak hour vehicle trips than were analyzed in 2012, but fewer than were analyzed in 2008.

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description includes a health club/athletic club and not necessarily a Lifetime Fitness Center; therefore, ITE trip generation rates were used for this portion of the project. ITE rates are for a typical health club facility with private ownership, indoor recreational activities and a membership which allows access to the general public.

### Restaurant Sensitivity Analysis

The trip generation for the retail portion of the general commercial space was based on ITE trip generation surveys at shopping centers across the county. The surveyed sites contained a mix of uses, including pad sites with anchor stores and restaurants. Therefore, the Proposed Project site could reasonably accommodate a small percentage of commercial space occupied by restaurant uses without generating more vehicle trips than were analyzed in the 2008 EIR or 2012 EIR Addendum. The 2008 project was approved with a 10 percent cap on square footage to be occupied by restaurants.

A sensitivity analysis was conducted to refine this restaurant cap for the 2012 schemes. For this analysis, it was assumed that up to 10 percent of the retail space could be occupied with full-service restaurants without applying restaurant-specific trip generation rates. After 10 percent were occupied, trips for the additional restaurant square footage were developed using ITE trip generation rates for high-turnover sit-down restaurants. This rate is higher than the rate for general retail, since these restaurants experience higher frequency turn-over and activity, particular during the morning hours if they are open for breakfast. The use of this rate is conservative, because it is based on a type of restaurant that is active throughout the day rather than one that may be open only for lunch or only for dinner.

The amount of retail space was incrementally reduced and analyzed as restaurant space until the number of trips generated by each scheme, variant, or option was no greater than the highest generating scheme (i.e., 2012 Scheme 1). Options A(2), B(1), and B(2) were not analyzed, since more restaurant uses on the site would increase the total number of peak hour trips to a level that could potentially result in a new or substantially different traffic impact. **Table 3** summarizes the resulting restaurant square footages that could be accommodated on the Project site. As shown, depending on the scheme, variant, or option, the site's retail space could include between 10 percent and 21 percent restaurant space before the site would generate more vehicle trips than analyzed in the 2008 EIR and 2012 EIR Addendum.

Table 3. Restaurant Sensitivity Summary

Scheme/Option/Variant	General Retail Space				
	Retail (sf)	Effective Restaurant Space (sf)	Maximum Additional Restaurant Squares	Total Restaurant Space	Percentage for Restaurant
Scheme 1 (Scheme 1c)	78,700	7,870	800	8,670	11%
Variant 1a	69,700	6,970	3,500	10,470	15%
Variant 1b	78,700	7,870	4,200	12,070	15%
Variant 3a(1)	78,700	7,870	400	8,270	11%
Variant 3a(2)	138,700	13,870	9,000	22,870	16%
Variant 3b	69,700	6,970	700	7,670	11%
Scheme 2 (Scheme 2b)	92,200	9,220	8,000	17,220	19%
Variant 2a	83,200	8,320	8,900	17,220	21%
Option A(1)	138,700	13,870	4,500	18,370	13%
Option A(2)	138,700	13,870	0	13,870	10%
Option B(1)	102,300	10,230	0	10,230	10%
Option B(2)	102,300	10,230	0	10,230	10%

## PARKING ANALYSIS

This section presents the results of the parking analysis. This analysis includes a comparison of the proposed parking supply to City Code requirements and to the estimated future parking demand.

Parking demand estimates for the schemes and variants were prepared using ITE *Parking Generation*, the Urban Land Institute's *Shared Parking* guidance, and the City's Municipal Code. The purpose of this comparison is to identify whether or not the Proposed Options would have sufficient parking to meet the expected peak parking demand. A shared parking analysis was also conducted to determine the net reduction in parking supply if all the uses shared the parking spaces.

As shown in **Table 4**, the Proposed Project Schemes, Variants, and Options would all have sufficient parking based on City Code. The proposed parking supply would also be greater than the projected demand on the site by between 323 spaces (Scheme 1c) and 718 spaces (Option B1). The Unshared Parking Demand and Shared Parking Demand columns include a circulation factor for vehicles looking for available parking at peak times; therefore, the site would provide sufficient parking.

Table 4A. Main Street Cupertino Parking Demand Summary – 10% Restaurant Space

Scheme/Option/Variant				
	City Code <sup>1</sup>	Unshared Parking Demand <sup>2</sup>	Shared Parking Demand <sup>3</sup>	Parking Supply
Scheme 1 (Scheme 1c) <sup>1</sup>	1,997	1,558	1,426	1,956
Variant 1a	1,864	1,617	1,438	2,191
Variant 1b	1,900	1,633	1,452	2,159
Variant 3a(1)	1,959	1,709	1,495	2,159
Variant 3a(2)	1,732	1,392	1,279	1,956
Variant 3b	1,934	1,702	1,489	2,191
Scheme 2 (Scheme 2b)	1,954	1,570	1,414	2,074
Variant 2a	1,918	1,554	1,399	2,107
Option A(1)	1,900	1,475	1,367	2,131
Option A(2)	1,970	1,560	1,418	2,131
Option B(1)	1,994	1,674	1,492	2,392
Option B(2)	2,064	1,759	1,543	2,392

Notes:

1. Based on City of Cupertino Municipal Parking Code
2. Based on ITE Parking Generation, 2008
3. Based on ITE Parking Demand, adjusted with time-of-day factors from Urban Land Institute Shared Parking. Assumes that all uses share parking on the site. If office and residential parking is reserved, the demand would be similar to unshared parking demand, since only hotel and retail uses would share a minimal number of parking spaces.

Source: Fehr & Peers, 2012.

Table 4B. Main Street Cupertino Parking Demand Summary – Increased Restaurant Space

Scheme/Option/Variant	City Code <sup>1</sup>	Unshared Parking Demand <sup>2</sup>	Shared Parking Demand <sup>3</sup>	Parking Supply
Scheme 1 (Scheme 1c) <sup>1</sup>	2,001	1,725	1,517	1,956
Variant 1a	1,882	1,657	1,473	2,191
Variant 1b	1,922	1,681	1,493	2,159
Variant 3a(1)	1,961	1,714	1,498	2,159
Variant 3a(2)	1,779	1,495	1,333	1,956
Variant 3b	1,937	1,710	1,495	2,191
Scheme 2 (Scheme 2b)	1,995	1,661	1,467	2,074
Variant 2a	1,964	1,656	1,462	2,107
Option A(1)	1,923	1,526	1,390	2,131
Option A(2)	1,970	1,560	1,418	2,131
Option B(1)	1,994	1,674	1,492	2,392
Option B(2)	2,064	1,759	1,543	2,392

Notes:

1. Based on City of Cupertino Municipal Parking Code
2. Based on ITE Parking Generation, 2008
3. Based on ITE Parking Demand, adjusted with time-of-day factors from Urban Land Institute Shared Parking. Assumes that all uses share parking on the site. If office and residential parking is reserved, the demand would be similar to unshared parking demand, since only hotel and retail uses would share a minimal number of parking spaces.

Source: Fehr & Peers, 2012.

## INTERSECTION IMPACT ANALYSIS

Traffic impacts associated with Options A(1) and A(2) were evaluated to determine whether or not the revised land uses would result in new or more severe traffic impacts than those disclosed in the Proposed Project's 2008 TIA and EIR and 2012 EIR Addendum. Traffic impacts are evaluated using intersection levels of service (LOS)<sup>3</sup> and a freeway segment analysis. This section discusses the LOS operations of the 27 study intersections evaluated in the 2008 studies and identifies both background and cumulative impacts associated with the Proposed Project.

Background Conditions comprise existing traffic volumes plus traffic generated from surrounding development projects that have been approved but are not yet constructed or occupied from the 2008 TIA and EIR traffic analysis. In the 2008 TIA and EIR Background Conditions serve as the basis for identifying project impacts.

Cumulative Conditions were taken from the 2008 studies and represent intersection operations with the addition of traffic from both approved and unoccupied projects and from pending projects in the study area. Cumulative Conditions serve as the basis for identifying cumulative project impacts.

Options B(1) and B(2) were not evaluated at this time because they generate more trips than the other schemes analyzed to date and would likely generate new or more severe impacts than the other schemes.

### Background and Project Conditions Results

Vehicle trips generated by the revised land use assumptions were added to Background Conditions traffic volumes presented in the 2008 TIA and EIR to represent Project Conditions. The Proposed Project's trip distribution to the surrounding roadway network was consistent with the 2008 TIA; however, trip assignment to the project's driveways was adjusted slightly to account for the revised site plan.

**Table 5** presents the intersection LOS calculation results under Background Conditions and Project Conditions for Options A(1) and A(2). The Proposed Project under both options would exacerbate unacceptable operations at the intersection of Homestead Road/Lawrence Expressway (both AM and PM peak hours). The Proposed Project under both options would degrade operations from acceptable to unacceptable LOS at the intersections of Wolfe Road/Vallco Parkway (PM peak hour) and Lawrence Expressway/I-280 Southbound Ramps (both AM and PM peak hours). Option A(2) would result in unacceptable LOS E conditions at Lawrence Expressway/Bollinger Road during the PM peak hour.

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<sup>3</sup> The operations of roadway facilities are described with the term level of service. Level of Service (LOS) is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, representing congestion-free conditions, to LOS F, when volumes exceed capacity and stop-and-go conditions occur. LOS E represents "at-capacity" operations.

Table 5: Intersection Levels Of Service (Option A Project Conditions)

