Meeting Date: 11/25/08

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 8A-1

Santa Clara All-America City 2001

Date: November 18, 2008

To: City Manager for Council Action

From: Director of Planning and Inspection

Subject: Planning Commission Recommendation for Adoption of a Resolution to Adopt Mitigated Negative Declaration, Rezone Land Use Designation from Light Industrial (ML) to Planned Development (PD), Approve Development Plan and Conditions of Approval, Adopt a Mitigation Monitoring and Reporting Plan, and Approval of a Memorandum of Understanding with the City of San Jose for Property Located at 1270 Campbell Avenue (PLN2008-07068)

EXECUTIVE SUMMARY:

On November 12, 2008, the Planning Commission held a public hearing and recommended Council adopt a Mitigated Negative Declaration, Rezone a portion of a 5.18 acre site from Light Industrial (ML) to Planned Development (PD), approve the Development Plan and Conditions of Approval for the project, and Adopt a Mitigation Monitoring and Reporting Plan for the property located at 1270 Campbell Avenue (PLN2008-07068). The project site straddles the jurisdictional boundary of Santa Clara and San Jose, with 0.58 acres of the site in Santa Clara and 4.6 acres in San Jose.

The project is a residential infill project that involves the demolition of a vacant industrial building and associated site improvements to construct up to 259 multifamily dwelling units, onsite parking, circulation and landscaping. The specific proposal involves a total of 248 units, of which a maximum of 27 units are located wholly in Santa Clara, 12 cross the jurisdictional boundary line and 209 are located in San Jose for a project site density of 48 dwelling units per acre. The project includes a Memorandum of Understanding (MOU) between Santa Clara and San Jose that assigns responsibilities for planning, building and inspection activities, as well as related public works improvements for the proposed residential development. The project and MOU have been reviewed and approved by the San Jose City Council at noticed public hearings. Copies of the full administrative record are available for public review in the Planning Department of each city.

A Notice of Public Hearing was mailed to property owners within 300 feet of the project site on November 14, 2008, and was posted at the project site on November 14, 2008 for Santa Clara City Council review on November 25, 2008. The Council Resolution and Planning Commission staff report and meeting minutes excerpts of November 12, 2008 are attached. Excerpt minutes from the San Jose City Council public hearing of October 28, 2008 and related agenda report are also attached.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Project approval would allow the construction of up to 27 new multifamily dwelling units in the City of Santa Clara as part of a high density residential infill project located within the jurisdictions of Santa Clara and San Jose, in proximity to transit, commercial, educational, and cultural facilities. The project would

contribute in-lieu affordable housing fees in proportion to the City's inclusionary housing policy to provide at least 10 percent of the units at affordable income levels (fee equivalent to three affordable units). The proposed MOU between Santa Clara and San Jose assigns responsibilities for planning, building and inspection activities, as well as related public works improvements for the proposed residential development.

ECONOMIC/FISCAL IMPACT:
There is no cost to the city other than administrative staff time and expense.

RECOMMENDATION:
That the Council uphold the Planning Commission recommendation to adopt the Council Resolution to adopt the Mitigated Negative Declaration, Rezone Land Use Designation from Light Industrial (ML) to Planned Development (PD), Approve the Development Plan and Conditions of Approval, Adopt a Mitigation Monitoring and Reporting Plan, and, further, that the Council approve a Memorandum of Understanding with the City of San Jose for property located at 1270 Campbell Avenue (PLN2008-07068).

Kevin L. Riley, AICP
Director of Planning and Inspection

APPROVED:

Jennifer Sparacino
City Manager

Documents Related to this Report:
1) ***Initial Study/Mitigated Negative Declaration***
2) ***Mitigated Negative Declaration, Rezone, Development Plan and Mitigation Monitoring Plan Resolution***
   - ***Exhibit A: Development Plan***
   - ***Exhibit B: Mitigation Monitoring Plan***
   - ***Exhibit C: Conditions of Approval***
3) ***Planning Commission staff report for November 12, 2008***
   - ***Exhibit 1: San Jose Planning Commission staff report, October 8, 2008***
   - ***Exhibit 2: Memorandum of Understanding***
4) ***Planning Commission meeting minutes excerpt, November 12, 2008***
5) ***San Jose City Council meeting minutes excerpt and agenda report, October 28, 2008***

Initial Study

1270 CAMPBELL AVENUE PLANNED DEVELOPMENT ZONING

(PDC07-081)

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

September 2008

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SECTION 1 INTRODUCTION AND PURPOSE

This Initial Study 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 San José, California.

This Initial Study evaluates the potential environmental impacts that might reasonably be anticipated to result from the proposed Planned Development (PD) zoning on a 5.18-acre site located at 1270 Campbell Avenue in the Cities of San José and Santa Clara. Approximately 4.60-acres of the site are located within the City of San José and 0.58-acres of the site are located in the City of Santa Clara. While the City of San José would be the Lead Agency for the entire project site under CEQA, the City of Santa Clara would be a Responsible Agency and use this Initial Study for approval of necessary development actions within its jurisdiction including, but not limited to, rezonings and permits.

Santa Clara BART Station Area Plan

The City of Santa Clara, City of San José, and Santa Clara Valley Transportation Authority (VTA) are working together on a plan for the area around the Santa Clara Transit Center. The Transit Center is currently served by Caltrain, Altamont Commuter Express (ACE), and VTA bus lines. Additionally, future plans call for an Automated People Mover (APM) system that would connect Norman Y. Mineta San José International Airport with both the Transit Center and VTA's Metro/Airport light rail station. The VTA is currently working to extend BART from Fremont to Silicon Valley, with the Santa Clara Transit Center forming the terminus of this extension. With completion of the BART extension to Santa Clara, direct rail service will be provided to virtually all parts of the San Francisco Bay Area and the Transit Center will become a key intermodal hub in the region. The project planning area consists of approximately 432 acres in the Cities of Santa Clara and San José, which includes the project site at 1270 Campbell Avenue. The plan will provide the foundation for revitalization and redevelopment within the planning area.[1]

[1] Santa Clara Station Area Plan. 1 October 2007. Santa Clara Station Area Plan. 6 December 2007. http://www.santaclarasap.com/index.php

SECTION 2 PROJECT INFORMATION

2.1 PROJECT TITLE

1270 Campbell Avenue Planned Development (PD) Zoning

2.2 PROJECT LOCATION

The project site is located on the north side of Campbell Avenue approximately 2000 feet northwesterly of Newhall Street at 1270 Campbell Avenue in the City of San José and City of Santa Clara (refer to Figures 1-3).[2] The western corner of the site is within the City of Santa Clara (refer to Figure 3). The project site is surrounded by a roofing company to the east, the Union Pacific Railroad (UPRR) tracks to the north, a two-story office/R&D building to the northwest, and the Santa Clara University baseball stadium to the south.

2.3 PROJECT PROPONENT

Tim Steele
Sobrato Development Companies
10600 North DeAnza Boulevard, Suite 200
Cupertino, CA 95014-2075

2.4 LEAD AGENCY CONTACT

City of San José
Department of Planning, Building, and Code Enforcement
Jeannie Hamilton, Project Manager
200 East Santa Clara Street, 3rd Floor
San José, CA 95113
(408) 535-7850

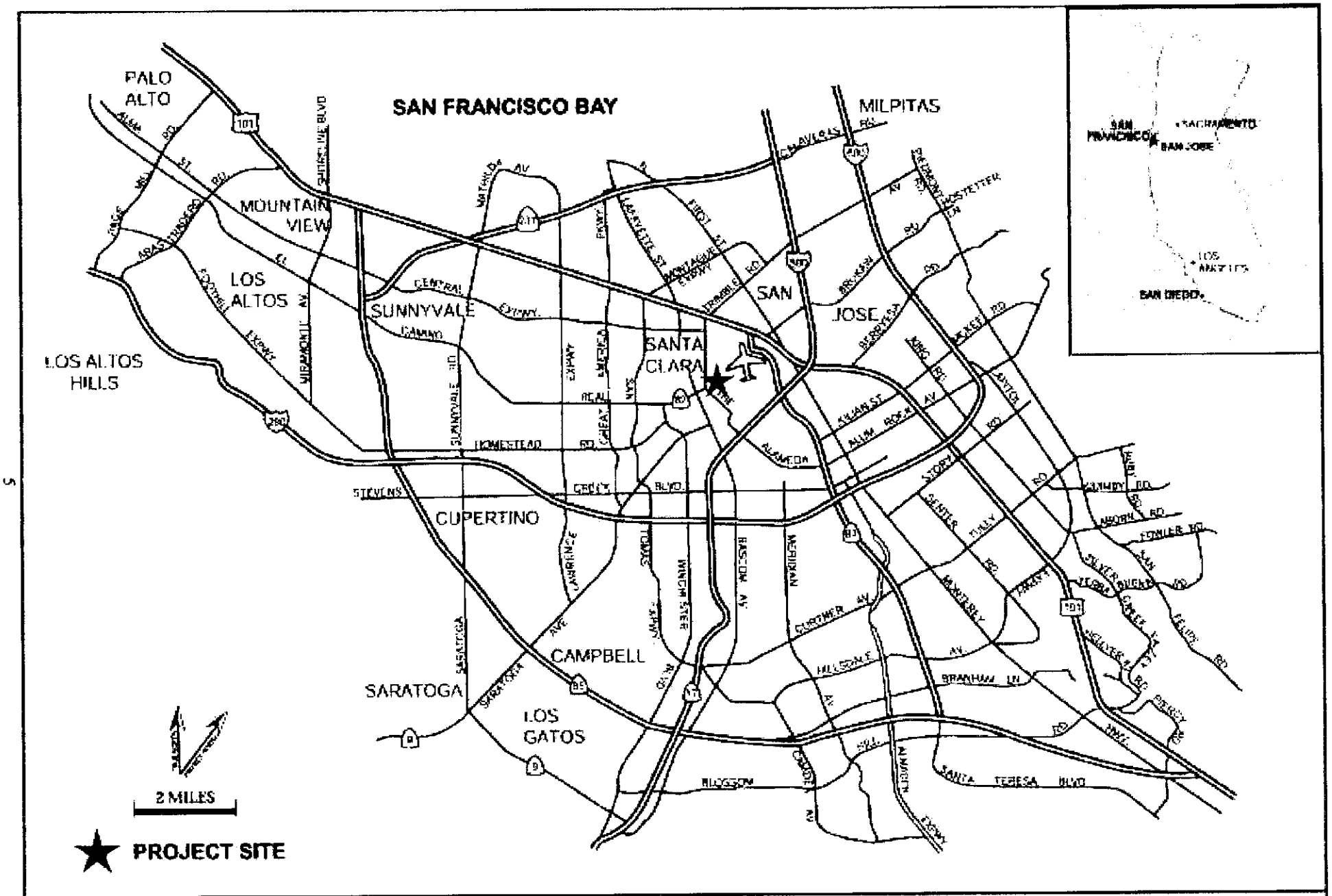
2.5 ASSESSOR'S PARCEL NUMBER

230-14-026

2.6 GENERAL PLAN LAND USE DESIGNATION AND ZONING DESIGNATION

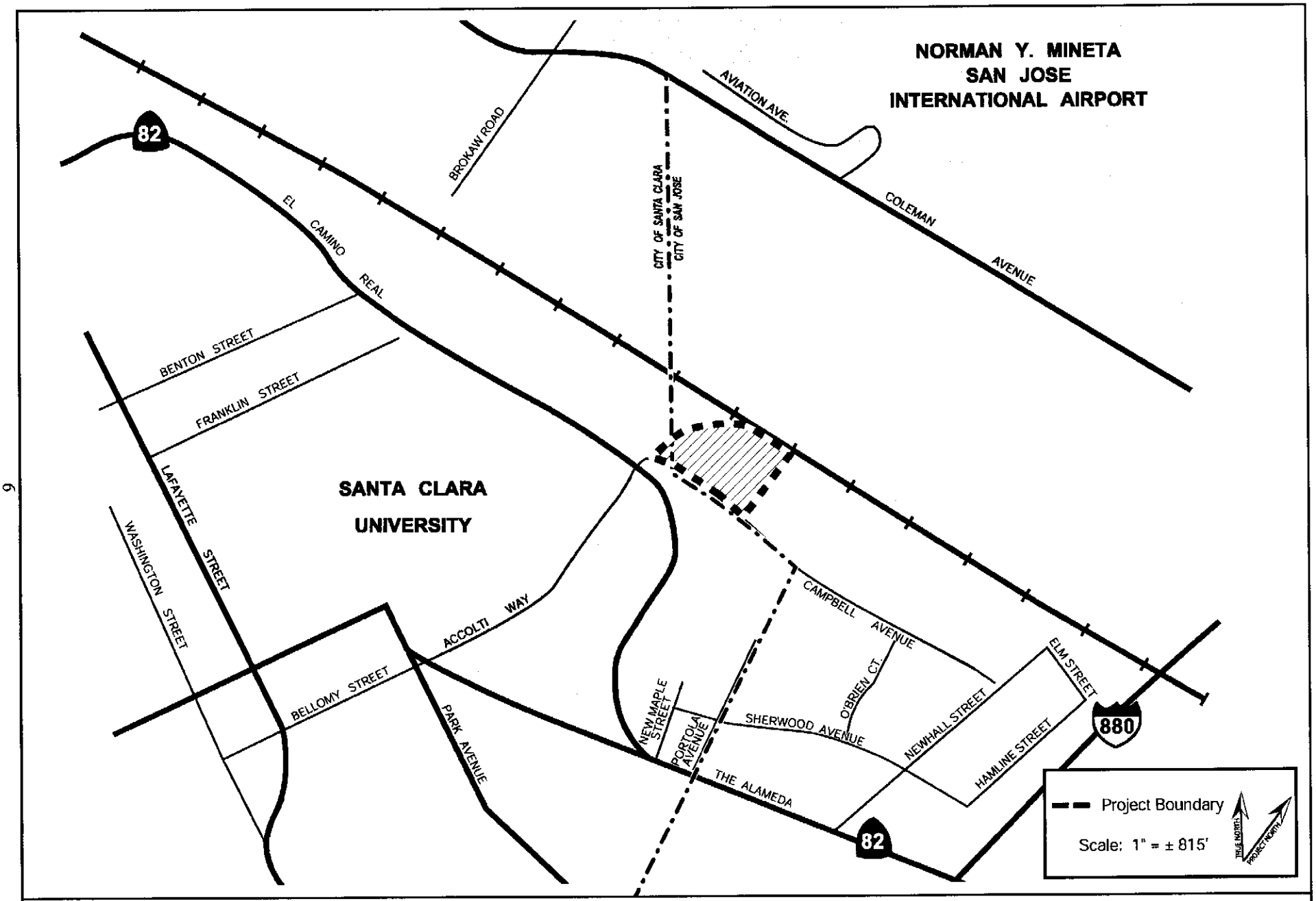
General Plan Land Use Designation:	*High Density Residential (25-50 DU/AC)* (City of San José) *Gateway Thoroughfare* (City of Santa Clara)
Zoning Designation:	*HI – Heavy Industrial* (City of San José) *ML – Light Industrial* (City of Santa Clara)

[2]Due to the physical orientation of the site, true north follows the City of San José and Santa Clara city limit line. For the purposes of this report, however, the railroad tracks are considered north of the project site.



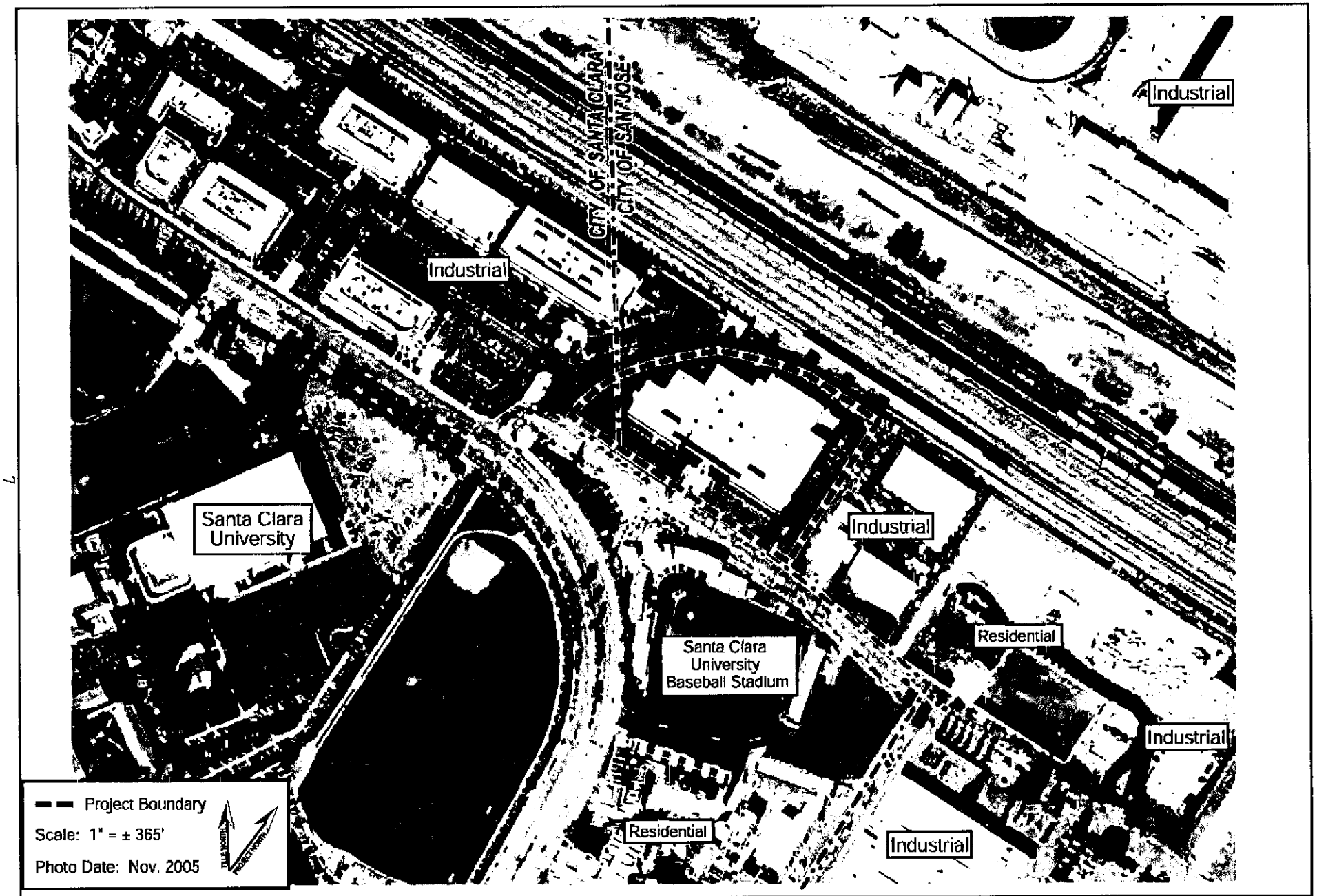
REGIONAL MAP

FIGURE 1



VICINITY MAP

FIGURE 2



AERIAL PHOTOGRAPH

FIGURE 3

SECTION 3 PROJECT DESCRIPTION

3.1 BACKGROUND

The 5.18-acre project site straddles the San José and Santa Clara City jurisdictional boundaries. Approximately 4.60 acres of the site is located within the City of San José and 0.58 acres of the site is located within the City of Santa Clara. A San José General Plan Amendment (GP05-03-02) approved in June 2006 changed the land use designation on the site to *High Density Residential* to allow development of 25 to 50 dwelling units per acre on the site. The existing land use designation for 0.58 acres of the site in the City of Santa Clara is *Gateway Thoroughfare*. The *Gateway Thoroughfare* land use designation in the City of Santa Clara's General Plan allows for both commercial and residential uses (19 to 25 du/acre). Although the proposed project includes residential uses, the density proposed is inconsistent with the City's General Plan land use designation for the site. The City of Santa Clara is a Charter City and state law does not require zoning consistency with the General Plan. Under the City's Zoning Ordinance, however, the project could be found consistent with the existing Santa Clara General Plan designation for the site by proposing a *Planned Development (PD)* zoning and determination of the necessary findings for zoning approval.

3.2 PROJECT OVERVIEW

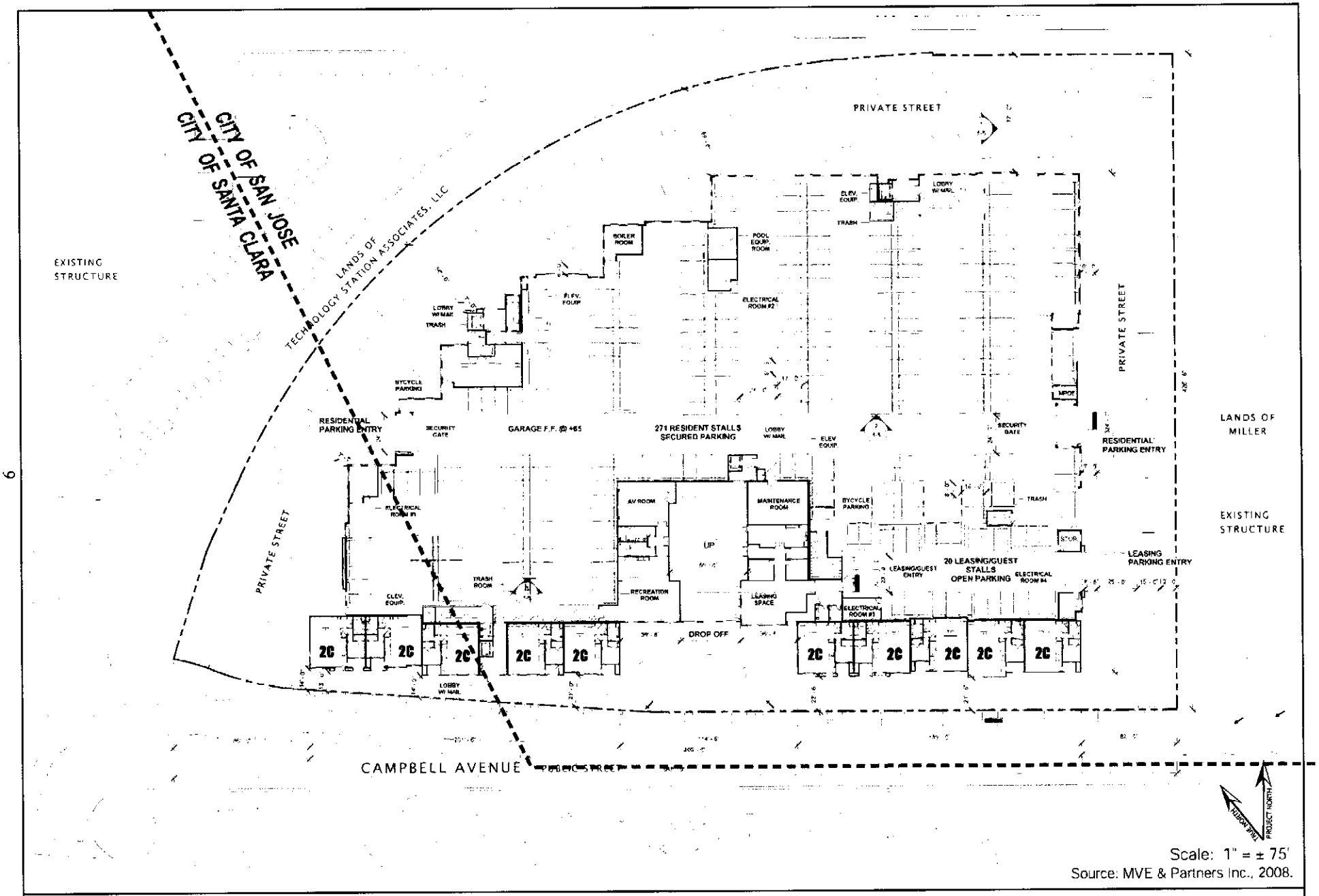
The project proposes to rezone the approximately 4.6 acres of the site in San José from *HI – Heavy Industrial* to *A(PD) – Planned Development* and the 0.58 acres of the site in Santa Clara from *ML – Light Industrial* to *PD – Planned Development. A Memorandum of Understanding (MOU) establishing review and permitting authority for San José and Santa Clara for site clearance and development will be pursued between the two jurisdictions.*

The site is currently developed with an approximately 82,000 square foot industrial/research and development building with associated parking lots and landscaping. The existing General Plan land use designations on the site allow for a total of 259 residential units on the entire parcel. The proposed PD zoning would allow for the development of 259 residential units on the site. The proposed PD zoning would also allow a front setback of 11 feet with side and rear setbacks of 45 feet and a maximum building height of 70 feet. The conceptual plans for the project site are discussed below.

3.3 PROJECT DESIGN

The conceptual plans for the project site propose development of approximately 248[3] units, including approximately 125 one-bedroom flats, 113 two-bedroom flats, and ten townhouse units. The proposed building would be a podium structure up to 70 feet in height, with an at-grade parking garage and four levels of residential units atop the podium. The proposed nine townhouse units would be located along the site's Campbell Avenue frontage. Leasing offices and amenity space for residents would also be located on the ground floor of the building. The proposed townhouses and community facilities would shield views of the parking garage from street level. Additional parking is proposed surrounding the perimeter of the building (refer to Figure 4).

[3] The proposed Planned Development zoning allows development of up to 259 dwelling units on the site; however, due to the applicant's desire to maintain a specific parking ratio for the units the current conceptual plans for the site propose development of 248 dwelling units. For the purposes of this environmental review for the project the maximum number of units allowed by the proposed PD zoning is analyzed throughout this Initial Study unless otherwise noted.



Scale: 1" = ± 75'
Source: MVE & Partners Inc., 2008.

CONCEPTUAL GROUND FLOOR SITE PLAN

FIGURE 4

The podium level of the building would include the second-story of the proposed townhouse units, 31 one-bedroom flats, and 19 two-bedroom flats. The podium level would also include community amenities for the building including a pool and spa (refer to Figure 5). The proposed pool and spa would be located in the northeast portion of the building.

3.3.1 Building Heights and Setbacks

The proposed building would be approximately 70 feet in height above grade (refer to Figure 6). The building would be set back approximately 13 feet from the Campbell Avenue property line. The building would also be set back approximately 62 feet from the project east property line, approximately 78 feet from the project north property line, and approximately 58 feet from the project west property line.

3.3.2 Site Access and Parking

Access to the site would be provided from Campbell Avenue at two existing driveways. The parking garage for residents of the site would be accessed from the surface parking lot on the east and west sides of the building. A separated visitor parking area in the proposed garage would be accessed at a separate entrance on the east side of the building from the surface parking lot. An additional half-circle visitor parking and loading area would be located at the center of the Campbell Avenue site frontage.

The project proposes approximately 438 vehicle parking spaces and 62 bicycle parking spaces on the site. The parking garage would include 291 spaces, and 147 surface parking spaces would be provided around the site perimeter (refer to Figure 4).

3.3.3 Landscaping

The project includes approximately 34,412 square feet of landscaped area. Landscaping for the project will be located surrounding the proposed building and parking areas. Landscaping will also be provided on the podium level of the proposed building.

3.3.3.1 *Drainage Improvements*

The project would include mechanical treatment units to treat all stormwater runoff from the site. The project would connect to storm drainage lines in Campbell Avenue.

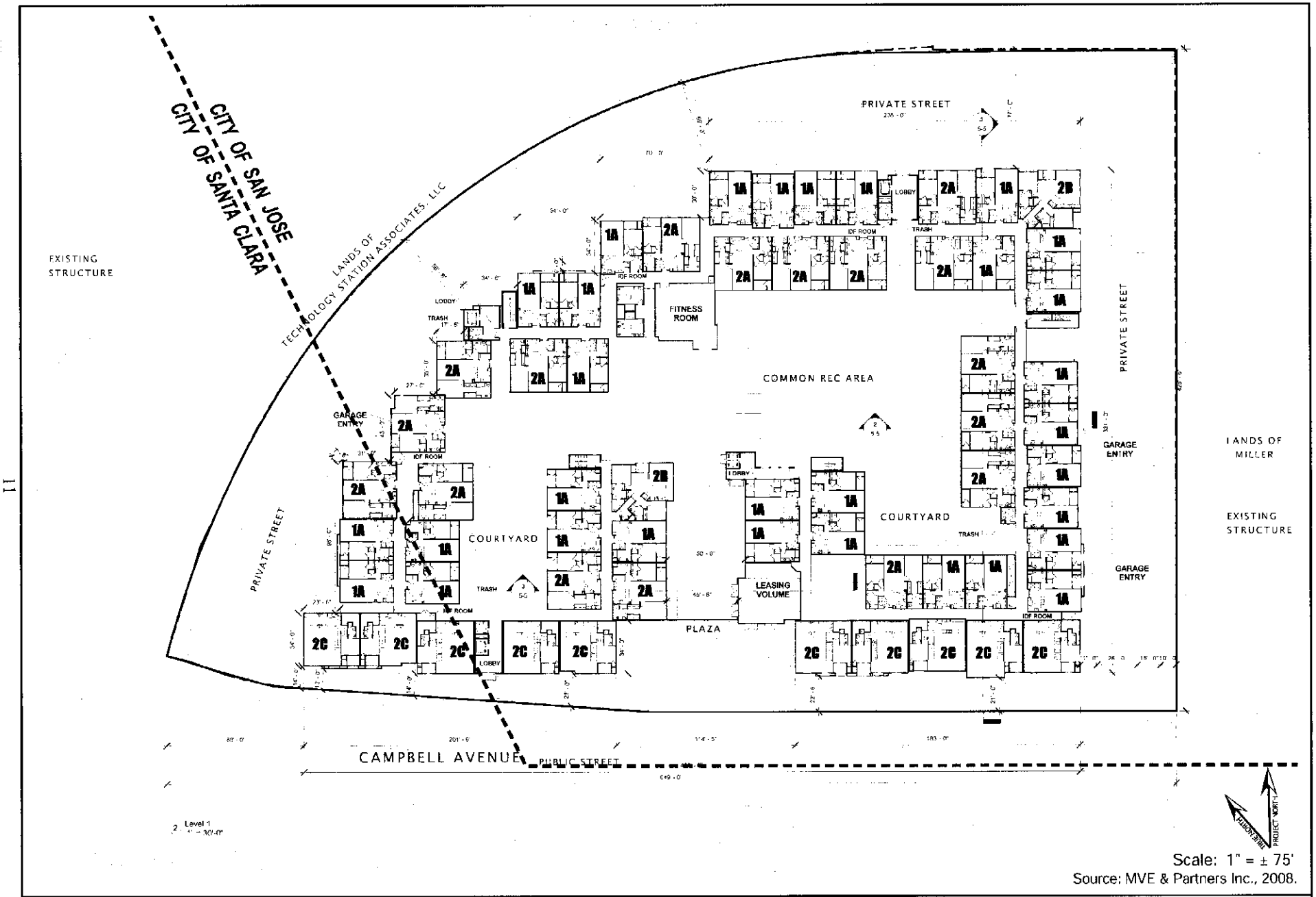
3.3.4 Demolition and Grading

The proposed project would require the demolition of the existing building on the project site. Concrete from the demolition of the existing development would be crushed on the site.

The project would require the excavation of approximately 140 cubic yards of soil and import of 3,550 cubic yards of soil to construct the proposed building foundations. The identified quantity of fill assumes the reuse of existing concrete and building materials on the site. The existing asphaltic concrete will be hauled from the site.

3.4.5 Construction Schedule

Construction of the proposed project is expected to begin in summer 2009 and be completed in 2011.



CONCEPTUAL PODIUM LEVEL PLAN

FIGURE 5

Scale: 1" = ± 50'
Source: MVE & Partners Inc., 2008.

CONCEPTUAL SITE ELEVATION

FIGURE 6

SECTION 4 ENVIRONMENTAL CHECKLIST, IMPACTS, AND MITIGATION

This section describes the existing environmental conditions on and near the project site, as well as environmental impacts associated with the proposed project. The environmental checklist, as recommended in the California Environmental Quality Act (CEQA) Guidelines, identifies environmental impacts that could occur if the proposed project is implemented.

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). Measures that are required by law or are standard City conditions of approval are categorized as "Standard Measures." Measures that are proposed by the applicant that will further reduce or avoid already less than significant impacts are categorized as "Avoidance Measures."

4.1 AESTHETICS

4.1.1 Setting

4.1.1.1 *Project Site*

The project site is located in an area that over the last several years has been transitioning from an industrial area to residential development. The site is currently developed with a vacant one-story, concrete tilt-up office and research and development (office/R&D) building. The building is surrounded by mature landscaping and parking lots. The site is separated from the UPRR tracks to the north and industrial uses to the east by cyclone fencing.

4.1.1.2 *Surrounding Area*

An older two-story industrial building is located east of the project site. A modern two-story office/R&D building is located west of the site. The Stephen Schott Santa Clara University baseball stadium located south of the site, across Campbell Avenue, was completed in April 2005 (refer to Figure 3). Four other recently approved projects have and will add medium and high density residential units on Campbell Avenue east of the project site and south of the site, fronting El Camino Real. The UPRR right-of-way is located north of the site. Views of the site and surrounding uses are shown in Photos 1-5 and Figure 7.

4.1.1.3 *Scenic Vistas*

The project site is not located within a scenic viewshed or along a scenic highway. There are no scenic views visible from the project site.

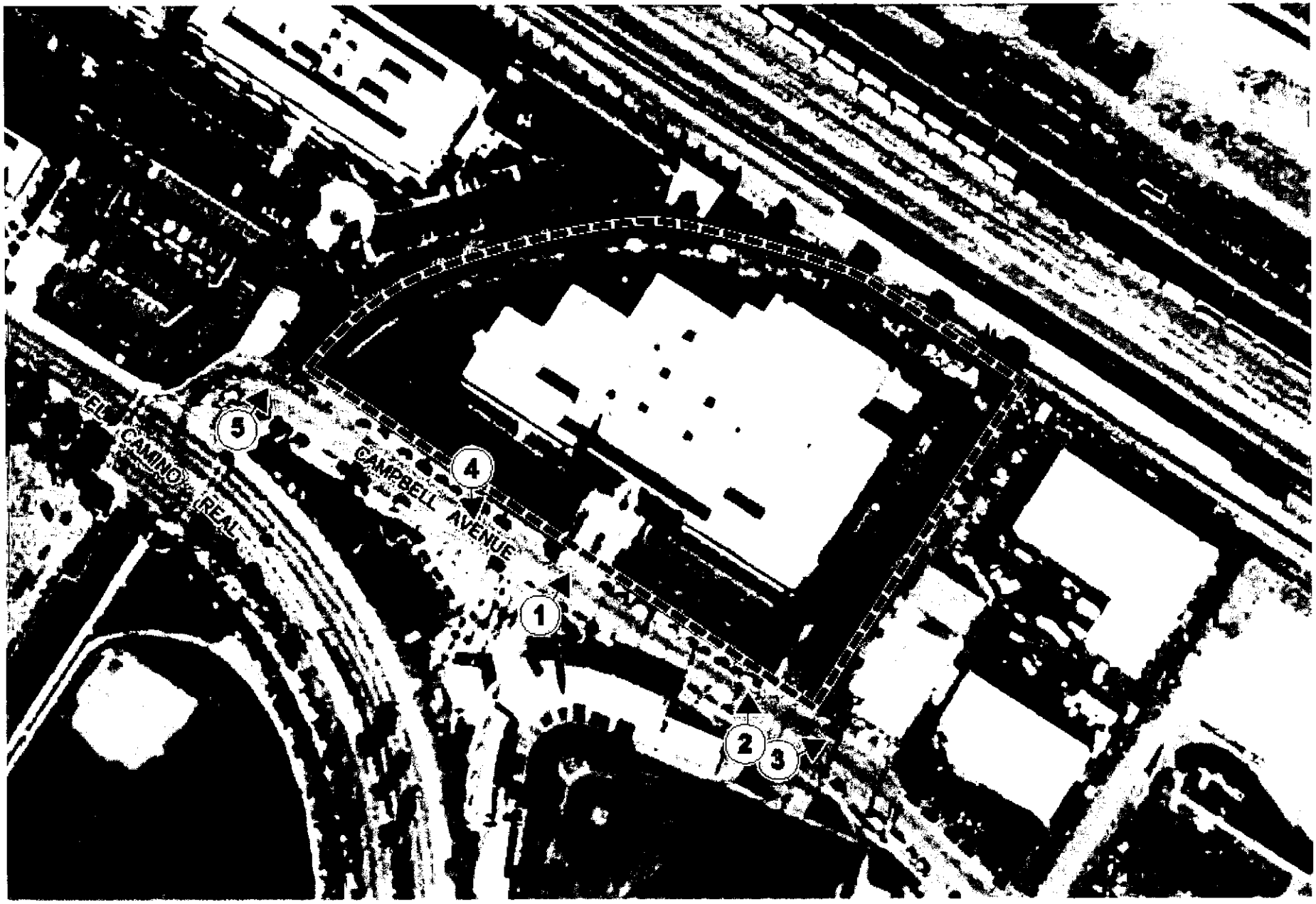


PHOTO LOCATIONS

FIGURE 7

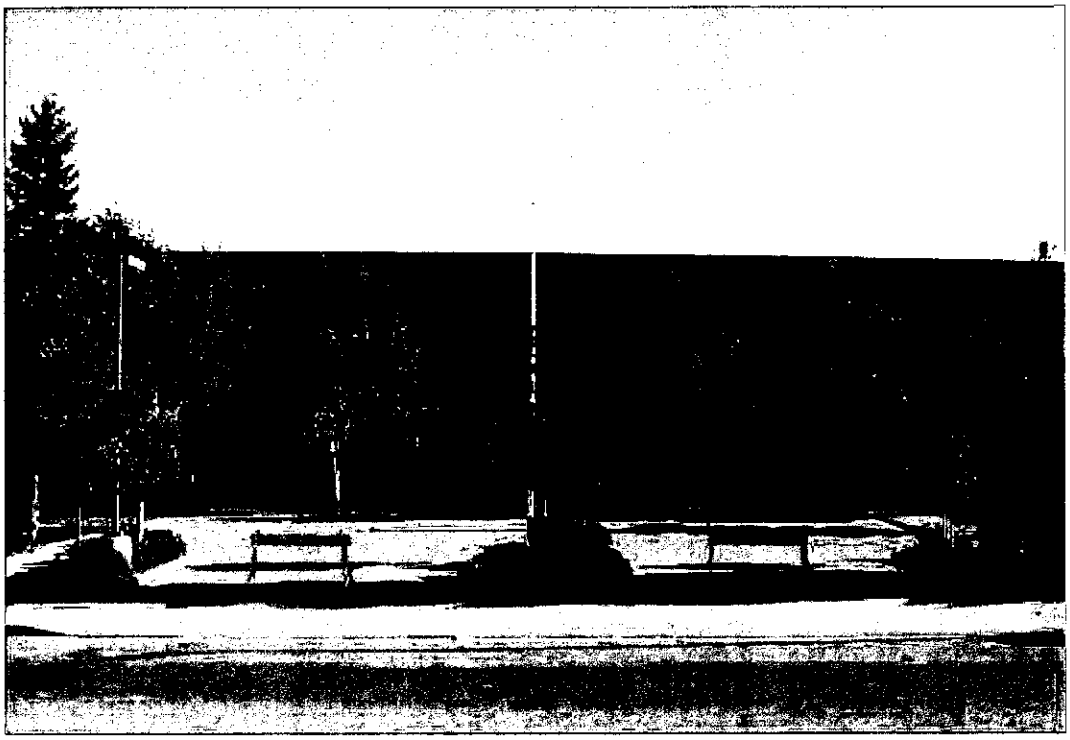


Photo 1 - View of the main entrance to the project site looking northeast from the Santa Clara University baseball stadium.

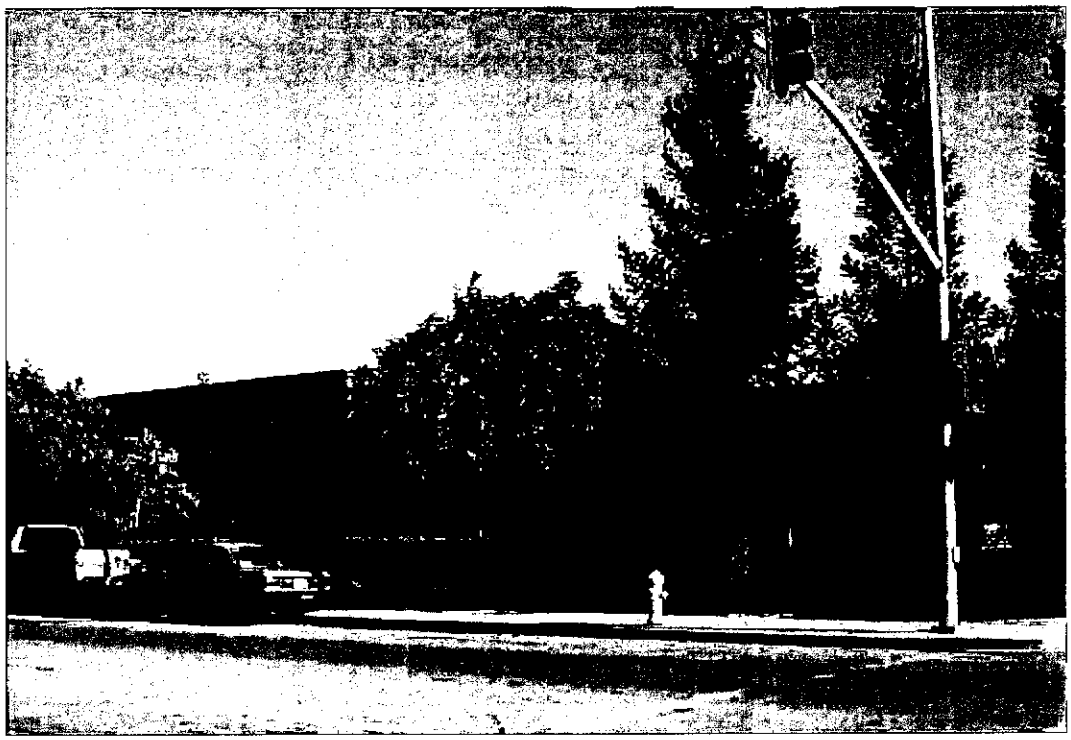


Photo 2 - View of the project site looking north from the south side of the site's signalized intersection with Campbell Avenue.

PHOTOS 1 AND 2

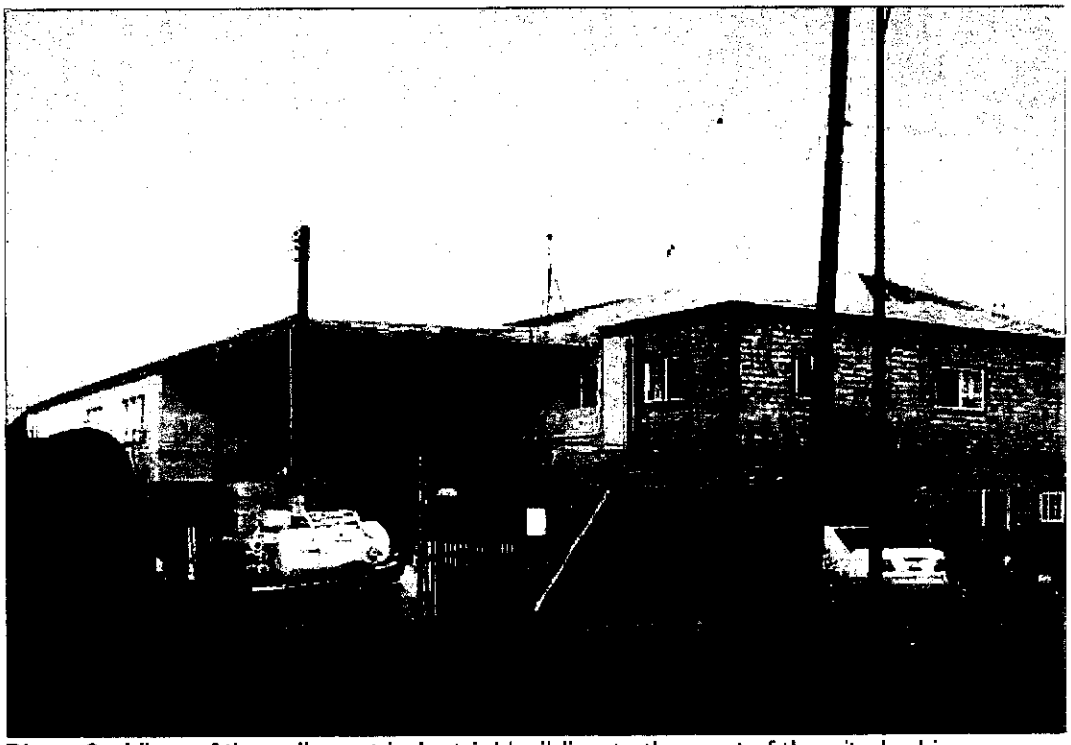


Photo 3 - View of the adjacent industrial building to the east of the site looking northeast from the south side of Campbell Avenue.

Photo 4 - View of the Santa Clara University baseball stadium looking south from the project site.

PHOTOS 3 AND 4

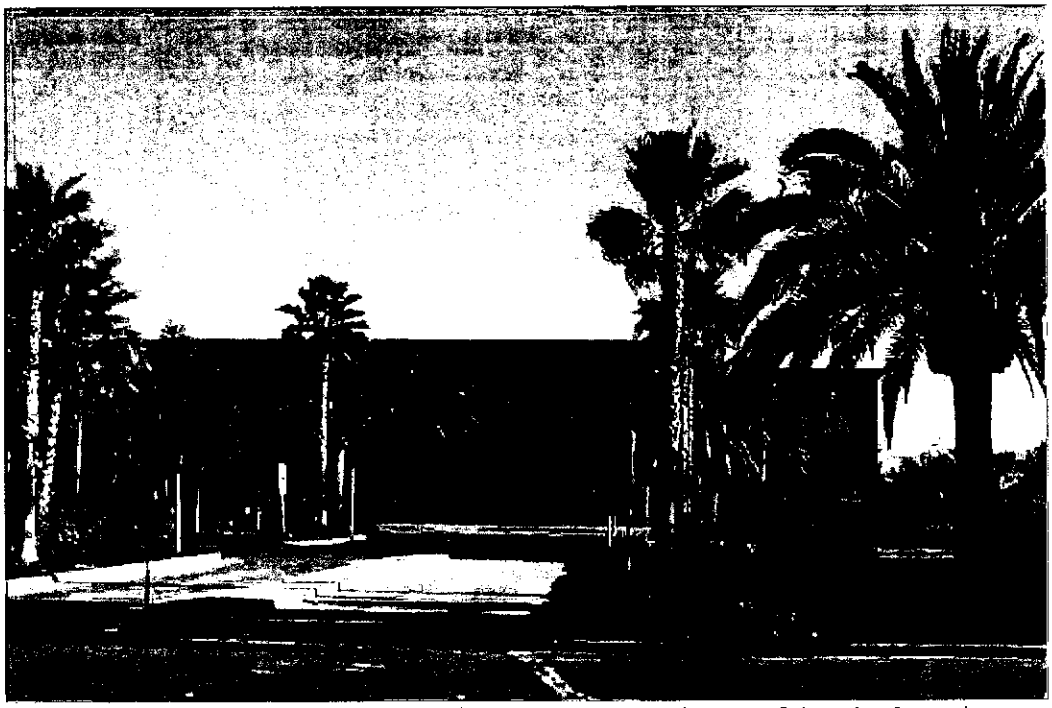


Photo 5 - View of the adjacent office/R&D building northwest of the site from the intersection of Campbell Avenue and El Camino Real.

PHOTO 5

4.1.2 Environmental Checklist and Discussion

AESTHETICS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	☐	1,2
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	☐	1,2
3) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐	☐	1,2
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐	☐	1,2
5) Increase the amount of shading on public open space (e.g., parks, plazas, and/or school yards)?	☐	☐	☐	☒	☐	1

4.1.2.1 *Change in Visual Character*

The project proposes to demolish and remove the existing one-story office building on the site. As discussed in *Section 4.4 Biological Resources*, the project would result in the removal of 166 landscape trees; due to the need to raise the elevation of the site to reduce flooding impacts on the project (refer to *Section 4.8 Hydrology and Water Quality*). The project would plant 13 street trees along the Campbell Avenue frontage. The proposed project will also plant replacement trees in the common area, courtyards, and around the perimeter of the site. Replacement tree planting will also occur off-site in accordance with the City's tree replacement ratios (refer to *Section 4.4 Biological Resources*).

The existing single-story office building on the site is approximately 15 to 20 feet in height and the proposed PD zoning would allow a building approximately 70 feet in height. The existing building is set back approximately 90 feet from the Campbell Avenue property line. The proposed building would be set back a minimum of 11 feet from the front (Campbell Avenue) property line of the site. The proposed building, therefore, would be substantially larger and closer to the street than the existing building on the site.

The proposed project would alter the visual character of the site; however, it would not significantly degrade the existing visual character of the site. The final project design would be required to undergo architectural and site design review by Planning Staff to ensure compatibility with the surrounding neighborhood.

Standard Measure: The project shall implement the following standard measure:

SM AES-1: The project shall conform to the City's *Residential Design Guidelines*.

4.1.2.2 *Light and Glare Impacts*

The proposed project will not introduce a new source of light or glare in the project area; however, light in the project area would generally increase because the proposed lit building would be taller than the existing buildings on-site. Light and glare impacts, including light spillover onto adjacent properties, would be avoided through compliance with the City's *Outdoor Lighting Policy* (4-3).

Standard Measure: The project shall implement the following standard measure:

SM AES-2: Compliance with the City's *Outdoor Lighting Policy* (Policy 4-3), which includes the use of low-pressure sodium outdoor security lighting on-site along walkways, entrance areas, common outdoor use areas, and parking areas.

4.1.2.3 *Shade and Shadow Impacts*

Shade and shadow impacts occur when a structure reduces access to natural sunlight. In an urban environment, virtually all land uses are subject to shading from adjacent properties to some extent. During summer, shading may even be desirable. The City of San José typically identifies significant shade and shadow impacts as occurring when a building or other structure substantially reduces natural sunlight on public open spaces, measured midday on the first day of winter (December 21) and on the vernal and autumnal equinoxes (March/September 21).[4]

Maximum shading occurs on December 21, the winter solstice, when the sun is at the lowest angle above the horizon. The proposed project would reach a maximum height of approximately 70 feet above grade which is taller than existing buildings adjacent to the site. There are no sensitive uses (residences, parks, etc.) near the project site that would be impacted by shading from the proposed building. The project would not result in substantial shading of any public open space and, therefore, the proposed project would not result in significant shade and shadow impacts.

4.1.3 <u>Conclusion</u>

The proposed project with the implementation of Standard Measures (SM AES-1 and SM AES-2) would result in a less than significant aesthetic impact. **(Less Than Significant Impact)**

[4] On the first day of winter, the sun is lowest in the sky and shading is greatest. On both the vernal and autumnal equinoxes, the sun is at the same location, over the equator. This threshold evaluates shading from September 21 through March 21.

4.2 AGRICULTURAL RESOURCES

4.2.1 Setting

According to the Santa Clara County Important Farmland 2006 map, the project site is designated as *Urban and Built-Up Land*. *Urban and Built-up Land* is defined as residential land with a density of at least six units per 10-acre parcel, as well as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment and water control structures.

Currently, the project site is developed and not used for agricultural purposes. The site is not the subject of a Williamson Act contract. The site is located within an urban area, and there is no property used for agricultural purposes adjacent to the project site.

4.2.2 Environmental Checklist and Discussion

AGRICULTURAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☐	☐	☒	☐	3
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐	1
3) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒	☐	1,3

The project site is located within an urbanized area. Approval of the proposed PD zoning would not result in the conversion of farmland to a non-agricultural use, or any impact on agriculture. For these reasons, the proposed project would not result in any impacts to farmland.

4.2.3 Conclusion

The proposed project would not result in impacts to farmland. **(No Impact)**

4.3 AIR QUALITY

4.3.1 Setting

4.3.1.1 *Regulatory Setting and Criteria Pollutants*

The Bay Area typically has moderate ventilation, frequent inversions that restrict vertical dilution, and terrain that restricts horizontal dilution. These factors give the Bay Area a relatively high atmospheric potential for pollution. Of the three pollutants known to at times exceed the state and federal standards in the project area, two are regional pollutants. Both ozone and particulate matter (PM_{10} and $PM_{2.5}$) are considered regional pollutants in that concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. The third pollutant, carbon monoxide, is considered a local pollutant because elevated concentrations are usually only found near the source.

The Federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designates portions of the state where the federal or state ambient air quality standards are not met as "non-attainment areas." Because of the differences between the national and state data standards, the designation of nonattainment areas is different under the federal and state legislation. Under the California Clean Air Act, Santa Clara County is a non-attainment area for ozone and particulate matter (PM_{10} and $PM_{2.5}$). The County is either in attainment or unclassified for other pollutants.

BAAQMD monitors air quality at various locations throughout the Bay Area. The closest monitoring station to the project site is the San José Central station located on Jackson Street in San José. This station monitors ozone, carbon monoxide, nitrogen dioxide, and particulate matter. In the period 2004-2006, the San José Central monitoring station reported six days where the state one-hour and eight-hour ozone standards were exceeded, one day where the national eight-hour standard was exceeded, and eight days where the state PM_{10} standard was exceeded. Carbon monoxide did not exceed the state or federal standards during this period.

4.3.1.2 *Toxic Air Contaminants*

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde.

Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage and death.

4.3.1.3 *Sensitive Receptors*

BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, school playgrounds, child-care centers, retirement homes, convalescent homes,

hospitals and medical clinics. Sensitive receptors (residences) are located approximately 300 feet east of the project site (refer to Figure 3).

4.3.2 Environmental Checklist and Discussion

AIR QUALITY	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
1) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	☐	1,2,4
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐	☐	1,4
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?	☐	☒	☐	☐	☐	1,4
4) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒	☐	1
5) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒	☐	1

4.3.2.1 *Regional and Local Impacts*

The Bay Area Air Quality Management District (BAAQMD) has established thresholds for what would typically be considered a significant addition to existing air pollution. A project that generates more than 80 pounds per day of reactive organic gases (ROG) or Nitrogen Oxides (NO_X) is considered to have a potentially significant impact on regional air quality, according to the BAAQMD CEQA guidelines. The BAAQMD generally does not recommend a detailed air quality analysis for projects generating less than 2,000 vehicle trips per day or less than 510 multi-family residential units, unless warranted by the specific nature of the project setting.

As described in *Section 4.15 Transportation* of this Initial Study, the residential project would result generate 1,295 net daily trips. The amount of traffic generated from 259 units allowed by the proposed PD zoning project falls well below BAAQMD's potential impact threshold that would necessitate the completion of an air quality analysis. The project, therefore, would result in less than significant long-term regional and local air quality impacts.

4.3.2.2 *Construction-Related Impacts*

Construction activities would temporarily affect local air quality. Construction activities such as demolition, earthmoving, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that affect local and regional air

quality. Construction activities are also a source of organic gas emissions. Solvents in adhesives, non-water based paints, thinners, some insulating materials, and caulking materials would evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

Construction dust could affect local air quality at various times during construction of the project. The dry, windy climate of the area during the summer months creates a high potential for dust generation when, and if, underlying soils are exposed to the atmosphere. The effects of construction activities would be increased dustfall and locally elevated levels of PM_{10} downwind of construction activity.

Impact AQ-1: Construction activities such as demolition, clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would fugitive particulate matter emissions that could temporarily affect local air quality. **(Significant Impact)**

Mitigation Measures: The project proposes to implement the following mitigation measures to reduce the impacts of demolition and construction activities to a less than significant level:

MM AQ-1: Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site.

MM AQ-2: Active areas adjacent to existing land uses shall be kept damp at all times or shall be treated with non-toxic stabilizers or dust palliatives.

MM AQ-3: Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

MM AQ-4: Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.

MM AQ-5: Sweep daily, or more often if necessary (preferably with water sweepers) to prevent visible dust from leaving the site all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality.

MM AQ-6: Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.

MM AQ-7: Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).

MM AQ-8: Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

MM AQ-9: Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

MM AQ-10: Replant vegetation in disturbed areas as quickly as possible.

MM AQ-11: Limit traffic speed on unpaved roads to 15 mph.

4.3.2.3 *Toxic Air Contaminants*

In 1998, the California Air Resources Board (CARB) identified particulate matter from diesel fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High volume freeways, stationary diesel engines, rail yards, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers, truck stops, etc.) were identified as having the highest associated risk.

The project site is located near the UPRR Newhall Yard and a planned BART maintenance yard. According to recommendations by the California Air Resources Board (CARB) on diesel emissions, development of new sensitive land uses should be avoided within 1,000 feet of a major service and maintenance rail yard.[5] The Newhall Yard is not considered a major yard according to CARB. In addition, there are no CARB major rail yards within Santa Clara County for which CARB has recommended assessment and mitigation for public health risks. The proposed BART extension runs on an electrified track and therefore the maintenance yard would not result in additional diesel particulate emissions near sensitive receptors.

Alliance Roofing, a commercial roofing and waterproofing contractor, is located adjacent to the east property line of the project site. The BAAQMD has received no odor complaints over the period August 2004 to August 2007 for Alliance Roofing.[6]

The proposed project would not expose sensitive receptors to toxic air contaminants or other odors that would result in significant air quality impacts.

4.3.3 Conclusion

Impact AQ-1: The proposed project with the implementation of the identified mitigation measures would not result in any significant air quality impacts. **(Less Than Significant Impact)**

[5] California Air Resources Board, Air Quality & Land Use Handbook: A Community Health Perspective, April 2005.
[6] Bay Area Air Quality Management District, Public Records Request #07-08-91, August 23, 2007.

4.4 BIOLOGICAL RESOURCES

The following discussion is based in part on a Tree Survey prepared by *McClenahan Consulting, LLC* in May 2008. A copy of this report is included as Appendix A of this Initial Study.

4.4.1 Setting

The project site consists of an existing one-story office/R&D building that is surrounded by a paved surface parking lot and urban landscaping, including mature trees. Habitats in developed urban areas are extremely low in species diversity. Species that use this habitat are predominantly urban adapted birds, such as Rock Dove, Mourning Dove, House Sparrow, and Starling. Based upon the habitats found on the site, no special-status plant or animal species are expected to be present on the site.

4.4.1.1 *City of San José Tree Ordinance*

The *City of San José Tree Ordinance* defines an ordinance-sized tree as any woody perennial plant characterized by having main stem or trunk which measures 18 inches or greater in diameter at a height of 24 inches above natural grade slope. A multi-stem tree is considered a single tree and measurement of that tree includes the sum of the diameter of the tree trunks of that tree.

A tree removal permit is required from the City for the removal of ordinance-sized trees. A survey of the site found a total of 166 trees on the project site, of which seven are ordinance-size and 159 are not ordinance-size. Of the seven ordinance-size trees on the site, one tree is an Evergreen ash, two are Coast redwoods, three are Melaleucas and one is an Italian stone pine. The tree survey results are shown in Table 4.4-1, below.

The City of Santa Clara does not have an adopted tree ordinance, although Santa Clara's General Plan 2000-2010 lists several tree-related policies and programs, including programs to develop a tree protection ordinance, continue the City's street tree program, and to require landscaping in all private development (with emphasis on native and drought-tolerant landscaping). A tree removal permit and tree replacement plan is required for the removal of City street trees on a project site and shall be addressed through the permitting of the project.

Table 4.4-1
Tree Survey Results

Tree Species	Diameter			Total
	1-11 inches	12-17 inches	18+ inches	
Aristocrat pear	25	-	-	25
Blackwood acacia	1	-	-	1
Chinese pistache	11	-	-	11
Coast redwood	30	14	2	46
Evergreen ash	10	10	1	21
Holly oak	5	-	-	5
Italian stone pine	15	18	1	34
Melaleuca	-	5	3	8
Purpleleaf plum	15	-	-	-
Total	**112**	**47**	**7**	**166**

4.4.2 Environmental Checklist and Discussion

BIOLOGICAL RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☐	☒	☐	☐	1
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?	☐	☐	☐	☒	☐	1
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?	☐	☐	☐	☒	☐	1
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?	☐	☐	☒	☐	☐	1
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐	1,5
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐	1

4.4.2.1 *Nesting Raptors*

Although the site is primarily used by species common to developed areas, some raptors (i.e., falcons, hawks, eagles, owls) may use the larger trees on the site for nesting. Nesting raptors are protected under provisions of the Migratory Bird Treaty Act (MBTA) and the California Department of Fish and Game (CDFG). The federal Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Construction disturbance on the site during the breeding season could

result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, a violation of the Migratory Bird Treaty Act.

Migratory birds are also protected in California. The California Fish and Game Code §3503 emulates the federal MBTA and protects birds' nests and eggs from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the California Department of Fish and Game (CDFG). Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." In addition, the State Code includes a section enforcing the Migratory Bird Treaty Act.

The proposed project may result in the disturbance of nesting raptors within the trees on and adjacent to the site. Construction during the nesting season could disturb or destroy occupied nests, which would result in the loss of eggs or young birds.

Implementation of the following standard measure would ensure that the project would not result in significant impacts to nesting raptors.

Standard Measure: The project proposes to implement the following standard measure:

SM BIO-1: If possible, construction should be scheduled between September and December (inclusive) to avoid the raptor nesting season. If this is not possible, pre-construction surveys for nesting raptors shall be conducted by a qualified ornithologist to identify active raptor nests that may be disturbed during project implementation. Between January and April (inclusive) pre-construction surveys shall be completed no more than 14 days prior to the initiation of construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys no more than thirty (30) days prior to the initiation of these activities. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area for raptor nests. If an active raptor nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist, shall, in consultation with the State of California, Department of Fish & Game (CDFG), designate a construction-free buffer zone (typically 250 feet) around the nest. The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the City's Environmental Principal Planner prior to the issuance of any grading or building permit.

4.4.2.2 *Ordinance-Size Trees*

The project would likely result in the removal of all 166 trees on-site, including seven ordinance-size trees due to the need to raise the elevation of the site to address flood concerns.

In the event some trees on the site are determined to be suitable for retention on the site, implementation of standard tree protection measures would ensure that the project would not result in impacts to retained trees.

Standard Measures: The project proposes to implement the following standard measures:

SM BIO-2: Pre-construction treatments

- The applicant shall retain a consulting arborist. The construction superintendent shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection.
- Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by consulting arborist. Fences are to remain until all grading and construction is completed.
- Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed or supervised by a Certified Arborist and adhere to the Best Management Practices for Pruning of the International Society of Arboriculture.

SM BIO-3: During construction

- No grading, construction, demolition or other work shall occur within the TREE PROTECTION ZONE. Any modifications must be approved and monitored by the consulting arborist.
- Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the consulting arborist.
- Supplemental irrigation shall be applied as determined by the consulting arborist.
- If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
- No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the TREE PROTECTION ZONE.
- Any additional tree pruning needed for clearance during construction must be performed or supervised by the consulting arborist, not by construction personnel.
- As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees shall be designed to withstand differential displacement.

Impact BIO-1: The project would result in the removal of 166 trees, including seven ordinance-size trees on the site. **(Significant Impact)**

Mitigation Measures: The project proposes to implement the following mitigation measures:

MM BIO-1.1: The proposed project shall replace trees removed at the following ratios:

Table 4.4-2
Standard Tree Replacement Requirements

Diameter of Tree to be Removed	Non-Native	Minimum Size of Each Replacement Tree
18 inches or greater	4:1	24-inch box
12 – 18 inches	2:1	24-inch box
Less than 12 inches	1:1	15-gallon container

Notes:
X:X = Tree replacement to tree loss ratio
Trees greater than 18-inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

The species and exact number of trees to be planted on the site will be determined at the development permit stage, in consultation with the City Arborist and the Department of Planning, Building, and Code Enforcement. Trees for purposes of mitigation shall be planted at the above standard ratio to be determined at the permit stage.

MM BIO-1.2: If the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures shall be implemented, to the satisfaction of the Director of Planning, Building, and Code Enforcement, at the development permit stage:

- The size of a 15-gallon replacement tree can be increased to 24-inch box and count as two replacement trees.
- An alternative site(s) shall be identified for additional tree planting. Alternative sites may include local parks or schools or installation of trees on adjacent properties for screening purposes to the satisfaction of the Director of the Department of Planning, Building, and Code Enforcement.
- A donation of $300 per mitigation tree to Our City Forest for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting will be provided to the Planning Project Manager prior to issuance of a development permit.

4.4.3 Conclusion

Impact BIO-1: The proposed project, with the implementation of the above mitigation (MM BIO-1.1 and -1.2) and standard measures (SM BIO-1 to SM BIO-3), would not result in significant impacts to biological resources. **(Less Than Significant Impact with Mitigation)**

4.5 CULTURAL RESOURCES

The following discussion is based upon an Archaeological Sensitivity Study prepared by *Albion Environmental, Inc.* in September 2005. This report is on file with the City of San José Department of Planning, Building, and Code Enforcement.

4.5.1 Setting

4.5.1.1 *Background*

The project site has not been previously surveyed for cultural resources. Many archaeological surveys and excavations have taken place in the vicinity of the subject parcel, particularly around the third Santa Clara mission site (CA-SCL-30/H) located on and near the northwest portion of the adjacent Santa Clara University campus. These include recent archaeological studies for university development, periodic expansion of the university property, investigations conducted for the realignment of the El Camino Real around the university campus, and other projects such as utilities installation and archaeological field schools.

4.5.1.2 *Prehistoric Resources*

The studies noted above demonstrate that the third mission site and the surrounding area, including most of the current university campus, are extremely sensitive for archaeological sites and features from both the Spanish-Mexican periods and the early historic town of Santa Clara. Although the approximate center of CA-SCL-30/H is the remains of the third mission church and compound at Franklin Street and State Route (SR) 82 (modern El Camino Real), the outside boundaries of this site are unknown and are likely distributed over a very large area, possibly including the project site. Additionally, within and adjacent to CA-SCL-30/H are the remains of prehistoric habitations (including native burials) dating from 1360 B.P. (640 AD) to the Spanish or Mission period. A large prehistoric site containing at least 29 human burials was previously recorded near the center of the current university campus, and several isolated burials have been located around the campus periphery. A large Mission-period native cemetery is also located in the area where Benton and Franklin streets intersect with SR 82, less than one-half mile northwest of the current project site.

Due to the high number and variety of prehistoric sites previously recorded in the vicinity of the project area, the parcel at 1270 Campbell Avenue is estimated as moderately sensitive for prehistoric resources. Though no such sites have been recorded in close proximity to this parcel, there have been few previous opportunities for test excavation or other archaeological studies within the industrial area along the railroad right-of-way. Historical records associated with the Santa Clara mission suggest that the project area was close to a natural lagoon or swamp that drained in a northeast direction toward the Guadalupe River. It is possible that this location may have been boggy and generally uninhabitable in prehistoric times. Such conditions, though not supportive of villages or other permanent sites, would tend to increase the potential for seasonal hunting sites or other resource procurement camps to exist in the project area.

4.5.1.3 *Historic Resources*

During the Mission period at Santa Clara, the project site was located immediately east of the mission pear orchard, a roughly hexagonal-shaped area of approximately 15 acres adjacent to the third mission site. The former pear orchard, along with an additional parcel of approximately 25 acres along its southern boundary, currently comprises the university sports fields and the current

alignment of SR 82. During the active years at the mission, particularly between 1785 and 1810, it is likely that crop fields surrounded the mission and orchard areas, and that the project area was planted in wheat, corn or beans, or was grazed by the mission herds.

In 1844, the project area became part of the Rancho El Potrero de Santa Clara, a grant of 1,939 acres awarded by Governor Micheltorena to James Alexander Forbes. In 1846, Forbes sold portions of the rancho to Santa Clara College and the eastern portion to Robert F. Stockton, who subdivided part of his land for residential purposes, and developed another portion as a plant nursery. Between 1860 and 1862, Stockton's Ranch was purchased by the San Francisco and San José Railroad (SF&SJRR) Company, and by 1864 the railroad was established along the east side of Santa Clara. While further subdivisions were made of the now-valuable lands adjacent to the railroad, and an 1873-75 plat map of Santa Clara indicates that the current project area was part of O'Brien's Subdivision, it does not appear that O'Brien's small lots were purchased by individuals but were most likely re-acquired by the powerful Southern Pacific Railroad (SPRR), which absorbed the SF&SJRR upon its establishment in 1874.

The current project area remained in the hands of SPRR until well into the twentieth century. It is likely that the railroad leased its right-of-way for the profitable development of fruit packing plants, canneries, and shipping warehouses, and one or more such facilities may have occupied the project area along Campbell Avenue. Following World War I, SPRR began to sell its excess right-of-way to companies such as Santa Clara Pear Growers and Security Warehouse and Cold Storage. As the canneries and fruit packers crowded in next to the railroad, SPRR expanded their yard in Santa Clara and added spur lines along Campbell Avenue to provide easier access. The current project area is considered extremely sensitive for historic resources, such as refuse and foundations associated with the SPRR or its supporting industries between the 1880s and the 1920s.

The historic record indicates that in modern times, the project area was occupied by a shipping facility in use through the 1980s. The existing building on the site was constructed in 1992 for use by Sanmina Corporation, a technology manufacturer.

4.5.2 Environmental Checklist and Discussion

CULTURAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☐	☐	☒	☐	6
2) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☒	☐	☐	☐	6
3) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒	☐	1
4) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☐	1,6

4.5.2.1 *Archaeological Resources*

The project site has been developed for industrial use for at least 30 years. There is no record of any previous archaeological investigations for the property. Many surveys and archaeological investigations, however, have been conducted to the west and north of this parcel and the findings of these studies suggest a moderate to high potential for buried prehistoric or historic sites or features throughout the entire area. The industrial nature of this property also suggests that a high level of ground disturbance (e.g., blading, filling, deep excavation for structural piers) has probably occurred during past development episodes. Disturbance caused by modern construction, using heavy equipment, may have damaged or destroyed any intact remains from previous occupations.

Impact CULT-1: The proposed project could result in impacts to buried prehistoric or historic archaeological resources on the site. **(Significant Impact)**

Mitigation Measures: The project proposes to implement the following mitigation measures to reduce impacts to archaeological resources:

MM CULT-1.1: A systematic inspection or survey of the present ground surface will provide archaeological data regarding post-depositional disturbance levels and shall be conducted by a qualified archaeologist. An archaeological survey of the entire parcel shall be completed after the present built environment (pavement, landscaping) is removed and preparation of the ground surface for new development begins. Depending on the results of the survey, it is recommended that a monitoring program be established in order that periodic inspections of subsurface levels be coordinated to allow careful examination of vertical and horizontal soil relationships between two and eight feet (below the present surface). The monitor must be pre-approved by the Director of Planning (or his designee). After written approval, the Planning Division must be notified at least 48 hours prior to any grading or other subsurface work on the site and the applicant must provide a written protocol which stipulates the manner in which the applicant shall comply with the monitoring requirements.

MM CULT-1.2: If no resources are discovered through the ground survey, the archaeologist shall submit a report to the City's Environmental Principal Planner verifying that the required monitoring occurred and that no further mitigation is necessary.

MM CULT-1.3: If evidence of any archaeological, cultural, and/or historical deposits is found, all work within proximity of the find shall temporarily halt so that the archaeologist can examine the find and document its provenience and nature (drawings, photographs, written description). The archaeological monitor will then direct the work to either proceed if the find is deemed to be insignificant, or instruct the work to continue elsewhere or cease until adequate mitigation measures are adopted. The archaeologist shall submit reports, to the satisfaction of the City's Environmental Principal Planner, describing the testing program and subsequent results. These reports shall identify any program mitigation that the Developer shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of

archaeological resources). The key elements of the treatment plan shall include the following:

- Identify scope of work and range of subsurface effects (include location map and development plan).
- Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found).
- Develop research questions goals to be addressed by the investigation (what is significant vs. what is redundant information).
- Detail field strategy used to record, recover, or avoid the finds (photos, drawings, written records, provenance data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.
- Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifact studies [list categories and methods for artifacts], etc.).
- Report structure, outline of document contents (draft for review, final).
- Disposition of artifacts.
- Appendices: Site records, updated site records, correspondence, consultation with Native Americans, etc. The need for burial agreement plan for Native American burials can be incorporated into the treatment plan, but must be done in consultation with Most Likely Descendents. Plan should detail goals, methods, and disposition of remains and associated artifacts.

MM CULT-1.4: In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius in order to proceed with the testing and mitigation measures required. Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California:

- In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.
- A final report shall be submitted to the City's Environmental Principal Planner prior to release of a Certificate of Occupancy. This report shall contain a description of the mitigation programs and its results including a description of the monitoring and testing program, a list of the resources found, a summary of the resources analysis methodology and conclusions, and a description of the disposition/curation of the resources.

The report shall verify completion of the mitigation program to the satisfaction of the City's Environmental Principal Planner.

4.5.2.2 *Historic Buildings*

The existing buildings on-site, due to their date of construction (1992) and lack of discernable architectural style, do not have historical significance at either the City, state, or national level. Demolition of the existing structures and development of the proposed project would have no impact on historic buildings.

4.5.3 Conclusion

Impact CULT-1: Implementation of the identified mitigation measures would reduce impacts to archaeological resources to a less than significant level. **(Less Than Significant Impact with Mitigation)**

4.6 GEOLOGY AND SOILS

The following discussion is based in part on a Geotechnical Investigation prepared by *Cornerstone Earth Group* in September 2007. A copy of this report is included as Appendix B in this Initial Study.

4.6.1 Setting

4.6.1.1 *Geology and Soils*

The project site is located in the Santa Clara Valley, a relatively flat alluvial basin, bounded by the Santa Cruz Mountains to the southwest and west, the Diablo Mountain Range to the east, and the San Francisco Bay to the north. The site is flat with the finished floor elevation of the existing building at approximately 64.5 feet. Soils on the site include Clear Lake clay, Sunnyvale silty clay, drained, and Orestimba silty clay loam. Soils on the site have a moderate to high expansion potential.

Groundwater is presumed to flow in a northeasterly direction below the site. This is consistent with the regional topography, which slopes gently toward the Guadalupe River, located approximately one mile to the northeast. The estimated depth to groundwater on the site is five feet.

4.6.1.2 *Seismicity and Seismic Hazards*

The project site is located within the seismically active San Francisco Bay region. The Uniform Building Code designates the entire South Bay as Seismic Activity Zone 4, the most seismically active zone in the United States. The faults in the region are capable of generating very strong ground shaking at the project site during the life of the proposed structures. The fault closest to the project site is the Hayward Fault located approximately 9.4 miles northeast of the site. The San Andreas Fault is located approximately 11.1 miles to the southwest and the Calaveras Fault is located approximately 9.6 miles northeast of the site.

The U.S. Geological Survey's Working Group on California Earthquake Probabilities (2003), determined there is a 62% chance of at least one magnitude 6.7 or greater earthquake striking the San Francisco Bay region between 2003 and 2032.

Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, which can occur during earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded fine-grained sands. The site is located within a State of California Seismic Hazard Zone for liquefaction. The potential for liquefaction is considered likely.

4.6.2 Environmental Checklist and Discussion

GEOLOGY AND SOILS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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.)	☐	☐	☒	☐	☐	1
b) Strong seismic ground shaking?	☐	☐	☒	☐	☐	1,7
c) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐	1,7
d) Landslides?	☐	☐	☐	☒	☐	1
2) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐	1
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?	☐	☐	☒	☐	☐	1,7
4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐	☐	1,7
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?	☐	☐	☐	☒	☐	1

4.6.2.1 *Soils*

The project site is underlain by expansive soils, with moderate to high shrink-swell potential, which may expand and contract as a result of seasonal or man-made soil moisture content changes. The potentially expansive soil conditions that could damage future structures and improvements will be avoided or minimized through proper design.

The project is underlain by undocumented fill up to two feet deep. Additional undocumented fill may be up to three feet thick beneath the existing building and between eight to 15 feet thick in the former UST area located beneath the central portion of the existing building (refer to *Section 2.7 Hazards and Hazardous Materials*) and Appendix B.

The proposed development is not expected to be exposed to significant impacts from slope instability, erosion, or landslide related hazards due to the flat topography on the site.

Standard Measures: The project proposes to implement the following standard measures:

SM GEO-1: A design level soils engineering investigation shall be prepared for the project site, which identifies the specific design features that will be required for the project, including site preparation, compaction, trench excavations, foundation and subgrade design, drainage, and pavement design. The geotechnical investigation shall be reviewed and approved by the City Geologist prior to issuance of a grading permit or Public Works Clearance for the project.

SM GEO-2: Best management practices will be used to prevent substantial erosion and siltation during development of the site.

4.6.2.2 *Seismicity and Seismic Hazards*

Due to its location within a seismically active region, the project site would likely be subject to at least one moderate to major earthquake that could affect the proposed development on the site. The site would be subject to strong ground shaking in the event of a major earthquake on one of the region's active faults. The site is located in a liquefaction hazard zone, therefore, liquefaction and differential settlement could occur on the site during an earthquake. Liquefaction-induced settlement on the site of one-half to one and one-half inches could occur. Differential settlement of up to three-quarters of one inch could also occur.

Buildings constructed on the site under the proposed land use designation will conform to the Uniform Building Code Guidelines for Seismic Activity Zone 4 to avoid or minimize potential damage from seismic shaking on the site. Conformance with standard Uniform Building Code Guidelines would minimize potential impacts from seismic shaking on the site. Therefore, impacts from seismic activity and liquefaction will be less than significant.

Standard Measures: The project proposes to implement the following standard measures:

SM GEO-3: Impacts will be reduced through design and construction in conformance with standard engineering practices for liquefaction, and for impacts related to seismic shaking.

SM GEO-4: Seismic shaking hazards would be mitigated by implementation of construction practices in accordance with Seismic Zone 4 building criteria as described in the Uniform Building Code.

4.6.3 Conclusion

With the implementation of the standard measures described above (SM GEO-1 to SM GEO-4), which are included in the project, the proposed project would not result in significant geologic hazard impacts. **(Less Than Significant Impact)**

4.7 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based upon a Summary of Environmental Documents prepared for the site by *PES Environmental, Inc.* in October 2007 and a memorandum prepared by *PES Environmental, Inc.* in July 2008. These documents are included in Appendix C of this Initial Study. In addition, the discussion is based on a Vicinity Hazardous Materials Users Survey prepared by *Belinda P. Blackie, P.E., and R.E.A* in September 2007, and a Screening Level Vicinity Hazardous Materials Risk Appraisal prepared by *Risicare, LLC* in November 2007. These reports are included in Appendix D of this Initial Study.

4.7.1 Setting

4.7.1.1 *Background Information*

Hazardous materials encompass a wide range of substances, some of which are naturally-occurring and some of which are man-made. Examples include pesticides, herbicides, petroleum products, metals (e.g., lead, mercury, arsenic), asbestos, and chemical compounds used in manufacturing. Determining if such substances are present on or near project sites is important because, by definition, exposure to hazardous materials above regulatory thresholds can result in adverse health effects on humans, as well as harm to plant and wildlife ecology. Since the proposed development would introduce a significant residential population onto the project site, it is relevant to determine what risks might be incurred.

Due to the fact that these substances have properties that are toxic to humans and/or the ecosystem, there are multiple regulatory programs in place that are designed to minimize the chance for unintended releases and/or exposures to occur. Other programs set forth remediation requirements at sites where contamination has occurred.

The project site is located adjacent to the UPRR right-of-way.[7] The historical use of herbicides along railroad corridors and the leaching of wood preserving compounds from railroad ties have been known to impact surface soils directly along the right-of-way as well as neighboring properties.

4.7.1.2 *Site History*

The project site was undeveloped land prior to 1940 when a building was constructed on the site and occupied by a refrigeration company. The previous building was used for cold storage or food warehousing until it was demolished in order to construct the existing building in 1992. Sanmina Corporation used the site since the current building, which is now vacant, was constructed.

Underground Storage Tanks

Four underground storage tanks (USTs) associated with the former cold storage/warehousing operations were historically present at the project site. Two gasoline storage tanks (one 750-gallon and one 1,500-gallon) were closed in place in August 1986 by filling them with cement slurry. These USTs were located in the northern portion of the site. Two soil samples were collected from beneath the tanks and analyzed for the presence of total petroleum hydrocarbons as gasoline (TPHg). No contaminants were detected at the location of these USTs.

[7] The project site was located adjacent to a pear orchard during the Mission period but has not been known to have been used for agricultural purposes in modern times. The site was undeveloped land prior to 1940.

In 1993, two diesel USTs (one 5,000-gallon and one 10,000-gallon), also associated with former cold storage/warehousing operations, were removed from the central portion of site. Initial soil samples collected from beneath the tank identified the presence of TPH quantified as diesel (TPHd) at concentrations as high as 4,100 milligrams per kilogram (mg/kg). The tank pit was subsequently over excavated and excavated soil was disposed offsite. Confirmation soil samples indicated the presence of TPHd at concentrations of up to four mg/kg in sidewall samples and 560 mg/kg in one excavation bottom sample. Approximately 8,000 gallons of groundwater was extracted from the excavation pit. A groundwater sample detected TPHd at 1,100 micrograms per liter (μg/L), and benzene, toluene, ethylbenzene, and xylene (BTEX) were reported at nondetectable to very low concentrations. BTEX is a group of volatile organic compounds found in petroleum hydrocarbons, such as gasoline, and is a common contaminant on former industrial sites with leaking USTs. Four groundwater monitoring wells were installed at the site and were sampled quarterly for five quarters. There were no detectable concentrations of TPHd or BTEX in any of the wells during any of the five samplings, except for one detection of TPHd in one well at 24,000 μg/L. Because TPHd was non-detectable in the well for the following three quarters, the detection was considered anomalous and not representative of actual conditions. The Santa Clara Valley Water District (SCVWD) issued case closure for all USTs in June 1995.

The four groundwater monitoring wells associated with the leaking USTs previously on the site were destroyed in 2002 under a permit from SCVWD.

4.7.1.3 *On-site Hazardous Materials Use*

Sanmina Corporation, the former occupant of the building on-site, has a Hazardous Materials Management Plan (HMMP) on file with the San José Fire Department (SJFD). Sanmina used and stored small quantities of thinners, resin, epoxy, paints, stains, and gases. Small quantities of waste compressor oil were also generated on the site but no violations for Sanmina are on file with the SJFD.

Numerous pieces of equipment and other materials were stored in the building parking area during the 2005 site inspection. A partially full 55-gallon drum labeled as containing a type of acid was present on the paved parking lot on site. No evidence of staining on the pavement beneath the drum or other evidence of leakage has been observed. These materials were removed from the site and relocated to Sanmina's facility at 2068 Bering Drive in San José. The 55-gallon drum was later sampled and determined to contain rainwater.

4.7.1.4 *Potential Off-Site Sources of Soil and Groundwater Contamination*

Several sites close to the project site were identified in a search of regulatory agency databases. One such facility, located east of the site, was Custom Food Machinery at 1180-1184 Campbell Avenue that has since been redeveloped with residences. This site was the subject of an investigation that identified polychlorinated biphenyls (PCBs) in soil and volatile organic compounds (VOCs) in groundwater. A northerly groundwater flow was measured at the site, indicating this facility is cross-gradient from the project site. Remedial activities were performed at this site including long-term monitoring of groundwater to evaluate biodegradation of VOCs detected in groundwater, and excavation of PCB-containing soils. Based on the cross-gradient location of this facility from the project site, this facility does not pose a significant concern.

An additional site, AJ Commercial Laundry/AllChem Supply located at 1173-1175 Campbell Avenue, is approximately one-quarter mile from the project site. Investigations at this site have

identified the presence of VOCs in soil and groundwater. Additional investigations have been requested by the Department of Toxic Substances Control (DTSC) to identify the offsite extent of contamination. Groundwater flow ranging from the southeast to northeast has been measured at this site, indicating the facility is located down- to cross-gradient from the project site and, therefore, does not pose a significant concern to the project site.

The remaining nearby sites listed in the database report are not likely to affect the project site because these sites have either received case closure by the appropriate regulatory agency, are crossgradient or downgradient of the site with respect to groundwater flow, are listed as a soils-only affected case, and/or the sites are located at too great a distance to be a concern to the project site.

4.7.1.5 *Hazardous Materials Use and Storage in the Project Vicinity*

The project site is located in an area currently transitioning from industrial uses to residential uses. A survey of businesses in the project vicinity (within one-half mile) that are likely to use, handle, and/or store significant quantities of hazardous substances was completed that consisted of a visual survey and environmental document review, including San José Fire Department and Santa Clara Fire Department files. The vicinity survey also included review of registered hazardous gas facilities identified by the SJFD; however, no such facilities within the City of San José are present within one mile of the project site.