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Option A(1)				2012 Option A(2)			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
1. Wolfe Road / Homestead Road	AM	27.5	C	27.6	C	+0.001	0.0	27.6	C	+0.001	0.0
	PM	35.1	D+	36.4	D+	+0.032	2.5	36.5	D+	+0.034	2.6
2. Homestead Road / Tantau Avenue	AM	22.9	C+	23.3	C	+0.010	0.8	23.4	C	+0.012	0.9
	PM	26.4	C	27.6	C	+0.018	1.3	27.7	C	+0.019	1.4
3. Homestead Road / Lawrence Expy <sup>6</sup>	AM	<b>86.4</b>	<b>F</b>	<b>89.2</b>	<b>F</b>	<b>+0.012</b>	<b>5.5</b>	<b>89.6</b>	<b>F</b>	<b>+0.012</b>	<b>5.8</b>
	PM	<b>111.1</b>	<b>F</b>	<b>118.3</b>	<b>F</b>	<b>+0.016</b>	<b>9.1</b>	<b>118.4</b>	<b>F</b>	<b>+0.016</b>	<b>9.3</b>
4. Wolfe Road / Pruneridge Avenue	AM	20.6	C+	20.4	C+	+0.005	0.0	20.4	C+	+0.005	0.0
	PM	38.8	D+	39.2	D	+0.027	1.3	39.2	D	+0.022	1.0
5. Pruneridge Avenue / Tantau Avenue	AM	22.3	C+	22.5	C+	+0.011	0.0	22.5	C+	+0.012	0.0
	PM	21.9	C+	22.4	C+	+0.060	0.5	22.4	C+	+0.061	0.5
6. Wolfe Road / I-280 Northbound Ramps <sup>6</sup>	AM	15.2	B	15.4	B	+0.001	0.1	15.4	B	+0.004	0.2
	PM	13.9	B	14.2	B	+0.021	0.5	14.3	B	+0.023	0.5
7. Wolfe Road / I-280 SB Ramps <sup>6</sup>	AM	14.0	B	14.1	B	+0.011	0.2	14.1	B	+0.014	0.2
	PM	9.4	A	9.8	A	+0.064	0.8	10.0	B+	+0.071	1.1
8. Wolfe Road / Vallco Parkway	AM	17.7	B	21.1	C+	+0.057	5.0	21.2	C+	+0.060	5.2
	PM	53.1	D-	<b>65.7</b>	<b>E</b>	<b>+0.079</b>	<b>17.1</b>	<b>66.2</b>	<b>E</b>	<b>+0.081</b>	<b>17.7</b>
9. Vallco Parkway / Finch Avenue	AM	11.6(SB)	B	13.8(SB)	B	--	--	13.9(SB)	B	--	--
	PM	15.2(NB)	C	24.2(NB)	C			24.7(NB)	C		
10. Vallco Parkway / Tantau Avenue	AM	18.1	B-	18.8	B-	+0.001	-0.1	18.8	B-	+0.003	-0.1
	PM	20.2	C+	22.6	C+	+0.204	2.8	22.6	C+	+0.206	2.9
11. Stevens Creek Blvd / De Anza Blvd <sup>6</sup>	AM	31.7	C	32.1	C-	+0.012	0.7	32.2	C-	+0.014	0.7
	PM	44.9	D	46.1	D	+0.011	1.7	46.2	D	+0.011	1.8
12. Stevens Creek Blvd / Blaney Avenue	AM	29.0	C	29.1	C	+0.009	0.4	29.1	C	+0.010	0.5
	PM	29.9	C	30.2	C	+0.027	0.9	30.3	C	+0.029	1.0
13. Stevens Creek Blvd / Portal Avenue	AM	14.3	B	14.0	B	+0.006	0.0	14.0	B	+0.006	0.0
	PM	13.2	B	12.9	B	+0.016	-0.2	12.9	B	+0.016	-0.2
14. Stevens Creek Blvd / Perimeter Road	AM	10.0	A	9.8	A	+0.000	0.0	9.8	A	+0.001	0.0
	PM	17.4	B	17.0	B	+0.015	-0.2	17.0	B	+0.016	-0.2
15. Stevens Creek Blvd / Wolfe Rd-Miller <sup>6</sup>	AM	38.7	D+	38.8	D+	+0.016	0.4	38.8	D+	+0.018	0.5
	PM	40.1	D	41.8	D	+0.051	2.3	41.8	D	+0.053	2.5
16. Stevens Creek Blvd / Finch Avenue	AM	37.6	D+	38.6	D+	+0.025	0.3	38.0	D+	+0.024	-0.1
	PM	27.0	C	39.4	D	+0.076	8.6	32.6	C-	+0.045	4.0

Table 5: Intersection Levels Of Service (Option A Project Conditions)

Intersection	Peak Hour <sup>1</sup>	2008 Background		2012 Option A(1)				2012 Option A(2)			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
17. Stevens Creek Blvd / Tantau Avenue	AM	23.0	C+	23.9	C	+0.098	2.1	23.9	C	+0.100	2.1
	PM	25.0	C	28.7	C	+0.085	4.9	28.8	C	+0.087	5.0
18. Stevens Creek Blvd / I-280 Ramps <sup>6</sup>	AM	28.5	C	27.2	C	+0.013	-3.9	27.2	C	+0.014	-3.9
	PM	55.2	E+	79.8	E-	+0.111	51.2	<b>80.3</b>	<b>F</b>	<b>+0.113</b>	<b>52.2</b>
19. Stevens Creek Blvd /LawrenceExpy(W) <sup>6</sup>	AM	23.1	C	24.0	C	+0.049	1.3	24.0	C	+0.050	1.3
	PM	32.4	C-	33.0	C-	+0.033	1.3	33.1	C-	+0.034	1.4
20. Stevens Creek Blvd /Lawrence Expy(E) <sup>6</sup>	AM	37.9	D+	38.9	D+	+0.029	1.0	38.9	D+	+0.030	1.0
	PM	33.7	C-	34.5	C-	+0.030	0.7	34.5	C-	+0.031	0.8
21. Lawrence Expy / I-280 SB Ramps <sup>6</sup>	AM	53.7	D-	<b>60.4</b>	<b>E</b>	<b>+0.027</b>	<b>7.7</b>	<b>60.7</b>	<b>E</b>	<b>+0.029</b>	<b>8.1</b>
	PM	54.2	D-	<b>70.8</b>	<b>E</b>	<b>+0.072</b>	<b>22.3</b>	<b>71.3</b>	<b>E</b>	<b>+0.074</b>	<b>22.9</b>
22. Bollinger Road / De Anza Boulevard <sup>6</sup>	AM	20.0	C+	19.9	B-	+0.001	-0.1	19.9	B-	+0.001	-0.1
	PM	24.0	C	24.1	C	+0.006	0.3	24.1	C	+0.007	0.3
23. Bollinger Road / Blaney Avenue	AM	20.0	B-	21.2	C+	+0.037	1.8	21.0	C+	+0.031	1.5
	PM	21.2	C+	21.6	C+	+0.017	1.1	21.6	C+	+0.017	1.1
24. Bollinger Road / Miller Avenue	AM	33.6	C-	33.9	C-	+0.015	0.6	33.9	C-	+0.015	0.6
	PM	38.4	D+	39.1	D	+0.020	0.7	39.1	D	+0.021	0.7
25. Bollinger Road / Tantau Avenue	AM	12.6	B	12.7	B	+0.001	0.1	12.7	B	+0.001	0.1
	PM	16.4	B	17.1	B	+0.002	0.7	17.1	B	+0.002	0.7
26. Bollinger Road / Lawrence Expy <sup>6</sup>	AM	51.5	D-	53.8	D-	+0.014	6.1	53.7	D-	+0.014	6.1
	PM	54.7	D-	54.8	D-	+0.008	0.3	<b>55.2</b>	<b>E+</b>	<b>+0.011</b>	<b>1.4</b>
27. Vallco Parkway / Perimeter Road	AM	19.9	B-	16.2	B	+0.027	-2.4	16.7	B	+0.035	-2.0
	PM	20.4	C+	20.0	C+	+0.018	-0.4	20.0	C+	+0.020	-0.4

Notes:

- 1 AM = morning peak-hour, PM = evening peak-hour.
- 2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX 7.9 level of service analysis software package.
- 3 LOS = Level of service
- 4 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.
- 5 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.
- 6 Designated CMP intersection.

Unacceptable operations are shown in **bold** typeface

Source: Fehr & Peers, 2012

### Cumulative Conditions Results

Vehicle trips generated by the 2012 land use assumptions were added to Cumulative Conditions traffic volumes presented in the 2008 TIA and EIR to represent Cumulative Plus Project Conditions. **Table 6** presents the intersection LOS calculation results under Cumulative Plus Project Conditions for Options A(1) and A(2). Under Cumulative Conditions, the Proposed Project under both Options would exacerbate unacceptable operations at the intersection of Homestead Road/Lawrence Expressway (AM and PM peak hours). The Proposed Project under both options would degrade operations from acceptable to unacceptable LOS at the intersections of Wolfe Road/Vallco Parkway (PM peak hour), Lawrence Expressway/I-280 Southbound Ramps (AM and PM peak hours), Stevens Creek/I-280 Southbound Ramps (PM peak hour), and at Lawrence Expressway/Bollinger Road (PM peak hour). All of the intersections would operate at the same or similar levels of service as the Proposed Project with the retail variant.

Table 6: Intersection Levels Of Service (Option A Cumulative Conditions)

Intersection	Peak Hour <sup>1</sup>	2008 Background		Cumulative + 2012 Option A(1)				Cumulative + Option A(2)			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
1. Wolfe Road / Homestead Road	AM	27.5	C	27.8	C	+0.017	0.4	27.7	C	+0.016	0.3
	PM	35.1	D+	37.1	D+	+0.039	3.0	37.2	D+	+0.041	3.1
2. Homestead Road / Tantau Avenue	AM	22.9	C+	23.4	C	+0.020	1.0	23.5	C	+0.021	1.0
	PM	26.4	C	28.2	C	+0.036	2.1	28.3	C	+0.037	2.2
3. Homestead Road / Lawrence Expy <sup>6</sup>	AM	<b>86.4</b>	<b>F</b>	<b>92.6</b>	<b>F</b>	<b>+0.056</b>	<b>2.5</b>	<b>92.8</b>	<b>F</b>	<b>+0.057</b>	<b>2.8</b>
	PM	<b>111.1</b>	<b>F</b>	<b>122.4</b>	<b>F</b>	<b>+0.078</b>	<b>9.8</b>	<b>122.5</b>	<b>F</b>	<b>+0.078</b>	<b>10.0</b>
4. Wolfe Road / Pruneridge Avenue	AM	20.6	C+	20.9	C+	+0.015	0.8	20.9	C+	+0.016	0.8
	PM	38.8	D+	40.3	D	+0.040	2.7	40.3	D	+0.041	2.7
5. Pruneridge Avenue / Tantau Avenue	AM	22.3	C+	22.6	C+	+0.020	0.2	22.6	C+	+0.021	0.2
	PM	21.9	C+	22.9	C+	+0.081	1.3	22.9	C+	+0.082	1.4
6. Wolfe Road / I-280 Northbound Ramps <sup>6</sup>	AM	15.2	B	15.4	B	+0.005	0.2	15.4	B	+0.006	0.2
	PM	13.9	B	14.3	B	+0.034	0.8	14.4	B	+0.035	0.8
7. Wolfe Road / I-280 SB Ramps <sup>6</sup>	AM	14.0	B	14.1	B	+0.013	0.2	14.1	B	+0.015	0.2
	PM	9.4	A	9.8	A	+0.070	0.9	9.9	A	+0.071	0.9
8. Wolfe Road / Vallco Parkway	AM	17.7	B	21.0	C+	+0.058	5.0	21.1	C+	+0.061	5.1
	PM	53.1	D-	<b>67.5</b>	<b>E</b>	<b>+0.093</b>	<b>20.7</b>	<b>67.9</b>	<b>E</b>	<b>+0.095</b>	<b>21.2</b>
9. Vallco Parkway / Finch Avenue	AM	11.6(SB)	B	13.8(SB)	B			13.9(SB)	B		
	PM	15.2(NB)	C	24.2(NB)	C			24.7(NB)	C		
10. Vallco Parkway / Tantau Avenue	AM	18.1	B-	18.8	B-	+0.001	-0.1	18.8	B-	+0.003	-0.1
	PM	20.2	C+	22.6	C+	+0.206	2.9	22.7	C+	+0.208	3.0
11. Stevens Creek Blvd / De Anza Blvd <sup>6</sup>	AM	31.7	C	32.6	C-	+0.027	1.2	32.6	C-	+0.028	1.3
	PM	44.9	D	50.6	D	+0.051	7.9	50.6	D	+0.052	8.0

Table 6: Intersection Levels Of Service (Option A Cumulative Conditions)