Based on this survey seven industrial facilities were identified as having the potential to result in impacts to the project site in the event of a worst-case accidental chemical release. These facilities were further reviewed by an industrial hygienist to identify and model the chemicals with the greatest potential to result in an impact to the proposed project. Three accidental chemical release scenarios were modeled for effects to the project. The facilities using the chemicals of concern include Alliance Roofing, Precision Specialties, and the San José Jet Center. A fourth facility, Variety Metals Finishing, was addressed separately in the chemical risk appraisal since this facility is subject to the California Accidental Release Prevention (CalARP) program due to the types and quantities of materials used at this facility. The results of the chemical release modeling are discussed in greater detail in *Section 4.7.2.2 Potential Sources of Risk Due to Accidental Chemical Releases.*

4.7.2 <u>Environmental Checklist and Discussion</u>

HAZARDS AND HAZARDOUS MATERIALS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☐	☐	☒	☐	1,8,9
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?	☐	☐	☒	☐	☐	1,8,9

HAZARDS AND HAZARDOUS MATERIALS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒	☐	1
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?	☐	☒	☐	☐	☐	1,10
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?	☐	☐	☐	☒	☐	1
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?	☐	☐	☐	☒	☐	1
7) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐	1
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?	☐	☐	☐	☒	☐	1

4.7.2.1 *Potential On-Site Sources of Contamination*

Two gasoline USTs were closed in place at the subject property in 1986 with no reported evidence of residual soil contamination. Two diesel USTs were removed from the site in 1993 and evidence of residual petroleum hydrocarbons in soil was present at the excavation location. The maximum detected concentration of petroleum hydrocarbons in soil at the bottom of the 24 foot deep excavation was 560 mg/kg of TPHd. Although this concentration exceeds current Environmental Screening Levels (ESLs) for residential land use (100 mg/kg) it is only slightly above the commercial/industrial land use ESL of 500 mg/kg. The detected concentrations of petroleum hydrocarbons is not likely a risk to current or future users of the site due to the depth below ground surface and because there is no direct route of exposure at the ground surface. In addition the low volatility and mobility of TPHd, the absence of any significant concentration of more volatile BTEX compounds, and the likelihood of further degradation of the TPHd since the tanks were removed in 1993 further reduces the risk to future residents of the site. The results of previous groundwater sampling do not indicate any remaining environmental concerns at the subject property associated

with the USTs. The previous case closure issued for the project site was reviewed by the County of Santa Clara Department of Environmental Health, which determined the residual contamination associated with the removed underground storage tanks would not require additional remediation prior to the property being developed for residential use.[8]

Based on the conceptual site plan, the closed in-place USTs are located under the planned perimeter parking area at the north side of the site. The USTs would be removed and appropriately disposed of off-site as part of the proposed development on-site. Upon excavation of the USTs, the tank shells would be removed from the concrete and, depending on the condition of the shells, they would either be recycled or disposed of as hazardous waste if there are signs of residual contamination that cause the shells to be non-recyclable. The concrete within the tanks is anticipated to be disposed of as non-hazardous construction debris. The USTs that were removed from the site in 1993 were located in an area that would be under the parking garage and planned podium structure.

The project site is located adjacent to the UPRR right-of-way. The historical use of herbicides along railroad corridors and the leaching of wood preserving compounds from railroad ties have been known to impact surface soils directly along the right-of-way as well as neighboring properties. Soil impacts from herbicide application and leaching of wood preserving compounds are usually very limited in their vertical and lateral extent. These types of compounds have limited mobility in the environment and, therefore, it is not anticipated that significant levels of railroad-related chemicals would be found outside the railroad right-of-way. There are no exposed soils on the project site in the proximity of the railroad with the exception of imported landscaping materials along the fence line bordering the railroad tracks. In 1992, surface soils on the north end of the site that may have been exposed to historical railroad-related chemicals were graded, compacted, and capped with base rock and the existing asphalt parking and roadway. Previous surface soils that may have been impacted by railroad-related chemicals have the greatest potential to be exposed during excavation of the two closed in-place USTs. Based on the location of the two USTs, approximately 80 feet from the railroad tracks, the proposed excavation is not anticipated to encounter railroad-related chemicals; however, soils will be tested in the event visual or olfactory evidence (i.e. discoloration of soils or odors) is present when the USTs are removed.

The project proposes to import fill to raise the site elevation one to one and one-half feet in order to comply with the City's *Special Flood Hazard Area Regulations*. The project design therefore, further reduces the likelihood of exposure of future residents of the project to residual hydrocarbons, herbicides, and pesticides.

Impact HM-1: The project site may contain residual herbicides and other railroad-related chemicals, as well as two closed in place USTs. Workers on site could be exposed to residual chemicals during grading, construction, or excavation on site. These issues, if not properly addressed, would result in impacts to the proposed residential development. **(Significant Impact)**

[8] Lee, Lani, Hazardous Materials Specialist II, Santa Clara County Department of Environmental Health. RE: Request for Review - Closed UST Case, 390 Bellomy St., San Jose, SCVWDID No. 07S1W01M01f. Email communication. May 13, 2008.

Mitigation and Avoidance Measures: The project proposes the following mitigation and avoidance measures to reduce impacts from hazardous materials to a less than significant level:

MM HM-1.1: The two closed in-place USTs, located under the planned perimeter parking area, shall be removed and properly disposed of off-site as part of the proposed redevelopment. The tank shells will be segregated from the concrete and, depending on the condition of the shells, will either be recycled or disposed of as hazardous waste if there are signs of residual contamination that cause the shells to be non-recyclable. The concrete within the tanks will likely be disposed as non-hazardous waste; however the final determination for disposition will be made by qualified personnel during removal. If required to determine either recycling and/or disposal options for these materials, sampling and analysis may be completed. Any materials determined to be hazardous waste will be managed in accordance with all applicable state and federal requirements for manifesting, transportation, and disposal. Soil sampling of the excavation pits will be completed, in the event visual or olfactory evidence (i.e. discoloration of soils or odors) is present when the USTs are removed.

MM HM-1.2: Contractors working on the redevelopment project during site grading, utility installation, and removal of the closed in-place USTs, shall incorporate routine safe work practices and dust control measures and shall adhere to standard worker health and safety procedures as required under the California Department of Occupational Safety and Health Administration (Cal-OSHA) regulations.

MM HM-1.3: In the event that evidence of unanticipated hazardous materials conditions is encountered, the contractor shall halt work and contact the applicant to arrange for oversight by a qualified engineer or geologist. The applicant shall submit a report to the appropriate regulatory agency and the City's Environmental Compliance Officer, for review and approval, detailing the assessment of the encountered materials and the need for additional mitigation.

AM HM-1: As part of the proposed redevelopment, the grade across the site would be raised by approximately one to one and one-half feet. The existing asphalt on the site would be removed including the asphalt that is in closest proximity to the railroad tracks. The existing baserock in this area would remain in place and the grade would be raised with imported soil and a new asphalt covered perimeter roadway and parking areas for the new development would be constructed. The redevelopment plans in the proximity of the railroad, therefore, would avoid disturbance of, or exposure to, subsurface soils that may have previously been exposed at the former surface of the pre-developed site to herbicides and pesticides.

4.7.2.2 *Potential Sources of Risk Due to Accidental Chemical Releases*

As noted previously, there are seven facilities in the vicinity of the site that have the potential to impact the proposed project due to their use and storage of hazardous materials. Three chemical release scenarios with the potential to impact the project site were developed for three nearby industrial facilities. These facilities range in distance to the site from 100 feet to one-half mile. Modeling for the Alliance Roofing Company assumed the release of the entire contents of a 500 gallon propane tank located 100 feet from the project site. The Precision Specialties facility, located approximately 0.2 miles from the project site, was modeled for a release of a 55 gallon drum of methylene chloride into a secondary containment area. The San José Jet Center facility, located

approximately one-half mile from the project site was modeled for a release of 5,000 gallons of aviation gasoline.

The Bay Area Air Quality Management District recommends the use of American Industrial Hygiene Association's (AIHA) Emergency Response Planning Guidelines exposure level 2 (ERPG-2) as the threshold for evaluating significant exposure impacts. In addition, both the U.S. Environmental Protection Agency (EPA) Risk Management Program and CalARP define concentration endpoints for off-site consequence analysis of accidental releases of toxic substances. Typically these are ERPG-2 concentrations, where available, or an equivalent under these regulations. The ERPG-2 is defined as the maximum airborne concentration that a person can be exposed to for up to one (1) hour without permanent ill effects or impairment of person's ability to take protective actions. ERPG values are intended to provide estimates of concentration ranges where an individual reasonably might anticipate observing adverse effects as a consequence of exposure to the specific substance. The risk appraisal also relied on the Temporary Emergency Exposure Limits (TEEL-2) for chemicals where no ERPG was available. The TEEL-2 is defined as the maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing or developing irreversible or other serious health effects or symptoms that could impair their abilities to take protective action.

The results of the modeling analysis show that the release of methylene chloride from Precision Specialties and aviation gasoline from the San José Jet Center would not result in impacts to the proposed project. The Alliance Roofing Company facility at 1250 Campbell Avenue could have the potential to impact the site. The flammability hazard associated with a liquid propane release from this facility has the greatest potential to impact the site. Propane is widely and commonly used in residential settings, including in remote residential locations for heating and cooking. A spill would likely occur during fuel delivery when a hose is disconnected. Given that fuel deliverers are trained to follow industry standard practice for tank filling and the lack of readily available information on the frequency of incidences, such as the one modeled, the potential for the project to be impacted by such a scenario is considered unlikely. In addition, the 2006 California Fire Code includes minimum separation distances to be maintained between liquefied petroleum gas tanks and buildings. Aboveground 500 gallon propane tanks are required to be set back 10 feet from buildings. The proposed PD zoning includes a minimum 45 foot set back from the eastern property line between the project site and Alliance Roofing Company. Given that the proposed building would adhere to the California Fire Code setback distances from the existing propane tank on the adjacent property, the propane tank would not represent a significant hazard to the proposed project and, therefore, would not result in a significant impact.

A fourth facility, Variety Metal Finishing was also reviewed for the potential of a chemical release to impact the project site. As mentioned in Section 4.7.1.5, this facility is subject to the California Accidental Release Prevention Program (CalARP), which is the Federal Risk Management Plan Program with additional state requirements, including an additional list of regulated substances and thresholds. At this facility, metal parts are dipped into tanks containing cleaning and plating solutions. The facility is subject to the CalARP program as a stationary source that stores and/or uses more than a threshold quantity of two regulated chemicals: nitric aid and potassium cyanide. As part of the CalARP program, Variety Metal Finishing has a Risk Management Plan (RMP) in place. The intent of the RMP is to provide basic information that may be used by first responders in order to prevent or mitigate damage to the public health and safety and to the environment from a release or threatened release of a hazardous material; and to satisfy federal and state Community Right-to-Know laws.

Based on the RMP, release scenarios were modeled for both a worst-case and an alternative release scenario (seismic event) for both chemicals. EPA and CalARP regulations establish two types of accidental release scenarios: 1) the largest theoretical release ("worst-case release scenario") and a more likely release scenario ("alternative release scenario") under the meteorological and topographical conditions as required by these regulations. Both EPA's RMP and CalARP's guidance and regulations have defined the worst-case release scenario as the total release of the largest quantity of a regulated substance from a single vessel or process line failure that results in the greatest distance to an endpoint under conservative meteorological conditions, which typically occur only at night when most people are sleeping. Worst-case release scenarios represent the failure modes that would result in the worst possible off-site consequences, however unlikely, and do not represent more likely smaller releases that would potentially result in smaller impacts. Both the federal and state programs define the alternative release scenarios as those that are more likely to occur than the worst-case release scenario and that reach an endpoint offsite, unless no such scenario exists. As in the worst-case release scenario, alternative release scenarios are hypothetical scenarios based on process knowledge, health and safety systems and practices and history of the facility, but the probability of the release to occur is not required to be calculated and reported. As a result, even the alternative release scenario may describe an unlikely event.

The endpoints evaluated in the Variety Metal Finishing RMP for nitric acid and the hydrogen cyanide generated from the potassium cyanide, are EPA Risk Management Program endpoints as recommended by CalARP guidance.[9] The endpoints selected in the EPA's Risk Management Program "are concentrations below which it is believed nearly all individuals could be exposed for one-half to one hour without any serious health effects."[10]

The risk assessment modeling data which projects the distance to endpoint (the distance the substance could travel before dispersing enough to no longer pose a serious hazard to the general public) for the worst-case scenario for nitric acid was a radius of 1,584 feet, and for potassium cyanide was a radius of 1,056 feet. The modeled distance to endpoint for the alternative release scenario was a radius of 528 feet for both nitric acid and for potassium cyanide. The worst-case release scenarios for nitric acid and potassium cyanide show that nitric acid has the potential to reach the project site but the potassium cyanide release would not. Under the worst-case release scenario, the modeled distance to endpoint for nitric acid would only extend onto a portion of the site located in the City of San José. Under the alternative release scenario, a release of either of these substances would not impact the project site. The City of San José has relied on the alternative release scenario as the basis to determine significant impacts to residential development from accidental chemical release in the project area, because this scenario acknowledges the process knowledge, and health and safety systems and practices the specific facility has incorporated, in response to participating in the RMP program, and, therefore, represents a more credible release scenario. Based on the alternative release scenario contained in the RMP for Variety Metal Finishing, future residents of the proposed project site would not be significantly impacted by the accidental chemical releases modeled in this study.[11]

[9] 2005. Governor's Office of Emergency Services. California Accidental Release Prevention (CalARP) Program Administering Agency Guidance.

[10] United States Environmental Protection Agency (USEPA). 2004. General Guidance on Risk Management Programs for Chemical Accident Prevention. Office of Solid Waste and Emergency Response. EPA-550-B-04-001. April.

[11] Modeling of accidental chemical releases from the Variety Metals Finishing facility prepared subsequent to the RMP confirms the project would not be significantly impacted due to an accidental chemical release.

Based on a review of current industrial facilities using their current hazardous materials in their current quantities in the vicinity of the project site, none of these facilities would impact the site if the alternative release were to occur. The impact of locating the proposed residential project near these industrial facilities is, therefore, less than significant.

Avoidance Measure: The project proposes to implement the following measure to avoid impacts from the use of hazardous materials adjacent to the site:

AM HM-2: In accordance with the 2007 California Fire Code, the project proposes to maintain a minimum 10-foot setback from the eastern property line of the site to avoid impacts from a 500-gallon aboveground propane tank located on the Alliance Roofing property.

4.7.3 Conclusion

Impact HM-1: The project with the implementation of the identified mitigation measures would reduce hazardous materials impacts to a less than significant level. **(Less Than Significant Impact with Mitigation)**

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 Setting

4.8.1.1 *Drainage*

The project site is part of the Guadalupe River watershed. The Guadalupe River is located approximately one mile northeast of the project site. The Guadalupe River originates in the Santa Cruz Mountains and flows in a northerly direction until it discharges to San Francisco Bay.

The average annual rainfall in San José is approximately 14 inches, although precipitation can vary greatly year-to-year. Ninety-eight percent of the annual precipitation is received during the period from October through May. Storm runoff within the urbanized areas of the City of San José is discharged into local storm drains, which in turn flow to the creeks and ultimately to the Bay. The Santa Clara Valley Water District (SCVWD) has jurisdiction over most of the creek channels that collect runoff from the storm drains serving urban areas.

The project site is currently developed with an office building, a paved parking lot, and landscaping. Approximately 81 percent of the project site is impervious and the remaining 19 percent of the site is pervious landscape area. The project site drains to the Guadalupe River through a 12 to 18-inch storm drain located on Campbell Avenue near the southeast corner of the project site.

4.8.1.2 *Regulatory Requirements*

City of San José Post-Construction
Urban Runoff Management (Policy 6-29)

The City of San José's Policy No. 6-29 requires all new and redevelopment projects to implement Post-Construction Best Management Practices (BMPs)[12] and Treatment Control Measures (TCMs)[13] to the maximum extent practicable. This Policy also establishes specific design standards for Post-Construction TCMs for projects that create, add, or replace 10,000 square feet or more of impervious surfaces.

City of San José Post-Construction
Hydromodification Management (Policy 8-14)

In 2005, the City of San José adopted the *Post-Construction Hydromodification Management* (Policy 8-14) to manage development related increases in peak runoff flow, volume and duration, where such

[12] Post-Construction Best Management Practices (BMPs) are methods, activities, maintenance procedures, or other management practices designed to reduce the amount of stormwater pollutant loading from a site. Examples of Post-Construction BMPs include proper materials storage and housekeeping activities, public and employee education programs, and storm inlet maintenance and stenciling.

[13] Post-Construction Treatment Control Measures are site design measures, landscape characteristics or permanent stormwater pollution prevention devices installed and maintained as part of a new development or redevelopment project that is designed to reduce stormwater pollution loading from the site; is installed as part of a new development or redevelopment project; and is maintained in place after construction has been completed. Examples of runoff treatment control measures include filtration and infiltration devices (e.g., vegetative swales/biofilters, insert filters, and oil/water separators) or detention/retention measures (e.g., detention/retention ponds). Post-Construction TCMs are a category of BMPs.

hydromodification[14] is likely to cause increased erosion, silt pollution generation, or other impacts to local rivers, streams, and creeks.

Policy 8-14 requires stormwater discharges from new and redevelopment projects that create or replace one acre (43,560 square feet) or more of impervious surfaces to be designed and built to control project-related hydromodification, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks. The Policy establishes specified performance criteria for Post-Construction Hydromodification Control Measures (HCMs) and identifies projects that are exempt from HCM requirements. For example, projects that do not increase the impervious area of a site, projects that drain to exempt channels, or projects that discharge to stream segments that are either tidally influenced or hardened to the Bay.

4.8.1.3 *Flooding*

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM), the project site is located within Zone AH, with a base flood elevation[15] of 63 feet, which is defined as a 100-year flood area with average flood elevations of one to three feet.[16]

The site is located within a dam failure inundation hazard area.[17] Flood waters associated with a catastrophic dam failure at Lexington Reservoir would result in flooding at the site.

The Lenihan Dam along Los Gatos Creek is located approximately 10.33 miles southwest of the project site. The dam is made of rolled earthfill and was constructed in 1952 to create Lexington Reservoir. The dam is operated by the Santa Clara Valley Water District (SCVWD) and is used for groundwater recharge on the west side of Santa Clara Valley. The dam has a storage capacity of approximately 19,044 acre-feet.

In the 1980s, the State Office of Emergency Services required that dam inundation maps be prepared for all dams in the state. The purpose of the maps is to provide information to local emergency service agencies that allows them to plan for a response in the event of a dam failure. The project site is located in the dam inundation area of Lexington Reservoir. Dams operated by the SCVWD are inspected twice each year and are continuously monitored for seepage and settling and inspected immediately following significant earthquakes.

The Lenihan Dam has experienced outlet pipe buckling since the late 1980s. Therefore, the state Division of Safety of Dams has imposed restrictions on the discharges from the outlet pipe which

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[14] Hydromodification occurs when the total area of impervious surfaces increases resulting in the decrease of rainfall infiltration, which causes more water to run off the surface as overland flow at a faster rate. Storms that previously did not produce runoff from a property under previous conditions can produce erosive flows in creeks. The increase in the volume of runoff and the length of time that erosive flows occur intensifies sediment transport, increasing creek scouring and erosion and causing changes in stream shape and conditions, which can, in turn, impair the beneficial uses of the stream channels.

[15] "Base flood elevation" or "BFE" is the computed elevation to which the flood water is anticipated to rise during the base flood.

[16] Federal Emergency Management Agency. Flood Insurance Rate Map. Community Panel No. 0603490018D per letter of map revision dated 25 October 2006.

[17] Association of Bay Area Governments. Dam Failure Inundation Hazard Map for Northwest San José/Milpitas/Santa Clara. 20 October 2003. ABAG. 16 October 2007. http://www.abag.ca.gov/cgi-bin/pickdamx.pl.; http://gis.abag.ca.gov

reduces reservoir operations. If the outlet pipe buckling is not corrected and flows continue to be restricted, a heavy rain season could lead to flooding around the reservoir. The SCVWD has proposed construction of a new outlet pipe for the reservoir. The project was begun in Fall 2007 and is expected to be completed in Summer 2009.[18] Construction of the new outlet pipe would allow the SCVWD to release water more efficiently from the reservoir during dry months. Due to frequent inspections of the dam, catastrophic failure is considered unlikely.

The site is not subject to seiche[19] or tsunami.

4.8.2 Environmental Checklist and Discussion

HYDROLOGY AND WATER QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
1) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	☐	1
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)?	☐	☐	☐	☒	☐	1
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?	☐	☐	☒	☐	☐	1
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?	☐	☐	☒	☐	☐	1
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?	☐	☐	☒	☐	☐	1

[18] Santa Clara Valley Water District. Fact Sheet: Lexington Reservoir and Lenihan Dam. March 2007. Accessed: 16 October 2007.

[19] A seiche is an oscillation of the surface of a lake or landlocked sea varying in period from a few minutes to several hours. Seiches are often generated by small oscillations from earthquakes.

HYDROLOGY AND WATER QUALITY	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
6) Otherwise substantially degrade water quality?	☐	☐	☐	☒	☐	1
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?	☐	☒	☐	☐	☐	1,11
8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☒	☐	☐	☐	11,12
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?	☐	☐	☒	☐	☐	1,13
10) Be subject to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	☐	1

4.8.2.1 *Water Quality*

Post-Construction Impacts

Currently, 81 percent of the project site is impervious and 19 percent of the project site is pervious (refer to Table 4.8-1). The project proposes to demolish and remove the existing structures and portions of the surface parking areas on-site and construct up to 259 residential units.

Table 4.8-1
Pervious and Impervious Surfaces Comparison

Site Surface	Existing/Pre-Construction (sf)	%	Project/Post-Construction (sf)	%	Difference (sf)	%
Impervious Surfaces						
Building Footprint	88,427	39%	89,298	40%	+871	>1%
Parking	85,378	38%	54,779	24%	-30,599	-14%
Sidewalks, Patios, Paths, etc.	9,147	4%	48,023	21%	+38,876	+17%
Subtotal	182,952	81%	192,100	85%	+9,148	+4%
Pervious Surfaces						
Landscaping	43,560	19%	34,412	15%	-9,148	-4%
Subtotal	43,560	19%	34,412	15%	-9,148	-4%
Total	226,512	100%	226,512	100%	0	0

The proposed conceptual design for the site would result in approximately 85 percent of the site covered with impervious surfaces and approximately 15 percent of the site would be pervious

landscape areas. The development of the proposed project, therefore, would result in an increase of impervious surfaces on the site which would increase the amount of runoff from the project site. The project would result in an incremental increase in runoff from the site; however, it is not anticipated to exceed the capacity of existing drainage facilities.

Stormwater from urban uses contains metals, pesticides, herbicides, and other contaminants such as oil, grease, lead, and animal waste. Runoff from the proposed project may contain increased oil and grease from parked vehicles, as well as sediment and chemicals (i.e., fertilizers and pesticides) from landscaped areas.

The project would increase traffic and human activity on and around the project site, generating more pollutants and increasing dust, litter, and other contaminants that would be washed into the storm drain system. The project, therefore, would generate an increase in water contaminants that could be carried downstream in stormwater runoff from paved surfaces on the site. The project currently proposes the use of mechanical stormwater treatment units in order to comply with the requirements of Policy 6-29, and if applicable, Policy 8-14.

Implementation of the following standard measures would ensure the project would not result in significant post-construction water quality impacts.

Standard Measures: The project proposes to implement the following standard measures to reduce and avoid post-construction water quality impacts:

SM HYD-1: Prior to the issuance of a Planned Development Permit, the applicant must provide details of specific Best Management Practices (BMPs), including, but not limited to, bioswales, disconnected downspouts, landscaping to reduce impervious surface area, mechanical treatment devices, and inlets stenciled "No Dumping – Flows to Bay" to the satisfaction of the Director of Planning, Building and Code Enforcement.

SM HYD-2: The project shall comply with Provision C.3 of NPDES permit Number CAS0299718, which provides enhanced performance standards for the management of stormwater of new development.

SM HYD-3: The project shall comply with applicable provisions of the following City Policies – 1) Post-Construction Urban Runoff Management Policy (6-29) which establishes guidelines and minimum BMPs for all projects and 2) Post-Construction Hydromodification Management Policy (8-14) which provides for numerically sized (or hydraulically sized) TCMs.

Construction-Related Impacts

Construction of the proposed project, as well as demolition, grading, and excavation activities, may result in temporary impacts to surface water quality. Demolition of the existing buildings and construction of the proposed project 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 drain system.

Implementation of the following standard measures would ensure the project would not result in significant construction-related water quality impacts.

Standard Measures: The project proposes to implement the following standard measures to reduce and avoid water quality impacts:

SM HYD-4: Prior to the commencement of any clearing, grading or excavation, the project shall comply with the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Construction Activities Permit, to the satisfaction of the Director of Public Works, as follows:

- The applicant shall develop, implement and maintain a Storm Water Pollution Prevention Plan (SWPPP) to control the discharge of stormwater pollutants including sediments associated with construction activities;
- The applicant shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB).

SM HYD-5: The project shall incorporate Best Management Practices (BMPs) into the project to control the discharge of stormwater pollutants including sediments associated with construction activities. Examples of BMPs are contained in the publication Blueprint for a Clean Bay. Prior to the issuance of a grading permit, the applicant may be required to submit an Erosion Control Plan to the City Project Engineer, Department of Public Works, 200 E. Santa Clara Street, San Jose, California 95113. The Erosion Control Plan may include BMPs as specified in the Association of Bay Area Governments' (ABAG) Manual of Standards Erosion & Sediment Control Measures for reducing impacts on the City's storm drainage system from construction activities. For additional information about the Erosion Control Plan, the NPDES Permit requirements or the documents mentioned above, please call the Department of Public Works at (408) 535-8300.

SM HYD-6: The project applicant shall comply with the City of San Jose Grading Ordinance, including erosion and dust control during site preparation and with the City of San Jose Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction. The following specific BMPs will be implemented to prevent stormwater pollution and minimize potential sedimentation during construction:

- Restriction of grading to the dry season (April 15 through October 15);
- Utilize on-site sediment control BMPs to retain sediment on the project site;
- Utilize stabilized construction entrances and/or wash racks;
- Implement damp street sweeping;
- Provide temporary cover of disturbed surfaces to help control erosion during construction;
- Provide permanent cover to stabilize the disturbed surfaces after construction has been completed.

4.8.2.2 *Flooding*

As discussed above, the project site is located within the 100-year flood hazard zone (Zone AH) and is subject to up to three feet of flooding. The base flood elevation for the site is 63 feet. The City's *Special Flood Hazard Area Regulations* (Municipal Code Chapter 17.08), specifies that the lowest finished floor of all new construction of any residential, nonresidential or mixed-use structure shall be elevated to or above the base flood elevation specified on the FIRM.

The project site would be elevated to avoid impacts from flooding. The lowest finished floor elevation would be 64.3 feet for the westernmost townhouse units proposed along the Campbell Avenue project frontage. The proposed parking garage would be 65 feet in elevation.

The *Special Flood Hazard Area Regulations* require that upon completion of the structure, the director or a registered professional engineer or surveyor shall certify that the structure is elevated to the base flood elevation and, if certified by a professional engineer or surveyor, shall provide such certification to the Director of Public Works as set forth in Section 17.08.310.

The proposed project was reviewed by *Schaaf & Wheeler Consulting Civil Engineers* to ensure the proposed development would not impact the elevation of the 100-year flood (refer to Appendix E). The proposed development does not block the release of ponded water resulting from the 100-year flood and therefore would not impact the 100-year floodplain.

Impact HYD-3: The proposed project would develop structures within a 100-year flood zone. **(Significant Impact)**

Mitigation Measure: The project proposes to implement the following mitigation measures:

MM HYD-3.1: Comply with the City of San José *Special Flood Hazard Area Regulations* and City's Floodplain Management Ordinance, including providing certification of the lowest floor elevation on N.G.V.D datum by a registered professional engineer or surveyor to the Director of Public Works, as set forth in Section 17.08.310.

MM HYD-3.2: Obtain an Elevation Certificate (FEMA Form 81-31) based on construction drawings prior to issuance of a building permit. An Elevation Certificate based on finished construction is also required prior to issuance of an occupancy permit.

MM HYD-3.3: Elevate building support utility systems such as HVAC, electrical, plumbing, air conditioning equipment, including ductwork, and other service facilities above the base flood elevation or otherwise protected from flood damage.

4.8.3 Conclusion

Impact HYD-1: The proposed project, with the implementation of the identified standard measures (SM HYD-1 to SM HYD-3), would not result in post-construction stormwater quality impacts. **(Less Than Significant Impact)**

Impact HYD-2: The proposed project, with the implementation of the identified standard measures (SM HYD-4 to SM HYD-6), would not result in any significant construction-related water quality impacts. **(Less Than Significant Impact)**

Impact HYD-3: The proposed project, with the implementation of the identified mitigation measures, would not result in significant flooding impacts. **(Less Than Significant Impact with Mitigation)**

4.9 LAND USE

4.9.1 Setting

4.9.1.1 *Existing Land Use*

The approximately 5.18-acre project site is located on the north side of Campbell Avenue approximately 2,000 feet northwesterly of Newhall Street at 1270 Campbell Avenue in the City of San José and City of Santa Clara. The project site consists of a single-story office/R&D building surrounded by surface parking lots and landscaping.

4.9.1.2 *Surrounding Land Uses*

The project site is located immediately adjacent to industrial uses in the City of San José. Some properties along Campbell Avenue have recently been redeveloped creating a mix of light industrial and residential development in the area. A roofing business (Alliance Roofing Company) is located directly east of the site. The UPRR tracks are adjacent to the north of the site. The parcel to the northwest is currently developed with a two-story office/R&D building. The property south of the site was redeveloped with the Santa Clara University baseball stadium in 2005. Apartments were constructed in 2005 south of the baseball stadium site in the City of Santa Clara. The City of San José has approved approximately 376 residential units on Campbell Avenue, east of the site, which are either completed or currently under construction.

4.9.1.3 *Land Use Plans*

General Plan Land Use Designation

A General Plan Amendment (GP05-03-02) was approved for the site by the San José City Council in June 2006. The approved amendment changed the City of San José General Plan land use designation on the site from *Light Industrial* to *High Density Residential (25-50 DU/AC)*. The proposed PD zoning would allow development of up to 259 residential units on the site proposed to be used for rental housing. The proposed project would be consistent with the City of San José General Plan land use designation for the site.

The project site is designated for *Gateway Thoroughfare* use in the City of Santa Clara General Plan. The *Gateway Thoroughfare* designation is primarily a commercial land use that is intended to be neighborhood and pedestrian friendly and provide additional housing opportunities in conjunction with high quality commercial uses at 19 to 25 DU/AC. Although the proposed project includes residential uses, the density proposed is inconsistent with the City's General Plan land use designation for the site. The City of Santa Clara will have to make findings that the majority of the site is located in the City of San José and the whole of the project is consistent with the General Plan designation assigned to property located within San José's jurisdiction.

Zoning Designation

The project site in the City of San José is zoned *HI – Heavy Industrial* which is intended for industrial uses with nuisance or hazardous characteristics which for reasons of health, safety, environmental effects, or general welfare are best segregated from other uses. The site is zoned *ML –*

Light Industrial by the City of Santa Clara.[20] The City of Santa Clara is a Charter City and therefore, under state law zoning within the City is not required to conform to the General Plan. Under the City of Santa Clara's Zoning Ordinance, the City Council may approve a *Planned Development (PD)* zoning if findings can be made that the project is consistent with the intent of Santa Clara's General Plan policies.

Santa Clara BART Station Area Plan

The City of Santa Clara, City of San José, and VTA are working together on a plan for the area around the Santa Clara Transit Center. The Transit Center is currently served by Caltrain, Altamont Commuter Express (ACE), and VTA bus lines. Additionally, future plans call for an Automated People Mover (APM) system that would connect Norman Y. Mineta San José International Airport with both the Transit Center and VTA's Metro/Airport light rail station. The VTA is currently working to extend BART from Fremont to Silicon Valley, with the Santa Clara Transit Center forming the terminus of this extension. With completion of the BART extension to Santa Clara, direct rail service will be provided to virtually all parts of the San Francisco Bay Area and the Transit Center will become a key intermodal hub in the region. The project planning area consists of approximately 432 acres in the Cities of Santa Clara and San José. The plan will provide the foundation for revitalization and redevelopment within the planning area.[21] The Draft Preferred Plan currently being considered (October 2007) proposes *Medium/High Density (25-50 DU/AC)* residential land uses for the site.

4.9.1.4 *Other Plans*

The project site is not part of a habitat conservation plan or natural community conservation plan.

4.9.2 Environmental Checklist and Discussion

LAND USE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
1) Physically divide an established community?	☐	☐	☐	☒	☐	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?	☐	☒	☐	☐	☐	1,2,14, 15,16, 17
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	☐	1

[20] Fernandez, Debby, Assistant Planner. Phone communication. 2 May 2008.
[21] Santa Clara Station Area Plan. 24 May 2007. Santa Clara Station Area Plan. 14 June 2007. http://www.santaclarasap.com/index.php

4.9.2.1 *Conformance with Land Use Plans*

General Plan

The proposed PD zoning would allow development of 50 DU/AC. The project, therefore, is consistent with the City of San José General Plan land use designation for the site.

The proposed PD zoning is not consistent with densities allowed for the City of Santa Clara General Plan land use designation of *Gateway Thoroughfare (19-25 DU/AC)*. The *Gateway Thoroughfare* designation was originally intended to allow residential development in existing commercial areas of the City. Since adoption of the *General Plan 2000-2010*, nearby commercial development sites have converted to *Institutional* and *Transit-Oriented Mixed Use* land uses, which have created a mix of commercial, residential, and institutional uses in the project area. The proposed high density residential development, therefore, would be compatible with the surrounding mix of land uses in the City of Santa Clara and would support the existing transit center. The project would provide pedestrian friendly development which is consistent with the design guidelines for this land use designation and housing policies to provide housing in proximity to transit. As previously stated, the City of Santa Clara is a Charter City and state law does not require zoning consistency with the General Plan. Under the City's Zoning Ordinance, the project could be found consistent with the existing Santa Clara General Plan designation for the site by proposing a Planned Development (PD) zoning and determination of the necessary findings for rezoning approval.

The City of Santa Clara has an affordable housing requirement that is applied to residential projects with ten or more units. The policy requires the developer to provide at least ten percent of the total number of units at rents or prices to low and moderate income households commensurate with the City's regional fair share requirement. The proposed project does not provide affordable housing units and is therefore inconsistent with the City of Santa Clara's General Plan policy for affordable housing.

Impact LU-1: The proposed project would not provide any affordable units on the project site which is inconsistent with City of Santa Clara requirements. **(Significant Impact)**

Mitigation Measure: The project proposes the following mitigation measure to reduce the project's land use impacts to a less than significant level:

MM LU-1.1: The project proposes to pay in-lieu housing fees to the City of Santa Clara to provide for affordable housing in the city.

Zoning

The project proposes to rezone the portion of the project site in the City of San Jose from *HI – Heavy Industrial* to *A(PD) – Planned Development* to allow high density residential development consistent with the existing General Plan land use designation on the site. The proposed project is not consistent with the existing zoning for the site and would place residential development adjacent to land uses typically considered incompatible. The proposed PD zoning, however, adheres to the perimeter setbacks from incompatible land uses identified in the City of San José's *Residential Design Guidelines*. The proposed high density residential development, therefore, would be compatible with the surrounding land uses and would not conflict with plans adopted for the purpose of avoiding or mitigating an environmental impact.

The project proposes to rezone the portion of the project site in the City of Santa Clara from *ML – Light Industrial* to *Planned Development (PD)*. The Santa Clara City Council, could make findings that the proposed PD zoning is consistent with the intent of the General Plan land use designation on the site and is compatible with nearby development in the City of Santa Clara.

4.9.2.2 *Spill Light Impacts*

Lighting during events and practices at the Santa Clara University (SCU) baseball stadium minimally increases nighttime light levels in the project area. It is estimated that SCU hosts 16 evening home games and evening tournament events per year. The number of practices requiring the use of lighting is unknown. The lights are equipped with spill and glare control shields that direct the light onto the field and away from adjacent development. Due to the infrequency of the stadium lighting and the spill and glare controls in place, the spill light resulting from the use of the stadium is considered a less than significant land use compatibility impact.

4.9.3 Conclusion

Impact LU-1: The proposed project would offset its inconsistency with the City of Santa Clara's affordable housing policy through the payment of in-lieu housing fees to provide affordable housing in the City of Santa Clara. **(Less Than Significant Impact with Mitigation)**

4.10 MINERAL RESOURCES

4.10.1 Setting

The project site is located within a developed urban area. It does not contain any known or designated mineral resources.

4.10.2 Environmental Checklist and Discussion

MINERAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☐	☐	☒	☐	1,2
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?	☐	☐	☐	☒	☐	1,2

According to the City of San José 2020 General Plan, there are no mineral deposits outside the Communications Hill Area of statewide significance. The project site is not located in an area known to contain mineral deposits of statewide or regional significance.

4.10.3 Conclusion

The proposed project would not result in impacts to known mineral resources. **(No Impact)**

4.11 NOISE AND VIBRATION

The following discussion is based upon an Environmental Noise Assessment completed for the project by *Illingworth & Rodkin* in June 2008. A copy of this report is included in Appendix F of this Initial Study.

4.11.1 Setting

4.11.1.1 *Introduction*

Fundamentals of Environmental Noise

Noise is measured in "decibels" (dB) which is a numerical expression of sound levels on a logarithmic scale. A noise level that is ten dB higher than another noise level has ten times as much sound energy and is perceived as being twice as loud. Sounds less than five dB are just barely audible and then only in absence of other sounds. Intense sounds of 140 dB are so loud that they are painful and can cause damage with only a brief exposure. These extremes are not commonplace in our normal working and living environments. An "A-weighted decibel" (dBA) filters out some of the low and high pitches which are not as audible to the human ear. Thus, noise impact analyses commonly use the dBA. Typical A-weighted levels measured in the environment and in industry are shown in Table 4.11-1.

Since excessive noise levels can adversely affect human activities (such as conversation, sleeping and human health) Federal, State, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods such as L_{eq}, DNL, or CNEL.[22] Using one of these descriptors is a way for a location's overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (e.g., when a jet is taking off from Norman Y. Mineta San José International Airport or a leafblower is operating) and specific moments when noise levels are lower (e.g., during lulls in traffic flows or in the middle of the night).

[22] L_{eq} stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. DNL stands for Day-Night Level and is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. CNEL stands for Community Noise Equivalent Level; it is similar to the DNL except that there is an additional five dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM. Generally, where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq}.

Table 4.11-1
Typical Sound Levels Measured in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 20 meters	100 dBA	
		Night club with live music
	90 dBA	
Large truck pass by at 15 meters		
	80 dBA	Noisy restaurant
		Garbage disposal at 1 meter
Gas lawn mower at 30 meters	70 dBA	Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
Suburban expressway at 90 meters	60 dBA	
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		
Quiet rural areas	30 dBA	Library
		Quiet bedroom at night
Wilderness area	20 dBA	
	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

Fundamentals of Groundborne Vibration

Railroad operations are potential sources of substantial ground vibration depending on distance, the type and the speed of trains, and the type of railroad track. People's response to ground vibration has been correlated best with the velocity of the ground. The velocity of the ground is expressed on the decibel scale. Although not a universally accepted notation, the abbreviation "VdB" is used in this document for vibration decibels to reduce the potential for confusion with sound decibels.

Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans. Perceptible vibration levels inside residences are attributed to the operation of heating and air conditioning systems, door slams and foot traffic. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences. Table 4.11-2 illustrates some common sources of vibration and the association to human perception or the potential for structural damage.

One of the problems with developing suitable criteria for groundborne vibration is the limited research into human response to vibration and more importantly human annoyance inside buildings. The U.S. Department of Transportation, Federal Transit Administration (FTA) has developed rational vibration limits that can be used to evaluate human annoyance to groundborne vibration.

These criteria are primarily based on experience with passenger train operations, such as rapid transit and commuter rail systems. The main difference between passenger and freight operations is the time duration of individual events; a passenger train lasts few seconds whereas a long freight train may last several minutes, depending on speed and length. The FTA vibration limits are used in this assessment to evaluate the potential of vibration-induced annoyance on the site due to railroad trains.

Table 4.11-2
Typical Levels of Groundborne Vibration

Human/Structural Response	Velocity Level, VdB (re 1μ inch/sec, RMS)	Typical Events (50 –foot setback)
Threshold, minor cosmetic damage	100	Blasting, pile driving, vibratory compaction equipment Heavy tracked vehicles (Bulldozers, cranes, drill rigs)
Difficulty with tasks such as reading a video or computer screen	90	Commuter rail, upper range
Residential annoyance, infrequent events	80	Rapid transit, upper range
Residential annoyance, frequent events	70	Commuter rail, typical bus or truck over bump or on rough roads Rapid transit, typical
Approximate human threshold of perception to vibration	60	Buses, trucks and heavy street traffic Background vibration in residential settings in the absence of activity
Lower limit for equipment ultra-sensitive to vibration	50	

Note: The reference velocity for groundborne vibration is 1 x 10^{-6} inches per second (1μ inch/sec) RMS, which equals 0 VdB, and 1 in./sec. equals 120 VdB.

Applicable Noise Standards and Policies

City of San José General Plan

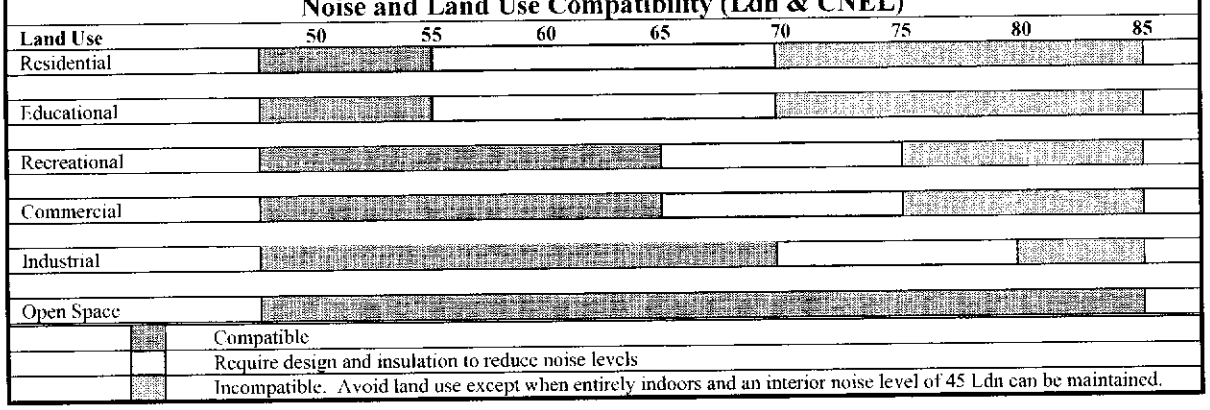
The Noise Element of the City of San José General Plan contains noise guidelines for various land uses within the City, and identifies acceptable noise exposure levels for those uses in terms of the Day-Night Level (DNL) 24-hour descriptor. The DNL descriptor is used to define the noise conditions on a site over a 24-hour period, with a penalty for nighttime noise because of increased sensitivity to noise at night. The City's acceptable noise level objectives for residential uses are 55 dBA DNL as the long-range exterior noise quality level, 60 dBA DNL as the short-range exterior noise quality level, and 45 dBA DNL as the interior noise quality level. Outdoor uses on sites where the DNL is above 60 dBA should be limited to acoustically protected areas. It should be noted, however, that the maximum exterior noise level necessary to avoid significant adverse health effects

is 76 dBA DNL. The City of San José interprets its General Plan policies as permitting up to 76 dBA DNL as a less than significant CEQA impact.[23]

City of Santa Clara General Plan and Noise Ordinance

The Noise Section of the City of Santa Clara's General Plan identifies guidelines for noise and land use compatibility, as shown in Table 4.11-3.

Table 4.11-3
Land Use Compatibility for Community Noise Environment



CEQA Guidelines

CEQA does not define what project-generated noise level increases are significant. Typically, project-generated noise level increases of three dBA DNL or greater are considered significant where exterior noise levels would exceed the normally acceptable noise level standard (60 dBA DNL). Where noise levels would remain at or below the normally acceptable noise level standard with the project, noise level increases of five dBA DNL or greater would be considered significant.

Section 1207 of the 2007 California Building Code

Multi-family housing in the State of California is subject to the environmental noise limits set forth in the 2007 California Building Code (Chapter 12, Appendix Section 1207.11.2). The noise limit is a maximum interior noise level of 45 dBA DNL. Where exterior noise levels exceed 60 dBA DNL, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the project to meet the noise limit.

Santa Clara County Airport Land Use Commission Land Use Plan

The Santa Clara County Airport Land Use Commission (ALUC) has adopted a Land Use Compatibility Chart for projects within the vicinity of San Jose International Airport. The chart indicates that residential land uses are compatible in noise environments resulting from aircraft of 65 dBA CNEL or less.

[23] Danielson, Akoni. City of San José, Department of Planning, Building, and Code Enforcement, Principal Planner. Personal communication. July 10, 2006.

Applicable Vibration Standards

The City of San José has not established vibration limits that can be used to evaluate the compatibility of sensitive land uses with respect to groundborne vibration. Although there are no local standards, the U.S. Department of Transportation's FTA has developed vibration impact assessment criteria for evaluating vibration impacts associated with transit projects. FTA has proposed vibration impact criteria based on maximum overall levels for a single event. The impact criteria for groundborne vibration are shown in Table 4.11-4. Note that there are criteria for frequent events (more than 70 events of the same source per day), occasional events (30 to 70 vibration events of the same source per day), and infrequent events (less than 30 vibration events of the same source per day).

Table 4.11-4
Groundborne Vibration Impact Criteria

Land Use Category	Groundborne Vibration Impact Limits (VdB re 1μ inch/sec, RMS)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1 Buildings where low ambient is essential for interior operations	65 VdB[4]	65 VdB[4]	65 VdB[4]
Category 2 Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3 Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

Notes:
[1]"Frequent Events" are defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.
[2]"Occasional Events" are described as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have these many operations.
[3]"Infrequent Events" is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.
[4]This limit is based on levels that acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration limits.

Source: U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006, FTA-VA-90-1003-06.

4.11.1.2 *Existing Noise Conditions*

Existing Noise Levels

To quantify the existing noise environment on the project site, a noise monitoring survey was completed from August 22, 2005 to August 24, 2005. Four long-term noise measurements were conducted at representative locations to complete the noise monitoring survey. Noise measurement locations are shown on Figure 8. The site was revisited in October of 2007 to evaluate any changes in noise sources or noise levels that may have occurred in the two years since the detailed measurement survey was completed. Noise measurements confirmed that the data gathered during the August 2005 survey remain representative of the ambient noise levels on the project site.

The first long-term noise measurement (LT-1) was made approximately 54 feet from the centerline of Campbell Avenue. This measurement location documented noise levels generated by vehicular traffic along Campbell Avenue and El Camino Real. The DNL noise level (day-night average) over the course of the measurement period ranged from 65 to 66 dBA. The data collected at location LT-1 is summarized in Appendix F.

A second long-term noise measurement was taken at the northeast corner of the project site near the adjacent railroad lines and Alliance Roofing. The noise monitor at location LT-2 was located approximately 140 feet from the center of the nearest through railroad track (center of the third track from the site). The DNL at location LT-2 was 62 dBA. Noise levels resulted primarily from train passages, idling of train engines, and local activities at Alliance Roofing. The sound-level meter began recording data at about 12:00 PM on August 22, 2005. When the sound level meter began recording data, an ACE train was idling near the site. The data collected at location LT-2 are summarized in Appendix F.

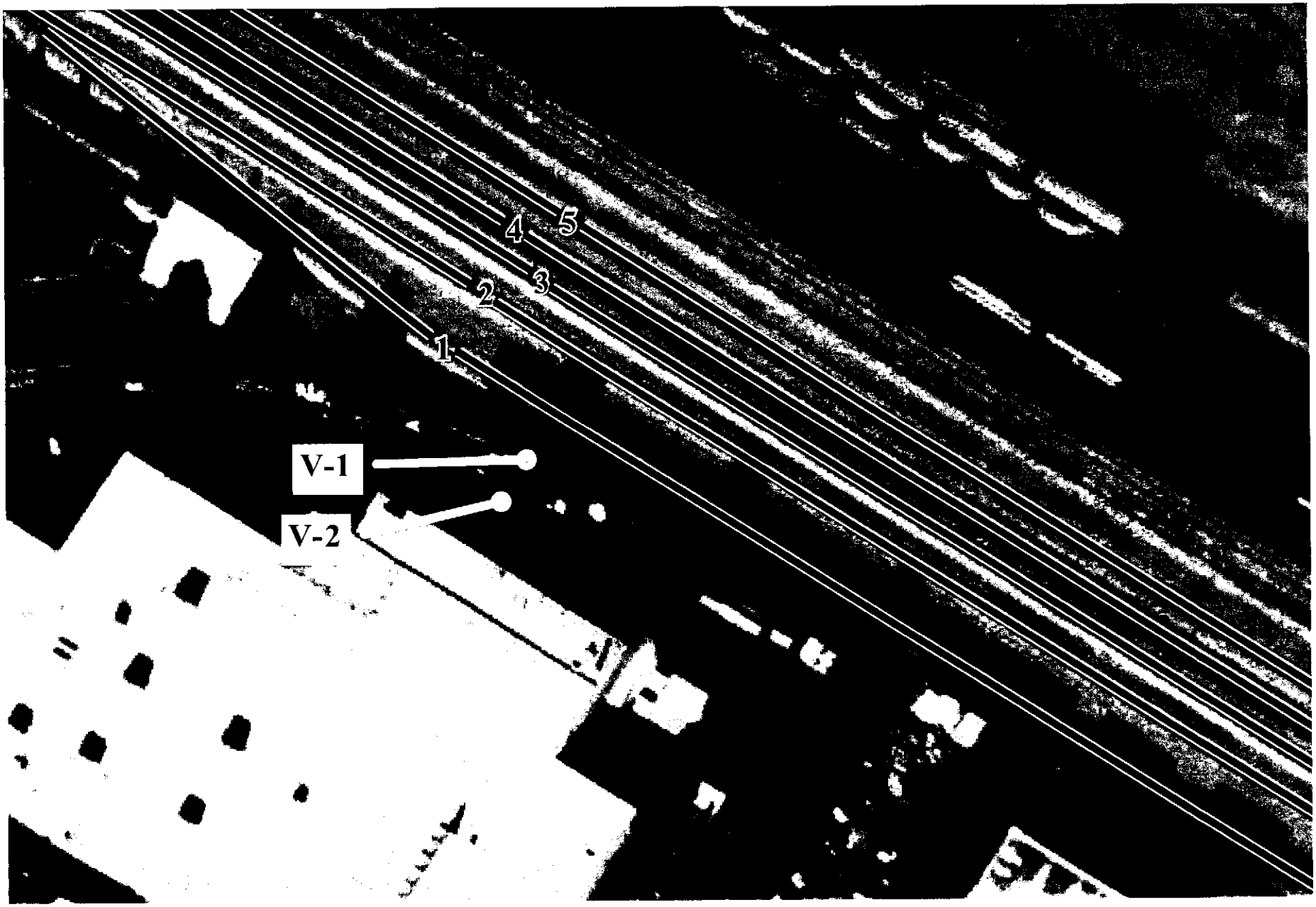
The third long-term noise measurement was taken at the east property line of the project site adjacent to Alliance Roofing. The noise monitor at location LT-3 was located approximately 300 feet from the center of the nearest through railroad track, and approximately 15 feet from the common property line with the roofing company. Noise levels measured at this site varied depending on the amount of activity occurring near the sound level meter. On the afternoon of August 23, 2005, noise levels from activities at Alliance Roofing were most prevalent given the intermittent nature of the noise levels recorded. On the morning and early afternoon of August 24, 2005, the data indicates that the ACE Train idled near the site, generating fairly steady noise levels of about 60 dBA. The DNL noise level at location LT-3 was 65 dBA. The data collected at location LT-3 are summarized in Appendix F.

A fourth long-term noise measurement was conducted at the northernmost property line of the project site, approximately 80 feet from the center of the near through track. Noise levels measured at this site were primarily the result of train traffic along the railroad lines and aircraft. A similar trend in the noise data, as discussed previously in the paragraph above, indicates that the ACE Train idled near the site on the morning and early afternoon of August 24, 2005. The DNL noise level was 70 dBA. The data collected at location LT-4 are summarized in Appendix F.

Several visits were made to the project site to observe train activity on the tracks adjacent to the site. The tracks are identified in Figure 9. Observations made during visits to the project site and neighboring sites indicate that the nearest railroad track (Track 1) is used primarily for the storage of rail cars. The second track (Track 2) provides a location for the ACE train to idle between commute hours. The third, fourth, and fifth tracks (Tracks 3, 4, and 5) are the primary through-travel rail lines used by freight and passenger trains. Beyond the through rail lines, there are several additional tracks used for storage of rail cars.

NOISE MEASUREMENT LOCATIONS

FIGURE 8



VIBRATION MEASUREMENTS AND TRACK LOCATIONS

FIGURE 9

Vibration Measurements

Vibration measurements were taken August 23, 2005. There have been no known changes to the railroad tracks or trains utilizing the tracks since the 2005 vibration measurements that would result in measurably different vibration levels, therefore, this data is considered to be representative of current conditions (2008). The instrumentation used to conduct the measurements is capable of measuring very low vibration levels accurately. Vibration levels measured on the site are representative of vibration levels at ground level, i.e. vibration levels that would enter the building foundation.

Vibration measurements were taken at two setbacks from the property line along the northern end of the property (refer to Figure 9). Several tracks exist adjacent to the site and were found to be active (refer to Figure 9). The nearest two tracks are predominantly used for storage and slow speed passbys. The three central tracks appear to be used by freight and passenger trains. The furthest tracks are also used for storage. Through trains were observed to travel at speeds ranging from approximately 20 mph to 45 mph adjacent to the project site.

Location V-1 was approximately 10 feet from the property line, and Location V-2 was 30 feet from the property line. The two different setbacks were used to develop a drop-off rate for ground vibration with distance.

Nine train passbys were measured between 11:00 AM and 2:00 PM on August 23, 2005. Caltrain was measured in both the northbound and southbound direction on six occasions. The measurements also included two northbound Amtrak trains and one southbound freight train. Southbound Caltrain passed the site along the third track (nearest through track) at approximately 24 to 34 mph. Northbound Caltrain passed the site at speeds of approximately 32 to 45 mph on the fourth railroad track (second through track) from the site. Amtrak and the freight train passed the site along the third through track from the site (Track 5) at speeds of approximately 20 to 32 mph. Vibration levels measured at each measurement position during train passby events are summarized in Table 4.11-5.

Table 4.11-5
Results of Vibration Measurements

Activity	Vibration Level (VdB re 1μinch/sec, RMS)		Track	Comments
	Location V-1	Location V-2		
Background	~ 45 VdB	~ 45 VdB	--	Ambient vibration levels
NB Caltrain (11:46 AM)	74 VdB	71 VdB	4	
NB Caltrain (12:16 PM)	77 VdB	74 VdB	4	45 mph, Engine + 4 Cars
SB Caltrain (12:32 PM)	73 VdB	68 VdB	3	34 mph, Engine + 5 Cars
NB Amtrak (12:37 PM)	70 VdB	66 VdB	5	32 mph, Engine + 7 Cars
NB Caltrain (12:45 PM)	78 VdB	75 VdB	4	Engine + 5 Cars
SB Caltrain (12:58 PM)	72 VdB	67 VdB	3	24 mph
NB Amtrak (1:15 PM)	78 VdB	75 VdB	5	
SB Caltrain (1:33 PM)	68 VdB	64 VdB	3	
SB Freight (1:37 PM)	70 VdB	65 VdB	5	20 mph

Notes:
Position V-1 – 10 feet from the property fence
Position V-2 - 30 feet from the property fence

4.11.2 Environmental Checklist and Discussion

NOISE AND VIBRATION	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☒	☐	☐	☐	18
2) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐	18
3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐	18
4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐	☐	1,2,18
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?	☐	☒	☐	☐	☐	18
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?	☐	☐	☐	☒	☐	1

4.11.2.1 *Noise Impacts to the Project*

The noise environment at the project site exceeds the City of San José's and Santa Clara's short-term noise level goal for exterior noise (60 dBA DNL and 55 dBA DNL) as a result of transportation noise sources in the site vicinity (i.e., railroad, Campbell Avenue, and the San José International Airport). In addition, BART has planned an extension of the regional transit network adjacent to the site with the potential to increase noise and vibration levels on the project site. Noise generated with the operation of adjacent light industrial uses would also continue to contribute to the future noise environment. Exterior noise levels throughout the project site would exceed the "satisfactory" compatibility standard for residential land uses established by the City of San José and Santa Clara.

Exterior Noise Levels

The existing noise environment along the northernmost property line of the site results primarily from train activity and aircraft. Future noise levels along the north property line of the project site are anticipated to increase assuming a moderate increase in train traffic and with the addition of BART. Based on the Silicon Valley Rapid Transit Corridor EIS/EIR project description map, the BART extension to Santa Clara would be located north of the existing through rail lines (north of

Track 5) and the alignment would be at-grade. A BART maintenance facility would be located at the end of the BART alignment (refer to Figure 10).

Existing noise levels at the north property line of the project site are approximately 70 dBA DNL. Maximum noise levels resulting from railroad train engines are approximately 85 dBA during passby events. Trains do not normally sound their warning whistles when adjacent to the site. BART would be expected to generate 62 dBA DNL at a distance of 160 feet. This noise level estimate is based on noise measurements conducted adjacent to BART in Walnut Creek in February 2004 and assumes a similar level of operation. Noise generated by the BART maintenance facility would not be expected to add substantially to the noise environment. With the addition of BART and a moderate increase in railroad activity (up to 200 trains per day)[24], future noise levels at the property line would be approximately 72 dBA DNL, which is inconsistent with the noise policies of each City's General Plan.

Receivers adjacent to Campbell Avenue would be exposed to noise generated primarily by vehicular traffic and occasional events at the Santa Clara University Baseball Stadium. Future noise levels at a distance of 50 feet from the center of the Campbell Avenue (nearest residential outdoor use areas) could be as high as 67 dBA DNL assuming a doubling of vehicular traffic along Campbell Avenue. A noise barrier would be required to maintain exterior noise levels generated by Campbell Avenue at 60 dBA DNL or less.

The Santa Clara University Baseball Stadium is located at the southeast corner of Campbell Avenue and El Camino Real. The baseball stadium is used for National Collegiate Athletic Association (NCAA) baseball games and practice. Noise sources associated with a college baseball game include the public address (PA) system, cheering, and individual shouts from coaches and players. The stadium holds a maximum of 1,500 spectators. Noise generation is concentrated around the home plate area where the coaches, players, spectators, and PA speakers are located.

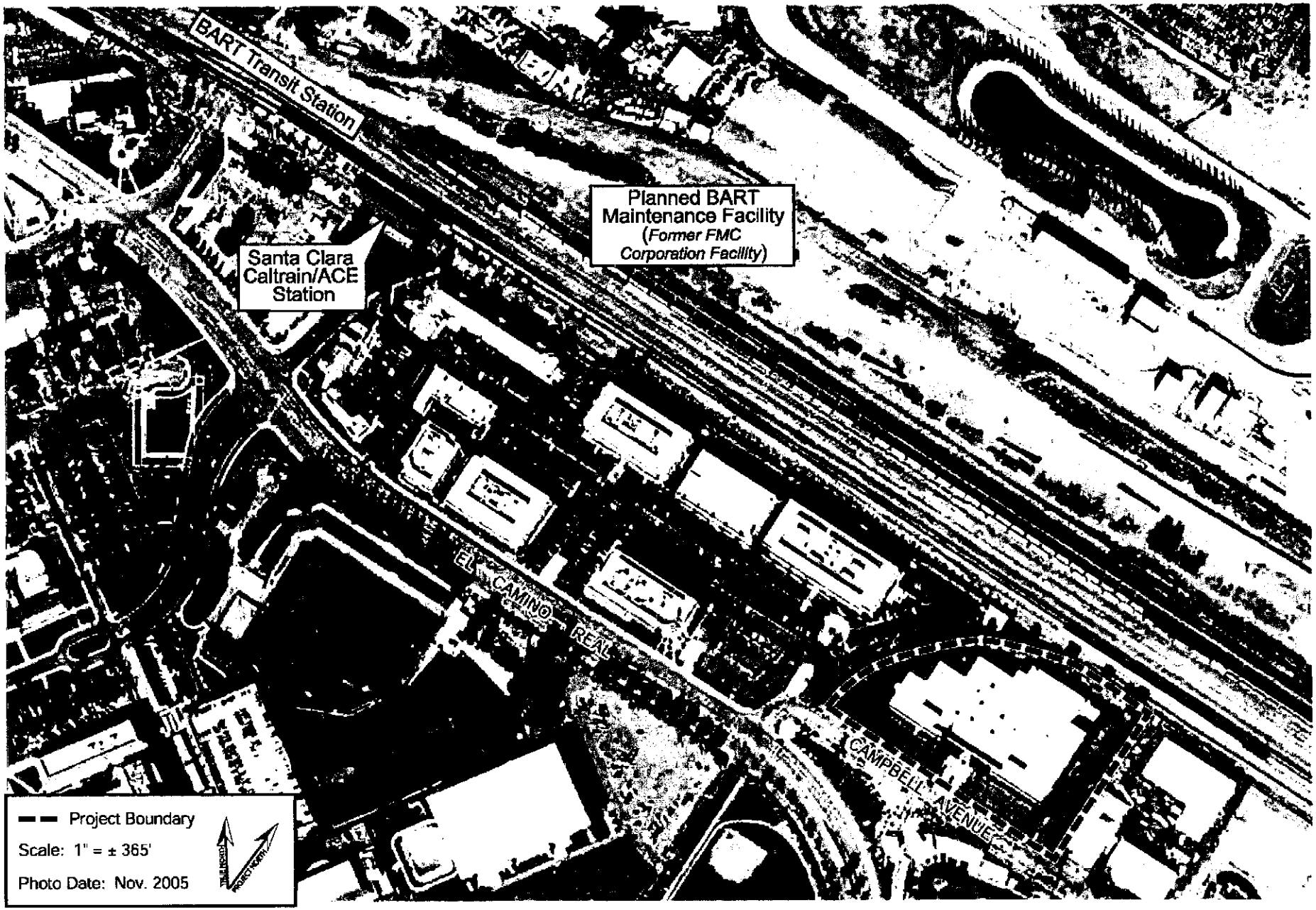
The baseball field is oriented away from the project site. Given the intermittent use of the field, it is not anticipated that noise generated during baseball games would substantially increase day-night average noise levels at the proposed residential development along Campbell Avenue.

Community Noise Equivalent Levels (CNEL) noise levels from the airport would be expected to exceed 60 dBA CNEL on site and be less than 65 dBA CNEL, but the City of San José recognizes that in the environs of the airport, exterior noise levels may exceed the satisfactory noise level goals. The noise environment resulting from aircraft would be considered acceptable for residential development according to the Santa Clara County ALUC.

Receivers adjacent to Alliance Roofing would be exposed to intermittent noise from operation of the industrial use. Day-night average noise levels along the easternmost property line of the project site could range from 62 dBA DNL to 68 dBA DNL. Noise generated by the adjacent industrial use would be audible at times and could be annoying. To reduce noise levels to 60 DNL or less, a noise barrier along the property line with Alliance Roofing could be constructed but is not proposed by the project.

There has recently been discussion of a potential professional soccer venue on the former FMC property across the railroad tracks from the site. The center of the stadium would be located approximately 1,650 feet from the project site. Noise measurements were taken at the home field of

[24] Letter from Stephen Chao, Caltrain, to Stephen Haase, City of San José, April 11, 2005.



PLANNED TRANSIT IMPROVEMENTS

FIGURE 10

Major League Soccer's Los Angeles Galaxy in Carson, California. The noise generated during a game at a similar venue on the FMC site would be approximately 69 dBA L_{max}[25] at the project site and hourly average noise levels would be 55 dBA L_{eq} or less at the project site. The day-night average noise level resulting from the operation of the soccer stadium between 5:00 PM and 11:00 PM (time period when these events would most likely occur) would be 53 dBA DNL at the project site. At the northern property line maximum noise levels would typically be one to 11 dBA below ambient maximum noise levels resulting from railroad train passby events. Hourly average noise levels generated by a soccer game would be within the range of existing hourly average noise levels. Day-night average noise levels resulting from a soccer game would be approximately nine dBA below ambient daily average noise levels. Noise generated from a future soccer stadium on the FMC site, therefore, would be lower than the noise generated by the trains on rail lines adjacent to the site and would not measurably increase the DNL at the project site.

The City of San José recommends that general noise levels in the outdoor use areas of new residential development be maintained at or below 60 dBA DNL. The City of San José recognizes that noise levels in the vicinity of the airport and adjacent to major thoroughfares are difficult to reduce to a DNL of 60 dBA and therefore accepts noise levels in the 60 to 65 dBA DNL range in these areas. The City of Santa Clara recommends that noise levels in outdoor use areas of new residential development be maintained at 55 dBA DNL. The City of Santa Clara's General Plan identifies 55 dBA DNL for residential uses as a guideline but recognizes many areas of the city currently exceed this standard, and therefore considers this an objective towards which the City will continue to work. The 65 dBA DNL is considered consistent with residential land uses by the U.S. Department of Housing and Urban Development (HUD), the Federal Aviation Administration (FAA), and the State of California whose standards take into account the impacts of noise on human health.[26]

The proposed site plan shows that the common outdoor use area associated with the project would be in a courtyard on the podium, shielded from offsite noise sources (including aircraft landing and taking off at San José International Airport) by the residential buildings (refer to Figure 5). The noise level in the common outdoor space would be between 60 and 65 dBA DNL. Exterior noise levels at private balconies would be approximately 70 dBA DNL adjacent to the railroad, 62 to 69 dBA DNL adjacent to Alliance Roofing, and 67 dBA DNL adjacent to Campbell Avenue. It is not possible to reduce exterior noise levels in these areas into compliance with the San José General Plan standards without full enclosures. Solid balcony rails could be considered to provide some minor acoustical shielding for persons sitting on their balconies. Given the existing and future noise levels on the project site, the residential noise level guidelines contained in the City of Santa Clara's General Plan would not be met. These guidelines are considered an objective, which the City recognizes may not be achieved in areas planned for residential uses with elevated noise levels. The proposed balconies on the site are not required open space and acoustically protected common open space areas are present on the site where noise levels would be reduced consistent with HUD standards for residential uses.

The proposed exterior common open spaces for the project would be acoustically protected and would not exceed 65 dBA DNL which conforms to the City of San José's and HUD noise standards. Exterior noise levels at private balconies could be reduced to the maximum extent practicable with the incorporation of solid balcony railings.

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[25] L_{max} refers to the maximum A-weighted noise level during a measurement period.

[26] References: www.hud.gov/local/shared/working/r10/environment/noise.doc; www.opr.ca.gov and San José International Airport Master Plan Update EIR (1997).

Avoidance Measures: The project includes the following avoidance measure to avoid impacts to exterior open spaces on the site:

AM NOI-1: Proposed common open space areas on the project site must be acoustically protected to maintain noise levels in these spaces below 65 dBA DNL.

Interior Noise Levels

Exterior noise levels at the facades of residential units adjacent to the railroad and BART would be expected to be approximately 70 dBA DNL. Exterior noise levels at receivers adjacent to Campbell Avenue could reach 66 dBA DNL. Exterior noise levels at proposed receivers adjacent to Alliance Roofing would be subject to exterior noise level ranging from 62 to 69 dBA DNL. Exterior noise levels at the facades of units within the central portion of the site would be expected to range from 63 to 64 dBA DNL as a result of aircraft.

Where exterior day-night average noise levels are 65 dBA DNL or less, interior noise level can typically be maintained below City and State standards (45 dBA DNL) with the incorporation of forced air mechanical ventilation systems in residential units. Typically, standard construction with a forced air unit (allowing the occupant to control noise by maintaining the windows shut) provides approximately 20 to 25 dBA of noise reduction in interior spaces.

Where noise levels exceed 65 dBA DNL, forced-air mechanical ventilation systems and sound-rated construction are normally required. The exact specifications of window and wall systems cannot be accurately predicted at this time, but once building elevations and floor plans are finalized, the specifications can be made. To control interior maximum noise levels to minimize the potential for activity interference and sleep disturbance, noise insulation features such as stucco-sided walls and sound-rated windows and doors would be required for residences located near the adjacent railroad. Preliminary calculations indicate that proposed residential units would require windows and doors with minimum sound ratings ranging from 28 STC to 34 STC depending on the project noise exposure. Noise insulation features to be included in the project's design will need to be developed once detailed plans are available. The noise control treatments will be designed to reduce noise levels from the railroad, airport, Campbell Avenue, and adjacent industrial uses to an interior 45 dBA DNL or less.

Impact NV-1: Future residential uses that would be developed at the project site would be exposed to exterior noise levels greater than 60 dBA DNL which exceeds the noise and land use compatibility standards presented in the City of San José's and Santa Clara's General Plan. Interior noise levels would be expected to exceed 45 dBA DNL without the incorporation of noise insulation features in the project design. **(Significant Impact)**

Mitigation Measures: The project shall incorporate the following measures to reduce the interior noise impacts of the project to a less than significant level:

MM NV-1.1: Project-specific acoustical analyses are required by the City of San José to insure that interior noise levels will be reduced to 45 dBA DNL or lower. It is also recommended that maximum interior noise levels be limited to 50 dBA L_{max} within bedrooms and 55 dBA L_{max} within other habitable rooms to avoid sleep disturbance and activity interference indoors. Building sound

insulation requirements would need to include the provision of forced-air mechanical ventilation for all new units, so that windows could be kept closed at the occupant's discretion to control noise. Special building construction techniques (e.g., sound-rated windows and building facade treatments) may be required for new residential uses adjacent to the railroad. These treatments include, but are not limited to, sound rated windows and doors, sound rated wall constructions, acoustical caulking, etc. The specific determination of what treatments are necessary will be conducted on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these would adequately reduce average interior noise levels to 45 dBA DNL or lower and maximum interior noise levels to 50 dBA L_{max} in bedrooms and 55 dBA L_{max} in other habitable rooms.

Groundborne Vibration

Approximately 98 Caltrain passenger trains pass the site during the course of a day. This number was calculated based on the published Caltrain schedule dated March 3, 2008. Additionally, Amtrak, ACE, and an unknown number of UPRR freight trains pass the site each day. It was not possible to confirm the total number of trains that pass the site per day because UPRR will not release this information for security reasons. The Public Utilities Commission states that the railroad corridor adjacent to the site carriers about 130 trains per day. Since the total number of trains passing the site exceeds 70 events per day, the 72 VdB limit is used in the evaluation of the project with respect to vibration compatibility.

Vibration levels measured on-site were typical for the primary through-tracks (3, 4, and 5) adjacent to the site. Based on the results of the vibration measurements, the calculated 72 VdB contour distance was 60 feet from the north property line and 135 feet from the center of the nearest track to the site carrying through-traffic. The "Baby Bullet" train passes at a higher rate of speed than a typical Caltrain passenger train along a reconditioned track. Vibration levels resulting from "Baby Bullet" train passbys would not be substantially different from existing operations given the lighter trains and the refurbished track. If passenger or freight railroad trains were to pass the site on the first and second lines at similar speeds, a similar setback from the near railroad track would be warranted to meet the 72 VdB vibration limit.

The future Santa Clara BART station would be located at the terminus of Brokaw Road and the planned BART tracks would be located north of the existing UPRR rail lines. Vibration levels generated by future BART trains would be below 72 VdB given the lighter weight of the BART trains and the increased distance from the project site.

No residential units are proposed within 60 feet of the north property line; therefore, no units would be exposed to vibration levels greater than the 72 VdB vibration limit for "frequent events".

Airport Noise

A review of the 65 CNEL noise contour map established by the Santa Clara County ALUC indicates that the project site is located outside of the future 65 CNEL noise contour. Where noise levels are less than 65 CNEL, residential land uses are considered compatible with the exterior noise

environment. Interior noise levels resulting from aircraft would be less than 45 dBA DNL with the incorporation of the mitigation measure identified above (MM NV-1.1).

4.11.2.2 *Noise Impacts from the Project*

Project Generated Traffic Noise

Noise level increases on the roadways serving the site were calculated based on the anticipated traffic volume increases for the project. The calculations show that the traffic added by the proposed project will increase the noise level on the local street system by less than one dBA DNL which is undetectable to the human ear. Overall growth in the area will result in a one dBA DNL increase in noise levels along El Camino Real, which is also an undetectable increase.

Construction Noise

Construction on the site would generate noise, and would temporarily increase noise levels at adjacent land uses. Commercial and light industrial uses border the project site. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. Where noise from construction activities exceeds 60 dBA L_{eq} and exceeds the ambient noise environment by at least five dBA L_{eq} for more than one year at noise-sensitive uses in the project vicinity, the impact would be considered significant.

Construction activities generate considerable amounts of noise, especially during the demolition phase and the construction of project infrastructure when heavy equipment is used. Typical hourly average construction generated noise levels are about 81 dBA L_{eq} to 89 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). In addition to this typical equipment, this project proposes to use a portable crusher to crush the existing concrete on the site. These portable crushers generate noise levels of up to 85 dBA L_{eq} at a distance of 50 feet. Construction generated noise levels drop off at a rate of about six dBA per doubling of distance between the source and receptor. At a distance of 300 feet, construction noise levels would be expected to be about 16 decibels lower as a result of increased distance from the noise source. Shielding by buildings would provide an additional five to 10 decibels of attenuation at distant receptors.

Typically, small residential, commercial, or office construction projects do not generate significant noise impacts when standard construction noise control measures are enforced at the project site and when the duration of the noise generating construction period is limited to one construction season (typically one year) or less. Construction noises associated with projects of this type are disturbances that are necessary for the construction or repair of buildings and structures in urban areas. Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction materials, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life.

Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction durations last over extended periods of time. Limiting the hours when construction can occur to daytime hours is often a simple method to reduce the potential for noise impacts. In areas immediately adjacent to construction,

controls such as constructing temporary noise barriers and utilizing "quiet" construction equipment can also reduce the potential for noise impacts.

Project construction would be expected to generate worst-case hourly average noise levels of up to 69 dBA L_{eq} at the nearest noise-sensitive receivers if the portable rock crusher were located at the southernmost portion of the project site. The noise generated by the other construction activity would be five to 10 dBA lower. As construction proceeds away from the southernmost portion of the project site, construction noise would be further reduced. Noise generated by the portable rock crusher could exceed a L_{eq} of 60 dBA at the nearest sensitive receptors during crushing activities on the site which would occur for approximately one month. The noise generated by all other construction activity would be at a level of 60 dBA L_{eq} or less.

Standard Measures: The project shall implement the following standard measures:

SM NV-1: Construction will be limited to the hours of 7:00 AM to 7:00 PM Monday through Friday for any on-site or off-site work within 500 feet of any residential unit. Construction outside of these hours may be approved through a development permit based on a site-specific construction noise mitigation plan and a finding by the Director of Planning, Building and Code Enforcement that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.

SM NV-2: The contractor shall use "new technology" power construction equipment with state-of-the-art noise shielding and muffling devices. All internal combustion engines used on the project site shall be equipped with adequate mufflers and shall be in good mechanical condition to minimize noise created by faulty or poor maintained engines or other components.

SM NV-3: Locate stationary noise generating equipment as far as possible from sensitive receptors. Staging areas shall be located a minimum of 200 feet from noise sensitive receptors, such as residential uses.

Impact NV-2: Noise generated by the portable rock crusher could exceed a L_{eq} of 60 dBA at the nearest sensitive receptors. **(Significant Impact)**

Mitigation Measures: The project shall implement the following mitigation measure to reduce construction noise impacts to nearby sensitive receptors:

MM NV-2.1: At the final design phase, a qualified acoustical consultant shall review the construction plans to ensure that the placement of a portable rock crusher on the site will reduce construction noise levels to 60 dBA L_{eq} at the nearest sensitive receivers to the east. In the event rock crusher noise levels would not be reduced to 60 dBA L_{eq} at noise sensitive receivers based on the location of intervening structures, the acoustical consultant shall identify the appropriate height and location of recycled material stockpiles to be maintained during crushing activities in order to attenuate noise to the maximum amount feasible. The required construction noise reduction measures shall be printed on all construction documents, contracts, and project plans; and be reviewed by the City's Environmental Principal Planner prior to issuance of building permits.

4.11.3 Conclusion

Impact NV-1: The proposed project with the implementation of the identified mitigation measure would reduce the interior noise levels to a less than significant level. **(Less Than Significant Impact with Mitigation)**

Impact NV-2: The proposed project, with the implementation of standard measures (SM NV-1 to SM NV-3) and the identified mitigation measure, would not result in significant construction noise impacts. **(Less Than Significant Impact with Mitigation)**

Additional Measure That Could be Required to Further Reduce Impacts

The following measure, if required as conditions of project approval, could further reduce exterior noise at the project site:

- Solid balcony railings could be incorporated into the project to reduce exterior noise levels at private balconies to the maximum extent practicable. Solid balcony railings would provide some minor acoustical shielding for persons while sitting on their balconies.

4.12 POPULATION AND HOUSING

4.12.1 Setting

Historically, San José has had a shortage of jobs compared to the number of employed residents living in the City, commonly referred to as a jobs/housing imbalance. A jobs/housing imbalance, especially when there is a relative deficit of jobs, can be problematic because it results in longer commutes as City residents travel to other locales for employment. This same imbalance can result in financial hardships for a city due to the costs associated with providing services to residential land uses in relation to revenue generated.

In recent years, consistent with the major strategies and objectives of the adopted General Plan, the City has been attempting to correct this imbalance. The City has recently adopted some General Plan policies that allow for increased job and housing growth that would, if implemented, improve the overall jobs/housing imbalance. Buildout of the current General Plan is estimated to result in 1.14 jobs per employed resident. However, near-term trends of industrial-to-residential conversions continue to undermine the existing jobs/housing balance.

According to the *Association of Bay Area Governments (ABAG) Projections 2007: Forecasts for the San Francisco Bay Area to the Year 2030*, within the City of San José's Sphere of Influence the population in 2030 is projected to be 1,336,400 and the total number of households was projected to be 422,720, with an average of 3.20 persons per household.

4.12.2 Environmental Checklist and Discussion

POPULATION AND HOUSING						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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)?	☐	☐	☒	☐	☐	1,2
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1,2
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1,2

The proposed project would result in approximately 828 new residents on the project site. The site is currently vacant and designated for residential use in the General Plan. The project would not result in a loss of jobs in the City that was not previously accounted for and therefore would not have any effect on the jobs/housing balance.

The proposed project would not induce substantial population growth in the City. The project would not displace substantial numbers of existing housing or people.

4.12.3 Conclusion

The proposed project would not displace people or housing and would not result in significant adverse impacts to the housing supply or population. **(Less Than Significant Impact)**

4.13 PUBLIC SERVICES

4.13.1 Setting

4.13.1.1 *Fire Service*

Fire protection services for the project site are provided by the San José Fire Department (SJFD). The SJFD currently serves a population of 920,000 and an area of 205 square miles. The SJFD responds to all fires, hazardous materials spills, and medical emergencies (including injury accidents) in the project area.

The closest fire station to the site is Fire Station No. 7 located at 800 Emory Street, approximately 1.61 miles southeast of the site. The second closest fire station to the site is Fire Station No. 1, located at 225 North Market Street, approximately 3.31 miles east of the site. In the 2004-2005 fiscal year, Fire Station No. 7 responded to a total of 1,054 calls including 815 medical, 60 fire, and 179 other emergencies.[27]

4.13.1.2 *Police Service*

Police protection services are provided to the project site by the City of San José Police Department (SJPD). Officers patrolling the project area are dispatched from police headquarters, located at 201 West Mission Street.

The SJPD consists of 83 patrol beats which are assigned to one of 16 patrol districts. The beats are identified with a number and the Districts are identified with a letter. From August 2006 to July 2007, calls for service in the project area were most frequently related to disturbances, alarms, and vehicle stops.[28]

4.13.1.3 *Schools*

The project site is located within the San José Unified School District. The closest schools to the project site are Trace Elementary School (approximately 2.1 miles south of the site), Hoover Middle School (approximately two miles south of the site), and Lincoln High School (approximately 2.35 miles south of the site).

4.13.1.4 *Parks*

The project site is located in Council District 6, which has 18 neighborhood parks. The nearest city park to the project site is Columbus Park, which is approximately 1.21 miles southeast of the site on Asbury Street and Walnut Street. The regional park closest to the project site is the Municipal Rose Garden, located approximately 1.17 miles south of the site. Council District 6 has a total of 282.4 acres of neighborhood/community serving parkland and requires an additional 13.84 acres to reach the City's goal of 3.5 acres per 1,000 residents. By 2020, the District will need an additional 70.54 acres to serve the increased population.[29]

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[27] City of San José Fire Department. SJFD Response Statistics Index. 28 August 2007. http://www.sjfd.org/Stats/0405Station.htm

[28] City of San José Police Department. BBB 5 Reports, Call Type Profile. August 1, 2007. 28 August 2007. http://public.coronasolutions.com/?page=agency_home&agency=25

[29] City of San José. City of San José Greenprint. 5 September 2000. http://www.sjparks.org/greenprint/GP2000/Ch.%206%20Neighborhood%20District%20Strategies.PDF

The nearest City of Santa Clara park to the project site is Marsalli Park located on the southeast corner of El Camino Real and Lafayette Street approximately 3,200 feet west of the project site.

4.13.1.5 *Libraries*

The project site is served by the San José Public Library System, which consists of one main library and 17 branch libraries. The closest library to the site is the Rosegarden Branch Library, located at 1580 Naglee Avenue, approximately 2.1 miles south of the site. The library was recently expanded to approximately 19,000 square feet in size and reopened in 2006.

4.13.2 Environmental Checklist and Discussion

PUBLIC SERVICES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☐	☒	☐	☐	1,2
Police Protection?	☐	☐	☒	☐	☐	1,2
Schools?	☐	☐	☒	☐	☐	1,2
Parks?	☐	☐	☒	☐	☐	1,2
Other Public Facilities?	☐	☐	☒	☐	☐	1,2

4.13.2.1 *Fire Service*

Construction of up to 259 residential units may incrementally increase the number of calls for fire service to the project site. The increase in calls would be the result of an increase in the permanent population on the site. The project is located on an infill site within the urbanized area of San José, which is currently served by the SJFD. The project will be constructed in conformance with current fire codes, including adequate emergency vehicle access and features that would reduce potential fire hazards. The increase in calls, therefore, is not expected to generate the need for additional fire department staff or facilities.

4.13.2.2 *Police Service*

Construction of up to 259 residential units may incrementally increase the number of calls for police service to the project site. The increase in calls would be the result of an increase in the permanent population on the site. The project is located on an infill site within the urbanized area of San José, which is currently served by the SJPD. The final project design will be reviewed by the SJPD to ensure that it incorporates appropriate safety features to minimize criminal activity.

4.13.2.3 *Schools*

The project site is located within the San José Unified School District. The proposed project would result in approximately 30 new elementary school students, 15 middle school students, and 17 high school students for the San José Unified School District.[30]

The number of students generated by the proposed project is not anticipated to require construction of a new school. The project may result in the need to realign elementary school attendance boundaries to accommodate the additional elementary students resulting from the proposed development.[31] The project will be required to pay the school impact fees for residential development as described in California Government Code Section 65995 to offset the increased demands on school facilities caused by the project.

Standard Measure: The project shall implement the following standard measure:

SM PS-1: In accordance with Government code 65996, the developer shall pay the statutory school impact fee to offset the increased demands on school facilities caused by the proposed project.

4.13.2.4 *Parks*

The City of San José has adopted the *Parkland Dedication Ordinance* (PDO) (Municipal Code Chapter 19.38) and *Park Impact Ordinance* (PIO) requiring residential developers to dedicate public parkland or pay in-lieu fees, or both, to offset the demand for neighborhood parkland created by their housing developments. Each new residential project is required to conform to the PDO and PIO. The acreage of parkland required is based upon the Acreage Dedication Formula disclosed in the Parkland Dedication Ordinance.[32] Based upon this formula, a project of this size would be required to dedicate approximately 2.49 acres of parkland. However, the project proposes to pay in-lieu fees to offset the increase in demand for park and recreational services due to the project.

Standard Measures: The project proposes to implement the following standard measures:

SM PS-2: The project shall conform to the City's *Park Impact Ordinance* (PIO) and *Parkland Dedication Ordinance* (PDO) (Municipal Code Chapter 19.38).