Intersection	Peak Hour <sup>1</sup>	2008 Background		Cumulative + 2012 Option A(1)				Cumulative + Option A(2)			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
12. Stevens Creek Blvd / Blaney Avenue	AM	29.0	C	29.0	C	+0.025	0.3	29.1	C	+0.027	0.4
	PM	29.9	C	30.3	C	+0.059	1.4	30.4	C	+0.061	1.5
13. Stevens Creek Blvd / Portal Avenue	AM	14.3	B	13.7	B	+0.018	-0.3	13.6	B	+0.019	-0.3
	PM	13.2	B	12.5	B	+0.040	-0.5	12.5	B	+0.041	-0.5
14. Stevens Creek Blvd / Perimeter Road	AM	10.0	A	9.7	A	+0.013	0.0	9.7	A	+0.013	0.0
	PM	17.4	B	16.5	B	+0.039	-0.5	16.5	B	+0.040	-0.6
15. Stevens Creek Blvd / Wolfe Rd-Miller <sup>6</sup>	AM	38.7	D+	38.8	D+	+0.032	0.7	38.9	D+	+0.034	0.7
	PM	40.1	D	42.9	D	+0.080	4.0	43.0	D	+0.082	4.2
16. Stevens Creek Blvd / Finch Avenue	AM	37.6	D+	37.9	D+	+0.039	-0.2	37.4	D+	+0.039	-0.6
	PM	27.0	C	38.3	D+	+0.101	7.7	38.6	D+	+0.103	7.9
17. Stevens Creek Blvd / Tantau Avenue	AM	23.0	C+	24.0	C	+0.115	2.2	24.0	C	+0.116	2.3
	PM	25.0	C	30.0	C	+0.114	7.0	30.1	C	+0.116	7.2
18. Stevens Creek Blvd / I-280 Ramps <sup>6</sup>	AM	28.5	C	27.4	C	+0.027	-3.6	27.4	C	+0.028	-3.6
	PM	55.2	E+	<b>84.6</b>	<b>F</b>	<b>+0.138</b>	<b>64.0</b>	<b>85.0</b>	<b>F</b>	<b>+0.140</b>	<b>65.0</b>
19. Stevens Creek Blvd /LawrenceExpy(W) <sup>6</sup>	AM	23.1	C	24.5	C	+0.068	1.9	24.5	C	+0.069	2.0
	PM	32.4	C-	34.0	C-	+0.067	3.2	34.1	C-	+0.069	3.3
20. Stevens Creek Blvd /Lawrence Expy(E) <sup>6</sup>	AM	37.9	D+	39.4	D	+0.045	1.9	39.4	D	+0.046	1.9
	PM	33.7	C-	35.4	D+	+0.069	2.4	35.5	D+	+0.070	2.5
21. Lawrence Expy / I-280 SB Ramps <sup>6</sup>	AM	53.7	D-	<b>59.4</b>	<b>E+</b>	<b>+0.037</b>	<b>7.5</b>	<b>59.8</b>	<b>E+</b>	<b>+0.038</b>	<b>8.0</b>
	PM	54.2	D-	<b>126.1</b>	<b>F</b>	<b>+0.286</b>	<b>104.4</b>	<b>126.6</b>	<b>F</b>	<b>+0.288</b>	<b>105.0</b>
22. Bollinger Road / De Anza Boulevard <sup>6</sup>	AM	20.0	C+	19.8	B-	+0.010	0.3	19.8	B-	+0.010	0.3
	PM	24.0	C	23.9	C	+0.037	1.3	23.9	C	+0.037	1.3
23. Bollinger Road / Blaney Avenue	AM	20.0	B-	21.2	C+	+0.042	1.8	21.2	C+	+0.042	1.8
	PM	21.2	C+	22.0	C+	+0.027	1.4	22.0	C+	+0.027	1.4
24. Bollinger Road / Miller Avenue	AM	33.6	C-	33.9	C-	+0.019	0.6	34.0	C-	+0.020	0.6
	PM	38.4	D+	39.3	D	+0.029	1.0	39.3	D	+0.030	1.0
25. Bollinger Road / Tantau Avenue	AM	12.6	B	12.7	B	+0.002	0.1	12.7	B	+0.002	0.1
	PM	16.4	B	17.1	B	+0.005	0.7	17.1	B	+0.005	0.7
26. Bollinger Road / Lawrence Expy <sup>6</sup>	AM	51.5	D-	54.0	D-	+0.036	2.6	54.0	D-	+0.036	2.6
	PM	54.7	D-	<b>56.0</b>	<b>E+</b>	<b>+0.066</b>	<b>2.1</b>	<b>56.0</b>	<b>E+</b>	<b>+0.066</b>	<b>2.1</b>
27. Vallco Parkway / Perimeter Road	AM	19.9	B-	16.7	B	+0.034	-1.9	16.7	B	+0.035	-2.0
	PM	20.4	C+	20.0	C+	+0.018	-0.4	20.0	C+	+0.018	-0.4

Notes:

1 AM = morning peak-hour, PM = evening peak-hour.

Table 6: Intersection Levels Of Service (Option A Cumulative Conditions)

Intersection	Peak Hour <sup>1</sup>	2008 Background		Cumulative + 2012 Option A(1)				Cumulative + Option A(2)			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	$\Delta$ in Crit V/C <sup>4</sup>	$\Delta$ in Crit Delay <sup>5</sup>

2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX 7.9 level of service analysis software package.

3 LOS = Level of service

4 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.

5 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.

6 Designated CMP intersection.

Unacceptable operations are shown in **bold** typeface

Source: Fehr & Peers, 2012

### Intersection Impact Criteria

The impacts of the project were evaluated by comparing the results of the level of service calculations under Project Conditions to the results under Background Conditions. Cumulative impacts are identified using the same general criteria as project impacts; however, the significance of cumulative impacts where the project exacerbates already unacceptable operations would be based on the change in critical delay and volume-to-capacity between Cumulative No Project and Cumulative Plus Project conditions. Criteria to determine significant impacts from the 2008 studies are as follows:

#### City of Cupertino, City of San Jose, and City of Santa Clara Intersections

A significant project impact to a City of Cupertino, City of San Jose, City of Santa Clara, or County of Santa Clara signalized intersection occurs if the project results in one of the following:

- Operations at a signalized intersection deteriorate from LOS D or better under Background Conditions to LOS E or F under Project Conditions; or
- Exacerbation of unacceptable operations (LOS E or F) at a signalized intersection by increasing the average critical delay by four seconds or more and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.
- Operations at the De Anza Boulevard/Stevens Creek Boulevard or De Anza Boulevard/Bollinger Road intersection to be LOS E or worse with more than 55.0 seconds of average vehicle weighted delay; or
- Exacerbation of unacceptable operations (LOS E or F) at the De Anza Boulevard/Stevens Creek Boulevard or De Anza Boulevard/Bollinger Road intersection by increasing the average critical delay by four seconds or more and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.

A significant project impact occurs at an unsignalized intersection when the addition of project traffic causes:

- Intersection operations to deteriorate from an acceptable level under Background Conditions (LOS E or better) to an unacceptable level (LOS F or worse) and the MUTCD Peak Hour Warrant is met under Project Conditions; or
- The exacerbation of operations at an unsignalized intersection already operating at an unacceptable level (LOS F or worse) under Background Conditions and the MUTCD Peak Hour Warrant is met under Project Conditions.

#### Valley Transportation Authority (CMP) Intersection

A significant impact at a CMP intersection located within the City of Santa Clara occurs when the addition of project traffic causes one of the following<sup>4</sup>:

- Operations to degrade from an acceptable level (LOS E or better) under Background Conditions to an unacceptable level (LOS F) under Project Conditions.
- Unacceptable operations are exacerbated by increasing the critical delay by more than four seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.
- The V/C ratio increases by 0.01 or more at an intersection with unacceptable operations (LOS E or F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

#### **Intersection Impacts**

**Table 7** summarizes the significant intersection impacts for Project and Cumulative Conditions using the significance criteria discussed in the previous section compared to the 2008 analysis results. The impacted intersections are the identical except for Option A(2) where a new project-level impact occurs at Stevens Creek/I-280 Southbound Ramp. The two options will have a **less-than-significant** impact at the other study intersections.

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<sup>4</sup> The Cities of Cupertino and San Jose follow their respective impact criteria for CMP intersections.

Table 7: Intersection Impacts Summary

Intersection	Peak Hour	2008 Project Description		2012 Project Description			
		Scheme 1	Scheme 2	Scheme 1c	Scheme 2b	Option A(1)	Option A(2)
<b>Project Conditions</b>							
Lawrence / Homestead	AM	89.8 / F	89.1 / F	89.5 / F	89.0 / F	89.2 / F	89.6 / F
	PM	118.6 / F	117.5 / F	118.6 / F	117.4 / F	118.3 / F	118.4 / F
Wolfe / Vallco	AM	--	--	--	--	--	--
	PM	68.4 / E	65.6 / E	66.2 / E	63.5 / E	65.7 / E	66.2 / E
Stevens Creek/I-280 SB Ramp	AM	--	--	--	--	--	--
	PM	--	--	--	--	--	80.3 / F
Lawrence / I-280 SB Ramp	AM	61.4 / E	60.5 / E	61.5 / E	60.2 / E	60.4 / E	60.7 / E
	PM	69.6 / E	69.6 / E	71.2 / E	68.8 / E	70.8 / E	71.3 / E
Lawrence / Bollinger	AM	--	--	--	--	--	--
	PM	55.3 / E+	--	--	55.2 / E+	--	55.2 / E+
<b>Cumulative Conditions</b>							
Lawrence / Homestead	AM	--	--	--	--	--	--
	PM	122.8 / F	121.9 / F	122.7 / F	121.6 / F	122.4 / F	122.5 / F
Wolfe / Vallco	AM	--	--	--	--	--	--
	PM	73.4 / E	71.3 / E	67.9 / E	65.2 / E	67.5 / E	67.9 / E
Stevens Creek/I-280 SB Ramp	AM	--	--	--	--	--	--
	PM	83.3 / F	82.7 / F	84.6 / F	81.8 / F	84.6 / F	85.0 / F
Lawrence / I-280 SB Ramp	AM	60.2 / E	59.5 / E+	60.7 / E	59.2 / E+	59.4 / E+	59.8 / E+
	PM	124.2 / F	124.5 / F	126.6 / F	123.2 / F	126.1 / F	126.6 / F
Lawrence / Bollinger	AM	--	--	--	--	--	--
	PM	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>

Note:

1. Less-than-Significant Impact between Cumulative No Project and Plus Project Scenarios

Source: Fehr & Peers, 2008 and 2012

In general, the increase in critical delay and volume-to-capacity ratio associated with the Proposed Project is lower than the increases identified in the 2008 studies, with the exception of Stevens Creek/I-280 Southbound Ramp. In fact, even though the revised Proposed Project would generate more trips during the AM peak hour compared to what was analyzed in 2008, some of the impacted intersections would actually operate with less delay.

### Intersection Mitigation Measures

Improvements were identified to mitigate intersection impacts to a less-than-significant level. These mitigation measures are presented below:

#### Project-Level Mitigation

*Lawrence Expressway / Homestead Road* – Both options increase the AM and PM peak-hour delays by more than four seconds to this intersection operating at unacceptable LOS F under Background Conditions. The addition of a third westbound through lane would improve overall delay and reduce the

impact to a less-than-significant level.<sup>5</sup> Intersection operations would return to LOS E in the AM peak hour under both options. During the PM peak hour overall delay would be reduced to less than Background Conditions in both options but the intersection would still operate at LOS F. This mitigation would require significant right-of-way acquisition and the relocation of existing utilities at the intersection. This intersection is controlled and maintained by the County of Santa Clara and any improvements need to be approved and implemented by the County. Therefore, the impact at this intersection is considered **significant and unavoidable**.

*Vallco Parkway / Wolfe Road* – Both options degrade the level of service at this intersection to LOS E during the PM peak hour. The following two mitigation measures were identified as potential improvements to return intersection operations to acceptable levels of service.

Mitigation Option #1 – Maintaining the existing intersection configuration, but installing a westbound right-turn overlap phase would mitigate the project-level impact under both schemes to a **less-than-significant** level. The intersection would operate at LOS D under either scheme.