4.13.2.5 *Libraries*

The San José Public Library System is currently expanding with funds from a bond measure passed by voters in November 2000. The bond measure will provide for the construction of six new branch libraries and the expansion of 14 existing branch libraries.[33] Based on the City's current plans for construction of new library facilities and expansion of existing libraries, including the recent

[30] Paoli & Odell, Inc. San José Unified School District Student Generation Rates. 2006. Generation rates for condominiums are 0.116 for grades K-5, 0.057 for grades 6-8, and 0.065 for grades 9-12. Generation rates for townhouses are 0.133 for grades K-5, 0.071 for grades 6-8, and 0.062 for grades 9-12.
[31] Bob Gonzales, Director of Student Assignment and Demographics. Personal communication. October 16, 2007.
[32] Minimum Acreage Dedication = (0.003 acres) x (number of dwelling units) x (average persons per household per Census data). Proposed project = (0.003 acres) x (259 units) x (3.20 persons per household in San Jose per 2000 Census data) = approximately 2.49 acres.
[33] San José Public Library. Bond Projects for Branch Libraries. 13 April 2007. http://www.sjlibrary.org/about/sjpl/bond/

expansion of the Rosegarden Branch Library, the project would not result in the need for new library facilities.

4.13.3 Conclusion

The proposed project would incrementally increase demand for public services but would not, with the implementation of standard measures (SM PS-1 and PS-2) result in a significant impact to public services or facilities. **(Less Than Significant Impact)**

4.14 RECREATION

4.14.1 Setting

The City of San José currently manages 3,500 acres of regional and neighborhood parkland. The City provides developed park lands, open space, and community facilities to serve its residents. Some of these facilities are supplemented by other public uses such as public school playgrounds and fields, County parks, and trail facilities on Santa Clara Valley Water District lands. Park and recreation facilities vary in size, use, type of service, and provide for neighborhood, citywide, and regional uses. The City Departments of Parks, Recreation and Neighborhood Services, General Services, and Public Works are responsible for the design, construction, operation, and maintenance of all City park and recreational facilities.

The City's General Plan has established level of service benchmarks for parks and community centers. The City has a service level goal of 3.5 acres of neighborhood and community serving parkland per 1,000 residents, of which a minimum of 1.5 acres is City-owned and up to two acres of school playground /fields, all of which should be located within three-quarters of a mile walking distance of each residence. In addition, the City seeks to provide 7.5 acres of regionally serving parkland and 500 square feet of community center space per 1,000 residents.

The project site is located in Council District 6, which has 18 neighborhood parks. The nearest city park to the project site is Columbus Park, which is approximately 1.21 miles southeast of the site on Asbury Street and Walnut Street. The regional park closest to the project site is the Municipal Rose Garden, located approximately 1.17 miles south of the site. Council District 6 has a total of 282.4 acres of neighborhood/community serving parkland and requires an additional 13.84 acres to reach the City's goal of 3.5 acres per 1,000 residents. By 2020, the District will need an additional 70.54 acres to serve the increased population.[34]

The nearest City of Santa Clara park to the project site is Marsalli Park located on the southeast corner of El Camino Real and Lafayette Street approximately 3,200 feet northwest of the project site.

[34] City of San José. City of San José Greenprint. 5 September 2000. http://www.sjparks.org/greenprint/GP2000/Ch.%206%20Neighborhood%20District%20Strategies.PDF

4.14.2 Environmental Checklist and Discussion

RECREATION						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☐	☒	☐	☐	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?	☐	☐	☒	☐	☐	1,2

The City of San José has adopted the *Parkland Dedication Ordinance* (PDO) (Municipal Code Chapter 19.38) and *Park Impact Ordinance* (PIO) requiring residential developers to dedicate public parkland or pay in-lieu fees, or both, to offset the demand for neighborhood parkland created by their housing developments. Each new residential project is required to conform to the PDO and PIO. The acreage of parkland required is based upon the Acreage Dedication Formula disclosed in the Parkland Dedication Ordinance.[35] Based upon this formula, a project of this size would be required to dedicate approximately 2.49 acres of parkland. However, the project proposes to pay in-lieu fees to offset the increase in demand for park and recreational services due to the project.

The proposed project would increase the number of residents on the site and would add to the residential population using nearby recreational facilities. The project, however, is not expected to increase the use of existing parks such that substantial deterioration

Standard Measures: The project proposes to implement the following standard measures:

SM PS-2: The project shall conform to the City's *Park Impact Ordinance* (PIO) and *Parkland Dedication Ordinance* (PDO) (Municipal Code Chapter 19.38).

4.14.3 Conclusion

Implementation of the proposed project will result in the development of up to 259 new residential units on the site, which would incrementally increase the demand for recreational and park services in the area. This increase, however, would be offset through compliance with the City's PDO/PIO (SM PS-2) and result in a less than significant impact. **(Less Than Significant Impact)**

[35] Minimum Acreage Dedication = (0.003 acres) x (number of dwelling units) x (average persons per household per Census data). Proposed project = (0.003 acres) x (259 units) x (3.20 persons per household in San Jose per 2000 Census data) = approximately 2.49 acres.

4.15 TRANSPORTATION

The following discussion is based on a Traffic Impact Analysis prepared by *Hexagon Transportation Consultants* in March 2008. A copy of this report is included as Appendix G of this Initial Study.

4.15.1 Setting

4.15.1.1 *Existing Roadway Network*

The project site location and surrounding regional and local roadway network are described below and shown in Figure 11.

Regional Access

Interstate 880 (I-880) is a north/south freeway providing regional access to the project site from East Bay cities to San José, where it becomes SR 17. I-880 is oriented in a northeast/southwest direction with six mixed-flow lanes in the vicinity of the site. I-880 provides access to the site via its interchange with The Alameda.

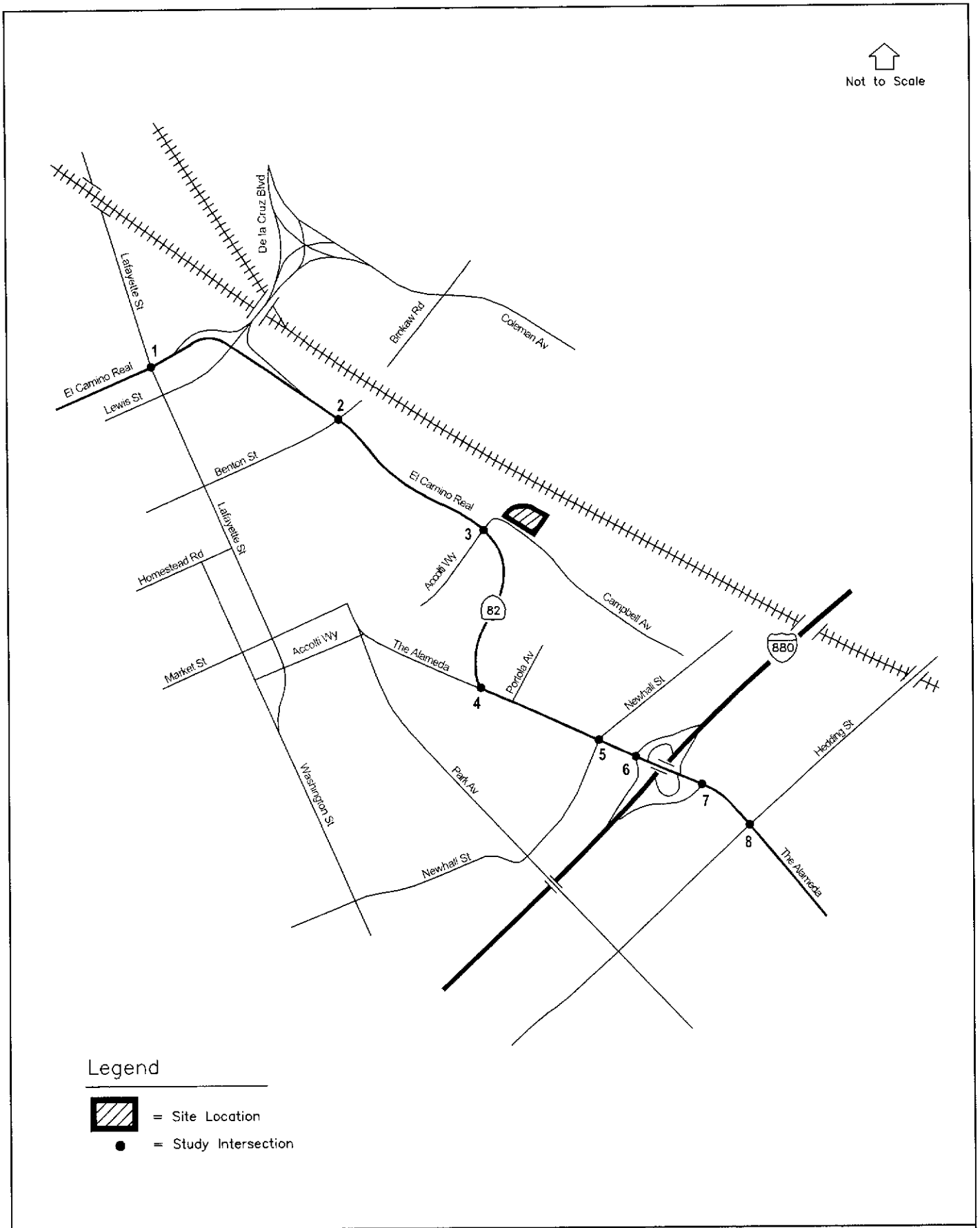
Local Access

Lafayette Street is a four-lane arterial that extends north-south from Gold Street north of SR 237 to the project area. North of El Camino Real and in the project vicinity, Lafayette Street is a four-lane arterial. South of El Camino Real Lafayette Street is a two-lane collector with a shared center left turn lane until it reaches Bellomy Street/Accolti Way, where it again becomes a four lane arterial as it begins its merge into Washington Street. Lafayette Street provides access to the site via its signalized intersection with El Camino Real.

El Camino Real is a six-lane major arterial that is aligned in a northwest/southeast orientation in the vicinity of the site. El Camino Real extends northward through San Francisco and southward through San Jose. El Camino Real provides access to the site via its signalized intersection with Campbell Avenue.

Benton Street is an east/west, two-lane collector street that provides direct access to the surrounding commercial and residential uses. It runs from El Camino Real in the east to just west of Lawrence Expressway. Benton Street provides access to the site via El Camino Real.

Campbell Avenue is a two-lane local roadway that provides direct access to the project site. West of El Camino Real, Campbell Avenue is renamed Accolti Way, which is a segmented road, with a short western segment that is broken by a pedestrian mall on the campus of Santa Clara University. West of campus, Accolti Way resumes and terminates at Washington Street. Due to traffic calming measures implemented in 2001 by the City of San José, access to Newhall Street from Campbell Avenue is closed. Thus, Campbell Avenue can only be accessed via El Camino Real and the western segment of Accolti Way.



EXISTING ROADWAY NETWORK AND STUDY INTERSECTIONS FIGURE 11

The Alameda is a northwest/southeast, four-lane divided arterial that extends from South Autumn Street in downtown San José to Market Street in Santa Clara. The Alameda has a full-access interchange with I-880 and provides access to the site via its intersection with El Camino Real.

Hedding Street is a four-lane arterial that extends from North Winchester Boulevard in the south, to Berryessa Road just north of I-280. Hedding Street provides access to the site via The Alameda.

4.15.1.2 *Existing Pedestrian and Bicycle Facilities*

Pedestrian facilities are comprised of sidewalks, crosswalks, and off-street paths. Pedestrian facilities in the study area consist of sidewalks along most of the surrounding roadways. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. The existing pedestrian facilities provide good connectivity between the surrounding residential areas and the Santa Clara Transit Center, located approximately one half-mile northwest of the project site. A walkway where Accolti Way dead-ends cuts straight through the Santa Clara University campus and provides a safe and direct route for children to walk to two schools located approximately three-quarters of a mile southwest of the project site.

Bicycle facilities are comprised of paths (Class I), lanes (Class II), and routes (Class III). Bicycle paths are paved trails that are separate from roadways. Bicycle lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bicycle routes are roadways designated for bicycle use by signs only. The only County-designated bicycle facilities within the project study area are located along Poplar Street and a small segment of The Alameda between Park Avenue and El Camino Real. According to the City of *San Jose Transportation Bicycle Network (TBN) Planning Map,* The Alameda is designated a Class III bike route south of its junction with El Camino Real. Due to low traffic volumes and vehicle speeds, the surrounding residential streets also provide safe routes for bicyclists. Figure 12 shows the existing bicycle facilities.

4.15.1.3 *Existing Transit Service*

Existing transit service in the project area is provided by the Santa Clara Valley Transportation Authority (VTA), Caltrain, and the Altamont Commuter Express (ACE). These transit services in the project area are described below and shown in Figure 13.

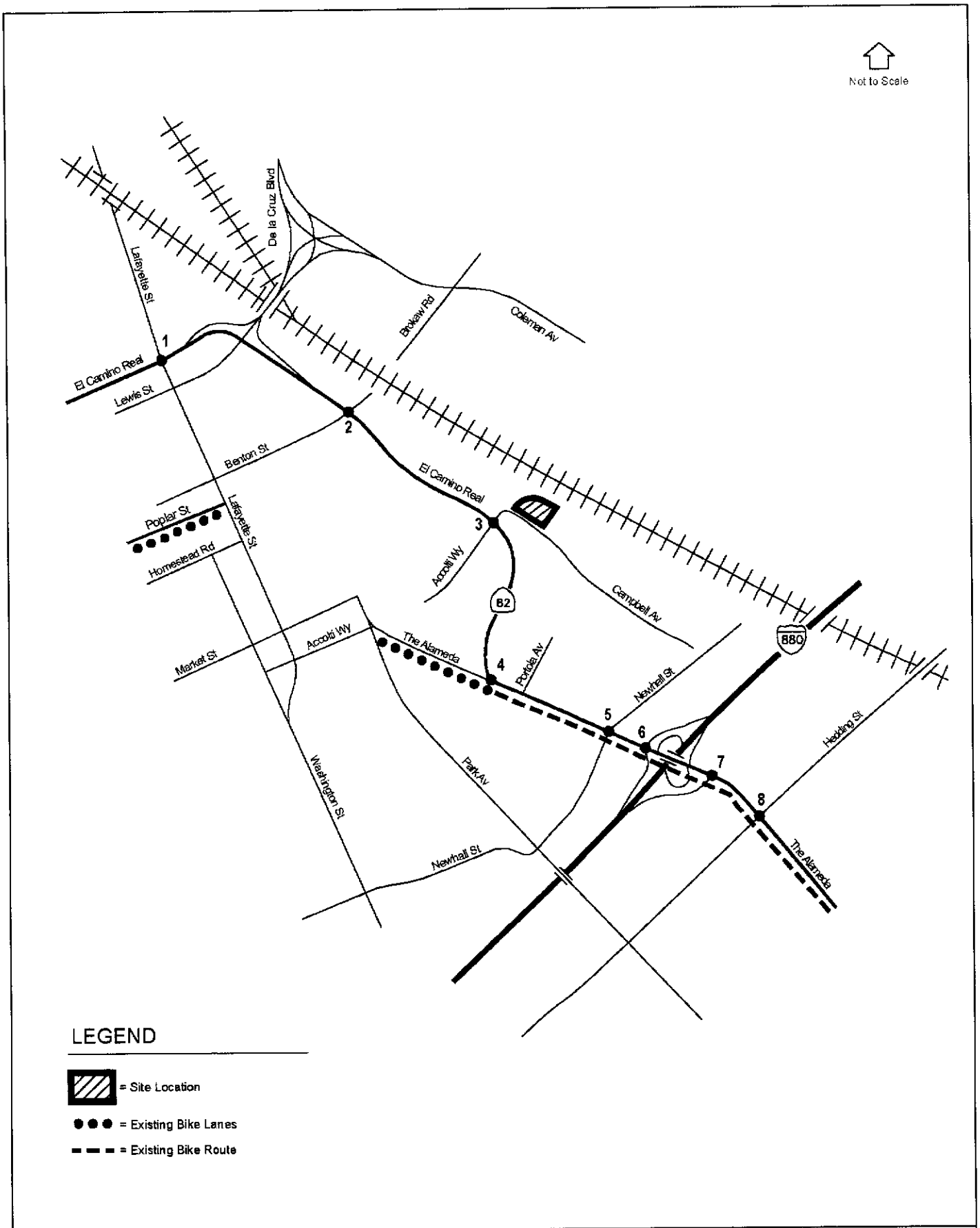
VTA Bus Service

The Santa Clara Valley Transportation Authority (VTA) operates bus and light rail service in Santa Clara County.

Bus Route 10 is the Airport Flyer Service between the Metro/Airport LRT station and the Santa Clara Transit Center. It operates along El Camino Real and De La Cruz Boulevard from 5:00am to midnight with 15- to 30-minute headways depending on the time of day.

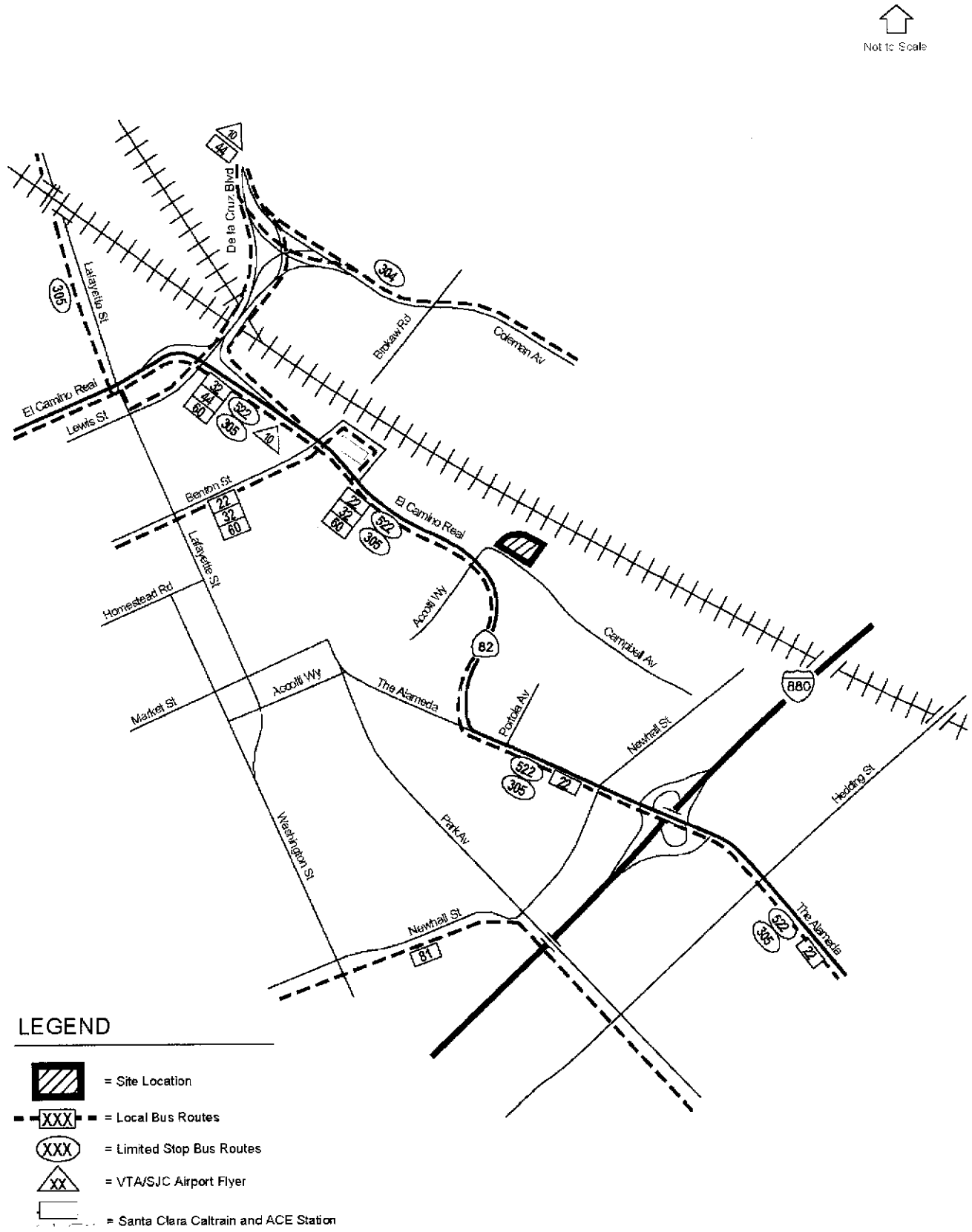
Bus Route 22 provides service between the Eastridge Mall and Palo Alto/Menlo Park. It runs 24 hours a day with 10- to 15-minute headways during the commute hours. Route 22 operates along El Camino Real and provides service to the Santa Clara Transit Center.

Bus Route 32 provides service between the Santa Clara Transit Center and the San Antonio shopping center. It runs between 5:30am and 7:30pm with 30-minute headways. Route 32 operates along Benton Street and El Camino Real near the site.



EXISTING BICYCLE FACILITIES

FIGURE 12



EXISTING TRANSIT FACILITIES

FIGURE 13

Bus Route 44 provides service between the Santa Clara Transit Center and the North First/River Oaks intersection in north San José. It operates from the hours of 6:30am to 9:00am and 3:30pm to 6:00pm with 30- to 60-minute headways. Route 44 operates along El Camino Real near the site.

Bus Route 60 provides service between Los Gatos and Great America between the hours of 5:30am and 11:00pm, with 15- to 30-minute headways during the commute hours. Route 60 operates along El Camino Real and provides service to the Santa Clara Transit Center.

Bus Route 81 provides service between East San José and Vallco Park. In the general vicinity of the project, Route 81 runs along Park Avenue and Newhall Street. It operates between the hours of 6:00am and 10:30pm, with 30-minute headways during the commute hours.

Bus Route 304 (Limited Stop) provides service between south San José and Mountain View. It operates from 5:30am to 9:00am and 3:30pm to 7:00pm, with 30-minute headways during the hours of operation. Route 304 operates along De la Cruz Boulevard and Coleman Avenue.

Bus Route 305 (Limited Stop) provides service between south San José and Mountain View. It operates from 5:00am to 8:00am and 3:00pm to 6:30pm, with 60-minute headways during the hours of operation. Route 305 operates along El Camino Real and provides service to the Santa Clara Transit Center.

Bus Route 522 (Rapid) provides service between Eastridge Mall and the Palo Alto Transit Center. It operates between 5:00am and 9:00pm with 15-minute headways during the commute hours. Route 522 operates along The Alameda and El Camino Real near the project site and provides service to the Santa Clara Transit Center.

Commuter Rail Service

The project site is located approximately 1,500 feet from the Santa Clara Transit Center. The Santa Clara Transit Center is currently served by Caltrain, Altamont Commuter Express (ACE), and VTA bus lines. There is a Park & Ride lot as well as bicycle lockers located at the Santa Clara Transit Center.

Caltrain provides frequent passenger train service between San José and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy.

The ACE train provides commuter passenger train service between Stockton and San José during the weekdays. ACE stops at the Santa Clara Transit Center three times in the morning and evening hours.

The future Santa Clara BART station is also planned at the terminus of Brokaw Road. When constructed this station would also serve the project area.

4.15.1.4 *Intersection Level of Service Methodology*

The operations of roadway facilities are described with the term level of service (LOS). 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, with the best operating conditions, to LOS F, with the worst operating conditions. LOS E represents "at-capacity" operations. Operations are

designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions. The correlation between delay and level of service is shown in Table 4.15-1.

The City of San José has established a minimum acceptable operating level of LOS D for intersections excluded from the Congestion Management Program (CMP). The minimum acceptable level for CMP-monitored intersections is LOS E.

Signalized Intersections

The signalized study intersections are subject to the City of San José level of service standards. The City of San José level of service methodology is TRAFFIX, which is based on the *Highway Capacity Manual (HCM) 2000* method for signalized intersections. TRAFFIX evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX also is the CMP-designated intersection level of service methodology, the City of San José methodology employs the CMP default values for the analysis parameters. The City's level of service standard for signalized intersections is LOS D or better.

Although the project site is located primarily in the City of San José, four of the study intersections are located within the City of Santa Clara. The City of Santa Clara level of service standard for signalized intersections also is LOS D or better. Therefore, the City of San José methodology can be applied to the Santa Clara intersections as well, and a separate level of service analysis for these intersections is not necessary.

Five of the study intersections are CMP intersections and, therefore, were analyzed according to the CMP requirements. The CMP level of service methodology is the same as that used by the City of San José, except that the CMP level of service standard for signalized intersections is LOS E or better.

Table 4.15-1
Signalized Intersection Level of Service Definitions Using Average Control Vehicular Delay

Level of Service	Description	Average Control DelayPer Vehicle(Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Transportation Research Board, Highway Capacity Manual, 2000.*

Freeway Segments

Freeway segments are evaluated using Santa Clara County's analysis procedure, which is based on the density of the traffic flow using methods described in the 2000 HCM. Density is expressed in passenger cars per mile per lane. The Congestion Management Program range of densities for freeway segment level of service is shown in Table 4.15-2. The LOS standard for the freeway segments is LOS E or better.

Table 4.15-2
Freeway Segment Level of Service Definitions

Level of Service	Description	Density (Vehicles Per Mile Per Lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles arealmost completely unimpeded in their ability to maneuver within the traffic stream.	0 to 11
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	>11 to 18
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	>18 to 26
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	>26 to 46
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	>46 to 58
F	Vehicular flow breakdowns occur. Large queues form behind breakdown points.	> 58

Source: Santa Clara County 2004 CMP (based on the 2000 Highway Capacity Manual, Transportation Research Board).

4.15.1.5 *Existing Conditions*

Intersection Levels of Service

The results of the intersection level of service analysis under existing conditions are summarized in Table 4.15-3. All of the signalized study intersections currently operate at acceptable levels of service during both the AM and PM peak hours of traffic. The level of service calculation sheets are included in Appendix G.

Table 4.15-3
Existing and Background Intersection Levels of Service

Intersection		Peak Hour[1]	Existing		Background	
			Delay[2]	LOS[3]	Delay[2]	LOS[3]
1	Lafayette Street/ El Camino Real*	AM	51.0	D	55.2	E
		PM	44.4	D	48.8	D
2	El Camino Real/ Benton Street	AM	15.9	B	16.8	B
		PM	20.5	C	22.7	C
3	El Camino Real/ Campbell Avenue	AM	14.3	B	16.3	B
		PM	24.6	C	24.9	C
4	El Camino Real/ The Alameda*	AM	19.7	B	20.6	C
		PM	22.6	C	24.8	C
5	The Alameda/ Newhall Street	AM	15.2	B	12.9	B
		PM	13.2	B	10.4	B
6	I-880 (SB)/ The Alameda (N)*	AM	24.6	C	24.9	C
		PM	14.3	B	15.8	B
7	I-880 (NB)/The Alameda (S)*	AM	23.3	C	23.4	C
		PM	18.8	B	19.1	B
8	The Alameda/ Hedding Street	AM	39.6	D	40.8	D
		PM	33.7	C	35.6	D

Notes:
1 AM = morning peak-hour, PM = evening peak-hour
2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop intersections using method described in the 2000 Highway Capacity Manual. For two-way stop controlled unsignalized intersections, total control delay for the worst movement/approach, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX level of service analysis software package.
3 LOS = Level of service
* C/CAG-designated Congestion Management Program (CMP) facilities (Intersection LOS standard is E)
Unacceptable operations are designated in **bold** type

Freeway Segment Levels of Service

Traffic volumes for the study freeway segments were obtained from the *2005 CMP Annual Monitoring Report*. The results of the analysis are summarized in Table 4.15-4. The results show that the following study freeway segments currently operate at LOS F in at least one direction during at least one of the peak hours of traffic as indicated below:

- I-880, northbound between Stevens Creek Boulevard and Bascom Avenue – AM peak hour
- I-880, southbound between Stevens Creek Boulevard and Bascom Avenue – PM peak hour
- I-880, northbound between Bascom Avenue and The Alameda – AM peak hour
- I-880, southbound between The Alameda and Bascom Avenue – PM peak hour
- I-880, northbound between The Alameda and Coleman Avenue – AM peak hour
- I-880, southbound between Coleman Avenue and The Alameda – PM peak hour
- I-880, northbound between Coleman Avenue and SR 87 – AM peak hour
- I-880, southbound between SR 87 and Coleman Avenue – PM peak hour

Table 4.15-4
Existing Freeway Segment Levels of Service

Direction[1]	From	To	Peak Hour[2]	Mixed-Flow Density[3]	Mixed-Flow LOS[4]
I-880					
NB	Stevens Creek Boulevard	North Bascom Avenue	AM	**88**	**F**
			PM	36	D
SB	North Bascom Avenue	Stevens Creek Boulevard	AM	28	D
			PM	**56**	**F**
NB	North Bascom Avenue	The Alameda	AM	**56**	**F**
			PM	29	D
SB	The Alameda	North Bascom Avenue	AM	27	D
			PM	**68**	**F**
NB	The Alameda	Coleman Avenue	AM	**62**	**F**
			PM	33	D
SB	Coleman Avenue	The Alameda	AM	30	D
			PM	**74**	**F**
NB	Coleman Avenue	SR 87	AM	**55**	**F**
			PM	37	D
SB	SR 87	Coleman Avenue	AM	38	D
			PM	**71**	**F**

Source: *VTA CMP Monitoring Study, 2005*
Notes:
1 NB = Northbound, SB = Southbound
2 AM = morning peak-hour, PM = evening peak-hour
3 Measured in passenger cars per mile per lane
4 LOS = Level of service
Unacceptable operations are designated in **bold** type.

Field Observations of Existing Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was to identify any existing traffic problems that may not be directly related to level of service, and to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions.

Overall the study intersections operated well during the AM and PM peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions.

4.15.1.6 *Background Conditions*

Background conditions are defined as conditions just prior to completion of the proposed development. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site.

Background Traffic Estimates

Background peak hour traffic volumes were estimated by adding to existing traffic volumes, the volumes from approved but not yet completed developments in the vicinity of the project site. The

added traffic from approved developments was provided by the City of San José in the form of the Approved Trips Inventory (ATI). The added traffic from approved developments in the City of Santa Clara were gathered from the City's TRAFFIX network and previously prepared TIA reports. To account for the existing vacant R&D building on the project site, traffic that previously would have been generated by full occupancy of the building was estimated by multiplying the applicable City of San José trip generation rates by the amount of building space. The estimated trips were assigned to the surrounding roadway network according to the existing travel patterns in the project area and the locations of complementary land uses. These estimated R&D trips make up the final ATI component. Thus, background peak hour traffic volumes were estimated by adding to existing peak hour volumes the peak hour volumes due to approved but not yet constructed developments in the area and the estimated R&D building trips based on full occupancy.

Background Roadway Improvements

It is assumed in this analysis that the transportation network under background conditions would be the same as the existing transportation network.

Background Intersection Levels of Service

The results of the intersection level of service analysis under background conditions are summarized in Table 4.15-3 on page 87. All of the signalized study intersections would operate at acceptable levels of service during both the AM and PM peak hours of traffic under background conditions.

According to CMP level of service standards, all of the CMP study intersections would operate at acceptable levels of service during the both the AM and PM peak hours of traffic under background conditions.

4.15.2 Environmental Checklist and Discussion

TRANSPORTATION/TRAFFIC						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
1) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio of roads, or congestion at intersections)?	☐	☐	☒	☐	☐	19
2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐	☐	19
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?	☐	☐	☐	☒	☐	1

TRANSPORTATION/TRAFFIC	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	☐	☐	☐	☒	☐	19
5) Result in inadequate emergency access?	☐	☐	☐	☒	☐	19
6) Result in inadequate parking capacity?	☐	☐	☐	☒	☐	19
7) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒	☐	1,19

4.15.2.1 *Significant Impact Criteria*

Signalized Intersections

Significant impacts at signalized San José and Santa Clara intersections occur when project traffic causes one of the following:

- The level of service at an intersection to degrade from an acceptable level (LOS D or better) under background conditions to an unacceptable level (LOS E or F) under project conditions; or
- The level of service at an intersection operating with an unacceptable LOS E or F under background conditions to be exacerbated by increasing the critical delay by more than 4 seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.

VTA Congestion Management Program Intersections

Significant impacts at CMP intersections occur when project traffic causes one of the following:

- The level of service at an intersection to degrade from an acceptable level (LOS E or better) under Background Conditions to an unacceptable level (LOS F) under Project Conditions; or
- The level of service at an intersection operating with an unacceptable LOS F under background conditions to be exacerbated by increasing the critical delay by more than 4 seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more.

Freeways

Significant impacts to freeway segments occur when the addition of project traffic causes one of the following:

- The level of service on the freeway segment to degrade from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under project conditions; or
- The addition of traffic equal to one percent of the segment capacity on a freeway segment operating at an unacceptable LOS F under project conditions.

4.15.2.2 *Project Conditions*

Project conditions are defined as background conditions plus traffic generated by the proposed project. The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections.

Trip Generation

Based on the residential rates recommended by the City of San José, the proposed project would generate 1,950 gross daily vehicle trips, with 195 trips occurring during both the AM and PM peak hours. Trip credits were estimated to account for the vacant 82,000 square-foot R&D building currently on the site. After subtracting the existing facility's potential vehicle trips, the residential project would generate 1,295 net daily trips, with 90 new AM peak hour trips and 103 new PM peak hour trips.[36] Using the inbound/outbound splits recommended by the City of San José, the project would produce 16 fewer inbound and 106 new outbound trips during the AM peak hour, and 118 new inbound and 15 fewer outbound trips during the PM peak hour than the existing vacant R&D building could potentially generate. The project trip generation estimates are presented in Table 4.15-5.

Table 4.15-5
Project Trip Generation Rates and Estimates

Use	Daily		AM Peak Hour				PM Peak Hour			
	Rate	Total	Rate	In	Out	Total	Rate	In	Out	Total
Condominium/ Townhouse – 260 units (Proposed)	7.5	1,950	0.10	68	127	195	0.10	127	68	195
Research and Development – 82,000 s.f. (Existing)	8.0	655	0.16	84	21	105	0.14	9	83	92
Net New Project Trips	--	1,295	--	-16	106	90	--	118	-15	103

Source: City of San José Interim Guidelines for Traffic Impact Analysis for Land Developments, *Common Vehicular Trip generation Rates for the San José Area*, 1994.

Trip Distribution and Assignment

The trip distribution pattern for the proposed residential project was estimated based on existing travel patterns in the area, the locations of complementary land uses, and previous traffic studies. Based on the project site's location, it was assumed that the trip distribution patterns for the proposed residential development and the existing R&D use would be identical. However, the existing peak direction of travel at the site would be reversed.

[36] The Transportation Impact Analysis for the project was completed using a higher number of residential units for the project than currently proposed. This impact analysis, therefore, should be considered conservative and the project's actual impacts would be slightly reduced.

The peak hour trips generated by the proposed residential development and the existing R&D space were assigned to the roadway system in accordance with the trip distribution patterns discussed above.

Project Intersection Levels of Service

The results of the intersection level of service analysis under project conditions are summarized in Table 4.15-6. The results show that the signalized study intersection of Lafayette Street and El Camino Real would continue to operate at an unacceptable level of service (LOS E). However, based on the applicable level of service standards, this study intersection would not be significantly impacted by the project. The other study intersections would operate at an acceptable level of service during both the AM and PM peak hours of traffic under project conditions.

Based on the CMP level of service standards, all of the CMP signalized study intersections, including Lafayette Street and El Camino Real, would operate at acceptable levels of service during both the AM and PM peak hours of traffic under project conditions. Therefore, none of the CMP intersections would be significantly impacted by the project. The intersection level of service calculation sheets are included in Appendix G.

Table 4.15-6
Background and Project Intersection Levels of Service

Intersection		Peak Hour[1]	Background		Project			
			Delay	LOS[2]	Delay	LOS[2]	Δ in V/C[3]	Δ in Delay
1	Lafayette Street/El Camino Real*	AM	55.2	E	55.4	E	+0.3	0.00
		PM	48.8	D	48.8	D	-0.1	0.00
2	El Camino Real/ Benton Street	AM	16.8	B	16.6	B	-0.2	+0.01
		PM	22.7	C	22.7	C	-0.1	+0.01
3	El Camino Real/ Campbell Avenue	AM	16.3	B	21.1	C	+5.1	+0.04
		PM	24.9	C	24.5	C	-0.5	-0.01
4	El Camino Real/ The Alameda*	AM	20.6	C	20.6	C	-0.1	0.00
		PM	24.8	C	24.4	C	-0.2	0.00
5	The Alameda/ Newhall Street	AM	12.9	B	12.8	B	0.0	0.00
		PM	10.4	B	10.3	B	0.0	0.00
6	I-880 (SB)/The Alameda (N)*	AM	24.9	C	24.8	C	-0.2	-0.01
		PM	15.8	B	17.1	B	+1.8	+0.02
7	I-880 (NB)/The Alameda (S)*	AM	23.4	C	23.4	C	0.0	0.00
		PM	19.1	B	19.4	B	0.0	0.00
8	The Alameda/ Hedding Street	AM	40.8	D	40.7	D	0.0	0.00
		PM	35.6	D	35.6	D	0.0	+0.01

Notes:
1 AM = morning peak-hour, PM = evening peak-hour
2 LOS = Level of service
3 Change in the critical volume-to-capacity ratio (V/C) between background and project conditions.
* C/CAG-designated Congestion Management Program (CMP) facilities (Intersection LOS standard is E)
Unacceptable operations are designated in **bold** type

Vehicle Queuing Campbell Avenue/El Camino Real Intersection

A future operations analysis was completed based on vehicle queuing for high-demand turning-movements at the Campbell Avenue and El Camino Real intersection. The maximum vehicle queues for the westbound left-turn movement from Campbell Avenue currently exceed the existing vehicle storage capacity of 100 feet during both the AM and PM peak hours of traffic. An additional 175 feet of vehicle storage currently is needed for this left-turn movement during the PM peak hour, which is when the vehicle queues are longest. The City of San José currently plans to widen the Campbell Avenue and El Camino Real intersection. The planned left-turn vehicle storage capacity of approximately 350 feet per lane would be adequate to serve the estimated maximum vehicle queues for the westbound left-turn movement. A separate right-turn lane is also being proposed as part of these improvements (refer to Appendix G). A separate right-turn lane would be warranted based on the estimated peak hour volumes and associated vehicle queuing on Campbell Avenue. These planned roadway improvements will require Caltrans review and approval.

4.15.2.3 *Project Freeway Segment Levels of Service*

Traffic volumes on the study freeway segments under project conditions were estimated by adding project trips to the existing volumes obtained from the 2005 CMP Annual Monitoring Report. The results of the CMP freeway analysis show that the project would not cause significant increases in traffic volumes (more than one percent of freeway capacity) on any of the studied freeway segments. The results of the CMP freeway level of service analysis under project conditions are summarized in Table 4.15-7.

Table 4.15-7
Project Freeway Segment Levels of Service

Direction	From	To	Peak Hour	Existing Plus Project Trips			Project Trips	
				Volume	Density	LOS	Volume	% Capacity
I-880								
NB	Stevens Creek Blvd.	North Bascom Ave.	AM	4,750	88	F	0	0.0%
			PM	6,625	36	D	35	0.5%
SB	North Bascom Ave.	Stevens Creek Blvd	AM	5,572	28	D	32	0.5%
			PM	6,050	56	F	0	0.0%
NB	North Bascom Ave.	The Alameda	AM	6,050	56	F	0	0.0%
			PM	5,695	29	D	35	0.5%
SB	The Alameda	North Bascom Ave.	AM	5,382	27	D	32	0.5%
			PM	5,510	68	F	0	0.0%
NB	The Alameda	Coleman Avenue	AM	5,982	62	F	32	0.5%
			PM	6,340	33	D	0	0.0%
SB	Coleman Avenue	The Alameda	AM	5,850	30	D	0	0.0%
			PM	5,365	74	F	35	0.5%
NB	Coleman Avenue	SR 87	AM	6,142	55	F	32	0.5%
			PM	6,550	37	D	0	0.0%
SB	SR 87	Coleman Avenue	AM	6,610	38	D	0	0.0%
			PM	5,575	71	F	35	0.5%

Source: *VTA Congestion Management Program Monitoring Study, 2005.*

4.15.2.4 *Impacts to Pedestrian and Bicycle Facilities*

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks along most of the surrounding roadways. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. The existing sidewalks provide good connectivity between the surrounding residential areas and the Santa Clara Transit Center, located approximately 1,500 feet northwest of the project site. The existing pedestrian facilities in the study area would provide pedestrians with safe and easy access to the surrounding land uses and would be adequate to serve the anticipated pedestrian demand.

Bicycle Facilities

The only County-designated bicycle facilities within the project study area are located along Poplar Street and a small segment of The Alameda near Poplar Street. However, according to the City of San Jose Transportation Bicycle Network (TBN) Planning Map, The Alameda is designated a Class III bike route south of its junction with El Camino Real. The TBN map also shows that future bicycle facilities are planned along Hedding Street and Park Avenue south of Hedding Street within the project area. Although some of the roadways in the project area are not considered ideal routes for bicyclists due to heavy traffic volumes, frequent bus service and stops, and relatively high vehicle speeds (e.g., El Camino Real), bicyclists may nonetheless choose to use them for commuting purposes since they often provide the shortest route. A reasonable assumption for bicycle trip generation would be a one percent mode share. This calculates to approximately one new bicycle trip during both the AM and PM peak hours under project conditions. Thus, the project would be expected to add very little bicycle traffic to the roadways in the study area.

4.15.2.5 *Transit Impacts*

Numerous bus routes operate along El Camino Real. Additionally, the Santa Clara Transit Center is located approximately 1,500 feet from the project site. Due to the number of bus routes operating in the area and the nearby Transit Center, it is assumed that some residents would utilize the existing transit services for commuting purposes. Assuming up to five percent transit mode share during the peak commute periods yields an estimate of five new transit trips during both the AM and PM peak hours under project conditions. These new riders easily could be accommodated by the available ridership capacity of the existing transit service in the project study area.

4.15.2.6 *Other Transportation Issues*

Emergency Vehicle Access

The internal roadway network would consist of a 26-foot wide private perimeter street circling the site. The project would also have a short loop driveway off of Campbell Avenue for deliveries and short-term parking. This one-way driveway would be 20 feet wide at the two curb interfaces and 24 feet wide along the curve where three parallel parking spaces would be provided. Emergency vehicle access would be provided by the private perimeter street for the project's north, east and west sides, and by Campbell Avenue for the project's south side. Analysis using the WB-40 and SU-30 truck turning templates shows that the loop driveway, the resident site access driveways, and the private perimeter street would be adequate to accommodate the turning movements of these trucks.

Parking

The internal roadway network would consist of a 26-foot wide private perimeter street circling the site and a parking garage with 24-foot wide drive aisles. This drive aisle would have 90-degree parking and two resident garage access driveways on opposite sides of the parking garage. A visitor parking area in the proposed garage would be accessed at a separate entrance on the east side of the proposed building. The perimeter drive aisle would be 26 feet in width. The two resident garage access driveways would be connected within the garage by a central drive aisle spanning the garage east to west. The resident garage would have nine aisles with 90-degree assigned resident parking. Based on the proposed number and type of units the project is required to provide 410 parking spaces. The project is proposing to provide 438 parking spaces and therefore would have 28 spaces more than required by the City's parking standards.

Within the resident garage, three aisles would have parking at the end of the aisles. At these locations vehicles would be required to make a difficult three-point turning maneuver in order to exit. The majority of parking spaces within these three aisles have been designated compact which would help to minimize maneuverability issues. The City of San José ultimately will determine whether the potential safety issues would be sufficient to warrant the reconfiguration of these parking spaces.

4.15.3 Conclusion

The proposed project would not result in significant transportation impacts. **(Less Than Significant Impact)**

4.16 UTILITIES AND SERVICE SYSTEMS

4.16.1 Setting

4.16.1.1 *Water Service*

Water service is provided to the site by the San José Water Company. A 12-inch water main is present on the site. The existing development on the project site, if fully occupied, would use approximately 103,038[37] gallons of water per day.

4.16.1.2 *Sanitary Sewer/Wastewater Treatment*

Sanitary sewer lines in the area are owned and maintained by the City of San José. There is currently a ten-inch sewer line along Campbell Avenue. The current building on the project site, if fully occupied, would generate approximately 87,582 gallons of sewage per day.[38]

Wastewater treatment service for the area is provided by the City of San José. The San José/Santa Clara Water Pollution Control Plant (WPCP) provides primary, secondary, and tertiary treatment of wastewater. The City's level of service goal for sewage treatment is to remain within the capacity of the WPCP. The existing capacity of the WPCP is 167 million gallons per day (mgd). The WPCP currently treats an average of 125 mgd and discharges 102 mgd effluent (dry weather peak) to the San Francisco Bay.

4.16.1.3 *Storm Drainage*

Storm drainage lines are provided and maintained in the project area by the City of San José and City of Santa Clara. There is an existing 18-inch storm drainage line in Campbell Avenue in the City of San José. A 24-inch storm drainage line is also located in El Camino Real in the City of Santa Clara.

4.16.1.4 *Solid Waste*

Collection service to non-residential properties is provided by a number of non-exclusive service providers and non-residential waste may be disposed at any of four privately owned landfills in San José. The project site, if fully occupied, would generate approximately 34,077 pounds of garbage per week.[39]

Residential solid waste and recycling collection services in the area are provided by Garden City Sanitation, California Waste Solutions, and Green Team of San José. San José has a contract with the Newby Island Landfill which extends to 2019. The City of San José disposes of approximately 225,000 tons of residential garbage per year at the Newby Island Landfill.

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[37] Water use for the existing development was estimated at 1.25 gallons per day per square foot of office space.
[38] Gene Golobic, Principal, Kier & Wright Civil Engineers. Existing and Proposed Sanitary Sewer Discharge. October 3, 2007.
[39] California Integrated Waste Management Board. Estimated Solid Waste Generation Rates for Commercial Establishments. 7 December 2004. 23 August 2005. http://www.ciwmb.ca.gov/wastechar/wastegenrates/Commercial.htm. Based on a waste generation rate of 0.0108 tons/sq. ft./year divided by 52 weeks.

4.16.1.5 *Electricity, Natural Gas, Telephone Services*

Electric and natural gas service would be provided to the project site by Pacific Gas & Electric (PG&E). Telephone service would be provided by AT&T.

4.16.2 Environmental Checklist and Discussion

UTILITIES AND SERVICE SYSTEMS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)/ Discussion Location
Would the project:						
1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐	☐	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?	☐	☐	☒	☐	☐	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?	☐	☐	☒	☐	☐	1,2
4) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐	☐	1,2
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?	☐	☐	☒	☐	☐	1,2
6) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	☐	1,2
7) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐	☐	1,2

4.16.2.1 *Water Service*

The proposed PD zoning would allow up to 259 residential units on the site that would use approximately 54,908 gallons of water per day.[40] The proposed project would result in a decrease in water usage on the site when compared to the office/R&D development on the site, if fully occupied, and therefore would not require the expansion of existing water supplies or facilities.

[40] Based on a water usage rate of 212 gallons per day per residential unit.

In accordance with State law (SB 610) and CEQA, all projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project must provide an analysis of whether there is adequate water supply available to serve the development. The proposed project would not construct 500 dwelling units or result in an equivalent amount of water use and therefore, a water supply analysis is not required

4.16.2.2 *Sanitary Sewer/Wastewater Treatment*

The proposed project would generate approximately 46,620[41] gallons of sewage per day which would need to be transported and treated at the San José/Santa Clara Water Pollution Control Plant (WPCP). This increase would not exceed the capacity of the WPCP. The proposed project would generate approximately one-half the sewage of the existing building on the site, if fully occupied. In order to conform to the City of San José's Sanitary Sewer Level of Service Policy, a detailed analysis of sanitary sewer capacity will be completed prior to the issuance of a PD permit and any necessary capacity improvements identified. Any additional construction required outside of the existing project boundary to provide capacity improvements would be limited to the street right-of-way and would not result in any additional environmental impacts than those addressed in this Initial Study.

Standard Measure: The project proposes to implement the following standard measure:

SM UTIL-1: Prior to issuance of a Planned Development (PD) Permit, a sanitary sewer main LOS study will be completed by a qualified civil engineer to determine the need for improvements to the sanitary sewer infrastructure adjacent to the project site. The study will be submitted to the Department of Public Works project engineer for review and approval.

4.16.2.3 *Storm Drainage*

The proposed project would result in a five percent increase in impervious surfaces on the site (refer to *Section 4.8 Hydrology and Water Quality*). The project proposes to connect to an existing 24-inch City of Santa Clara storm drainage line in El Camino Real. This connection is anticipated to be made with an 18-inch storm drainage line connection from the site. The storm drainage line would be extended in the Campbell Avenue street right-of-way. The extension of this line would be subject to the stormwater quality control measures identified in *Section 4.8 Hydrology and Water Quality*.

4.16.2.4 *Solid Waste*

The proposed project is estimated to generate approximately 8,107 pounds of garbage and 1,735 pounds of recyclables per week.[42] The proposed project would result in a decrease in solid waste generated from the project site, compared to the former office/R&D use.

[41] Gene Golobic, Principal. Kier & Wright Civil Engineers. Existing and Proposed Sanitary Sewer Discharge. October 3, 2007.

[42] The solid waste and recycling generation for the proposed project was based on solid waste generation rate of 31.3 pounds per household per week for multi-family residences and the recycling generation rate of 6.7 pounds per household per week for multi-family residences. Source: Godley, Laurel. City of San José Environmental Services Department. Personal Communications. 2 November 2006.

4.16.2.5 *Electricity, Natural Gas, and Telephone Service*

Facilities for providing electrical, natural gas, and telephone services are built and maintained by the public and private utilities which provide these services under their franchise agreements with the State of California. New and expanded facilities are paid for from capital funds financed by fees paid by users. Existing electric and gas utilities in the area are anticipated to be adequately sized to serve the proposed project.

4.16.3 Conclusion

The proposed project is not anticipated to exceed the capacity of existing utility and service systems. The proposed project with the implementation of standard measures (SM UTIL-1) would not result in significant impacts to utilities and services systems. **(Less Than Significant Impact)**

4.17 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	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?	☐	☒	☐	☐	☐	1,2, p.13-105
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)?	☐	☐	☒	☐	☐	1,2, p.13-105
3) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐	☐	1,2, p.13-105
4) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☒	☐	☐	1,2, p.13-105

Discussion: With the implementation of the mitigation and standard measures included in the project and described in the specific sections of this report (refer to *Section 4. Environmental Checklist, Impacts, and Mitigation Measures*), on pages 13-99 of this Initial Study; the proposed project would not result in significant environmental impacts.

4.17.1 Global Climate Change Impacts

Global climate change is the alteration of the Earth's weather including its temperature, precipitation, and wind patterns. Global temperatures are affected by naturally occurring and anthropogenic-generated atmospheric gases, such as carbon dioxide, methane, and nitrous oxide. These gases allow sunlight into the Earth's atmosphere, but prevent radiative heat from escaping into outer space, which is known as the "greenhouse" effect. The world's leading climate scientists have reached consensus that global climate change is underway and is very likely caused by humans.[43]

[43] IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: http://www.ipcc.ch/.

Agencies at the international, national, state, and local levels are considering strategies to control emissions of gases that contribute to global warming. There is no comprehensive strategy that is being implemented on a global scale that addresses climate change; however, in California a multi-agency "Climate Action Team", has identified a range of strategies and the Air Resources Board, under Assembly Bill (AB) 32, has been designated to adopt the main plan for reducing California's greenhouse gas (GHG) emissions by January 1, 2009, and regulations and other initiatives for reducing GHG emissions by January 1, 2011. AB 32 requires achievement by 2020 of a statewide GHG emissions limit equivalent to 1990 emissions, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. By 2050, the state plans to reduce emission to 80 percent below 1990 levels.

While the state of California has established programs to reduce GHG emissions, there are no established standards for gauging the significance of greenhouse gas emissions. Neither CEQA nor the CEQA Guidelines provide any methodology for analysis of greenhouse gases. Given the global scope of global climate change, the challenge under CEQA is for a Lead Agency to translate the issue down to the level of a CEQA document for a specific project in a way that is meaningful to the decision making process. Under CEQA, the essential questions are whether a project creates or contributes to an environmental impact or is subject to impacts from the environment in which it would occur, and what mitigation measures are available to avoid or reduce impacts.

4.17.1.1 *Impacts from the Project*

The proposed project would allow construction of up to 259 residential units on a site currently developed with an 82,000 square foot office/R&D building. The project would generate GHG primarily through vehicle trips and, to a lesser extent, electricity use and construction of the proposed buildings. Due to the location of the project in proximity to the Santa Clara Caltrain station, the proposed residents would likely opt to make some trips such as commuting by mass transit. The project also proposes to reuse some of the existing building materials on the project site. The project, therefore, would reduce some of the operational and construction GHG emissions.

Given the overwhelming scope of global climate change, it is not anticipated that a single development project would have an individually discernable effect on global climate change (e.g., that any increase in global temperature or rise in sea level could be attributed to the emissions resulting from one single development project). Rather, it is more appropriate to conclude that the GHG emissions generated by the proposed project would combine with emissions across the state, nation, and globe to cumulatively contribute to global climate change.

Based on the project's location on a developed urban site near mass transit facilities (i.e. Caltrain Station and future BART station), the fact that it proposes high density infill development, and the reuse of building materials, the project would be consistent with several strategies identified by the State of California Climate Action Team (CAT) to reduce GHG emissions.[44]

4.17.1.2 *Impacts to the Project*

Impacts to the project from global climate change could include reduced water availability due to changes in the Sierra snowpack and/or droughts. Energy use could also rise as average temperatures rise. The project site is not within possible inundation areas from an up to three meter

[44] These general strategies include strategies for increased recycling and reduced vehicle miles traveled (in this case, reusing construction materials from the site and supporting alternative transportation use).

(approximately 10 feet) rise in sea level.[45] Based on the project's location, the potential for the project to be adversely impacted by global climate change may be limited to a reduction in potable water supplies.

4.17.1.3 *Significance of Cumulative Global Climate Change Impacts*

Declaring an impact significant or not implies some knowledge of incremental effects that is several years away, at best. To determine whether the proposed project would have a significant impact on global climate change is speculative, particularly given the fact that there are no existing numerical thresholds to determine an impact. However, in an effort to make a good faith effort at disclosing environmental impacts and to conform with the CEQA Guidelines [§16064(b)], it is the City's position that, based on the nature of this redevelopment project, its location within an established urban area served by existing infrastructure (rather than a greenfield site) and proximate to multi-modal mass transit, the proposed 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.

4.17.1.4 *Conclusion*

The proposed project would not result in significant unavoidable impacts or substantial new cumulative impacts associated with greenhouse gas emissions and global climate change. **(Less Than Significant Cumulative Impact)**

4.17.2 Cumulative Traffic Impacts

The following discussion is based on a memorandum prepared by *Hexagon Transportation Consultants* in May 2008 which is included in Appendix G of this Initial Study.

Due to traffic calming measures implemented in 2001 by the City of San José, access to Newhall Street from Campbell Avenue is closed. Thus, Campbell Avenue can only be accessed via El Camino Real and the western segment of Accolti Way. This cumulative traffic analysis focuses on the potential for traffic generated by the on-going industrial to residential conversion of Campbell Avenue to impact the intersection of Campbell Avenue and El Camino Real.

Four residential projects have recently been approved and/or constructed on Campbell Avenue and several additional parcels are anticipated to be redeveloped with residential uses consistent with these other recent industrial to residential conversions. The approved projects include the 340-unit El Camino Real Apartments project (fully occupied), the 220-unit Pulte Homes project (90% occupied), the 113-unit Santa Clara Development project (75% occupied), and the 43-unit Robson Homes project (not yet built). The proposed PD zoning would replace an existing 82,000 square foot office/R&D building with up to 259 residential units. In addition, approximately 14.06 acres of remaining light industrial land on Campbell Avenue could be redeveloped for residential use resulting in an anticipated increase of 466 residential units. The conversion of the remaining light industrial land on Campbell Avenue would replace approximately 210,000 square feet of light industrial space.

The conversion of the remaining parcels on Campbell Avenue to residential use and full occupancy of the recent residential developments on Campbell Avenue would result in an additional 397 AM

[45] San Francisco Bay Conservation and Development Commission. San Francisco Bay Scenarios for Sea Level Rise South Bay. 6 December 2007. http://www.bcdc.ca.gov/media/planning/CCP_SouthBay_H.jpg

net new peak hour trips and 399 net new PM peak hour trips. The result of the intersection level of service (LOS) analysis show that the Campbell Avenue and El Camino Real intersection currently operates at LOS B during the AM peak hour and LOS C during the PM peak hour. Under cumulative traffic conditions the intersection would operate at an acceptable LOS D during the AM peak hour and LOS C during the PM peak hour. Therefore, converting the remaining R&D and light industrial parcels on Campbell Avenue to residential development could be accommodated while maintaining an acceptable LOS at the El Camino Real and Campbell Avenue intersection under its existing configuration.

4.17.2.1 *Planned Roadway Improvements*

The City of San José currently plans to widen the Campbell Avenue and El Camino Real intersection. These planned roadway improvements will require Caltrans review and approval. Two left-turn lanes and a separate right-turn lane are planned on westbound Campbell Avenue as well as two eastbound receiving lanes to provide inbound truck access for trucks turning right off northbound El Camino Real. The proposed PD zoning would be required to dedicate some right-of-way along the project frontage in both jurisdictions to accommodate these improvements which is included as part of this project proposal. With these planned improvements the Campbell Avenue and El Camino Real intersection would operate at LOS C during both the AM and PM peak hours. Although these intersection improvements are not required to mitigate an LOS impact caused by the cumulative projects, they would be necessary operationally to provide adequate turn pocket storage to serve the vehicle queues that would occur under cumulative traffic conditions.

4.17.2.2 *Conclusion*

The proposed PD zoning would not contribute to a significant cumulative traffic impact at the intersection of Campbell Avenue and El Camino Real. **(Less Than Significant Cumulative Impact)**

Checklist 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 San José. San José 2020 General Plan. June 5, 2007.

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8. Belinda P. Blackie, P.E., R.E.A. Vicinity Hazardous Materials Users Survey, Proposed 1270 Campbell Avenue Redevelopment Project. September 26, 2007.

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11. Federal Emergency Management Agency. Flood Insurance Rate Map. Community Panel No. 0603490018D, Letter of Map Revision (LOMR) 06-09-B378P-060349. October 25, 2006.

12. Schaaf & Wheeler, Consulting Civil Engineers. 1270 Campbell Avenue Floodplain Impacts Memorandum. October 29, 2007.

13. Association of Bay Area Governments. Dam Failure Inundation Hazard Map for Northwest San José/Milpitas/Santa Clara. 20 October 2003. ABAG. 16 October 2007. http://www.abag.ca.gov/cgi-bin/pickdamx.pl.; http://gis.abag.ca.gov

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19. Hexagon Transportation Consultants. Campbell Avenue Sobrato Residential Development Draft Transportation Impact Analysis. March 11, 2008.

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APPENDIX A
TREE SURVEY

TREE REPORT

Submitted To:

Kier and Wright
Attention: Mr. Gene Golobic
3350 Scott Boulevard #22
Santa Clara, CA 95054

Project Location:

Project #A07041
1270 Campbell Avenue
San Jose, California

KIER & WRIGHT
MAY 19 2008
RECEIVED

Submitted By:
McCLENAHAN CONSULTING, LLC
John H. McClenahan
Certified Arborist, WE-1476A
member, American Society of Consulting Arborists
May 14, 2008
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McCLENAHAN CONSULTING, LLC

May 14, 2008

Kier and Wright
Attention: **Mr. Gene Golobic**
3350 Scott Boulevard # 22
Santa Clara, CA 95054

RE: **Project #A07041**
1270 Campbell Avenue
San Jose, CA

Assignment
As requested, I performed a visual inspection of 166 trees to determine species, size, condition, suitability for preservation and heritage tree status. This report includes the addition of trees 379 to 393 and is a revision from the April 28, 2007 report.

Summary
This site is a commercial office building located on the San Jose/Santa Clara border. Trees in fair condition or better are typically suitable for preservation. Tree species and information is included in the attached table. However, certain species, like Evergreen ash, are not considered well suited for preservation due to extensive surface roots and potential for adverse impacts to site improvements. Tree dispositions include recommendation for removal of 35 trees based on poor to fair condition or worse.

Proposed site development will require removal of all trees on site. Mitigation for removals should be shown on Landscape Plan in accordance with City of San Jose ordinance.

Six trees are ordinance sized trees, three of which are multi-trunk Melaleucas.

Tree 253, an ordinance sized tree in poor to fair condition is recommended for removal due to poor suitability for preservation.

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Tree species Summary

Aristocrat pear	*Pyrus calleryana 'Aristocrat'*	25 trees
Blackwood acacia	*Acacia melanoxylon*	1
Chinese pistache	*Pistacia chinensis*	11
Coast Redwood	*Sequoia sempervirens*	46
Evergreen ash	*Fraxinus uhdei*	21
Holly oak	*Quercus ilex*	5
Italian stone pine	*Pinus pinea*	34
Melaleuca	*Melaleuca quinquenervia*	8
Flowering plum	*Prunus cerasifera*	15

Methodology

No root crown exploration, climbing or plant tissue analysis was performed as part of this survey.

In determining Tree Condition several factors have been considered which include:

Rate of growth over several seasons;
Structural decays or weaknesses;
Presence of disease or insects; and
Life expectancy.

The following guide for interpretation of Tree Condition as related to Life Expectancy is submitted for your information.

0 - 5	Years	=	Poor
5 - 10	Years	=	Poor to Fair
10 - 15	Years	=	Fair
15 - 20	Years	=	Fair to Good
20 +	Years	=	Good

Tree Description

Number: 201 **Name:** Coast redwood
Diameter: 8.50 **Circumference:** 26.69 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 10' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Water pipe at base of tree.

Number: 202 **Name:** Coast redwood
Diameter: 10.30 **Circumference:** 32.34 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 8' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Water pipe at base of tree.

Number: 203 **Name:** Coast redwood
Diameter: 9.90 **Circumference:** 31.09 **Heritage:** No
Trunk Type: **Height:** 19' **Spread:** 6' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Water pipe at base of tree.

Number: 204 **Name:** Coast redwood
Diameter: 8.40 **Circumference:** 26.38 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Water pipe at base of tree.

Number: 205 **Name:** Coast redwood
Diameter: 9.20 **Circumference:** 28.89 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Water pipe at base of tree.

Number: 206 **Name:** Coast redwood
Diameter: 11.60 **Circumference:** 36.42 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Secondary leader at base.

Number: 207 **Name:** Coast redwood
Diameter: 11.80 **Circumference:** 37.05 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 208 **Name:** Evergreen ash
Diameter: 9.00 **Circumference:** 28.26 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 20' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 209 **Name:** Evergreen ash
Diameter: 12.50 **Circumference:** 39.25 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 30' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Number: 210 **Name:** Evergreen ash
Diameter: 6.50 **Circumference:** 20.41 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 15' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Slight phototropic lean.

Number: 211 **Name:** Evergreen ash
Diameter: 13.50 **Circumference:** 42.39 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 30' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Number: 212 **Name:** Blackwood acacia
Diameter: 11.20 **Circumference:** 35.17 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 18' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Storm drain adjacent to root flare.

Number: 213 **Name:** Evergreen ash
Diameter: 15.10 **Circumference:** 47.41 **Heritage:** No
Trunk Type: **Height:** 38' **Spread:** 30' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Number: 214 **Name:** Evergreen ash
Diameter: 4.70 **Circumference:** 14.76 **Heritage:** No
Trunk Type: **Height:** 15' **Spread:** 10' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Slight phototropic lean.

Number: 215 **Name:** Coast redwood
Diameter: 10.80 **Circumference:** 33.91 **Heritage:** No
Trunk Type: **Height:** 27' **Spread:** 12' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Water pipe at base of tree.

Number: 216 **Name:** Coast redwood
Diameter: 8.80 **Circumference:** 27.63 **Heritage:** No
Trunk Type: **Height:** 23' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Water pipe at base of tree.

Number: 217 **Name:** Coast redwood
Diameter: 11.50 **Circumference:** 36.11 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition:
Observation: Water pipe at base of tree.

Number: 218 **Name:** Coast redwood
Diameter: 4.70 **Circumference:** 14.76 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 5' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Water pipe at base of tree. Topped for ash clearance.

Number: 219 **Name:** Coast redwood
Diameter: 5.40 **Circumference:** 16.96 **Heritage:** No
Trunk Type: **Height:** 18' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition:
Observation: Water pipe at base of tree.

Number: 220 **Name:** Coast redwood
Diameter: 3.50 **Circumference:** 10.99 **Heritage:** No
Trunk Type: **Height:** 14' **Spread:** 4' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Canopy is one sided. Water pipe at base of tree.

Number: 221 **Name:** Coast redwood
Diameter: 5.20 **Circumference:** 16.33 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 6' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Canopy is one sided. Water pipe at base of tree

Number: 222 **Name:** Evergreen ash
Diameter: 20.30 **Circumference:** 63.74 **Heritage:** Ordinance
Trunk Type: **Height:** 40' **Spread:** 40' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Figure 1 Tree 222

Number: 223 **Name:** Coast redwood
Diameter: 9.40 **Circumference:** 29.52 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Watering pipe at base of tree.

Number: 224 **Name:** Coast redwood
Diameter: 9.50 **Circumference:** 29.83 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Watering pipe at base of tree.

Number: 225 **Name:** Coast redwood
Diameter: 10.70 **Circumference:** 33.60 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Watering pipe at base of tree.

Number: 226 **Name:** Coast redwood
Diameter: 11.50 **Circumference:** 36.11 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Watering pipe at base of tree.

Number: 227 **Name:** Evergreen ash
Diameter: 14.50 **Circumference:** 45.53 **Heritage:** No
Trunk Type: **Height:** 40' **Spread:** 40' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Number: 228 **Name:** Evergreen ash
Diameter: 9.70 **Circumference:** 30.46 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 30' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Interior deadwood.

Number: 229 **Name:** Evergreen ash
Diameter: 11.50 **Circumference:** 36.11 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 30' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Number: 230 **Name:** Evergreen ash
Diameter: 14.00 **Circumference:** 43.96 **Heritage:** No
Trunk Type: **Height:** 38' **Spread:** 35' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Number: 231 **Name:** Evergreen ash
Diameter: 14.10 **Circumference:** 44.27 **Heritage:** No
Trunk Type: **Height:** 38' **Spread:** 35' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting.

Number: 232 **Name:** Evergreen ash
Diameter: 5.30 **Circumference:** 16.64 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 9' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation:

Number: 233 **Name:** Italian stone pine
Diameter: 15.40 **Circumference:** 48.36 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 25' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 234 **Name:** Italian stone pine
Diameter: 13.70 **Circumference:** 43.02 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 20' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 235 **Name:** Italian stone pine
Diameter: 11.50 **Circumference:** 36.11 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 17' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 236 **Name:** Italian stone pine
Diameter: 13.50 **Circumference:** 42.39 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 22' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 237 **Name:** Italian stone pine
Diameter: 13.70 **Circumference:** 43.02 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 25' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 238 **Name:** Italian stone pine
Diameter: 14.50 **Circumference:** 45.53 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 25' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 239 **Name:** Italian stone pine
Diameter: 10.40 **Circumference:** 32.66 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 20' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 240 **Name:** Italian stone pine
Diameter: 11.00 **Circumference:** 34.54 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 20' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 241 **Name:** Italian stone pine
Diameter: 10.90 **Circumference:** 34.23 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 15' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Limited root environment.

Number: 242 **Name:** Melaleuca
Diameter: 6.1 / 6.2 **Circumference:** 38.62 **Heritage:** No
Trunk Type: Multi trunk **Height:** 20' **Spread:** 7' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect. Extensive surface roots were observed.

Number: 243 **Name:** Melaleuca
Diameter: 2.6 / 4.0 / 6.7 **Circumference:** 41.76 **Heritage:** No
Trunk Type: Multi trunk **Height:** 20' **Spread:** 9' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect. Extensive surface roots were observed.

Number: 244 **Name:** Melaleuca
Diameter: 5.8 / 5.5 / 5.1 **Circumference:** 51.50 **Heritage:** No
Trunk Type: Multi trunk **Height:** 20' **Spread:** 10' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect. Extensive surface roots were observed.

Number: 245 **Name:** Melaleuca
Diameter: 7.3 / 4.3 / 5.7 **Circumference:** 54.32 **Heritage:** No
Trunk Type: Multi trunk **Height:** 20' **Spread:** 13' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect. Extensive surface roots were observed.

Number: 246 **Name:** Melaleuca
Diameter: 5.5 / 12.1 / 3.9 **Circumference:** 67.51 **Heritage:** Ordinance
Trunk Type: Multi trunk **Height:** 24' **Spread:** 15' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect. Extensive surface roots were observed.

Figure 2 Tree 246

Number: 247 **Name:** Melaleuca
Diameter: 5.5 / 6.0 / 5.1 **Circumference:** 52.12 **Heritage:** No
Trunk Type: Multi trunk **Height:** 24' **Spread:** 10' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect. Extensive surface roots were observed.

Number: 248 **Name:** Melaleuca
Diameter: 9.5 / 5.1 / 9.4 **Circumference:** 75.36 **Heritage:** Ordinance
Trunk Type: Multi trunk **Height:** 25' **Spread:** 15' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect. Extensive surface roots were observed.

Figure 3 Tree 248

Number: 249 **Name:** Italian stone pine
Diameter: 16.00 **Circumference:** 50.24 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 22' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to an exaggerated southeast lean.

Number: 250 **Name:** Italian stone pine
Diameter: 12.20 **Circumference:** 38.31 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 14' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Grows to an exaggerated lean. Sequoia pitch moth infestation is visible.

Number: 251 **Name:** Italian stone pine
Diameter: 9.70 **Circumference:** 30.46 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 10' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Grows to an exaggerated lean. Sequoia pitch moth infestation is visible. Trunk has been notched for sprinkler.

Number: 252 **Name:** Italian stone pine
Diameter: 9.90 **Circumference:** 31.09 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 12' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Extensive surface rooting was observed.

Number: 253 **Name:** Italian stone pine
Diameter: 18.40 **Circumference:** 57.78 **Heritage:** Ordinance
Trunk Type: **Height:** 25' **Spread:** 20' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Extensive surface rooting was observed. Grows to a slight lean.

Figure 4 Tree 253

Number: 254 **Name:** Italian stone pine
Diameter: 11.10 **Circumference:** 34.85 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 15' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Grows to an exaggerated lean.

Number: 255 **Name:** Italian stone pine
Diameter: 17.00 **Circumference:** 53.38 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 25' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Grows to an exaggerated lean. Extensive surface roots were observed.

Number: 256 **Name:** Evergreen ash
Diameter: 14.90 **Circumference:** 46.79 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 35' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting and narrow scaffold limb attachments.

Number: 257 **Name:** Evergreen ash
Diameter: 6.00 **Circumference:** 18.84 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 15' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Scaffold limbs exhibit narrrow attachments.

Number: 258 **Name:** Italian stone pine
Diameter: 10.70 **Circumference:** 33.60 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 16' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to a slight lean

Number: 259 **Name:** Italian stone pine
Diameter: 10.70 **Circumference:** 33.60 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 16' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to a slight lean

Number: 260 **Name:** Italian stone pine
Diameter: 9.90 **Circumference:** 31.09 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 15' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to a slight lean

Number: 261 **Name:** Italian stone pine
Diameter: 11.00 **Circumference:** 34.54 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 15' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to a slight lean

Number: 262 **Name:** Italian stone pine
Diameter: 11.60 **Circumference:** 36.42 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 18' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to a slight lean

Number: 263 **Name:** Italian stone pine
Diameter: 15.20 **Circumference:** 47.73 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 20' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to a slight lean

Number: 264 **Name:** Evergreen ash
Diameter: 8.80 **Circumference:** 27.63 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 25' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting and narrow scaffold limb attachments.

Number: 265 **Name:** Evergreen ash
Diameter: 15.80 **Circumference:** 49.61 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 30' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting and narrow scaffold limb attachments.

Number: 266 **Name:** Evergreen ash
Diameter: 13.90 **Circumference:** 43.65 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 30' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting and narrow scaffold limb attachments.

Number: 267 **Name:** Evergreen ash
Diameter: 5.00 **Circumference:** 15.70 **Heritage:** No
Trunk Type: **Height:** 18' **Spread:** 12' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Exhibits extensive surface rooting and narrow scaffold limb attachments.

Number: 268 **Name:** Evergreen ash
Diameter: 6.70 **Circumference:** 21.04 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 15' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Scaffold limbs exhibit narrrow attachments.

Number: 269 **Name:** Evergreen ash
Diameter: 13.50 **Circumference:** 42.39 **Heritage:** No
Trunk Type: **Height:** 32' **Spread:** 28' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Canopy is sparse. Exhibits extensive surface rooting and narrow scaffold limb attachments.

Number: 270 **Name:** Coast redwood
Diameter: 12.00 **Circumference:** 37.68 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 271 **Name:** Coast redwood
Diameter: 11.70 **Circumference:** 36.74 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 272 **Name:** Coast redwood
Diameter: 10.00 **Circumference:** 31.40 **Heritage:** No
Trunk Type: **Height:** 27' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 273 **Name:** Coast redwood
Diameter: 10.10 **Circumference:** 31.71 **Heritage:** No
Trunk Type: **Height:** 27' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 274 **Name:** Coast redwood
Diameter: 12.80 **Circumference:** 40.19 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 275 **Name:** Coast redwood
Diameter: 11.50 **Circumference:** 36.11 **Heritage:** No
Trunk Type: **Height:** 32' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 276 **Name:** Coast redwood
Diameter: 12.70 **Circumference:** 39.88 **Heritage:** No
Trunk Type: **Height:** 34' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 277 **Name:** Coast redwood
Diameter: 12.50 **Circumference:** 39.25 **Heritage:** No
Trunk Type: **Height:** 32' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 278 **Name:** Coast redwood
Diameter: 12.20 **Circumference:** 38.31 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 14' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 279 **Name:** Coast redwood
Diameter: 14.80 **Circumference:** 46.47 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 12' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 280 **Name:** Coast redwood
Diameter: 13.40 **Circumference:** 42.08 **Heritage:** No
Trunk Type: **Height:** 32' **Spread:** 12' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 281 **Name:** Chinese pistache
Diameter: 5.40 **Circumference:** 16.96 **Heritage:** No
Trunk Type: **Height:** 15' **Spread:** 8' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Foliage is sparse, stunted and chlorotic.

Number: 282 **Name:** Chinese pistache
Diameter: 8.10 **Circumference:** 25.43 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 16' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 283 **Name:** Coast redwood
Diameter: 10.40 **Circumference:** 32.66 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 12' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 284 **Name:** Italian stone pine
Diameter: 13.00 **Circumference:** 40.82 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 25' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Surface roots observed.

Number: 285 **Name:** Italian stone pine
Diameter: 11.80 **Circumference:** 37.05 **Heritage:** No
Trunk Type: **Height:** 18' **Spread:** 18' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Grows to an exaggerated lean.

Number: 286 **Name:** Italian stone pine
Diameter: 14.40 **Circumference:** 45.22 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 25' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Grows to an exaggerated lean.

Number: 287 **Name:** Italian stone pine
Diameter: 14.20 **Circumference:** 44.59 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 16' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Grows to an exaggerated lean.

Number: 288 **Name:** Italian stone pine
Diameter: 15.60 **Circumference:** 48.98 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 20' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Codominant leader visible at 12-feet.

Number: 289 **Name:** Italian stone pine
Diameter: 12.90 **Circumference:** 40.51 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 25' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 290 **Name:** Melaleuca
Diameter: 13 / 6.6 **Circumference:** 61.54 **Heritage:** Ordinance
Trunk Type: Multi trunk **Height:** 22' **Spread:** 12' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Multi trunk growth habit creates an inherent structural defect.

Figure 5 Tree 290

Number: 291 **Name:** Italian stone pine
Diameter: 14.30 **Circumference:** 44.90 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 25' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to a phototropic lean.

Number: 292 **Name:** Italian stone pine
Diameter: 12.00 **Circumference:** 37.68 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 12' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Circling roots visible. Canopy competes with adjacent pines.

Number: 293 **Name:** Italian stone pine
Diameter: 11.90 **Circumference:** 37.37 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 15' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Surface roots visible 4-feet from trunk.

Number: 294 **Name:** Italian stone pine
Diameter: 15.30 **Circumference:** 48.04 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 18' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Grows to a phototropic lean.

Number: 295 **Name:** Aristocrat pear
Diameter: 8.40 **Circumference:** 26.38 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 12' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight.

Number: 296 **Name:** Aristocrat pear
Diameter: 7.40 **Circumference:** 23.24 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 12' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight.

Number: 297 **Name:** Aristocrat pear
Diameter: 9.40 **Circumference:** 29.52 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 20' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight.

Number: 298 **Name:** Aristocrat pear
Diameter: 5.30 **Circumference:** 16.64 **Heritage:** No
Trunk Type: **Height:** 16' **Spread:** 8' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy is sparse

Number: 299 **Name:** Aristocrat pear
Diameter: 4.60 **Circumference:** 14.44 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 8' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy is sparse

Number: 300 **Name:** Aristocrat pear
Diameter: 8.10 **Circumference:** 25.43 **Heritage:** No
Trunk Type: **Height:** 24' **Spread:** 12' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight. Scaffold limbs exhibit narrow attachments. Mushrooms at base.

Number: 328 **Name:** Aristocrat pear
Diameter: 7.10 **Circumference:** 22.29 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 10' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight. Scaffold limbs exhibit narrow attachments.

Number: 329 **Name:** Aristocrat pear
Diameter: 4.10 **Circumference:** 12.87 **Heritage:** No
Trunk Type: **Height:** 11' **Spread:** 5' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 330 **Name:** Aristocrat pear
Diameter: 6.20 **Circumference:** 19.47 **Heritage:** No
Trunk Type: **Height:** 18' **Spread:** 12' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight.

Number: 331 **Name:** Aristocrat pear
Diameter: 5.00 **Circumference:** 15.70 **Heritage:** No
Trunk Type: **Height:** 14' **Spread:** 8' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight.

Number: 332 **Name:** Aristocrat pear
Diameter: 6.60 **Circumference:** 20.72 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 9' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits symptoms of fireblight and low dieback.

Number: 333 **Name:** Chinese pistache
Diameter: 5.30 **Circumference:** 16.64 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 10' **Condition:** Very poor
Preservation Suitability: No
Disposition: Remove
Observation: Foliage is very sparse.

Number: 334 **Name:** Chinese pistache
Diameter: 6.20 **Circumference:** 19.47 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 10' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Foliage is sparse, stunted and chlorotic.

Number: 335 **Name:** Chinese pistache
Diameter: 6.10 **Circumference:** 19.15 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 9' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Foliage is sparse, stunted and chlorotic.

Number: 336 **Name:** Chinese pistache
Diameter: 5.30 **Circumference:** 16.64 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 12' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Foliage is sparse, stunted and chlorotic.

Number: 337 **Name:** Chinese pistache
Diameter: 6.20 **Circumference:** 19.47 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 7' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Foliage is sparse, stunted and chlorotic.

Number: 338 **Name:** Italian stone pine
Diameter: 17.10 **Circumference:** 53.69 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 30' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Grows to an exaggerated lean.

Number: 339 **Name:** Coast redwood
Diameter: 18.20 **Circumference:** 57.15 **Heritage:** Ordinance
Trunk Type: **Height:** 45' **Spread:** 15' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Figure 6 Tree 339

Number: 340 **Name:** Coast redwood
Diameter: 16.80 **Circumference:** 52.75 **Heritage:** No
Trunk Type: **Height:** 45' **Spread:** 13' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 341 **Name:** Coast redwood
Diameter: 15.80 **Circumference:** 49.61 **Heritage:** No
Trunk Type: **Height:** 45' **Spread:** 12' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 342 **Name:** Coast redwood
Diameter: 16.70 **Circumference:** 52.44 **Heritage:** No
Trunk Type: **Height:** 48' **Spread:** 15' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 343 **Name:** Coast redwood
Diameter: 13.70 **Circumference:** 43.02 **Heritage:** No
Trunk Type: **Height:** 40' **Spread:** 12' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 344 **Name:** Holly oak
Diameter: 5.10 **Circumference:** 16.01 **Heritage:** No
Trunk Type: **Height:** 10' **Spread:** 5' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 345 **Name:** Holly oak
Diameter: 4.30 **Circumference:** 13.50 **Heritage:** No
Trunk Type: **Height:** 10' **Spread:** 4' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Tip dieback was observed.

Number: 346 **Name:** Holly oak
Diameter: 3.70 **Circumference:** 11.62 **Heritage:** No
Trunk Type: **Height:** 8' **Spread:** 4' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 347 **Name:** Holly oak
Diameter: 4.20 **Circumference:** 13.19 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 6' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 348 **Name:** Holly oak
Diameter: 3.90 **Circumference:** 12.25 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 349 **Name:** Coast redwood
Diameter: 15.90 **Circumference:** 49.93 **Heritage:** No
Trunk Type: **Height:** 40' **Spread:** 12' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 350 **Name:** Coast redwood
Diameter: 12.10 **Circumference:** 37.99 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 351 **Name:** Coast redwood
Diameter: 10.20 **Circumference:** 32.03 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 8' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 352 **Name:** Chinese pistache
Diameter: 10.00 **Circumference:** 31.40 **Heritage:** No
Trunk Type: **Height:** 15' **Spread:** 15' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Moderate accumulation of interior deadwood.

Number: 353 **Name:** Chinese pistache
Diameter: 3.80 **Circumference:** 11.93 **Heritage:** No
Trunk Type: **Height:** 10' **Spread:** 4' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Branch cankers have created significant canopy dieback.

Number: 354 **Name:** Chinese pistache
Diameter: 4.60 **Circumference:** 14.44 **Heritage:** No
Trunk Type: **Height:** 10' **Spread:** 6' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 355 **Name:** Chinese pistache
Diameter: 8.10 **Circumference:** 25.43 **Heritage:** No
Trunk Type: **Height:** 16' **Spread:** 15' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation: Girdling root observed on north side.

Number: 356 **Name:** Coast redwood
Diameter: 13.80 **Circumference:** 43.33 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 16' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 357 **Name:** Coast redwood
Diameter: 10.40 **Circumference:** 32.66 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 15' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 358 **Name:** Coast redwood
Diameter: 10.60 **Circumference:** 33.28 **Heritage:** No
Trunk Type: **Height:** 28' **Spread:** 12' **Condition:** Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 359 **Name:** Italian stone pine
Diameter: 13.20 **Circumference:** 41.45 **Heritage:** No
Trunk Type: **Height:** 22' **Spread:** 18' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Extensive surface roots were observed.

Number: 360 **Name:** Coast redwood
Diameter: 7.90 **Circumference:** 24.81 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 361 **Name:** Coast redwood
Diameter: 9.40 **Circumference:** 29.52 **Heritage:** No
Trunk Type: **Height:** 35' **Spread:** 13' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 362 **Name:** Aristocrat pear
Diameter: 5.50 **Circumference:** 17.27 **Heritage:** No
Trunk Type: **Height:** 18' **Spread:** 15' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 363 **Name:** Aristocrat pear
Diameter: 6.70 **Circumference:** 21.04 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 20' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 364 **Name:** Aristocrat pear
Diameter: 7.70 **Circumference:** 24.18 **Heritage:** No
Trunk Type: **Height:** 18' **Spread:** 18' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 365 **Name:** Aristocrat pear
Diameter: 7.90 **Circumference:** 24.81 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 18' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 366 **Name:** Aristocrat pear
Diameter: 8.00 **Circumference:** 25.12 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 18' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 367 **Name:** Aristocrat pear
Diameter: 8.90 **Circumference:** 27.95 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 20' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 368 **Name:** Aristocrat pear
Diameter: 7.50 **Circumference:** 23.55 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 15' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 369 **Name:** Aristocrat pear
Diameter: 8.30 **Circumference:** 26.06 **Heritage:** No
Trunk Type: **Height:** 15' **Spread:** 15' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 370 **Name:** Aristocrat pear
Diameter: 8.00 **Circumference:** 25.12 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 15' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 371 **Name:** Aristocrat pear
Diameter: 7.00 **Circumference:** 21.98 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 12' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 372 **Name:** Aristocrat pear
Diameter: 8.30 **Circumference:** 26.06 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 15' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 373 **Name:** Aristocrat pear
Diameter: 7.90 **Circumference:** 24.81 **Heritage:** No
Trunk Type: **Height:** 18' **Spread:** 15' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 374 **Name:** Aristocrat pear
Diameter: 11.50 **Circumference:** 36.11 **Heritage:** No
Trunk Type: **Height:** 30' **Spread:** 25' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits minor dieback.

Number: 375 **Name:** Aristocrat pear
Diameter: 6.30 **Circumference:** 19.78 **Heritage:** No
Trunk Type: **Height:** 25' **Spread:** 15' **Condition:** Poor
Preservation Suitability: No
Disposition: Remove
Observation: Canopy exhibits dieback.