Mitigation Option #2 – The addition of a second, westbound right-turn lane would improve project-level intersection operations to an acceptable level of service and mitigate the project-level impact to a **less-than-significant** level. The additional turn lane could be accommodated by re-striping the existing westbound through lane as a shared through/right-turn lane. The intersection would operate at LOS D under either scheme.

*Stevens Creek Boulevard / I-280 Southbound Ramps* – Addition of an eastbound right-turn overlap phase mitigates the impact to a less-than-significant level. This intersection is not located within the City of Cupertino; therefore, the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

*Lawrence Expressway / I-280 Southbound Ramps* – Major improvements at this intersection were identified in the Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2008, including a Caltrans Project Study Report (PSR) for this interchange (Tier 1A project). The completion of a PSR, however, would not mitigate the project's impact at this location to a less-than-significant level, since no physical changes would occur at the intersection to either increase capacity or improve traffic operations. This intersection is controlled by the County and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

*Bollinger Road-Moorpark Avenue/Lawrence Expressway* – The Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2003 identified the widening of Lawrence Expressway from six lanes to eight lanes between Moorpark/Bollinger and Calvert as a Tier 1A improvement. This

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<sup>5</sup> The addition of a third eastbound lane on Homestead Road was identified as a Tier 1C improvement in the Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2003. The report footnoted that the improvement would not improve projected 2025 LOS from F to LOS E or better.

improvement would mitigate the project's impact to a less-than-significant level of service. However, this intersection is controlled by the County of Santa Clara and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

#### Cumulative Level Mitigation Measures

Improvements were identified at the impacted intersections to mitigate Cumulative Plus Project impacts to less-than-significant levels. The following mitigation measures identified under Project Conditions mitigate the cumulative impact to **less-than-significant** levels:

*Lawrence Expressway/Homestead Road* – The addition of a third westbound or a third eastbound through lane would improve Cumulative Plus Project intersection levels of service to acceptable LOS E; however, this improvement would require significant right-of-way acquisition. This intersection is controlled and maintained by the County of Santa Clara and any improvements need to be approved and implemented by the County. Therefore, the impact at this intersection is considered **significant and unavoidable**.

*Vallco Parkway / Wolfe Road* – The mitigation measures identified under Project Conditions (a westbound right overlap phase; a second westbound right-turn lane; or permitted phasing on the eastbound and westbound approaches) also mitigate the potential Cumulative Plus Project impact to **less-than-significant**

*Stevens Creek Boulevard / I-280 Southbound Ramps* – Addition of an eastbound right-turn overlap phase mitigates the impact to a less-than-significant level. This intersection is not located within the City of Cupertino; therefore, the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

*Lawrence Expressway/I-280 Southbound Ramps* – An additional northbound and southbound through lane would improve overall delay; however, the intersection would still operate unacceptably. Therefore the impact is considered **significant and unavoidable**. This intersection is not controlled by the City of Cupertino and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

#### **FREEWAY SEGMENT LEVELS OF SERVICE**

Option A-generated traffic volumes were added to the existing traffic volumes for each freeway mainline segment from the 2008 studies. These volumes were then used to estimate density for each segment under Project Conditions. The resulting freeway segment operations are presented in **Table 8**. All traffic associated with the two options was assumed to use the mixed-flow lanes on the freeway (a conservative assumption); therefore, HOV lanes were not analyzed under Project Conditions.

Table 8: Freeway Segment Levels Of Service

From	To	Peak Hour	2008 Existing		Option A(1)				Option A(2)			
			Density <sup>1</sup>	LOS <sup>2</sup>	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact <sup>4</sup>	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact <sup>4</sup>
<b>Eastbound I-280</b>												
SR 85	De Anza	AM	27	D	70	27	D	1.01%	72	27	D	1.04%
		PM	32	D	45	32	D	0.65%	46	32	D	0.67%
De Anza	Wolfe	AM	32	D	63	32	D	0.91%	65	32	D	0.94%
		PM	67	F	40	68	F	0.58%	42	68	F	0.61%
Wolfe	Lawrence	AM	22	C	3	22	C	0.04%	4	22	C	0.06%
		PM	76	F	16	76	F	0.23%	17	76	F	0.25%
Lawrence	Saratoga	AM	38	D	26	38	D	0.38%	29	38	D	0.42%
		PM	98	F	<b>135</b>	<b>101</b>	<b>F</b>	<b>1.96%</b>	<b>138</b>	<b>101</b>	<b>F</b>	<b>2.00%</b>
Saratoga	Winchester	AM	43	D	22	43	D	0.32%	25	43	D	0.36%
		PM	86	F	<b>115</b>	<b>88</b>	<b>F</b>	<b>1.67%</b>	<b>115</b>	<b>88</b>	<b>F</b>	<b>1.67%</b>
Winchester	I-880	AM	27	D	18	27	D	0.26%	20	27	D	0.29%
		PM	104	F	<b>95</b>	<b>107</b>	<b>F</b>	<b>1.38%</b>	<b>99</b>	<b>107</b>	<b>F</b>	<b>1.43%</b>
<b>Westbound I-280</b>												
I-880	Winchester	AM	94	F	<b>81</b>	<b>96</b>	<b>F</b>	<b>1.17%</b>	<b>83</b>	<b>96</b>	<b>F</b>	<b>1.20%</b>
		PM	73	F	48	74	F	0.70%	50	74	F	0.72%
Winchester	Saratoga	AM	65	F	<b>98</b>	<b>66</b>	<b>F</b>	<b>1.42%</b>	<b>100</b>	<b>66</b>	<b>F</b>	<b>1.45%</b>
		PM	55	E	58	56	E	0.84%	60	56	E	0.87%
Saratoga	Lawrence	AM	74	F	<b>115</b>	<b>76</b>	<b>F</b>	<b>1.67%</b>	<b>118</b>	<b>76</b>	<b>F</b>	<b>1.71%</b>
		PM	29	D	68	29	D	0.99%	71	29	D	1.03%
Lawrence	Wolfe	AM	68	F	26	68	F	0.38%	26	68	F	0.38%
		PM	27	D	6	27	D	0.09%	10	27	D	0.14%
Wolfe	De Anza	AM	50	E	16	50	E	0.23%	17	50	E	0.25%
		PM	37	D	81	37	D	1.17%	42	37	D	0.61%
De Anza	SR 85	AM	60	F	17	60	F	0.25%	18	60	F	0.26%
		PM	25	C	85	25	C	1.23%	86	25	C	1.25%

Notes:

- <sup>1</sup> Measured in passenger cars per mile per lane. Density is calculated by using the travel speed from the adjacent segment, as well as the volume (flow) from the adjacent segment adjusted by the volume entering/exiting the freeway at the interchange.
- <sup>2</sup> LOS = level of service.
- <sup>3</sup> Project trips added during the peak hour.
- <sup>4</sup> Added volume compared to segment capacity.

Significant impacts are shown in **bold** typeface.

Source: VTA, April 2008; and Fehr & Peers, 2012

### Project Freeway Impacts and Mitigation Measures

The impacts of the two options were evaluated by comparing the results of the level of service calculations under Projects Conditions to the results under Existing Conditions. Significant impacts to freeway segments are defined to occur when the addition of project-related traffic causes one of the following:

- A segment to drop below its acceptable CMP operating standard (LOS E); or,
- The project traffic added to a segment operating at LOS F is more than one percent of its capacity.

Based on the significance criteria, the proposed options will have significant impacts on several freeway segments summarized in **Table 9**. The freeway segments impacted are not greater than the 2008 project.

TABLE 9: FREEWAY IMPACTS

Segment Limits	2008 Project Description		2012 Project Description			
	Scheme 1	Scheme 2	Scheme 1c	Scheme 2b	Option A(1)	Option A(2)
<b>Eastbound I-280</b>						
Lawrence Expressway to Saratoga	PM	PM	PM	PM	PM	PM
Saratoga to Winchester	PM	PM	PM	PM	PM	PM
Winchester to I-880	PM	PM	PM	PM	PM	PM
<b>Westbound I-280</b>						
I-880 and Winchester Boulevard	PM	AM	AM/PM	AM	AM	AM
Winchester Boulevard to Saratoga	AM	AM	AM	--	AM	AM
Saratoga to Lawrence	AM	AM	AM	AM	AM	AM

Source: Fehr & Peers, 2008 and 2012

According to VTA policy direction, the mitigation measure for regional freeway impacts is participation in the Countywide Deficiency Plan (CDP) prepared by the VTA. The CDP has not received final approval; therefore, the mitigation of freeway impacts cannot be guaranteed since Cupertino does not have legal authority to mitigate freeway impacts. Pending adoption of the CDP, the Lead Agency for a development project must include programs or facilities delineated in the "Immediate Implementation Action List" (Appendix D to the Draft CDP) as part of the project's approval if the freeway impact cannot be reduced to a less-than-significant level. Measures from the list that are appropriate for this project include:

- Improve Pedestrian Facilities (A-4)
- Bus Stop Improvements (B-8)
- HOV parking preference program (G-1)
- Bike facilities at development projects (G-2)
- Pedestrian circulation system (G-4)

While implementation of these measures would incrementally reduce traffic, they would not reduce the identified impact to a less-than-significant level. Full mitigation of freeway impacts is considered beyond the scope of an individual project; thus, the addition of project traffic results in a **significant and unavoidable** impact to the all of the freeway segments listed above.

## CONCLUSION

The new 2012 Options for the Main Street Cupertino project would generally result in fewer daily and PM peak hour vehicle trips, but slightly more AM peak hour vehicle. Option A(1) would not result in new or substantially more severe significant intersection and freeway impacts than were identified in the 2008 TIA and EIR or 2012 EIR Addendum; however, Option A(2) would result in a new project-level impact at the intersection of Stevens Creek/I-280 Southbound Ramp. This impact was previously identified under cumulative conditions only. The severity of the AM peak period impacts would be slightly less, since the revised Proposed Project would result in slightly lower intersection delay at the study intersections and slightly lower freeway densities on the study segments due to the different traffic patterns caused by the changes in use.

The new impact at Stevens Creek/I-280 Southbound Ramp is likely caused by the increase intensity of retail uses proposed on the site when compared to the other Schemes and Variants analyzed previously. Since Options B(1) and B(2) have similar retail intensities, the impact would likely also occur under those Options. Additionally, these schemes generate more outbound PM peak hour trips than analyzed previously. Thus, they were not analyzed at this time.

We hope that you have found the data contained in this memorandum helpful. If you have any questions, please contact Todd Henry at (415) 348-0300.

Table 1. Main Street Cupertino Land Use Plan Summary

Scheme/Option/Variant	Land Uses								Parking Spaces	Effective Restaurant Space (sf)
	Retail (sf)	Restaurant (in Excess of 10% of Retail SF)	Athletic Club (sf)	Office (sf)	Residential (units)		Hotel (rooms)	Open Space with Public Easement (ac)		
					Senior	Market-Rate				
Scheme 1 (Scheme 1c)	77,900	800	60,000	292,000	0	105	180	1.55	1,956	(1) 8,670
Variant 1a	66,200	3,500	60,000	292,000	143	0	180	1.55	2,191	10,470
Variant 1b	74,500	4,200	60,000	292,000	143	0	180	1.55	2,159	12,070
Variant 3a(1)	78,300	400	60,000	289,000	143	0	250	1.55	2,159	8,270
Variant 3a(2)	129,700	9,000	0	265,000	0	0	250	1.55	1,956	22,870
Variant 3b	69,000	700	60,000	292,000	143	0	250	1.55	2,191	7,670
Scheme 2 (Scheme 2b)	84,200	8,000	0	292,000	143	105	180	1.55	2,074	17,220
Variant 2a	74,300	8,900	0	292,000	143	105	180	1.55	2,107	17,220
Option A(1)	134,200	4,500	0	292,000	143	0	180	1.55	2,131	18,370
Option A(2)	138,700	0	0	292,000	143	0	250	1.55	2,131	13,870
Option B(1)	102,300	0	60,000	292,000	143	0	180	1.55	2,392	10,230

Note: (1) Under 2012 Scheme 1, the 60,000 sf athletic club can be replaced with 60,000 sf of additional retail space; and the 120 market-rate apartments can be replaced with 143 senior units. If 60,000 sf of additional retail and 120 market-rate apartments are constructed, 1,956 parking spaces would be provided. If a 60,000 sf athletic club and 143 senior housing units were constructed instead, 2,159 parking spaces would be provided. (2) Assumes that Market Rate Housing is constructed to 105 units with additional restaurant space.