Number: 376 **Name:** Coast redwood
Diameter: 21.80 **Circumference:** 68.45 **Heritage:** No
Trunk Type: **Height:** 45' **Spread:** 18' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 377 **Name:** Coast redwood
Diameter: 8.00 **Circumference:** 25.12 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 12' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation:

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Number: 378 **Name:** Coast redwood
Diameter: 10.00 **Circumference:** 31.40 **Heritage:** No
Trunk Type: **Height:** 20' **Spread:** 12' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 379 **Name:** Flowering plum *(Prunus cerasifera)*
Diameter: 2.30 **Circumference:** 7.22 **Heritage:** No
Trunk Type: **Height:** 17' **Spread:** 12' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy one sided.

Number: 380 **Name:** Flowering plum
Diameter: 2.50 **Circumference:** 7.85 **Heritage:** No
Trunk Type: **Height:** 17' **Spread:** 12' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 381 **Name:** Flowering plum
Diameter: 2.70 **Circumference:** 8.48 **Heritage:** No
Trunk Type: **Height:** 17' **Spread:** 10' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 382 **Name:** Flowering plum
Diameter: 1.85 **Circumference:** 5.81 **Heritage:** No
Trunk Type: **Height:** 10' **Spread:** 3' **Condition:** Poor to Fair
Preservation Suitability: No
Disposition: Remove
Observation:

Number: 383 **Name:** Flowering plum
Diameter: 3.40 **Circumference:** 10.68 **Heritage:** No
Trunk Type: **Height:** 15' **Spread:** 15' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 384 **Name:** Flowering plum
Diameter: 2.40 **Circumference:** 7.54 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 6' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Leans, weak trunk.

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Mr. Gene Golobic
Number: 385 **Name:** Flowering plum
Diameter: 3.10 **Circumference:** 9.73 **Heritage:** No
Trunk Type: **Height:** 15' **Spread:** 13' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Leans to the east.

Number: 386 **Name:** Flowering plum
Diameter: 1.80 **Circumference:** 5.65 **Heritage:** No
Trunk Type: **Height:** 16' **Spread:** 7' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 387 **Name:** Flowering plum
Diameter: 3.10 **Circumference:** 9.73 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 10' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Northeast lean. One sided.

Number: 388 **Name:** Flowering plum
Diameter: 2.60 **Circumference:** **Heritage:** No
Trunk Type: **Height:** 18" **Spread:** 9' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Northerly lean.

Number: 389 **Name:** Flowering plum
Diameter: 2.60 **Circumference:** 8.16 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 9' **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Northerly lean.

Number: 390 **Name:** Flowering plum
Diameter: 2.20 **Circumference:** 6.91 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:** 9' **Condition:** Fair
Preservation Suitability: No
Disposition: Remove
Observation: Canopy leans north with top dieback.

Number: 391 **Name:** Flowering plum
Diameter: 2.90 **Circumference:** 9.11 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 9' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Kier & Wright
Mr. Gene Golobic

Number: 392 **Name:** Flowering plum
Diameter: 2.10 **Circumference:** 6.59 **Heritage:** No
Trunk Type: **Height:** 12' **Spread:** 8' **Condition:** Fair to Good
Preservation Suitability: Yes
Disposition: Remove
Observation:

Number: 393 **Name:** Flowering plum
Diameter: 3.0 **Circumference:** 9.42 **Heritage:** No
Trunk Type: **Height:** 13' **Spread:10 '** **Condition:** Fair
Preservation Suitability: Yes
Disposition: Remove
Observation: Slight southerly lean.

All written material appearing herein constitutes original and unpublished work of the Arborist and may not be duplicated, used or disclosed without written consent of the Arborist.

We thank you for this opportunity to be of assistance in your tree preservation concerns.

Should you have any questions, or if we may be of further assistance in these concerns, kindly contact our office at any time.

Very truly yours,

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Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like a medicine, cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the recommended treatment or remedial measures.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks is to eliminate all trees.

Arborist: John H. McClenahan

Date: May 14, 2008

APPENDIX B
GEOTECHNICAL INVESTIGATION

CORNERSTONE
EARTH GROUP

Type of Services	Geotechnical Investigation
Project Name	Campbell Avenue Residential Development
Location	1270 Campbell Avenue Santa Clara & San Jose, California
Client	Sobrato Development Companies
Client Address	10600 North DeAnza Boulevard, Suite 200 Cupertino, California 95014
Project Number	102-3-1
Date	September 6, 2007

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APPENDIX A – FIELD INVESTIGATION
APPENDIX B – LABORATORY TEST PROGRAM
APPENDIX C – CORROSION EVALUATION

Type of Services	**Geotechnical Investigation**
Project Name	**Campbell Avenue Residential Development**
Location	**1270 Campbell Avenue Santa Clara & San Jose, California**

SECTION 1 – INTRODUCTION

This geotechnical report was prepared for the sole use of Sobrato Development Companies for the proposed Campbell Avenue Residential Development project located in San Jose and Santa Clara. For our use, we received a copy of the base topographic map prepared by Kier & Wright dated April 30, 2007. We also received the original site grading and topographic plans prepared by Kier & Wright in 1993.

Based on our findings and professional judgment, no adverse geotechnical conditions are present that would preclude development at the site provided the recommendations in this report are incorporated into the design and construction of the project.

1.1 PROJECT DESCRIPTION

The project site is located at 1270 Campbell Avenue, in San Jose and Santa Clara, CA. The site is currently occupied by an existing 80,000 square foot concrete tilt-up office building surrounded by asphalt concrete parking areas. The proposed plan is to demolish the existing building and parking lot and then construct a four-story apartment complex over an at-grade podium garage. Approximately 250 units are planned for the 5.13 acre site.

Building loads and site grading are not yet known. We assume that building loads will be typical for this level of wood and concrete podium construction. Since the site is relatively level and no basement levels are proposed at this time, grading will likely consist of minor cuts and fills. Appurtenant parking, utilities, landscaping and other improvements necessary for site development are also likely planned.

The site is located in an area where historical occurrences of liquefaction, or where geotechnical and ground water conditions indicate a potential for permanent ground displacements, such that mitigation would be required (California Geologic Survey, San Jose West 7.5-minute quadrangle, 2003).

1.2 SCOPE OF SERVICES

Our scope of services was presented in our proposal dated April 10, 2007 and consisted of field and laboratory programs to evaluate physical and engineering properties of subsurface soils, engineering analysis to prepare recommendations for site work and grading, building foundations, retaining walls, and pavements. Brief descriptions of our exploration and laboratory programs are presented below. Detailed information is provided in Appendix A and B, respectively. A corrosion evaluation was performed for the site and is included in Appendix C.

1.3 FIELD EXPLORATION PROGRAM

1.3.1 Cone Penetration Tests (CPT)

On May 10, 2007, we advanced four Cone Penetration Tests (CPT) to depths of approximately 50 feet using truck-mounted CPT equipment. Our CPTs were permitted and backfilled with cement grout in accordance with Santa Clara Valley Water District guidelines. The approximate locations of our CPTs are shown on the Site Plan, Figure 2.

1.3.2 Conventional Borings

Our field exploration also consisted of drilling three borings with truck-mounted, hollow-stem auger drilling equipment. Borings were drilled on May 14, 2007, to depths ranging from approximately 45 to 47½ feet. Borings were backfilled with cement grout in accordance with Santa Clara Valley Water District guidelines. Approximate boring locations are shown on the Site Plan, Figure 2.

1.4 LABORATORY TESTING PROGRAM

In addition to visual classification of samples, the laboratory program focused on obtaining data for foundation analysis and design. Testing included moisture contents and dry densities (ASTM D2216/D2937), Atterberg Limits and plasticity index (PI) tests (ASTM D4318), grain size analyses (ASTM D422), four unconsolidated-undrained triaxial shear tests (ASTM D2850), and two consolidation tests (ASTM D2435).

Preliminary soil corrosion tests were also performed on nine soil samples collected at depths ranging from 1½ to 9 feet. These tests included pH (ASTM G51), sulfate (Caltrans 417), chloride (Caltrans 422), and resistivity at 100 percent saturation (ASTM G57). The results of these tests, as well as a brief discussion of the soil corrosion potential prepared by JDH Corrosion Consultants, are presented in Appendix C.

1.5 ENVIRONMENTAL SERVICES

Cornerstone Earth Group did not provide environmental services for this project. If environmental concerns are present, we recommend the environmental consultant review our geotechnical report and recommendations for compatibility with environmental concerns.

SECTION 2 – REGIONAL SETTING

2.1 REGIONAL SEISMICITY

The San Francisco Bay area is one of the most seismically active areas in the Country. While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities (2003) estimates there is a 62 percent chance of at least one magnitude 6.7 earthquake occurring in the Bay Area region between 2003 and 2032. As seen with damage in San Francisco and Oakland due to the 1989 Loma Prieta earthquake that was centered about 50 miles south, significant damage can occur at considerable distances. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances.

Faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. Table 1 presents a list of faults the State of California considers active within approximately 25 kilometers of the site (Type A and B faults).

Table 1: Approximate Fault Distances

Fault Name	Distance (miles)	Distance (kilometers)
Hayward Fault (SE Extension)	6.6	10.6
Monte Vista/Shannon	7.0	11.3
Hayward	9.4	15.2
Calaveras	9.6	15.5
San Andreas (Peninsula)	11.1	17.8
Sargent	14.7	23.6

SECTION 3 – SITE CONDITIONS

3.1 SURFACE DESCRIPTION

The site is located at 1270 Campbell Avenue in Santa Clara. The parcel is bounded by Campbell Avenue to the southwest, and existing commercial development to the southeast, Caltrain and Union Pacific railroad tracks to the northeast, and an existing office development to the northwest.

The site is currently occupied by an existing approximately 80,000 square foot, one-story concrete tilt-up office building. The finished floor of the existing building is reportedly at Elevation 66.8 feet (datum unknown). The building is surrounded by asphalt concrete parking and landscaped areas with ground cover, bushes and mature trees. The primary driveway entrance to the site is covered with Portland cement concrete pavement. A depressed loading

dock is located at the northeast corner of the building. A 6-foot-high chain link fence borders the north, south, and east sides of the site.

Prior to construction of the existing building, a roughly 80,000 square foot warehouse building occupied the site. A previous grading plan for the site prepared by Kier & Wright dated February 10, 1994 (Sheet C-1, Delta revision 13) indicates that two diesel fuel tanks (5,000 and 10,000 gallon) were excavated and removed from the site on July 16, 1993. The approximate lateral extent of this tank excavation, as scaled from this original plan, is shown on the Site Plan, Figure 2. The original topographic survey (Sheet C-3) dated May 17, 1993, indicates the previous warehouse building finished floor was at Elevation 68.2 feet. A railroad spur previously bordered the east side of Campbell Avenue.

3.2 SUBSURFACE CONDITIONS

Our borings encountered approximately 2½ to 3 inches of asphalt pavement underlain by 6 to 7 inches of granular base material in the parking areas. Beneath the pavement section, our borings encountered approximately 1 to 2 feet of undocumented fill consisting of stiff to very stiff silty clay, silty clay with gravel and gravelly clay. Borings were not drilled within the existing building due to access limitations; therefore, the thickness of the existing slab-on-grade or any existing fill beneath the slab is not known at this time. In addition, the consistency of the tank backfill area is unknown.

Beneath the surface pavements and existing fill, the site is generally underlain by highly variable interbedded alluvial soils. Near surface native soils generally consist of medium stiff to stiff, moderately to highly plastic clays to approximately 19 to 22 feet in depth, except in Boring EB-3 and CPT-2, where stiff silty and sandy clays extended to approximately 37 feet below existing grade. Plasticity Index (PI) tests were performed on samples of the near-surface fill and native soils resulting in PI's of 23 and 47, indicating moderate to high expansion potential.

The upper clays are underlain by interbedded layers of loose to dense clayey/silty sands, gravelly sands, and poorly graded sands. These sand layers vary from approximately 1 to 15 feet thick; the percent fines (silt- and clay-sized particles) in these sand layers generally ranged from 3 to 36 where tested. The sands were interbedded with stiff silty and sandy clays to the maximum depth explored at 50 feet. Sands were not encountered in CPT-4 to a depth of 50 feet, which was performed on the northwest end of the site.

A more detailed description of the subsurface conditions is presented on the boring and CPT logs in Appendix A.

3.3 GROUND WATER

Exploratory borings performed during this investigation encountered free ground water at depths ranging from 12½ to 13 feet below existing site grades. Our measurements were taken at the time of drilling and may not represent the stabilized levels that can be higher than first encountered. Based on available published data, seasonal and/or historical high groundwater on the order of 10 feet below the ground surface could be expected for the site vicinity.

A pore pressure dissipation test was also performed at a depth of approximately 24 feet during CPT-1. Based on the maximum recorded pore pressure of 8.26 pounds per square inch (psi) recorded during the test, the estimated depth to ground water is 5 feet. This elevated water level may represent a confined condition on the shallow water bearing zone beneath the site.

Fluctuations in ground water levels occur due to many factors including seasonal variations, perched ground water in permeable layers, and regional changes in ground water levels.

SECTION 4 – GEOLOGIC HAZARDS

4.1 FAULT RUPTURE

As discussed in Section 2, several significant faults are located within 25 kilometers of the site. However, the site is not located within a State-designated Alquist Priolo Earthquake Fault Zone or a Santa Clara County Fault Hazard Zone. No known surface expression of fault traces is known to cross the site; therefore, fault rupture hazard is not a significant geologic hazard at the site.

4.2 ESTIMATED GROUND SHAKING

Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the Bay Area. The magnitude-weighted pseudo-peak acceleration for the site with a 10 percent chance of exceedance in 50 years is approximately 0.51g (CGS, San Jose West Quadrangle, 1998). Pseudo-peak ground accelerations have been normalized to a 7.9 Mw seismic event, including weighting to account for regional seismic activity and fault distances.

The California Geological Survey (CGS) also maintains a web-based computer model that estimates probabilistic seismic ground motions for any location within California. The computer model estimates the "Design Basis Earthquake" ground motion, which is defined as the Peak Ground Acceleration (PGA) with a 10 percent chance of exceedance in 50 years (475-year return period). For an alluvial soil type, this estimated PGA is approximately 0.48g.

4.3 LIQUEFACTION POTENTIAL

4.3.1 Background

The State of California is in the process of mapping seismic hazards statewide. These maps will assist cities and counties in fulfilling their responsibilities for protecting the public safety from the effects of earthquake-triggered ground failure as required by the Seismic Hazards Mapping Act. Based on the final map for the San Jose West Quadrangle, the site is located within a State of California Seismic Hazard Zone for liquefaction (CGS, San Jose West Quadrangle, Official Map, Released: February 7, 2002).

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering, soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (lateral spreading) (NCEER 1998). Limited field and laboratory data is available regarding ground deformation due to settlement; however, in clean sand layers settlement on the order of 2 to 3 percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive soil cap.

4.3.2 Analysis and Results

As discussed in the "Subsurface" section above, several sand and silt layers were encountered below the design ground water depth of 5 feet. Following the procedures in the 1998 NCEER Workshop Proceedings (Youd et. al., 2001) and in accordance with CDMG Special Publication 117 guidelines (CDMG, 1997), these layers were analyzed for liquefaction triggering and potential post-liquefaction settlement. These methods compare ratio of the estimated cyclic shaking (Cyclic Stress Ratio - CSR) to the soil's estimated resistance to cyclic shaking (Cyclic Resistance Ratio - CRR), providing a factor of safety against liquefaction triggering. Factors of safety less than or equal to 1.0 are considered to be potentially liquefiable.

The CSR for each layer quantifies the stresses anticipated to be generated due to a design-level seismic event, is based on the peak horizontal acceleration generated at the ground surface discussed in the "Estimated Ground Shaking" section above, and is corrected for overburden and stress reduction factors as discussed in the procedure developed by Seed and Idriss (1971).

The soil's CRR is typically estimated from the in-situ density and strength obtained from field SPT blowcounts ("N" value) from rotary-wash borings and from CPT field tip pressures. SPT "N" values obtained from hollow-stem auger borings were not used in our analyses, as the "N" values obtained are unreliable in sands below ground water. The tip pressures were corrected for effective overburden stresses, taking into consideration both the ground water level at the time of exploration and the design ground water level, and stress reduction versus depth factors. The CPT method utilizes the soil behavior type index (I_C) to estimate the plasticity of the layers. Selected soil samples collected from the correlation boring (performed adjacent to the CPTs) were tested to evaluate the percent fines and in-situ moisture content, as well as visual observed for confirmation of CPT soil behavior types.

Soils with significant quantities of plastic fines (PI greater than 12) generally correlate with I_C values greater than 2.6; these soils and soils with CPT tip pressures greater than 160 tsf are typically considered too plastic or too dense/stiff to liquefy. These soil layers have been screened out during our analyses and are not presented below. The results of our CPT analyses are presented in the table below.

Table 3: Results of Liquefaction Analyses – CPT Method

CPT Number	Depth to Top of Layer (feet)	Layer Thickness (feet)	I_C	$Q_{c,1N}$	Factor of Safety	Potential for Liquefaction	Estimated Total Settlement (inches)
CPT-1	5.0	0.33	2.56	17.8	0.23	Likely	0.1
	22.3	0.66	2.2	68.9	0.3	Likely	0.2
	34.45	0.66	2.01	107.5	0.54	Likely	0.15
	40.68	0.66	2.14	88.23	0.47	Likely	0.12
						Total	**0.65**

CPT Number	Depth to Top of Layer (feet)	Layer Thickness (feet)	I_C	$Q_{c,1N}$	Factor of Safety	Potential for Liquefaction	Estimated Total Settlement (inches)
CPT-2	23.0	1.0	2.4	48.0	0.31	Likely	0.3
	28.5	0.67	2.48	33.1	0.21	Likely	0.2
	33.5	0.67	2.45	34.2	0.21	Likely	0.2
	39.7	1.6	2.17	80.9	0.44	Likely	0.4
						Total	**1.1**

CPT Number	Depth to Top of Layer (feet)	Layer Thickness (feet)	I_C	$Q_{c,1N}$	Factor of Safety	Potential for Liquefaction	Estimated Total Settlement (inches)
CPT-3	7.5	0.33	2.59	17.89	0.2	Likely	0.1
	19.3	1.4	2.3	45.0	0.25	Likely	0.3
	26.2	0.67	2.0	96.8	0.39	Likely	0.2
	31.8	1.3	2.0	89.8	0.39	Likely	0.3
	34.8	0.67	2.4	30.7	0.2	Likely	0.2
	39.0	0.67	2.0	89.0	0.3	Likely	0.2
	44.3	0.67	2.0	102.6	0.5	Likely	0.2
						Total	**1.5**

Table 3: Results of Liquefaction Analyses – CPT Method, continued

CPT Number	Depth to Top of Layer (feet)	Layer Thickness (feet)	I_C	$Q_{c,1N}$	Factor of Safety	Potential for Liquefaction	Estimated Total Settlement (inches)
CPT-4	42.0	1.0	2.47	28.5	0.19	Likely	0.4
	47.0	1.3	2.45	47.4	0.38	Likely	0.3
						Total	**0.7**

4.3.3 Summary

Our analyses indicate that several layers could potentially experience liquefaction triggering that could result in soil softening and post-liquefaction total settlement ranging from approximately ½ to 1½ inches based on the Ishihara and Yoshimine (1990) method. As discussed in the SCEC report, differential movement for level ground sites over deep soil sites will be about half of the total settlement. In our opinion, differential settlements are anticipated to be on the order of ¼ to ¾ inch over a horizontal distance of 50 feet.

4.3.4 Ground Rupture Potential

The methods used to estimate liquefaction settlements assume that there is a sufficient cap of non-liquefiable material to prevent ground rupture or sand boils. For ground rupture to occur, the pore water pressure within the liquefiable soil layer will need to be great enough to break through the overlying non-liquefiable layer, which could cause significant ground deformation and settlement. The work of Youd and Garris (1995) indicates that the non-liquefiable cap of stiff clays is sufficient to prevent ground rupture; therefore, the above total settlement estimates are reasonable.

4.4 LATERAL SPREADING

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

There are no open faces within close proximity of the site where lateral spreading could occur; therefore, in our opinion, the potential for lateral spreading to affect the site is low.

4.5 FLOODING

Based on our internet search of the Federal Emergency Management Agency (FEMA) flood map public database, the site is located within Zone D, an area of undetermined, but possible

flood hazard. We recommend the project civil engineer be retained to confirm this information and verify the base flood elevation, if appropriate.

The Association of Bay Area Governments has compiled a database of Dam Failure Inundation Hazard Mapas (ABAG, 1995). The generalized hazard maps were prepared by dam owners as required by the State Office of Emergency Services; they are intended for planning purposes only. Based on our review of these maps, the site is located within a dam failure inundation area for the Lexington Reservoir.

SECTION 5 – CONCLUSIONS

From a geotechnical viewpoint, the project is feasible provided the recommendations presented in this report are incorporated into design and construction of the project. Primary geotechnical concerns are listed below. A brief discussion of each geotechnical concern follows.

- Liquefaction-induced total and differential settlement
- Undocumented fills
- Moderately to highly expansive surficial soils
- Shallow ground water
- Soil corrosion potential to buried metal and concrete structures

5.1 LIQUEFACTION-INDUCED SETTLEMENT

As discussed, our liquefaction analysis indicates that there is a potential for liquefaction of localized sand layers during a significant seismic event. Although the potential for liquefied sands to vent to the ground surface through cracks in the surficial soils is very low, our analysis indicates that liquefaction-induced settlement on the order of ½ to 1½ inches could occur, resulting in differential settlement up to ¾-inch. Foundations should be designed to tolerate the anticipated total and differential settlements. Detailed foundation recommendations are presented in the "Foundations" section.

5.2 UNDOCUMENTED FILL

Our borings encountered approximately 1 to 2 feet of undocumented fill below the existing surface pavements. The thickness of fill within the existing building footprint is not known at this time. However, based on our review of the original topographic and grading plans, we anticipate that the existing building slab-on-grade is underlain by approximately 2 to 3 feet of undocumented fill. At the location of the former underground storage tank excavation, the fill thickness could be on the order of 8 to 15 feet.

In our opinion, the undocumented fill beneath the existing building may be highly variable and may not uniformly support the loads from the proposed development. Therefore, to provide a

more uniform bearing surface for the proposed structures, we recommend the undocumented fill be removed and replaced as engineered fill. Existing underground improvements, where they exist, will need to be removed or demolished during construction. Detailed recommendations are provided in the "Earthwork" section.

At this time, compaction records for previous site grading or tank excavation backfill were not available for our review. If previous compaction records become available, we should review them to further evaluate previously placed fills and provide supplemental recommendations, if needed.

5.3 EXPANSIVE SOILS

As discussed, moderately to highly expansive surficial soils generally blanket the site. Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. To reduce the potential for damage to the planned structures, we recommend slabs-on-grade have sufficient reinforcement and be supported on a layer of non-expansive fill and that footings extend below the zone of seasonal moisture fluctuation. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering. Grading and foundation recommendations addressing this concern are presented in the "Earthwork" and "Foundations" sections of this report.

5.4 SHALLOW GROUND WATER

Shallow ground water was measured at a depth of approximately 12 to 13 feet below the existing ground surface during drilling. Our CPT pore pressure dissipation test indicated ground water at approximately 5 feet below the existing parking lot grade. Historic ground water level for the vicinity is recorded at about 10 feet. Our experience with similar sites in the vicinity indicates that shallow ground water could impact grading and underground utility construction. These impacts typically consist of potentially wet and unstable foundation subgrade, difficulty achieving compaction, and difficult underground utility installation. Dewatering and shoring of utility trenches may be required in areas where deep utilities are planned. Detailed recommendations addressing this concern are presented in following sections of this report.

5.5 SOIL CORROSION POTENTIAL

A preliminary soil corrosion screening was performed by JDH Corrosion Consultants based on the results of analytical tests on samples of the near-surface soil. In general, the JDH report concludes that the corrosion potential for buried concrete warrants the use of sulfate resistant concrete. In addition, the corrosion potential for buried metallic structures, such as metal pipes, is considered corrosive. JDH recommends that special requirements for corrosion control be made to protect metal pipes. A more detailed discussion of the site corrosion evaluation is presented in Appendix C. As the preliminary soil corrosion screening was based on the results of limited sampling, consideration may be given to collecting and testing additional samples from the upper 5 feet for sulfates and pH to confirm the classification of corrosive to mortar coated steel and concrete.

5.6 PLANS AND SPECIFICATIONS REVIEW

We recommend that we be retained to review the geotechnical aspects of the project structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction.

5.7 CONSTRUCTION OBSERVATION AND TESTING

As site conditions may vary significantly between widely-spaced, small-diameter borings and CPT soundings performed during this investigation, we recommend that Cornerstone be present to provide geotechnical observation and testing during earthwork and foundation construction. This will also allowed Cornerstone an opportunity to evaluate any conditions differing from those encountered during this investigation and provide supplemental recommendations, as necessary. For these reasons, we should be retained to provide geotechnical observation and testing services during construction.

SECTION 6 – EARTHWORK

6.1 SITE DEMOLITION, CLEARING, AND PREPARATION

6.1.1 Site Stripping

The site should be stripped of all surface vegetation, and surface and subsurface improvements within the proposed development area. Demolition of existing improvements is discussed in detail below. A detailed discussion of removal of existing fills is provided later in this report. Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material greater than 3 percent organic content by weight. Based on our site observations, surficial stripping should extend about 2 to 3 inches below existing grade in vegetated areas.

6.1.2 Tree and Shrub Removal

Trees and shrubs designated for removal should have the rootballs and any roots greater than ½-inch diameter removed completely. Grade depressions resulting from rootball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the "Compaction" section of this report.

6.1.3 Demolition of Existing Slabs, Foundations and Pavements

All slabs, foundations, and pavements should be completely removed from within planned development areas so they do not conflict with planned improvements, including underground utilities.

6.1.4 Abandonment of Existing Utilities

All utilities, including any septic tanks, leach fields, or irrigation lines, should be completely removed from within planned building areas. Any existing trench fills should either be removed and replaced as engineered fill with the trench side slopes flattened to at least 1:1, or the trench fills should be potholed and observed by a member of our staff prior to grading. The assessment of the level of risk posed by the particular utility line will determine whether the utility may be abandoned in place or needs to be completely removed. The contractor should assume that all utilities will be removed from within building areas unless provided written confirmation from both the owner and the geotechnical engineer.

Utilities extending beyond the building area may be abandoned in place provided the ends are plugged with concrete, they do not conflict with planned improvements, and that the trench fills do not pose significant risk to the planned surface improvements.

Risks associated with abandoning utilities in place include the potential for future differential settlement of existing trench fills, and/or partial collapse and potential ground loss into utility lines that are not completely filled with grout. The risks for each issue are relatively low for single utility lines less than 4 inches in diameter and increase with increasing pipe diameter.

6.2 REMOVAL OF UNDOCUMENTED FILLS

We encountered undocumented fill up to 2 feet deep in our borings. Additional undocumented fills may be up to 3 feet thick beneath the existing building, and on the order of 8 to 15 feet thick in the former UST area. The approximate lateral extent of the former UST excavation area is shown on the Site Plan, Figure 2. We recommend undocumented fill in proposed building areas be removed in their entirety. The fill should be removed to expose competent native soil and replace with engineered fill. We expect the fill to vary in depth, lateral extent, and consistency across the site. Therefore, we should observe and evaluate the fill further in the field at the time of demolition or construction. We recommend that the grading contractor complete potholes in each grading area, prior to reaching subgrade to check for undocumented fills during grading.

Side slopes of fill removals in building and pavement areas should be sloped at inclinations of 3:1 (horizontal to vertical) or flatter to minimize abrupt variations in fill thickness. Limits of undocumented fill removal should extend beyond building footprints and foundations the same distance as the thickness of fill removal but need not exceed five feet.

Provided the fills meet the "Material for Fill" requirements below, fills may be reused when backfilling excavations. Materials that do not meet these requirements, such as debris, wood, and trash should be screened out of the remaining material and not be reused. Backfill of excavations should be placed in lifts and compacted in accordance with the "Compaction" section below.

6.3 TEMPORARY CUT AND FILL SLOPES

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 15 feet at the site may be classified as OSHA Site C materials. A Cornerstone representative should be retained to confirm the preliminary site classification. Recommended soil parameters for temporary shoring are provided in the "Temporary Shoring" section of this report.

6.4 SUBGRADE PREPARATION

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from fill removal or demolition, the excavation subgrade and subgrade within areas to receive additional site fills, slabs-on-grade and/or pavements should be scarified to a depth of 9 inches, moisture conditioned, and compacted in accordance with the "Compaction" section.

6.5 MATERIAL FOR FILL

6.5.1 Re-Use of On-site Soils

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter; 85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversize material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together, and the compaction method will allow for loosely placed lifts not exceeding 12 inches.

6.5.2 Potential Import Sources

Imported and non-expansive material should be inorganic with a Plasticity Index (PI) of 15 or less. Imported material should have sufficient fines to prevent significant caving during trenching or foundation construction. Samples of potential import sources should be delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stock pile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (Class 2 aggregate base, ¾-inch crushed rock, quarry fines, etc.) listing current laboratory testing data (not older than 4 months from the import date) may be provided for our review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data collected from the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant's review. The potential import

source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

6.6 WET SOIL CONDITIONS

It should be understood that it will be difficult to perform earthwork operations, such as fill placement and trench backfill, during wet weather, especially for fill materials with a significant amount of clay. In addition, due to the relatively shallow ground water levels that may exist during the year, soil excavated during grading or underground utility trenching may be well over optimum moisture content. If the percent water in the fill increases significantly above the optimum moisture content, the soils will be or become soft, yielding, and difficult to compact. Therefore, we recommend that earthwork be performed during periods of suitable weather conditions, such as the "summer" construction season.

As discussed previously, the near-surface soils encountered generally have in-situ moisture contents ranging from 5 to 15 percent over the estimated laboratory optimum. There are several alternatives to facilitate fill placement and trench backfill if earthwork is performed during the wet winter season, and the moisture content of the fill materials increases significantly above optimum moisture.

- Scarify and air dry until the fill materials have adequate moisture for compaction
- Over-excavate wet soil and replace with suitable on-site or import materials with an appropriate moisture content
- Install a geo-synthetic (geotextile or geogrid) to reduce surface yielding and reinforce soft fill
- Chemically treat with quicklime (CaO), kiln-dust, or cement to reduce the moisture content and increase the strength of the fill

The implementation of these methods should be reviewed on a case-by-case basis so that a cost effective approach may be used for the specific conditions at the time of construction.

6.7 COMPACTION REQUIREMENTS

All fills and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557 (latest version) requirements as shown in Table 3. In general, sandy/gravelly soils should be compacted with vibratory equipment; open-graded materials such as crushed rock should be placed in lifts no thicker than 18 inches and consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from a Cornerstone representative) should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moisture can cause unstable conditions.

Table 3: Compaction Requirements

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Fill (within upper 5 feet)	On-Site Expansive Soils	87 – 92	>3
	On-Site Low Expansion Soils	90	>1
General Fill (below a depth of 5 feet)	On-Site Expansive Soils	95	>3
	On-Site Low Expansion Soils	95	>1
Basement Wall Backfill	Without Surface Improvements	90	>1
Basement Wall Backfill	With Surface Improvements	95[4]	>1
Trench Backfill	On-Site Expansive Soils	87 – 92	>3
Trench Backfill	On-Site Low Expansion Soils	90	>1
Trench Backfill (upper 6 inches of subgrade)	On-Site Low Expansion Soils	95	>1
Crushed Rock Fill	¾-inch Clean Crushed Rock	Consolidate In-Place	NA
Non-Expansive Fill	Imported Non-Expansive Fill	90	Optimum
Flatwork Subgrade	On-Site Expansive Soils	87 - 92	>3
Flatwork Subgrade	On-Site Low Expansion Soils	90	>1
Flatwork Aggregate Base	Class 2 Aggregate Base[3]	90	Optimum
Pavement Subgrade	On-Site Expansive Soils	87 - 92	>3
Pavement Subgrade	On-Site Low Expansion Soils	90	>1
Pavement Aggregate Base	Class 2 Aggregate Base[3]	95	Optimum
Asphalt Concrete	Asphalt Concrete	95 (Marshall)	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)
4 – Using light-weight compaction or walls should be braced

6.8 TRENCH BACKFILL

Utility lines constructed within public right-of-ways should be trenched, bedded and shaded, and backfilled in accordance with the local or governing jurisdictional requirements. Utility lines in private improvement areas should be constructed in accordance with the following requirements unless superseded by other governing agency requirements.

All utility lines should be bedded and shaded to at least 6 inches over the top of the lines with crushed rock (3/8-inch-diameter or greater) or well-graded sand and gravel materials conforming to the pipe manufacturer's requirements. Open-graded shading materials should be consolidated in place with vibratory equipment and well-graded materials should be compacted

to at least 90 percent relative compaction with vibratory equipment prior to placing subsequent backfill materials.

General backfill over shading materials may consist of on-site native materials provided they meet the requirements in the "Material for Fill" section, and are moisture conditioned and compacted in accordance with the requirements in the "Compaction" section.

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, the footing will either need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

6.9 SITE DRAINAGE

Surface water ponding should not be allowed adjacent to building foundations, slabs-on-grade, or pavements. Hardscape surfaces should slope away from foundations at least 1 percent towards suitable discharge facilities; landscape areas should slope at least 2 percent. Roof runoff should be directed away from building areas in closed conduits and directed to suitable discharge areas, such as storm drain inlets, paved surfaces, or approved biofiltration swales. Downspouts may discharge onto splash blocks provided the area is covered with asphalt or concrete pavements.

Landscaping drainage inlets should be provided around the proposed foundations that adequately collect irrigation or rain water and direct the water onto pavement or into storm water systems. It is important that the drainage inlets be properly designed and constructed so that the moisture content of the soils surrounding the foundations do not become excessive and no water ponding occurs. Although the foundations are designed to account for some variability in the surrounding soil moisture, excessively moist or desiccated soils located near or below foundations may result in increased differential movement of the foundations.

SECTION 7 – FOUNDATIONS

7.1 SUMMARY OF RECOMMENDATIONS

In our opinion, proposed structures may be supported on conventional shallow footings. Detailed foundation recommendations are provided in subsequent sections of this report.

7.2 SEISMIC DESIGN CRITERIA

The 2001 California Building Code (CBC) provides criteria for the seismic design of buildings in Chapter 16 that will be permitted before January 2008. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and distance to the controlling seismic source/fault system, which may not be the source closest to the site. Table 4 below lists the various factors used to determine the seismic coefficients.

Table 4: 2001 CBC Site Categorization and Site Coefficients

Categorization/Coefficient	Design Value
Soil Profile Type (Table 16-J)	S_D
Seismic Zone (Figure 16-2)	4
Seismic Zone Factor (Table 16-I)	0.4
Controlling Seismic Source Name	Hayward (S.E. Extension)
Controlling Seismic Source Type (Table 16-U)	B
Distance to Controlling Seismic Source (kilometers)	10.6
Near Source Factor N_a (Table 16-S)	1.0
Near Source Factor N_v (Table 16-T)	1.0
Seismic Coefficient C_a (Table 16-Q)	0.44
Seismic Coefficient C_v (Table 16-R)	0.64

If the project will be permitted in 2008, the project structural design will be based on the 2006 International Building Code (IBC), which provides criteria for the seismic design of buildings in Chapter 16. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system. Based on our borings and review of local geologic maps, the site is underlain by stiff alluvial soils to depths on the order of 100 feet with SPT "N" values between 15 and 50 blows per foot; therefore, we have classified the site as Soil Classification D. The mapped spectral acceleration parameters S_S and S_1 were calculated using the USGS computer program *Earthquake Ground Motion Parameters*, Version 5.0.7, revision date June 18, 2007, based on the site coordinates presented below and the site classification. The table below lists the various factors used to determine the seismic coefficients.

Table 5: 2006 IBC Site Classification and Seismic Coefficients

Classification/Coefficient	Design Value
Soil Classification (Table 1613.5.2)	D
Site Latitude	37.349961
Site Longitude	-121.931213
Short Period Mapped Spectral Acceleration, S_S	1.50g
1-second Period Mapped Spectral Acceleration, S_1	0.60g
Seismic Coefficient F_a (Table 1613.5.3(1))	1.0
Seismic Coefficient F_v (Table 1613.5.3(2))	1.5

7.3 FOOTINGS

As discussed, the site is blanketed by previously placed fill that is currently undocumented. Therefore, we recommend the surficial fill be removed and replaced as engineered fill within the proposed building footprint. Subgrade preparation, fill removal, placement, and compaction should be performed in accordance with recommendations provided in the "Earthwork" section.

In our opinion, the new podium buildings may be supported on shallow foundations bearing entirely on natural, undisturbed soil or engineered fill using conventional continuous perimeter strip and isolated interior, shallow spread footings. The bottom of footings should extend at least 24 inches below the lowest adjacent finished grade. Lowest adjacent finished grade may be considered as the bottom of the interior slab-on-grade or the finished exterior grade, excluding landscape topsoil, whichever is lower. Because of the moderate to high expansion potential of the near-surface soils, this relatively deeper footing is recommended to place bearing surfaces below the zone of significant moisture fluctuation in order to reduce the effects of heave or shrinkage.

Spread footings bearing entirely on engineered fill and constructed in accordance with above recommendations would be capable of supporting a maximum allowable bearing pressure of 3,000 psf for dead loads, 4,500 psf for combined dead plus live loads, and 6,000 psf for all loads including wind and seismic. Above pressures are based on factors of safety of 3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected.

7.3.1 Footing Settlement

Structural loading for the proposed structures are not currently developed; however, based on the preliminary structural information we have received, we have estimated the assumed loads presented in Table 5.

Table 6: Anticipated Structural Loading for Low-Rise Structures

Foundation Area	Assumed Loads
Interior Isolated Column Footing (maximum dead + live load)	300 kips – multi-story podium
Exterior Isolated Column Footing (maximum dead + live load)	100 kips – multi-story podium

We also assumed that portions of the site outside of the existing building footprint may require up to 3 feet of new engineered fill to construct the building pad. Based on above loading conditions and allowable bearing pressures, we estimate that the total post-construction settlement will be less than 1 inch, with less than about ½ inch of post-construction differential settlement between adjacent independent foundation elements.

As discussed in the "Conclusions" section, differential settlement of foundation elements may also occur due to liquefaction-induced settlement following strong ground shaking. On a preliminary basis, shallow footings should also be designed to tolerate up to ¾-inch of additional differential settlement over a horizontal distance of 50 feet. The differential settlement values may be interpolated or extrapolated, as needed, for column bay spacing less than or greater than 50-feet. We should be retained to review these estimates once final building pad elevation and structural load information is available.

7.3.2 Lateral Loading

Lateral loads may be resisted by friction between the bottom of footing and the supporting subgrade, and also by passive pressures generated against footing sidewalls. An ultimate frictional resistance of 0.4 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety to the ultimate values above. Where footings are adjacent to landscape areas without hardscape, the upper 12 inches of soil should be neglected when determining lateral passive pressure resistance.

7.3.3 Spread Footing Construction Considerations

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement.

Where utility lines will parallel footings and extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling to prevent desiccation. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations. The Contractor should be notified that some localized softening of footing excavations could occur where the footings extend near the ground water table and are left open for extended periods.

SECTION 8 – CONCRETE SLABS AND PEDESTRIAN PAVEMENTS

8.1 INTERIOR SLABS-ON-GRADE

Due to the moderate to high expansion potential of the near surface soils, any proposed interior slabs-on-grade should be supported on at least 24 inches of non-expansive fill (NEF) to reduce the potential for slab damage due to soil heave. If the slabs will be at least 5 inches thick, the NEF layer may be reduced to 18 inches, and to 15 inches for a 6-inch-thick slab. The NEF layer should be constructed over subgrade prepared in accordance with the recommendations in the "Earthwork" section of this report.

If moisture-sensitive floor coverings are planned, the recommendations in the "Interior Slab Moisture Protection Considerations" section below may be incorporated in the project design if desired. If significant time elapses between initial subgrade preparation and slab-on-grade [NEF] construction, the subgrade should be proof-rolled to confirm subgrade stability, and if the soil has been allowed to dry out, the subgrade should be re- moisture conditioned to at least 3 percent over the optimum moisture content. If the subgrade has been proof-rolled, then the pad subgrade should be scarified prior to moisture conditioning.

The structural engineer should determine the appropriate slab reinforcement for the loading requirements and considering the expansion potential of the underlying soils. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness.

8.2 PODIUM GARAGE SLABS-ON-GRADE

Garage slabs-on-grade should be at least 5 inches thick and if constructed with minimal reinforcement intended for shrinkage control only, should have a minimum compressive strength of 3,000 psi. If the slab will have heavier reinforcing because the slab will also serve as a structural diaphragm, the compressive strength may be reduced to 2,500 psi at the structural engineer's discretion. The garage slab should also be supported on at least 12 inches of non-

expansive fill (NEF), the upper 4 inches of which should consist of either Class 2 aggregate base or ¾-inch clean, crushed rock placed and compacted in accordance with the "Compaction" section of this report. If there will be areas within the garage that are moisture sensitive, such as equipment and elevator rooms, the recommendations in the "Interior Slabs Moisture Protection Considerations" section below may be incorporated in the project design, if desired. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness.

8.3 INTERIOR SLAB MOISTURE PROTECTION CONSIDERATIONS

The following general guidelines for concrete slab-on-grade construction where floor coverings are planned are presented for the consideration by the developer, design team, and contractor. These guidelines are based on information obtained from a variety of sources, including the American Concrete Institute (ACI) and are intended to reduce the potential for moisture-related problems causing floor covering failures, and may be supplemented as necessary based on project-specific requirements. The application of these guidelines or not will not affect the geotechnical aspects of the mat foundation performance.

- Place a minimum 10-mil thick vapor barrier meeting minimum ASTM E 1745, Class C requirements or better directly below the slab. The vapor barrier should extend to the edge of the slab-on-grade. At least 4 inches of free-draining gravel, such as ½-inch or ¾-inch crushed rock with no more than 5 percent passing the ASTM No. 200 sieve, should be placed below the vapor barrier to serve as a capillary break. The crushed rock should be consolidated in place with vibratory equipment. The vapor barrier should be sealed at all seams and penetrations in accordance with manufacturer's recommendations and ASTM E1643 requirements. The crushed rock may be considered as the upper 4 inches of the non-expansive fill requirement.

- The concrete water:cement ratio should be 0.45 or less. Mid-range plasticizers may be used to increase concrete workability and facilitate pumping and placement.