Source: David J. Powers, April 7, 2012.

Table 2. Main Street Cupertino Trip Generation Summary

Scheme/Option/Variant	Weekday	AM Peak-Hour Trips			PM Peak-Hour Trips		
	Trips	In	Out	Total	In	Out	Total
2008 Scheme 1	13,751	423	199	622	591	673	1,264
2008 Scheme 2	10,692	450	133	583	408	628	1,036
Scheme 1 (Scheme 1c)	10,918	529	201	730	470	689	1,159
Variant 1a	10,546	537	181	729	437	665	1,102
Variant 1b	10,923	543	187	730	456	682	1,138
Variant 3a(1)	11,178	545	186	730	459	689	1,148
Variant 3a(2)	11,517	541	188	730	458	687	1,145
Variant 3b	10,888	546	185	730	446	676	1,122
Scheme 2 (Scheme 2b)	10,221	532	197	729	408	638	1,046
Variant 2a	9,952	532	198	730	394	625	1,019
Option A(1)	10,937	532	159	691	429	689	1,118
Option A(2)	11,144	533	155	689	429	697	1,126
Option B(1)	11,486	537	177	714	479	716	1,195

Source: Fehr & Peers, April 2012



## **Appendix F: Additional Restaurant Sensitivity Analysis**

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## MEMORANDUM

Date: May 4, 2012

To: Kristy Weis, David J. Powers

From: Todd Henry, Fehr & Peers

**Subject: Main Street Cupertino – Restaurant Mix Refinements**

*SJ11-1292.01*

The purpose of this memorandum is to present the trip generation and parking forecasts prepared for the restaurant-intensive land use scenarios being considered for the Main Street Cupertino Project (herein the "Proposed Project"). The Proposed Project was previously evaluated in a transportation impact analysis (TIA) and environmental impact report (EIR) certified in 2008. Since the certification of the EIR, the project applicant modified the project's proposed site plan and land use mix with various development schemes and variants, as summarized in **Table 1**. The scenarios under 2012 Scheme 1 and 2012 Scheme 2 were analyzed in an addendum to the EIR prepared in March 2012.

The purpose of this analysis is identify what level of food service-related uses (i.e., restaurants and small-scale eateries like bakeries and coffee shops) could be accommodated on the project site within the envelope of the transportation analyses conducted to date. The memorandum also evaluates whether or not the increase in restaurant uses would potentially result in new or more severe traffic impacts than those disclosed in the 2008 TIA and EIR and 2012 EIR Addendum.

### LAND USE DESCRIPTIONS

**Table 1** presents the two restaurant-intensive project land use scenarios – "Maximum Office" and "Reduced Office". These scenarios include the following land uses:

#### *Maximum Office:*

- General commercial space occupied by a mix of retail uses including up to 75,000 square feet of the following types of uses:
  - Durable consumer goods
  - small-scale food-service businesses (e.g., coffee shop, yogurt shop, bakeries),
  - "incubator"-type space for smaller businesses (e.g., startup offices, real estate offices, dance studios)
- Sit-Down Restaurant space up to 45,000 square feet, inclusive of the following restaurant types:
  - 20,000 square feet of low-turnover quality sit-down restaurants typically open for dinner and potentially lunch
  - 20,000 square feet of high-turnover sit-down restaurants typically open for dinner and potentially lunch

- 5,000 square feet of high-turnover sit-down restaurants that could be open for breakfast, lunch, and dinner service
- General office space – up to 292,000 sf
- Residential – up to 143 senior housing units
- Hotel – 180-rooms

*Reduced Office:*

- General commercial space occupied by a mix of retail uses including up to 94,700 square feet of the following types of uses:
  - Durable consumer goods
  - small-scale food-service businesses (e.g., coffee shop, yogurt shop, bakeries),
  - "incubator"-type space for smaller businesses (e.g., startup offices, real estate offices, dance studios)
- Sit-Down Restaurant space up to 44,000 square feet, inclusive of the following restaurant types:
  - 19,500 square feet of low-turnover quality sit-down restaurants typically open for dinner and potentially lunch
  - 19,500 square feet of high-turnover sit-down restaurants typically open for dinner and potentially lunch
  - 5,000 square feet of high-turnover sit-down restaurants that could be open for breakfast, lunch, and dinner service
- General office space – up to 260,000 sf
- Residential – up to 143 senior housing units
- Hotel – 180-rooms

This analysis assumes that the general commercial space contains a mix of commercial uses, including general retail shops, restaurants, coffee shops, and anchor stores, similar to other shopping centers and malls. Some commercial uses, particularly full-service restaurants, generate more traffic than other general retail uses; however, by assuming a mix of general commercial uses, the analysis accounts for this. The trip generation rates applied to the retail square footage, as discussed later, are based on national surveys of shopping centers that contain a mix of commercial uses (including restaurants) that generate peak traffic at different times of day and visitors that go to multiple places on the site (e.g. a visitor to a retail shop also stops for coffee, or a lunch guest also goes into a shop, etc.).

A higher intensity of restaurants than a typical shopping center could generate a greater number of trips. Therefore, the City placed a 10 percent "cap" on the amount of general commercial space that could be occupied by restaurant uses within the general retail space. The analysis contained in this memorandum includes a separate "restaurant" category, for which trip generation was calculated at the higher restaurant rate. The breakdown of low-turnover and high-turner restaurants included in this category was provided by the City and applicant. **Table 1** includes a column for "Maximum Food Service" representing the amount of general commercial space that could accommodate either general retail or food service uses without exceeding the number of trips analyzed for the commercial space.

Table 1. Main Street Cupertino Land Use Plan Summary

Scheme/Option/Variant	Land Uses						
	General Commercial Space			Office (sf)	Residential (units)		Hotel (rooms)
	Retail (sf) <sup>1</sup>	Sit-Down Restaurant (sf) <sup>2</sup>	Maximum Food Service <sup>1,2</sup>		Senior	Market-Rate	
Maximum Office	75,000	45,000	43.8%	292,000	143	0	180
Reduced Office	94,700	44,000	38.6%	260,000	143	0	180

Notes:

(1) Assumes that 10% percent of general retail space is occupied by smaller food service businesses like bakeries, coffee shops and ice cream stands.

(2) Assumes the following mix of restaurant types: 44.4% low-turnover quality restaurants with no breakfast service, 44.4% high-turnover restaurants with no breakfast service, and 11.2% high-turnover restaurants with breakfast service.

Source: Fehr & Peers, 2012.

## TRIP GENERATION

Trip generation forecasts for the Proposed Project land uses were developed using the Institute of Transportation Engineers (ITE) *Trip Generation, 8<sup>th</sup> Edition*. Where appropriate, trip reductions for the mix of uses on the site and nearby bus service were applied according to the Santa Clara Valley Transportation Authority *Transportation Impact Analysis Guidelines* (VTA Guidelines). For this analysis, trip generation rates for shopping center were applied to the space proposed for shops and “incubator”-type uses. This results in a greater number of trips, since the incubator-type uses would likely generate trips at a lower rate similar to the office uses on the site. **Table 2** provides a summary of the total net new trips associated with the new land use schemes.

Table 2. Main Street Cupertino Trip Generation Summary

Scheme/Option/Variant	Weekday	AM Peak-Hour Trips			PM Peak-Hour Trips		
	Trips	In	Out	Total	In	Out	Total
Maximum Office	11,621	520	160	680	525	690	1,215
Reduced Office	12,117	496	159	655	546	692	1,238

Source: Fehr & Peers, 2012.

## PARKING ANALYSIS

**Table 3** summarizes the parking demand estimates for the restaurant-intensive scenarios were prepared using ITE *Parking Generation*, the Urban Land Institute’s *Shared Parking* guidance, and the City’s Municipal Code, consistent with the previous analyses. The purpose of this analysis is to determine the amount of parking that the restaurant-intensive schemes should provide to accommodate the expected peak demand.

Table 3. Main Street Cupertino Parking Demand Summary

Scheme/Option/Variant	City Code <sup>1</sup>	Unshared Parking Demand <sup>2</sup>	Shared Parking Demand <sup>3</sup>
Maximum Office	2,059	1,957	1,768
Reduced Office	2,017	1,890	1,701

Notes:

1. Based on City of Cupertino Municipal Parking Code
2. Based on ITE Parking Generation, 2008
3. Based on ITE Parking Demand, adjusted with time-of-day factors from Urban Land Institute Shared Parking. Assumes that all uses share parking on the site. If office and residential parking is reserved, the demand would be similar to unshared parking demand, since only hotel and retail uses would share a minimal number of parking spaces.

Source: Fehr & Peers, 2012.

## INTERSECTION IMPACT ANALYSIS

Traffic impacts associated with the restaurant-intensive scenarios were evaluated to determine whether or not the revised land uses would result in new or more severe traffic impacts than those disclosed in the Proposed Project’s 2008 TIA and EIR and 2012 EIR Addendum. Traffic impacts are evaluated using intersection levels of service (LOS)<sup>1</sup>. This section discusses the LOS operations of the 27 study intersections evaluated in the 2008 studies and identifies both background and cumulative impacts associated with the Proposed Project.

Background Conditions comprise existing traffic volumes plus traffic generated from surrounding development projects that have been approved but are not yet constructed or occupied from the 2008 TIA and EIR traffic analysis. In the 2008 TIA and EIR Background Conditions serve as the basis for identifying project impacts.

Cumulative Conditions were taken from the 2008 studies and represent intersection operations with the addition of traffic from both approved and unoccupied projects and from pending projects in the study area. Cumulative Conditions serve as the basis for identifying cumulative project impacts.

### Background and Project Conditions Results

Vehicle trips generated by the revised land use assumptions were added to Background Conditions traffic volumes presented in the 2008 TIA and EIR to represent Project Conditions. The Proposed Project’s trip distribution to the surrounding roadway network was consistent with the 2008 TIA; however, trip assignment to the project’s driveways was adjusted slightly to account for the revised site plan.

<sup>1</sup> The operations of roadway facilities are described with the term level of service. Level of Service (LOS) is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, representing congestion-free conditions, to LOS F, when volumes exceed capacity and stop-and-go conditions occur. LOS E represents “at-capacity” operations.

**Tables 4 and 5** present the intersection LOS calculation results under Background Conditions and Project Conditions for the the Maximum Office scenario and Reduced Office scenario, respectively. Both the Maximum Office scenario and Reduced Office scenario would exacerbate unacceptable operations at the intersection of Homestead Road/Lawrence Expressway (both AM and PM peak hours). Both scenarios would degrade operations from acceptable to unacceptable LOS at the intersections of Wolfe Road/Vallco Parkway (PM peak hour) and Lawrence Expressway/I-280 Southbound Ramps (both AM and PM peak hours).

### Cumulative Conditions Results

Vehicle trips generated by the new land use assumptions were added to Cumulative Conditions traffic volumes presented in the 2008 TIA and EIR to represent Cumulative Plus Project Conditions. **Tables 4 and 5** present the intersection LOS calculation results under Cumulative Plus Project Conditions the Maximum Office scenario and Reduced Office scenario, respectively. Under Cumulative Conditions, the both scenarios would exacerbate unacceptable operations at the intersection of Homestead Road/Lawrence Expressway (AM and PM peak hours). Both scenarios would degrade operations from acceptable to unacceptable LOS at the intersections of Wolfe Road/Vallco Parkway (PM peak hour), Lawrence Expressway/I-280 Southbound Ramps (AM and PM peak hours), Stevens Creek/I-280 Southbound Ramps (PM peak hour), and at Lawrence Expressway/Bollinger Road (PM peak hour).

Table 4: Intersection Levels Of Service – Maximum Office Project

Intersection	Peak Hour <sup>1</sup>	2008 Background		Maximum Office Project Conditions				Maximum Office Cumulative Plus Project Conditions			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
1. Wolfe Road / Homestead Road	AM	27.5	C	27.6	C	+0.001	0.0	27.8	C	+0.017	0.4
	PM	35.1	D+	36.6	D+	+0.039	3.0	37.4	D+	+0.045	3.5
2. Homestead Road / Tantau Avenue	AM	22.9	C+	23.4	C	+0.011	0.8	23.5	C	+0.020	1.0
	PM	26.4	C	27.8	C	+0.019	1.4	28.4	C	+0.037	2.3
3. Homestead Road / Lawrence Expy <sup>6</sup>	AM	<b>86.4</b>	<b>F</b>	<b>89.3</b>	<b>F</b>	<b>+0.012</b>	<b>5.5</b>	92.6	F	+0.056	2.5
	PM	<b>111.1</b>	<b>F</b>	<b>118.9</b>	<b>F</b>	<b>+0.018</b>	<b>10.3</b>	<b>123.0</b>	<b>F</b>	<b>+0.080</b>	<b>11.0</b>
4. Wolfe Road / Pruneridge Avenue	AM	20.6	C+	20.4	C+	+0.006	0.0	20.9	C+	+0.016	0.8
	PM	38.8	D+	39.3	D	+0.028	1.4	40.3	D	+0.040	2.7
5. Pruneridge Avenue / Tantau Avenue	AM	22.3	C+	22.5	C+	+0.012	0.0	22.6	C+	+0.021	0.2
	PM	21.9	C+	22.4	C+	+0.060	0.5	22.9	C+	+0.081	1.3
6. Wolfe Road / I-280 Northbound Ramps <sup>6</sup>	AM	15.2	B	15.4	B	+0.002	0.1	15.4	B	+0.006	0.2
	PM	13.9	B	14.3	B	+0.026	0.6	14.4	B	+0.039	0.9
7. Wolfe Road / I-280 SB Ramps <sup>6</sup>	AM	14.0	B	14.1	B	+0.012	0.2	14.1	B	+0.014	0.2
	PM	9.4	A	9.9	A	+0.068	1.0	10.0	A	+0.074	1.0
8. Wolfe Road / Vallco Parkway	AM	17.7	B	21.2	C+	+0.059	5.1	21.1	C+	+0.060	5.1
	PM	53.1	D-	<b>66.5</b>	<b>E</b>	<b>+0.081</b>	<b>17.7</b>	<b>68.3</b>	<b>E</b>	<b>+0.095</b>	<b>21.2</b>

Table 4: Intersection Levels Of Service – Maximum Office Project

Intersection	Peak Hour <sup>1</sup>	2008 Background		Maximum Office Project Conditions				Maximum Office Cumulative Plus Project Conditions			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
9. Vallco Parkway / Finch Avenue	AM	11.6(SB)	B	13.7	B			13.7	B		
	PM	15.2(NB)	C	26.9	D			26.9	D		
10. Vallco Parkway / Tantau Avenue	AM	18.1	B-	18.8	B-	+0.003	-0.1	18.8	B-	+0.003	-0.1
	PM	20.2	C+	22.9	C+	+0.214	3.3	23.0	C+	+0.216	3.3
11. Stevens Creek Blvd / De Anza Blvd <sup>6</sup>	AM	31.7	C	32.2	C-	+0.013	0.7	32.6	C-	+0.028	1.2
	PM	44.9	D	46.2	D	+0.012	1.9	50.7	D	+0.053	8.2
12. Stevens Creek Blvd / Blaney Avenue	AM	29.0	C	29.1	C	+0.010	0.4	29.0	C	+0.026	0.3
	PM	29.9	C	30.4	C	+0.033	1.1	30.5	C	+0.066	1.7
13. Stevens Creek Blvd / Portal Avenue	AM	14.3	B	14.0	B	+0.006	0.0	13.6	B	+0.019	-0.3
	PM	13.2	B	12.9	B	+0.021	-0.2	12.5	B	+0.045	-0.4
14. Stevens Creek Blvd / Perimeter Road	AM	10.0	A	9.8	A	+0.001	0.0	9.7	A	+0.013	0.0
	PM	17.4	B	16.9	B	+0.019	-0.3	16.5	B	+0.043	-0.6
15. Stevens Creek Blvd / Wolfe Rd-Miller <sup>6</sup>	AM	38.7	D+	38.8	D+	+0.018	0.5	38.9	D+	+0.034	0.7
	PM	40.1	D	41.9	D	+0.057	2.8	43.2	D	+0.087	4.6
16. Stevens Creek Blvd / Finch Avenue	AM	37.6	D+	38.8	D+	+0.027	0.6	38.1	D+	+0.041	0.0
	PM	27.0	C	40.3	D	+0.077	8.6	39.1	D	+0.110	15.0
17. Stevens Creek Blvd / Tantau Avenue	AM	23.0	C+	23.9	C	+0.099	2.1	24.0	C	+0.115	2.3
	PM	25.0	C	28.8	C	+0.088	5.1	30.1	C	+0.117	7.2
18. Stevens Creek Blvd / I-280 Ramps <sup>6</sup>	AM	28.5	C	27.2	C	+0.013	-3.9	27.4	C	+0.027	-3.6
	PM	55.2	E+	79.7	E-	+0.112	51.8	<b>84.5</b>	<b>F</b>	<b>+0.139</b>	<b>64.7</b>
19. Stevens Creek Blvd /LawrenceExpy(W) <sup>6</sup>	AM	23.1	C	24.0	C	+0.049	1.3	24.5	C	+0.068	1.9
	PM	32.4	C-	33.1	C-	+0.041	1.7	34.2	C-	+0.076	3.7
20. Stevens Creek Blvd /Lawrence Expy(E) <sup>6</sup>	AM	37.9	D+	38.9	D+	+0.029	1.0	39.4	D	+0.045	1.9
	PM	33.7	C-	34.7	C-	+0.037	0.9	35.6	D+	+0.076	2.6
21. Lawrence Expy / I-280 SB Ramps <sup>6</sup>	AM	53.7	D-	<b>60.7</b>	<b>E</b>	<b>+0.029</b>	<b>8.1</b>	<b>59.8</b>	<b>E+</b>	<b>+0.038</b>	<b>7.9</b>
	PM	54.2	D-	<b>71.3</b>	<b>E</b>	<b>+0.074</b>	<b>23.1</b>	<b>126.8</b>	<b>F</b>	<b>+0.288</b>	<b>105.4</b>
22. Bollinger Road / De Anza Boulevard <sup>6</sup>	AM	20.0	C+	19.9	B-	+0.001	-0.1	19.8	B-	+0.010	0.3
	PM	24.0	C	24.1	C	+0.007	0.3	23.9	C	+0.038	1.3
23. Bollinger Road / Blaney Avenue	AM	20.0	B-	21.2	C+	+0.037	1.8	21.2	C+	+0.042	1.8
	PM	21.2	C+	21.6	C+	+0.019	1.2	22.0	C+	+0.029	1.5
24. Bollinger Road / Miller Avenue	AM	33.6	C-	33.9	C-	+0.015	0.6	34.0	C-	+0.020	0.6
	PM	38.4	D+	39.2	D	+0.021	0.7	39.4	D	+0.030	1.0

Table 4: Intersection Levels Of Service – Maximum Office Project

Intersection	Peak Hour <sup>1</sup>	2008 Background		Maximum Office Project Conditions				Maximum Office Cumulative Plus Project Conditions			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
25. Bollinger Road / Tantau Avenue	AM	12.6	B	12.7	B	+0.001	0.1	12.7	B	+0.002	0.1
	PM	16.4	B	17.1	B	+0.003	0.7	17.1	B	+0.006	0.7
26. Bollinger Road / Lawrence Expy <sup>6</sup>	AM	51.5	D-	53.7	D-	+0.014	6.1	54.0	D-	+0.036	2.6
	PM	54.7	D-	54.8	D-	+0.008	0.3	55.9	E+	+0.066	2.1
27. Vallco Parkway / Perimeter Road	AM	19.9	B-	16.2	B	+0.027	-2.5	16.7	B	+0.034	-1.9
	PM	20.4	C+	20.0	C+	+0.018	-0.4	20.0	C+	+0.018	-0.4

Notes:

- 1 AM = morning peak-hour, PM = evening peak-hour.
- 2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX 7.9 level of service analysis software package.
- 3 LOS = Level of service
- 4 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.
- 5 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.
- 6 Designated CMP intersection.

Unacceptable operations are shown in **bold** typeface

Source: Fehr & Peers, 2012

Table 5: Intersection Levels Of Service – Reduced Office Project

Intersection	Peak Hour <sup>1</sup>	2008 Background		Reduced Office Project Conditions				Reduced Office Cumulative Plus Project Conditions			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
1. Wolfe Road / Homestead Road	AM	27.5	C	27.6	C	+0.001	0.0	27.8	C	+0.017	0.4
	PM	35.1	D+	36.7	D+	+0.040	3.1	37.4	D+	+0.047	3.6
2. Homestead Road / Tantau Avenue	AM	22.9	C+	23.4	C	+0.011	0.8	23.5	C	+0.020	1.0
	PM	26.4	C	27.9	C	+0.021	1.5	28.5	C	+0.039	2.4
3. Homestead Road / Lawrence Expy <sup>6</sup>	AM	<b>86.4</b>	<b>F</b>	<b>89.2</b>	<b>F</b>	<b>+0.011</b>	<b>5.3</b>	92.5	F	+0.056	2.3
	PM	<b>111.1</b>	<b>F</b>	<b>118.8</b>	<b>F</b>	<b>+0.018</b>	<b>10.0</b>	<b>123.0</b>	<b>F</b>	<b>+0.080</b>	<b>10.7</b>
4. Wolfe Road / Pruneridge Avenue	AM	20.6	C+	20.4	C+	+0.006	0.0	20.9	C+	+0.016	0.8
	PM	38.8	D+	39.3	D	+0.028	1.4	40.3	D	+0.041	2.7
5. Pruneridge Avenue / Tantau Avenue	AM	22.3	C+	22.5	C+	+0.012	0.0	22.6	C+	+0.021	0.2
	PM	21.9	C+	22.4	C+	+0.060	0.5	22.9	C+	+0.081	1.3

Table 5: Intersection Levels Of Service – Reduced Office Project

Intersection	Peak Hour <sup>1</sup>	2008 Background		Reduced Office Project Conditions				Reduced Office Cumulative Plus Project Conditions			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
6. Wolfe Road / I-280 Northbound Ramps <sup>6</sup>	AM	15.2	B	15.4	B	+0.002	0.1	15.4	B	+0.005	0.1
	PM	13.9	B	14.3	B	+0.028	0.6	14.4	B	+0.041	0.9
7. Wolfe Road / I-280 SB Ramps <sup>6</sup>	AM	14.0	B	14.1	B	+0.012	0.2	14.1	B	+0.014	0.2
	PM	9.4	A	10.0	A	+0.069	1.0	10.0	A	+0.075	1.0
8. Wolfe Road / Vallco Parkway	AM	17.7	B	21.0	C+	+0.056	4.9	20.9	C+	+0.058	4.9
	PM	53.1	D-	<b>66.5</b>	<b>E</b>	<b>+0.081</b>	<b>17.6</b>	<b>68.2</b>	<b>E</b>	<b>+0.095</b>	<b>21.1</b>
9. Vallco Parkway / Finch Avenue	AM	11.6(SB)	B	13.7	B			13.7	B		
	PM	15.2(NB)	C	26.9	D			26.9	D		
10. Vallco Parkway / Tantau Avenue	AM	18.1	B-	18.7	B-	+0.003	-0.1	18.7	B-	+0.003	-0.1
	PM	20.2	C+	22.7	C+	+0.208	3.0	22.8	C+	+0.211	3.1
11. Stevens Creek Blvd / De Anza Blvd <sup>6</sup>	AM	31.7	C	32.1	C-	+0.013	0.7	32.6	C-	+0.028	1.2
	PM	44.9	D	46.3	D	+0.013	2.0	50.8	D	+0.053	8.3
12. Stevens Creek Blvd / Blaney Avenue	AM	29.0	C	29.1	C	+0.009	0.4	29.0	C	+0.026	0.3
	PM	29.9	C	30.3	C	+0.034	1.1	30.5	C	+0.067	1.7
13. Stevens Creek Blvd / Portal Avenue	AM	14.3	B	14.0	B	+0.006	0.0	13.6	B	+0.019	-0.3
	PM	13.2	B	12.9	B	+0.021	-0.2	12.5	B	+0.046	-0.4
14. Stevens Creek Blvd / Perimeter Road	AM	10.0	A	9.8	A	+0.001	0.0	9.7	A	+0.013	0.0
	PM	17.4	B	16.9	B	+0.020	-0.3	16.5	B	+0.044	-0.6
15. Stevens Creek Blvd / Wolfe Rd-Miller <sup>6</sup>	AM	38.7	D+	38.8	D+	+0.018	0.5	38.9	D+	+0.034	0.7
	PM	40.1	D	42.0	D	+0.060	3.0	43.3	D	+0.089	4.9
16. Stevens Creek Blvd / Finch Avenue	AM	37.6	D+	39.0	D+	+0.027	0.7	38.2	D+	+0.041	0.1
	PM	27.0	C	40.4	D	+0.096	16.7	39.5	D	+0.119	15.6
17. Stevens Creek Blvd / Tantau Avenue	AM	23.0	C+	23.8	C	+0.091	1.8	23.9	C	+0.107	2.0
	PM	25.0	C	28.6	C	+0.086	4.9	29.9	C	+0.115	7.0
18. Stevens Creek Blvd / I-280 Ramps <sup>6</sup>	AM	28.5	C	27.2	C	+0.011	-3.9	27.4	C	+0.025	-3.6
	PM	55.2	E+	79.2	E-	+0.111	50.9	<b>84.0</b>	<b>F</b>	<b>+0.137</b>	<b>63.7</b>
19. Stevens Creek Blvd /LawrenceExpy(W) <sup>6</sup>	AM	23.1	C	24.0	C	+0.046	1.2	24.4	C	+0.065	1.8
	PM	32.4	C-	33.2	C-	+0.043	1.8	34.3	C-	+0.077	3.8
20. Stevens Creek Blvd /Lawrence Expy(E) <sup>6</sup>	AM	37.9	D+	38.8	D+	+0.028	1.0	39.3	D	+0.044	1.8
	PM	33.7	C-	34.7	C-	+0.038	0.9	35.7	D+	+0.078	2.7
21. Lawrence Expy / I-280 SB Ramps <sup>6</sup>	AM	53.7	D-	<b>60.6</b>	<b>E</b>	<b>+0.028</b>	<b>8.0</b>	<b>59.7</b>	<b>E+</b>	<b>+0.038</b>	<b>7.9</b>
	PM	54.2	D-	<b>71.1</b>	<b>E</b>	<b>+0.073</b>	<b>22.7</b>	<b>126.5</b>	<b>F</b>	<b>+0.287</b>	<b>105.0</b>

Table 5: Intersection Levels Of Service – Reduced Office Project

Intersection	Peak Hour <sup>1</sup>	2008 Background		Reduced Office Project Conditions				Reduced Office Cumulative Plus Project Conditions			
		Delay <sup>2</sup>	LOS <sup>3</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>	Delay <sup>2</sup>	LOS <sup>3</sup>	Δ in Crit V/C <sup>4</sup>	Δ in Crit Delay <sup>5</sup>
22. Bollinger Road / De Anza Boulevard <sup>6</sup>	AM	20.0	C+	19.9	B-	++0.002	-0.1	19.8	B-	+0.010	0.3
	PM	24.0	C	24.1	C	+0.008	0.3	23.9	C	+0.038	1.3
23. Bollinger Road / Blaney Avenue	AM	20.0	B-	21.1	C+	+0.037	1.8	21.2	C+	+0.042	1.8
	PM	21.2	C+	21.6	C+	+0.020	1.3	22.0	C+	+0.031	1.6
24. Bollinger Road / Miller Avenue	AM	33.6	C-	33.9	C-	+0.015	0.6	33.9	C-	+0.019	0.6
	PM	38.4	D+	39.2	D	+0.021	0.7	39.4	D	+0.030	1.0
25. Bollinger Road / Tantau Avenue	AM	12.6	B	12.7	B	+0.001	0.1	12.7	B	+0.002	0.1
	PM	16.4	B	17.2	B	+0.003	0.7	17.1	B	+0.006	0.7
26. Bollinger Road / Lawrence Expy <sup>6</sup>	AM	51.5	D-	53.7	D-	+0.014	5.9	53.9	D-	+0.036	2.4
	PM	54.7	D-	54.9	D-	+0.009	0.6	56.0	E+	+0.066	2.3
27. Vallco Parkway / Perimeter Road	AM	19.9	B-	16.3	B	+0.026	-2.4	16.8	B	+0.032	-1.9
	PM	20.4	C+	20.0	C+	+0.018	-0.4	20.0	C+	+0.018	-0.4

Notes:

- 1 AM = morning peak-hour, PM = evening peak-hour.
- 2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using method described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX 7.9 level of service analysis software package.
- 3 LOS = Level of service
- 4 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.
- 5 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.
- 6 Designated CMP intersection.

Unacceptable operations are shown in **bold** typeface

Source: Fehr & Peers, 2012

### Intersection Impact Criteria

Intersection impacts were evaluated by comparing the results of the level of service calculations under Project Conditions to the results under Background Conditions. Cumulative impacts are identified using the same general criteria as project-level impacts; however, the significance of cumulative impacts where the project exacerbates already unacceptable operations would be based on the change in critical delay and volume-to-capacity between Cumulative No Project and Cumulative Plus Project conditions. Criteria to determine significant impacts from the 2008 studies are as follows:

#### City of Cupertino, City of San Jose, and City of Santa Clara Intersections

A significant project impact to a City of Cupertino, City of San Jose, City of Santa Clara, or County of Santa Clara signalized intersection occurs if the project results in one of the following:

- Operations at a signalized intersection deteriorate from LOS D or better under Background Conditions to LOS E or F under Project Conditions; or
- Exacerbation of unacceptable operations (LOS E or F) at a signalized intersection by increasing the average critical delay by four seconds or more and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.
- Operations at the De Anza Boulevard/Stevens Creek Boulevard or De Anza Boulevard/Bollinger Road intersection to be LOS E or worse with more than 55.0 seconds of average vehicle weighted delay; or
- Exacerbation of unacceptable operations (LOS E or F) at the De Anza Boulevard/Stevens Creek Boulevard or De Anza Boulevard/Bollinger Road intersection by increasing the average critical delay by four seconds or more and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.

A significant project impact occurs at an unsignalized intersection when the addition of project traffic causes:

- Intersection operations to deteriorate from an acceptable level under Background Conditions (LOS E or better) to an unacceptable level (LOS F or worse) and the MUTCD Peak Hour Warrant is met under Project Conditions; or
- The exacerbation of operations at an unsignalized intersection already operating at an unacceptable level (LOS F or worse) under Background Conditions and the MUTCD Peak Hour Warrant is met under Project Conditions.

#### Valley Transportation Authority (CMP) Intersection

A significant impact at a CMP intersection located within the City of Santa Clara occurs when the addition of project traffic causes one of the following<sup>2</sup>:

- Operations to degrade from an acceptable level (LOS E or better) under Background Conditions to an unacceptable level (LOS F) under Project Conditions.
- Unacceptable operations are exacerbated by increasing the critical delay by more than four seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.
- The V/C ratio increases by 0.01 or more at an intersection with unacceptable operations (LOS E or F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

#### **Intersection Impacts**

**Table 6** summarizes the significant intersection impacts for Project and Cumulative Conditions using the significance criteria discussed in the previous section compared to the 2008 analysis results. The impacted intersections are identical to the project schemes analyzed in the 2009 Final EIR. The new scenarios will have a **less-than-significant** impact at the other study intersections.

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<sup>2</sup> The Cities of Cupertino and San Jose follow their respective impact criteria for CMP intersections.

Table 6: Intersection Impacts Summary

Intersection	Peak Hour	2008 Project Description		2012 Project Description			
		Scheme 1	Scheme 2	Scheme 1c	Scheme 2b	Maximum Office	Reduced Office
<b>Project Conditions</b>							
Lawrence / Homestead	AM	89.8 / F	89.1 / F	89.5 / F	89.0 / F	89.3 / F	89.2 / F
	PM	118.6 / F	117.5 / F	118.6 / F	117.4 / F	118.9 / F	118.8 / F
Wolfe / Vallco	AM	--	--	--	--	--	--
	PM	68.4 / E	65.6 / E	66.2 / E	63.5 / E	66.5 / E	66.5 / E
Lawrence / I-280 SB Ramp	AM	61.4 / E	60.5 / E	61.5 / E	60.2 / E	60.7 / E	60.6 / E
	PM	69.6 / E	69.6 / E	71.2 / E	68.8 / E	71.3 / E	71.1 / E
Lawrence / Bollinger	AM	--	--	--	--	--	--
	PM	55.3 / E+	--	--	55.2 / E+	--	--
<b>Cumulative Conditions</b>							
Lawrence / Homestead	AM	--	--	--	--	--	--
	PM	122.8 / F	121.9 / F	122.7 / F	121.6 / F	123.0 / F	123.0 / F
Wolfe / Vallco	AM	--	--	--	--	--	--
	PM	73.4 / E	71.3 / E	67.9 / E	65.2 / E	68.3 / E	68.2 / E
Stevens Creek/I-280 SB Ramp	AM	--	--	--	--	--	--
	PM	83.3 / F	82.7 / F	84.6 / F	81.8 / F	84.5 / F	84.0 / F
Lawrence / I-280 SB Ramp	AM	60.2 / E	59.5 / E+	60.7 / E	59.2 / E+	59.8 / E+	59.7 / E+
	PM	124.2 / F	124.5 / F	126.6 / F	123.2 / F	126.8 / F	126.5 / F
Lawrence / Bollinger	AM	--	--	--	--	--	--
	PM	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>	LTS <sup>1</sup>

Note:

1. Less-than-Significant Impact between Cumulative No Project and Plus Project Scenarios

Source: Fehr & Peers, 2008 and 2012

### Intersection Mitigation Measures

Improvements were identified to mitigate intersection impacts to a less-than-significant level. These mitigation measures, which apply to both the Maximum Office and Reduced Office scenarios, are presented below:

#### Project-Level Mitigation

*Lawrence Expressway / Homestead Road* – The scenarios increase the AM and PM peak-hour delays by more than four seconds to this intersection operating at unacceptable LOS F under Background Conditions. The addition of a third westbound through lane would improve overall delay and reduce the impact to a less-than-significant level.<sup>3</sup> Intersection operations would return to LOS E in the AM peak hour

<sup>3</sup> The addition of a third eastbound lane on Homestead Road was identified as a Tier 1C improvement in the Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2003. The report footnoted that the improvement would not improve projected 2025 LOS from F to LOS E or better.

under both options. During the PM peak hour overall delay would be reduced to less than Background Conditions in both options but the intersection would still operate at LOS F. This mitigation would require significant right-of-way acquisition and the relocation of existing utilities at the intersection. This intersection is controlled and maintained by the County of Santa Clara and any improvements need to be approved and implemented by the County. Therefore, the impact at this intersection is considered **significant and unavoidable**.

*Vallco Parkway / Wolfe Road* – The scenarios degrade the level of service at this intersection to LOS E during the PM peak hour. The following two mitigation measures were identified as potential improvements to return intersection operations to acceptable levels of service.

Mitigation Option #1 – Maintaining the existing intersection configuration, but installing a westbound right-turn overlap phase would mitigate the project-level impact under both schemes to a **less-than-significant** level. The intersection would operate at LOS D under either scheme.

Mitigation Option #2 – The addition of a second, westbound right-turn lane would improve project-level intersection operations to an acceptable level of service and mitigate the project-level impact to a **less-than-significant** level. The additional turn lane could be accommodated by re-striping the existing westbound through lane as a shared through/right-turn lane. The intersection would operate at LOS D under either scheme.

*Lawrence Expressway / I-280 Southbound Ramps* – Major improvements at this intersection were identified in the Comprehensive County Expressway Planning Study for Lawrence Expressway completed in 2008, including a Caltrans Project Study Report (PSR) for this interchange (Tier 1A project). The completion of a PSR, however, would not mitigate the project's impact at this location to a less-than-significant level, since no physical changes would occur at the intersection to either increase capacity or improve traffic operations. This intersection is controlled by the County and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

*Bollinger Road-Moorpark Avenue/Lawrence Expressway* – The Comprehensive County Expressway Planning Study for Lawrence Expressway identified the widening of Lawrence Expressway from six lanes to eight lanes between Moorpark/Bollinger and Calvert as a Tier 1A improvement. This improvement would mitigate the project's impact to a less-than-significant level of service. However, this intersection is controlled by the County of Santa Clara and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

#### Cumulative Level Mitigation Measures

Improvements were identified at the impacted intersections to mitigate Cumulative Plus Project impacts to less-than-significant levels. The following mitigation measures identified under Project Conditions mitigate the cumulative impact to **less-than-significant** levels:

*Lawrence Expressway/Homestead Road* – The addition of a third westbound or a third eastbound through lane would improve Cumulative Plus Project intersection levels of service to acceptable LOS E; however, this improvement would require significant right-of-way acquisition. This intersection is controlled and maintained by the County of Santa Clara and any improvements need to be approved and implemented by the County. Therefore, the impact at this intersection is considered **significant and unavoidable**.

*Vallco Parkway / Wolfe Road* – The mitigation measures identified under Project Conditions (a westbound right overlap phase; a second westbound right-turn lane; or permitted phasing on the eastbound and westbound approaches) also mitigate the potential Cumulative Plus Project impact to **less-than-significant**

*Stevens Creek Boulevard / I-280 Southbound Ramps* – Addition of an eastbound right-turn overlap phase mitigates the impact to a less-than-significant level. This intersection is not located within the City of Cupertino; therefore, the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

*Lawrence Expressway/I-280 Southbound Ramps* – An additional northbound and southbound through lane would improve overall delay; however, the intersection would still operate unacceptably. Therefore the impact is considered **significant and unavoidable**. This intersection is not controlled by the City of Cupertino and the applicant will need to coordinate with the lead agency to determine the appropriate mitigation at this location. Therefore, this impact would be considered **significant and unavoidable** because the City of Cupertino has no authority to implement any improvements at this location.

## **FREEWAY SEGMENT LEVELS OF SERVICE**

Vehicle trips generated by the restaurant-intensive scenarios were added to the existing traffic volumes for each freeway mainline segment from the 2008 studies. These volumes were then used to estimate density for each segment under Project Conditions. The resulting freeway segment operations are presented in **Table 7**. All traffic associated with the scenarios was assumed to use the mixed-flow lanes on the freeway.

Table 7: Freeway Segment Levels Of Service

From	To	Peak Hour	2008 Existing		Maximum Office Scenario				Reduced Office Scenario			
			Density <sup>1</sup>	LOS <sup>2</sup>	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact <sup>4</sup>	Added Trips <sup>3</sup>	Density <sup>1</sup>	LOS <sup>2</sup>	% Impact <sup>4</sup>
<b>Eastbound I-280</b>												
SR 85	De Anza	AM	27	D	71	27	D	1.03%	67	27	D	0.97%
		PM	32	D	56	32	D	0.81%	58	32	D	0.84%
De Anza	Wolfe	AM	32	D	64	32	D	0.93%	60	32	D	0.87%
		PM	67	F	50	68	F	0.72%	52	68	F	0.75%
Wolfe	Lawrence	AM	22	C	4	22	C	0.06%	4	22	C	0.06%
		PM	76	F	16	76	F	0.23%	16	76	F	0.23%
Lawrence	Saratoga	AM	38	D	29	38	D	0.42%	26	38	D	0.38%
		PM	98	F	<b>137</b>	<b>101</b>	<b>F</b>	<b>1.99%</b>	<b>134</b>	<b>101</b>	<b>F</b>	<b>1.94%</b>
Saratoga	Winchester	AM	43	D	25	43	D	0.36%	22	43	D	0.31%
		PM	86	F	<b>116</b>	<b>88</b>	<b>F</b>	<b>1.69%</b>	<b>111</b>	<b>88</b>	<b>F</b>	<b>1.61%</b>
Winchester	I-880	AM	27	D	21	27	D	0.30%	19	27	D	0.27%
		PM	104	F	<b>99</b>	<b>107</b>	<b>F</b>	<b>1.43%</b>	<b>96</b>	<b>107</b>	<b>F</b>	<b>1.40%</b>
<b>Westbound I-280</b>												
I-880	Winchester	AM	94	F	<b>84</b>	<b>96</b>	<b>F</b>	<b>1.21%</b>	<b>78</b>	<b>96</b>	<b>F</b>	<b>1.14%</b>
		PM	73	F	62	74	F	0.90%	63	74	F	0.92%
Winchester	Saratoga	AM	65	F	<b>99</b>	<b>66</b>	<b>F</b>	<b>1.43%</b>	<b>90</b>	<b>66</b>	<b>F</b>	<b>1.31%</b>
		PM	55	E	73	56	E	1.06%	73	56	E	1.06%
Saratoga	Lawrence	AM	74	F	<b>116</b>	<b>76</b>	<b>F</b>	<b>1.68%</b>	<b>109</b>	<b>76</b>	<b>F</b>	<b>1.58%</b>
		PM	29	D	86	29	D	1.25%	88	29	D	1.28%
Lawrence	Wolfe	AM	68	F	26	68	F	0.38%	24	68	F	0.35%
		PM	27	D	11	27	D	0.16%	11	27	D	0.16%
Wolfe	De Anza	AM	50	E	18	50	E	0.26%	17	50	E	0.25%
		PM	37	D	82	37	D	1.19%	80	37	D	1.16%
De Anza	SR 85	AM	60	F	19	60	F	0.28%	18	60	F	0.26%
		PM	25	C	86	25	C	1.25%	84	25	C	1.22%

Notes:

- <sup>1</sup> Measured in passenger cars per mile per lane. Density is calculated by using the travel speed from the adjacent segment, as well as the volume (flow) from the adjacent segment adjusted by the volume entering/exiting the freeway at the interchange.
- <sup>2</sup> LOS = level of service.
- <sup>3</sup> Project trips added during the peak hour.
- <sup>4</sup> Added volume compared to segment capacity.

Significant impacts are shown in **bold** typeface.

Source: VTA, April 2008; and Fehr & Peers, 2012

### Project Freeway Impacts and Mitigation Measures

Freeway impacts were evaluated by comparing the results of the level of service calculations under Projects Conditions to the results under Existing Conditions. Significant impacts to freeway segments are defined to occur when the addition of project-related traffic causes one of the following:

- A segment to drop below its acceptable CMP operating standard (LOS E); or,
- The project traffic added to a segment operating at LOS F is more than one percent of its capacity.

Based on the significance criteria, the proposed scenarios will have significant impacts on several freeway segments summarized in **Table 8**. The freeway segments impacted are not greater than the 2008 project.

TABLE 8: FREEWAY IMPACTS

Segment Limits	2008 Project Description		2012 Project Description			
	Scheme 1	Scheme 2	Scheme 1c	Scheme 2b	Maximum Office	Reduced Office
<b>Eastbound I-280</b>						
Lawrence Expressway to Saratoga	PM	PM	PM	PM	PM	PM
Saratoga to Winchester	PM	PM	PM	PM	PM	PM
Winchester to I-880	PM	PM	PM	PM	PM	PM
<b>Westbound I-280</b>						
I-880 and Winchester Boulevard	PM	AM	AM/PM	AM	AM	AM
Winchester Boulevard to Saratoga	AM	AM	AM	--	AM	AM
Saratoga to Lawrence	AM	AM	AM	AM	AM	AM

Source: Fehr & Peers, 2008 and 2012

According to VTA policy direction, the mitigation measure for regional freeway impacts is participation in the Countywide Deficiency Plan (CDP) prepared by the VTA. The CDP has not received final approval; therefore, the mitigation of freeway impacts cannot be guaranteed since Cupertino does not have legal authority to mitigate freeway impacts. Pending adoption of the CDP, the Lead Agency for a development project must include programs or facilities delineated in the "Immediate Implementation Action List" (Appendix D to the Draft CDP) as part of the project's approval if the freeway impact cannot be reduced to a less-than-significant level. Measures from the list that are appropriate for this project include:

- Improve Pedestrian Facilities (A-4)
- Bus Stop Improvements (B-8)
- HOV parking preference program (G-1)
- Bike facilities at development projects (G-2)
- Pedestrian circulation system (G-4)

While implementation of these measures would incrementally reduce traffic, they would not reduce the identified impact to a less-than-significant level. Full mitigation of freeway impacts is considered beyond the scope of an individual project; thus, the addition of project traffic results in a ***significant and unavoidable*** impact to the all of the freeway segments listed above.

## **CONCLUSION**

The restaurant-intensive scenarios would have similar or slightly lower trip generation than the schemes, options, and variants analyzed to date. During the PM peak hour, the inbound trip volume would be slightly higher; however, the change would not result in new or substantially more severe significant intersection and freeway impacts than were identified in the 2008 TIA and EIR or 2012 EIR Addendum.

We hope that you have found the data contained in this memorandum helpful. If you have any questions, please contact Todd Henry at (415) 348-0300.