- Water should not be added after initial batching unless the slump is less than specified and/or the resulting water:cement ratio will not exceed 0.45.

- Polishing the concrete surface with metal trowels should not be allowed versus light broom or limited trowel finishing.

- Where floor coverings are planned, all concrete surfaces should be moist cured (kept continuously wet) for at least 7 days by soaking burlap, cotton mats, or carpet, or frequent sprinkling. The moist cure method should be placed as soon after concrete finishing as possible, while resisting surface damage. Chemical curing may be an option depending on the floor covering type.

- Water vapor emission levels and concrete pH should be determined in accordance with ASTM F1869-98 and F710-98 requirements and evaluated against the floor covering manufacturer's requirements prior to installation.

8.4 EXTERIOR FLATWORK

8.4.1 Pedestrian Concrete Flatwork

Exterior slabs-on-grade, such as pedestrian walkways, patios, driveways, and sidewalks, will experience seasonal movement due to the native expansive soils; therefore, some cracking or vertical movement of conventional slabs should be anticipated. There are several alternatives for mitigating the impacts of expansive soils beneath concrete flatwork. We are providing recommendations to reduce distress to concrete flatwork that includes moisture conditioning the subgrade soils, using non-expansive fill, and providing adequate construction and control joints to control cracks that do occur. It should be noted that minor slab movement or localized cracking and/or distress could still occur.

- The minimum recommendation for concrete flatwork constructed on expansive soils is to properly prepare the clayey soils prior to placing concrete. This is typically achieved by scarifying, moisture conditioning, and re-compacting the subgrade soil. Subgrade soil should be moisture conditioned to at least 3 percent over the laboratory optimum and compacted using moderate compaction effort to a relative compaction of 87 to 92 percent (ASTM Test Method D1557). Since the near surface soils will have been previously compacted and tested, the subgrade soils could possibly be moisture conditioned by gradually wetting the soil, depending on the time of year slab construction occurs. This should not include flooding or excessively watering the soil, which would likely result in a soft, unstable subgrade condition, and possible delays in the construction while waiting for the soil to dry out. In general, the subgrade should be relatively firm and non-yielding prior to construction.

- Concrete flatwork, excluding pavements that would be subject to wheel loads, should be at least 4 inches thick and underlain by at least 12 inches of non-expansive fill. Non-expansive fill may include aggregate base, crushed rock, or imported soil with a PI of 15 or less. Non-expansive fill should be compacted to at least 90 percent relative compaction. Flatwork that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below.

- We recommend a maximum control joint spacing of about 2 feet in each direction for each inch of concrete thickness and a construction joint spacing of 10 to 12 feet. Construction joints that abut the foundations or garage slabs should include a felt strip, or approved equivalent, that extends the full depth of the exterior slab. This will help to reduce the potential for permanent vertical offset between the slabs due to friction between the concrete edges. We recommend that exterior slabs be isolated from adjacent foundations.

At the owner's option, if desired to reduce the potential for vertical offset or widening of concrete cracks, consideration should be given to using reinforcing steel, such as No. 3 rebar spaced at 18 inches on center each direction.

SECTION 9 – VEHICULAR PAVEMENTS

9.1 ASPHALT CONCRETE

The following asphalt concrete pavement recommendations tabulated below are based on the Procedure 608 of the Caltrans Highway Design Manual, estimated traffic indicies for various pavement-loading conditions, and on an estimated design R-value of 5. The design R-value was chosen based on our visual observations and classification of soil at the site and engineering judgment considering the variable surface conditions. The associations of the traffic loading condition and Traffic Index (TI) were based on engineering judgment and the proposed project parameters and not upon a traffic study furnished to us. The project civil engineer should determine the appropriate TI based on local requirements.

Table 7: Asphalt Concrete Pavement Recommendations, Design R-value = 5

Design Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Total Pavement Section Thickness (inches)
4.0	2.5	8.0	10.5
4.5	2.5	10.0	12.5
5.0	3.0	10.0	13.0
5.5	3.0	12.0	14.0
6.0	3.5	13.0	16.5
6.5	4.0	14.0	18.0

Frequently, the full asphalt concrete section is not constructed prior to construction traffic loading. This can result in significant loss of asphalt concrete layer life, rutting, or other pavement failures. To improve the pavement life and reduce the potential for pavement distress through construction, we recommend the full design asphalt concrete section be constructed prior to construction traffic loading. Alternatively, a higher traffic index may be chosen for the areas where construction traffic is expected.

Asphalt concrete pavements constructed on expansive subgrade where the adjacent areas will not be irrigated for several months after the pavements are constructed may experience longitudinal cracking parallel to the pavement edge. These cracks typically form within a few feet of the pavement edge and are due to seasonal wetting and drying of the adjacent soil. The cracking may also occur during construction where the adjacent grade is allowed to significantly dry during the summer, pulling moisture out of the pavement subgrade. Any cracks that form should be sealed with bituminous sealant prior to the start of winter rains. One alternative to

reduce the potential for this type of cracking is to install a moisture barrier at least 24 inches deep behind the pavement curb and to completely recondition subgrade soils prior to paving.

9.2 PORTLAND CEMENT CONCRETE

The exterior Portland Cement Concrete (PCC) pavement recommendations tabulated below are based on methods presented in the PCA design manual (need reference). Recommendations for garage slabs-on-grade were provided in the "Concrete Slabs and Pedestrian Pavements" section above. We have provided a few pavement alternatives as an anticipated Average Daily Truck Traffic (ADTT) was not provided. An allowable ADTT should be chosen that is greater than what is expected for the development.

Table 8: PCC Pavement Recommendations, R-value - 5

Allowable ADTT	Minimum PCC Thickness (inches)
0.8	5
13	5½
130	6

The PCC thicknesses above are based on a concrete compressive strength of at least 3,500 psi, supporting the PCC on at least 6 inches of Class 2 aggregate base compacted as recommended in the "Earthwork" section, and laterally restraining the PCC with curbs or concrete shoulders. Adequate expansion and control joints should be included. Consideration of limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness, or as recommended by the structural engineer. Although slab reinforcement is not necessary for structural loading purposes, it would be advantageous to provide minimal reinforcement, such as No. 3 steel reinforced bars placed 18 inches on center in both horizontal directions, to help control cracking. Due to the expansive surficial soils present, we recommend that the construction and expansion joints be dowelled.

Trash enclosure and approach slabs should be a minimum of 6 inches overlying at least 10 inches of Class 2 aggregate base.

9.3 VEHICULAR CONCRETE UNIT PAVERS

Where vehicular concrete unit pavers are desired in standard traffic areas, we recommend that the pavers be underlain by a 6-inch-thick concrete sub-slab designed as discussed above, including the aggregate base section. Pavers should be placed on a bituminous or mortar setting bed over the concrete sub-slab. Where the pavers will be used as an emergency vehicle access (EVA), the pavers should be placed over at least 15 inches of Class 2 aggregate base

and prepared subgrade as recommended in the "Earthwork" section. A maximum 1 inch thick sand setting bed may be used to level the pavers on the aggregate base.

9.4 PAVEMENT CUTOFF

Surface water penetration into the pavement section can significantly reduce the pavement life, due to the native expansive clays. While quantifying the life reduction is difficult, a normal 20-year pavement design could be reduce to less than 10 years; therefore, increased long-term maintenance may be required.

It would be beneficial to include a pavement cut-off, such as deepened curbs, redwood-headers, or "Deep-Root Moisture Barriers" that are keyed into the pavement subgrade. This will help limit the additional long-term maintenance.

SECTION 10 – CONVENTIONAL RETAINING WALLS

10.1 LATERAL EARTH PRESSURES

The structural design of any site retaining wall should include resistance to lateral earth pressures that develop from the soil behind the wall, any undrained water pressure, and surcharge loads acting behind the wall. Provided a drainage system is constructed behind the wall to prevent the build-up of hydrostatic pressures as discussed in the section below, we recommend that walls with level backfill be designed using the lateral earth pressures presented in the table below.

Table 9: Recommended Lateral Earth Pressures

Wall Condition	Lateral Earth Pressure[1]	Additional Surcharge Loads
Unrestrained – Cantilever Wall	45 pcf	$^1/_3$ of vertical loads at top of wall
Restrained – Braced Wall	45 pcf + $8H^2$ psf	½ of vertical loads at top of wall

Note: 1 Lateral earth pressures are based on an equivalent fluid pressure for level backfill conditions
2 H is the distance in feet between the bottom of footing and top of retained soil

If adequate drainage cannot be provided behind the wall, an additional equivalent fluid pressure of 40 pcf should be added to the values above for both restrained and unrestrained walls for the portion of the wall that will not have drainage. Damp proofing or waterproofing of the walls may be considered where moisture penetration and/or efflorescence are not desired.

10.2 WALL DRAINAGE

Adequate drainage may be provided by a subdrain system behind the walls. This system should consist of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with Class 2 Permeable Material per Caltrans Standard Specifications, latest edition. The permeable backfill

should extend at least 12 inches out from the wall and to within 2 feet of outside finished grade. Alternatively, ½-inch to ¾-inch crushed rock may be used in place of the Class 2 Permeable Material provided the crushed rock and pipe are enclosed in filter fabric, such as Mirafi 140N or approved equivalent. The upper 2 feet of wall backfill should consist of compacted on-site soil. The subdrain outlet should be connected to a free-draining outlet or sump. For truck dock walls, weep holes spaced at 6 foot centers can be used as an alternative to a subdrain system.

Miradrain, Geotech Drainage Panels, or Enkadrain drainage matting can be used for wall drainage as an alternative to the Class 2 Permeable Material or drain rock backfill. The drainage panel should be connected to the perforated pipe at the base of the wall, or to some other closed or through-wall system. Miradrain panels should terminate 18 to 24 inches from final exterior grade. The Miradrain panel filter fabric should be extended over the top of and behind the panel to protect it from intrusion of the adjacent soil.

10.3 BACKFILL

Where surface improvements will be located over the retaining wall backfill, backfill placed behind the walls should be compacted to at least 95 percent relative compaction using light compaction equipment. Where no surface improvements are planned, backfill should be compacted to at least 90 percent. If heavy compaction equipment is used, the walls should be temporarily braced.

10.4 FOUNDATIONS

Retaining walls may be supported on a continuous spread footing designed in accordance with the recommendations presented in the "Foundations" section of this report.

SECTION 11 – LIMITATIONS

This report has been prepared for the sole use of Sobrato Development Companies specifically for design of the residential development to be located at 1270 Campbell Avenue in San Jose, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No other warranty, expressed or implied, is made or should be inferred.

Recommendations in this report are based upon the soil and ground water conditions encountered during our subsurface exploration. If variations or unsuitable conditions are encountered during construction, Cornerstone Earth Group, Inc. (Cornerstone) should be contacted to provide supplemental recommendations, as needed.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or his representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone's control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone should review the proposed changes and provide supplemental recommendations, as needed.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services and/or at the time another consultant is retained for follow up service to this report.

SECTION 12 – REFERENCES

California Building Code, 2001, *Structural Engineering Design Provisions*, Vol. 2.

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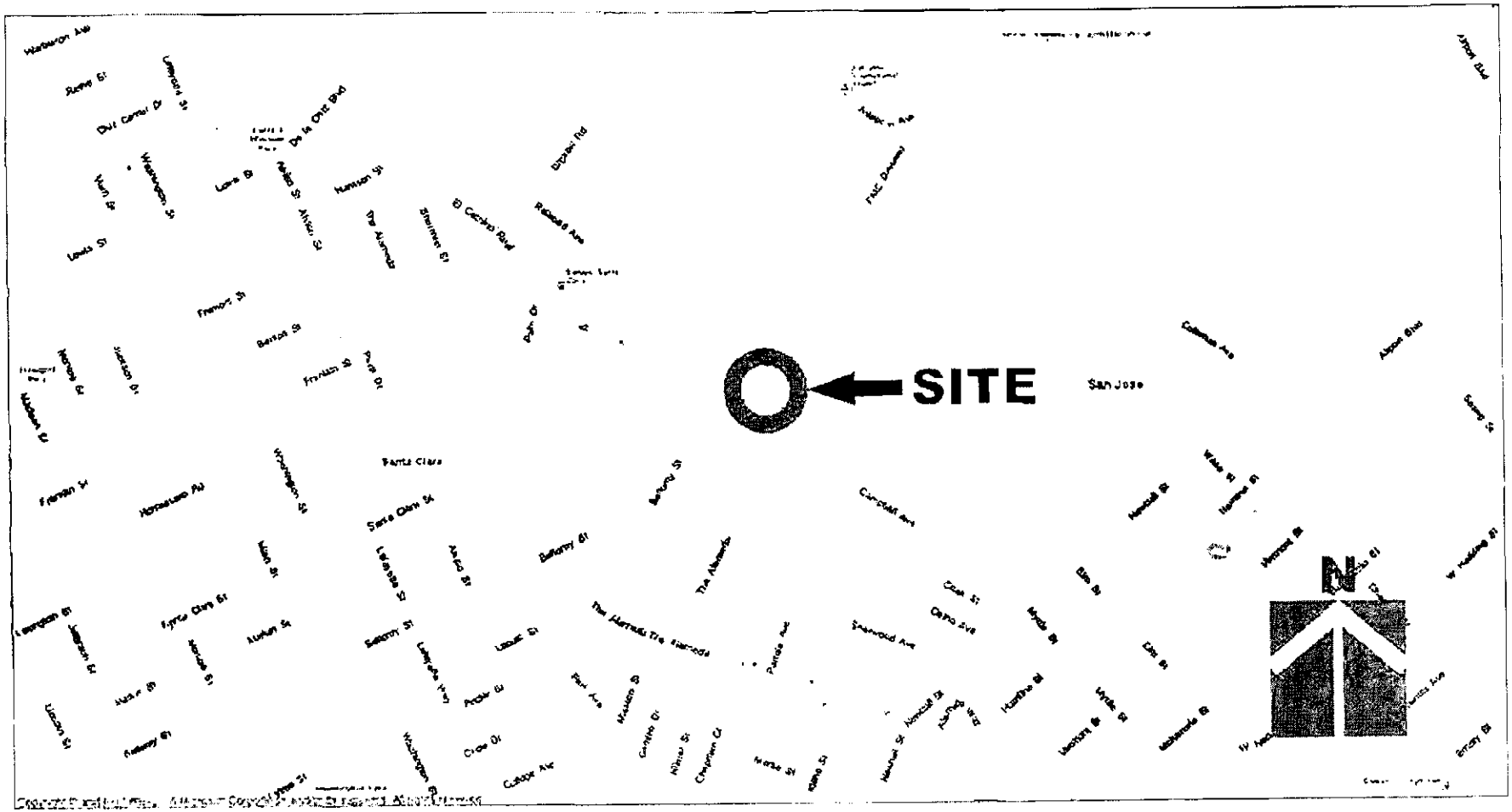
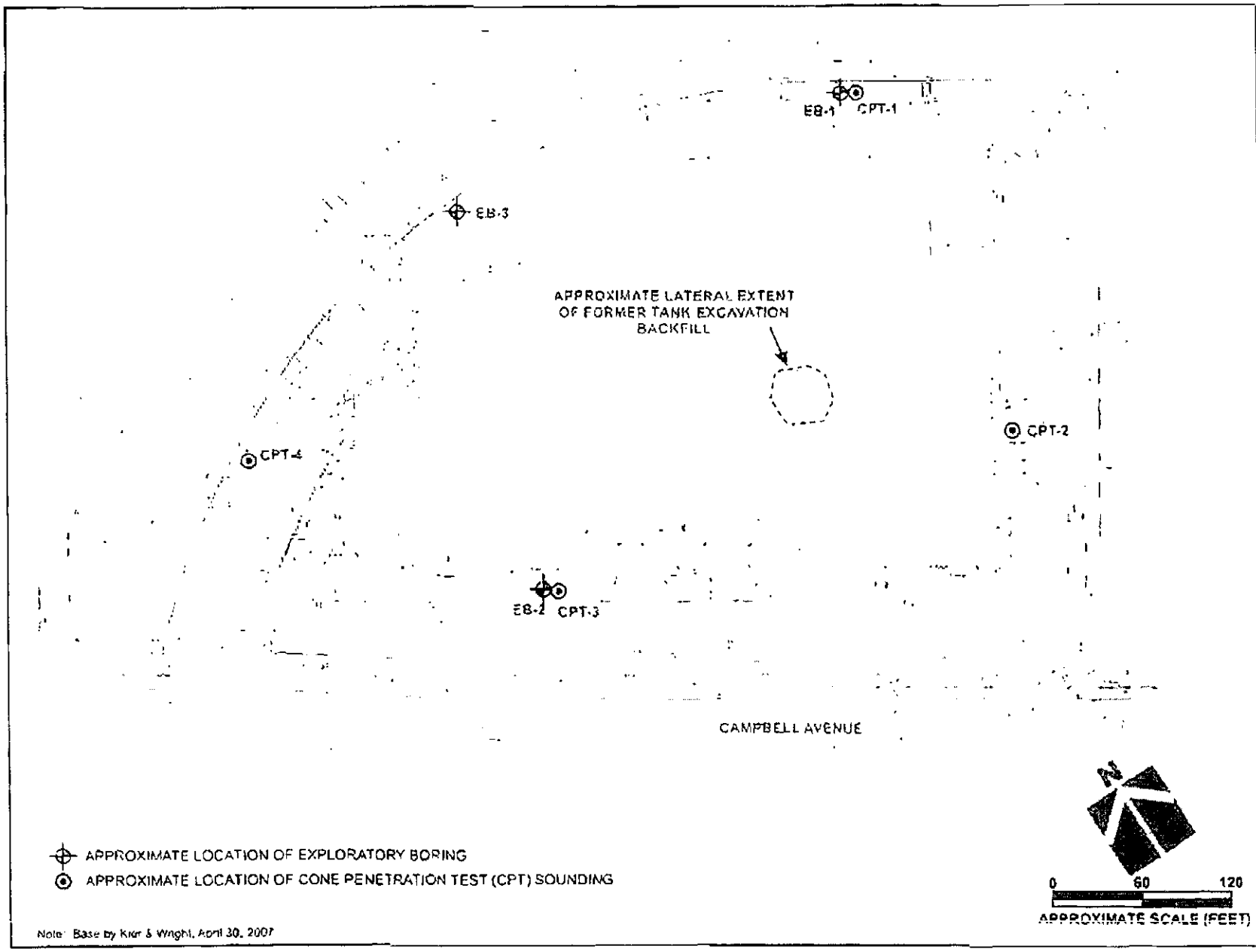


CORNERSTONE EARTH GROUP

Vicinity Map

1270 Campbell Avenue
San Jose and Santa Clara, CA

Project Number	102-3-1
Figure Number	Figure 1
Date	June 2007
Drawn By	MGV



102-3-1

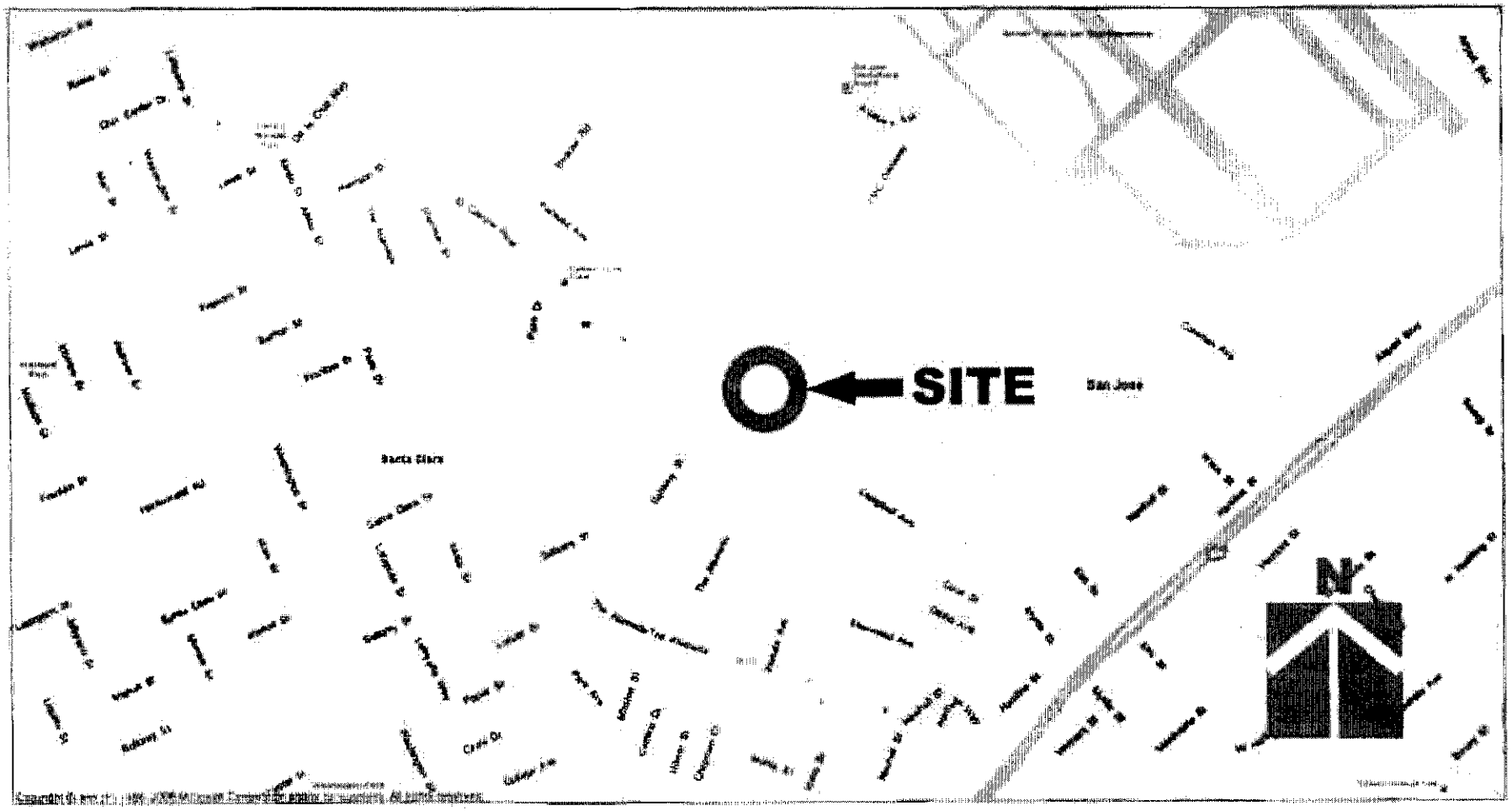
Figure 2

June 2007

Site Plan

1270 Campbell Avenue
San Jose and Santa Clara, CA

CORNERSTONE
EARTH GROUP

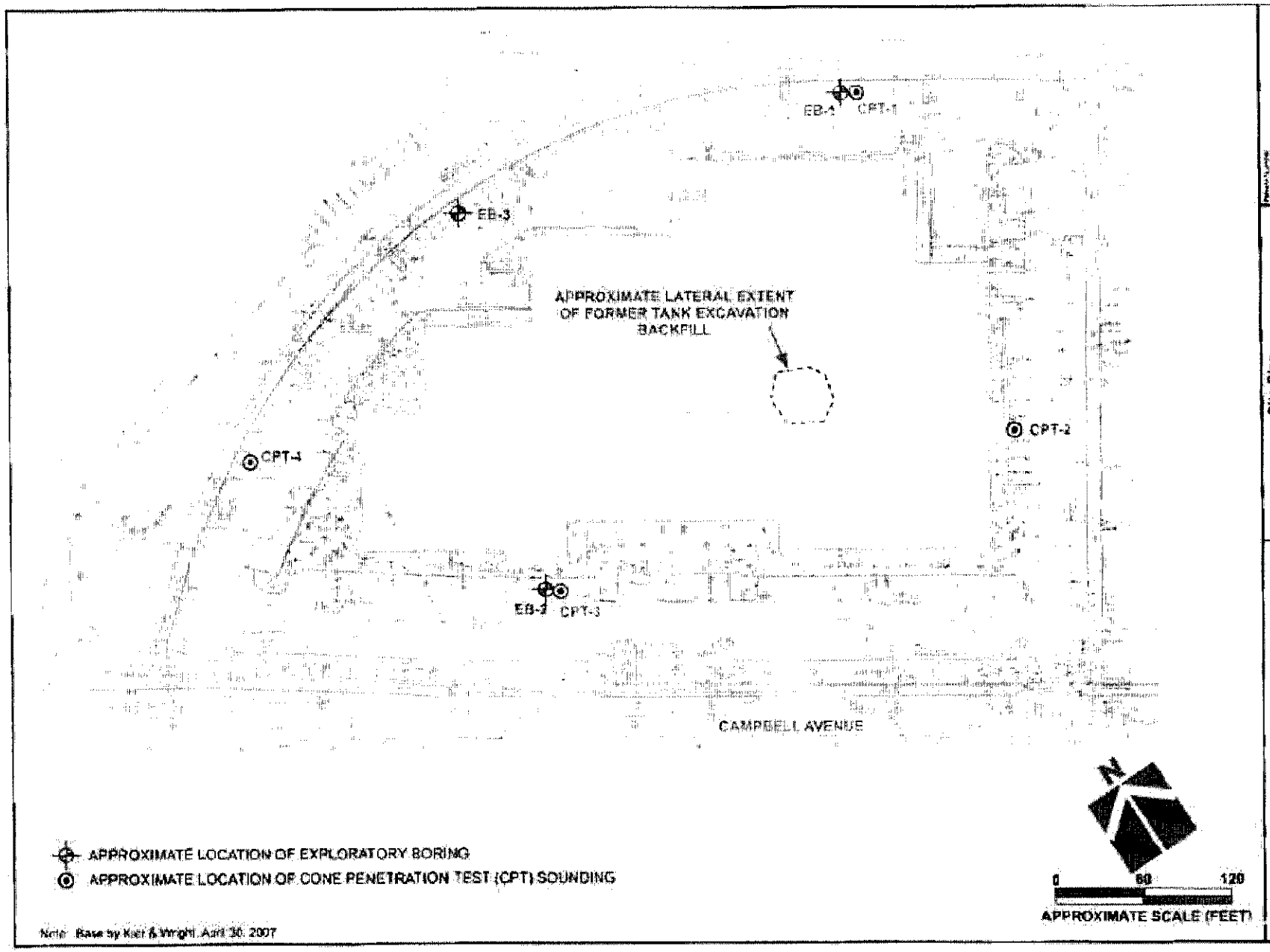


CORNERSTONE EARTH GROUP

Vicinity Map

1270 Campbell Avenue
San Jose and Santa Clara, CA

Project Number	102-3-1
Figure Number	Figure 1
Date: June 2007	Drawn By: MGV



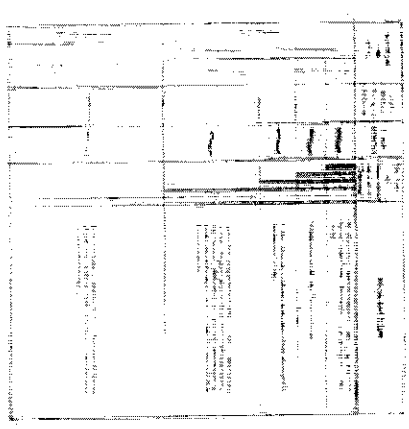
Site Plan

1270 Campbell Avenue
San Jose and Santa Clara, CA

102-3-1

Figure 2

CORNERSTONE EARTH GROUP



0 5 10 15 20
Approximate Scale (Miles)

Base Map: "Map showing recency of faulting, San Francisco - San Jose Quadrangle California," by Bortugno, et.al. (California Division of Mines and Geology) dated 1991.

CORNERSTONE EARTH GROUP	**Regional Fault Map**	Project Number: 102-3-1
	1270 Campbell Avenue **San Jose and Santa Clara, CA**	Figure 3
		Date: June 2007 / Drawn By: MCV

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME 1270 Campbell Avenue
PROJECT NUMBER 102-3-1
PROJECT LOCATION Santa Clara
GROUND ELEVATION 63 FT +/- BORING DEPTH 45 ft.
LATITUDE LONGITUDE
GROUND WATER LEVELS:
AT TIME OF DRILLING 18.5 ft.
AT END OF DRILLING 12.5 ft.

DATE STARTED 5/14/07 DATE COMPLETED 5/14/07
DRILLING CONTRACTOR EGI
DRILLING METHOD 6" Hollow Stem Auger
LOGGED BY JRD
NOTES

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-VALUE (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT, PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE
63.0	0	2.5 inches AC over 6 inches aggregate base						
62.3		**Gravelly Clay (GC) [FILL]** very stiff, moist, grayish brown, gravel to 2 inch, some brick fragments	47	MC-1	117	28		
60.0		**Silty Clay (CH)** stiff, moist, dark gray with light gray mottles, high plasticity, trace of sand, trace of fine gravel	22	MC-2			47	
	5		12	MC-3		12		
			9	MC-4				
	10	no recovery	14	NR				
50.0		**Silty Clay with Sand (CL)** stiff, moist, gray with orange mottles, fine sand, moderate plasticity	16	MC-5B	82	44		
	15			ST-6	72	49		
45.0		**Silty Clay (CL)** medium stiff, wet, gray, trace of roots, moderate plasticity	9	MC-7B		45		
	20			ST-8				
41.5		**Gravelly Sand (SP)** dense, wet, grayish brown, medium to coarse sand, gravel to 1.5 inch, silty fines	48	SPT-9		11		
	25							
36.0		**Silty Sand (SM)** dense, wet, gray, fine to medium sand						
34.0		**Poorly-Graded Sand with Silt (SP-SM)** dense, wet, grayish brown, medium to coarse sand, some gravel to 1 inch	72	SPT-10A		17		
	30							
			35	SPT-11				8
28.0	35							

SYMBOL

UNDRAINED SHEAR STRENGTH, tsf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0 5.0

Continued Next Page

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BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME 1270 Campbell Avenue
PROJECT NUMBER 102-3-1
PROJECT LOCATION Santa Clara

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-VALUE (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT, PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	UNDRAINED SHEAR STRENGTH, tsf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 1.0 2.0 3.0 4.0 5.0
28.0	35		**Silty Clay (CL)** stiff, wet, olive brown, trace of fine sand, medium plasticity							
				13	MC-12B		21		61	○ △
23.0	40		**Clayey Sand (SC)** medium dense, wet, brown, fine to medium sand, moderate plasticity fines							
22.0			**Poorly-Graded Sand (SP)** dense, wet, gray, fine to medium sand							
				71	SPT-13					
13.0	45		Bottom of Boring at 45.0 feet.							
	50									
	55									
	60									
	65									
	70									
	75									

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME 1270 Campbell Avenue
PROJECT NUMBER 102-3-1
PROJECT LOCATION Santa Clara
GROUND ELEVATION 62 FT +/- BORING DEPTH 45 ft.
LATITUDE LONGITUDE
GROUND WATER LEVELS:
AT TIME OF DRILLING 17 ft.
AT END OF DRILLING 13 ft.

DATE STARTED 5/14/07 DATE COMPLETED 5/14/07
DRILLING CONTRACTOR EGI
DRILLING METHOD 6" Hollow Stem Auger
LOGGED BY JRD
NOTES

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION
62.0	0	3 inches AC over 7 inches aggregate base
61.2		**Silty Clay with Gravel (CL) [FILL]** stiff, moist, grayish brown, gravel to 1 inch, some sand
60.0		**Silty Clay (CH)** stiff, moist, black, moderate to high plasticity
58.5	5	**Silty Clay (CL)** stiff, moist, olive gray with orange mottles, moderate plasticity
	10	
	15	
44.5		**Sandy Clay (CL)** stiff, wet, olive-brown, fine sand, moderate plasticity
43.0	20	**Sandy Silt (ML)** stiff, very moist, olive brown with orange mottles, fine to medium sand
41.0		**Silty Sand with Gravel (SM)** dense, wet, gray, medium to coarse sand, gravel to 1.5 inch
	25	decreasing fines
	30	
30.0		**Sandy Clay (CL)** medium, stiff, wet, bluish gray, fine sand, low to moderate plasticity
27.0	35	*Continued Next Page*

N-VALUE (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT, PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE
20	MC-1A	103	23		
21	MC-2		28		
18	MC-3B	92	30		
11	MC-4		37		
	ST-5	86	36		
14	MC-6B		32		
	ST-7				
16	MC-8B				53
35	SPT-9				
54	SPT-10				
65	SPT-11				
10	SPT-12		24		58

UNDRAINED SHEAR STRENGTH, tsf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0 5.0

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME 1270 Campbell Avenue

PROJECT NUMBER 102-3-1

PROJECT LOCATION Santa Clara

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-VALUE (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT, PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	UNDRAINED SHEAR STRENGTH, tsf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 1.0 2.0 3.0 4.0 5.0
23.0	35		**Silty Clay (CL)** stiff, wet, olive brown, trace of fine sand, medium plasticity	13	MC-12B		21		61	○ △
23.0	40		**Clayey Sand (SC)** medium dense, wet, brown, fine to medium sand, moderate plasticity fines							
22.0			**Poorly-Graded Sand (SP)** dense, wet, gray, fine to medium sand	71	SPT-13					
13.0	45		Bottom of Boring at 45.0 feet.							
	50									
	55									
	60									
	65									
	70									
	75									

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BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME 1270 Campbell Avenue
PROJECT NUMBER 102-3-1
PROJECT LOCATION Santa Clara
GROUND ELEVATION 62 FT +/- BORING DEPTH 47.5 ft.
LATITUDE LONGITUDE
GROUND WATER LEVELS:
AT TIME OF DRILLING 18 ft.
AT END OF DRILLING 13 ft.

DATE STARTED 5/14/07 DATE COMPLETED 5/14/07
DRILLING CONTRACTOR EGI
DRILLING METHOD 6" Hollow Stem Auger
LOGGED BY JRD
NOTES

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	DESCRIPTION
62.0	0	3 inches AC over 7 inches aggregate base
61.2		**Silty Clay (CL) [Fill]** stiff, moist, dark brown with light brown mottles, some sand and gravel, moderate plasticity
59.0	5	**Silty Clay (CH)** stiff, moist, gray with dark gray mottling, trace of fine sand, moderate plasticity; color change to olive brown
49.0	10	**Sandy Clay (CL)** stiff, moist, olive brown with gray mottles, fine sand, moderate plasticity
45.0	15	**Clayey Silt with Sand (ML)** stiff, wet, gray with orange mottling, fine sand, some clayey fines, low plasticity
41.0	20	**Sandy Clay (CL)** stiff, wet, bluish gray with orange mottles, fine to medium sand, low to moderate plasticity
35.0	25	**Silty Clay (CL)** stiff, moist, light gray, trace of fine sand, trace of carbonate modules, moderate plasticity
27.0	30, 35	

Continued Next Page

N-VALUE (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT, PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE
24	MC-1	22	23	23	
16	MC-2		33		
19	MC-3A	86	32		
12	MC-4		40		
	ST-5	83	37		
13	MC-6				
17	MC-7B	90	32		56
	ST-8	99	24		
17	MC-9	94	30		
22	MC-10		26		
11	MC-11B		26		

UNDRAINED SHEAR STRENGTH, tsf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0 5.0

BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME 1270 Campbell Avenue

PROJECT NUMBER 102-3-1

PROJECT LOCATION Santa Clara

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-VALUE (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT, PCF	NATURAL MOISTURE CONTENT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	UNDRAINED SHEAR STRENGTH, tsf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0 5.0)
27.0	35									
25.0			**Sandy Clay (CL)** stiff, wet, bluish gray, fine to medium sand, slight hydrocarbon odor	16	MC-12B		21		57	
	40			12	SPT-13A		28		64	
17.0	45		**Sandy Clay (CL)** very stiff, wet, gray, fine to medium sand, moderate plasticity, slight hydrocarbon odor	25	SPT-14		23		69	
14.5			Bottom of Boring at 47.5 feet.							
	50									
	55									
	60									
	65									
	70									
	75									

Cone Penetration Test Data & Interpretation

Soil behavior type and stratigraphic interpretation is based on relationships between cone bearing (q_c), sleeve friction (f_s), and pore water pressure (u_2). The friction ratio (R_f) is a calculated parameter defined by $100 f_s/q_c$ and is used to infer soil behavior type. Generally:

Cohesive soils (clays)

- High friction ratio (R_f) due to small cone bearing (q_c)
- Generate large excess pore water pressures (u_2)

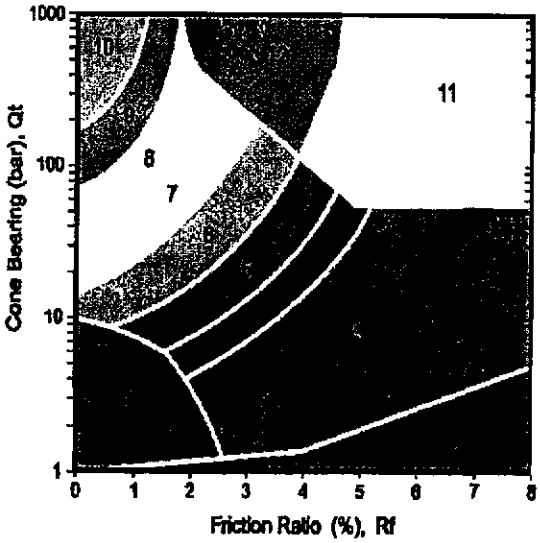
Cohesionless soils (sands)

- Low friction ratio (R_f) due to large cone bearing (q_c)
- Generate very little excess pore water pressures (u_2)

A complete set of baseline readings are taken prior to and at the completion of each sounding to determine temperature shifts and any zero load offsets. Corrections for temperature shifts and zero load offsets can be extremely important, especially when the recorded loads are relatively small. In sandy soils, however, these corrections are generally negligible.

The cone penetration test data collected from your site is presented in graphical form in Appendix CPT. The data includes CPT logs of measured soil parameters, computer calculations of interpreted soil behavior types (SBT), and additional geotechnical parameters. A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Soil interpretation for this project was conducted using recent correlations developed by Robertson et al, 1990, *Figure SBT*. Note that it is not always possible to clearly identify a soil type based solely on q_c, f_s, and u_2. In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type.



ZONE	Qt/N	SBT
1	2	Sensitive, fine grained
2	1	Organic materials
3	1	Clay
4	1.5	Silty clay to clay
5	2	Clayey silt to silty clay
6	2.5	Sandy silt to clayey silt
7	3	Silty sand to sandy silt
8	4	Sand to silty sand
9	5	Sand
10	6	Gravely sand to sand
11	1	Very stiff fine grained*
12	2	Sand to clayey sand*

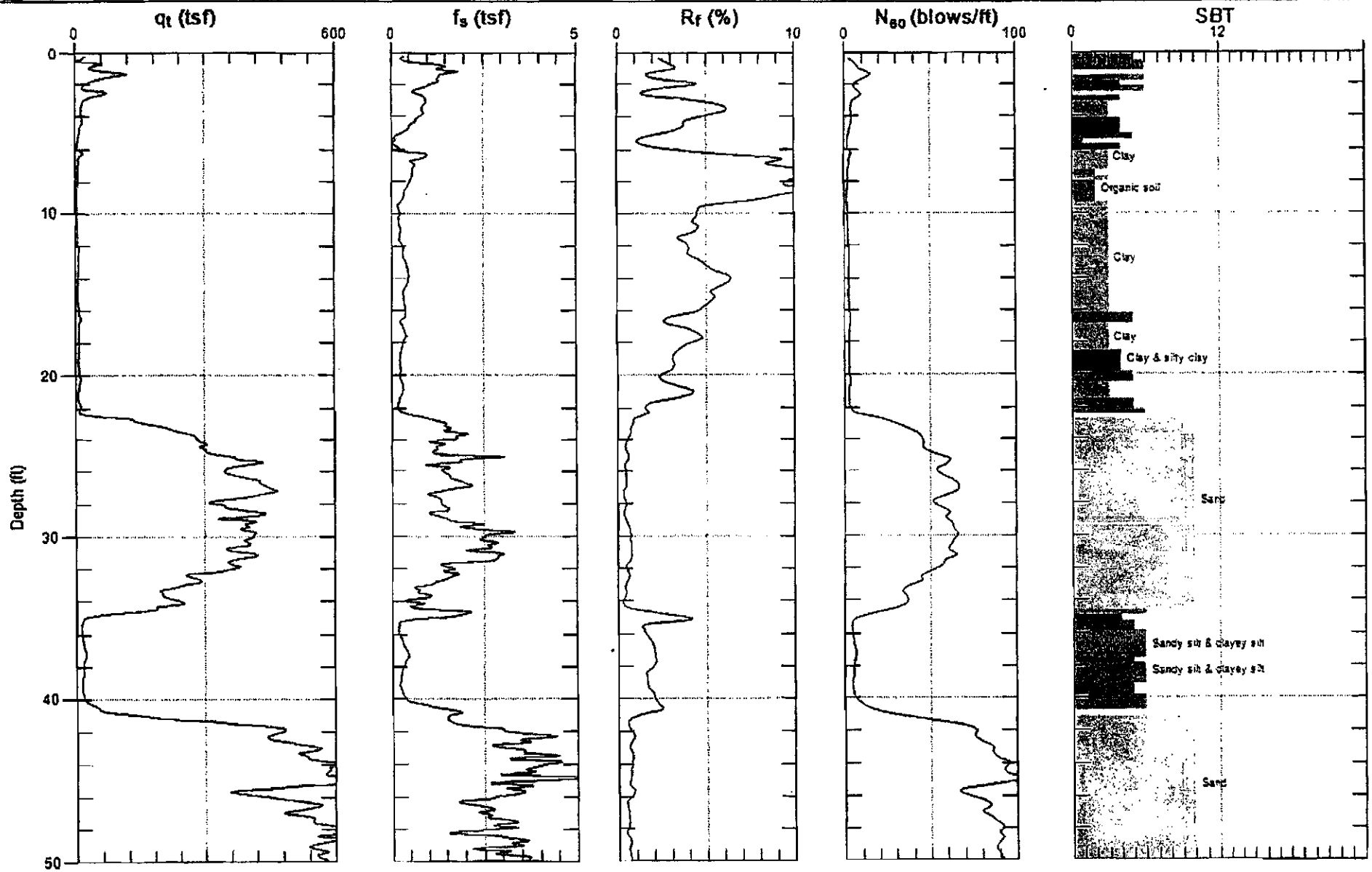
*over consolidated or cemented

Figure SBT

CORNERSTONE EARTH GROUP

Site: 1270 CAMPBELL AVE.
Sounding: CPT-01

Engineer: J.DYE
Date: 5/10/2007 11:15



Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

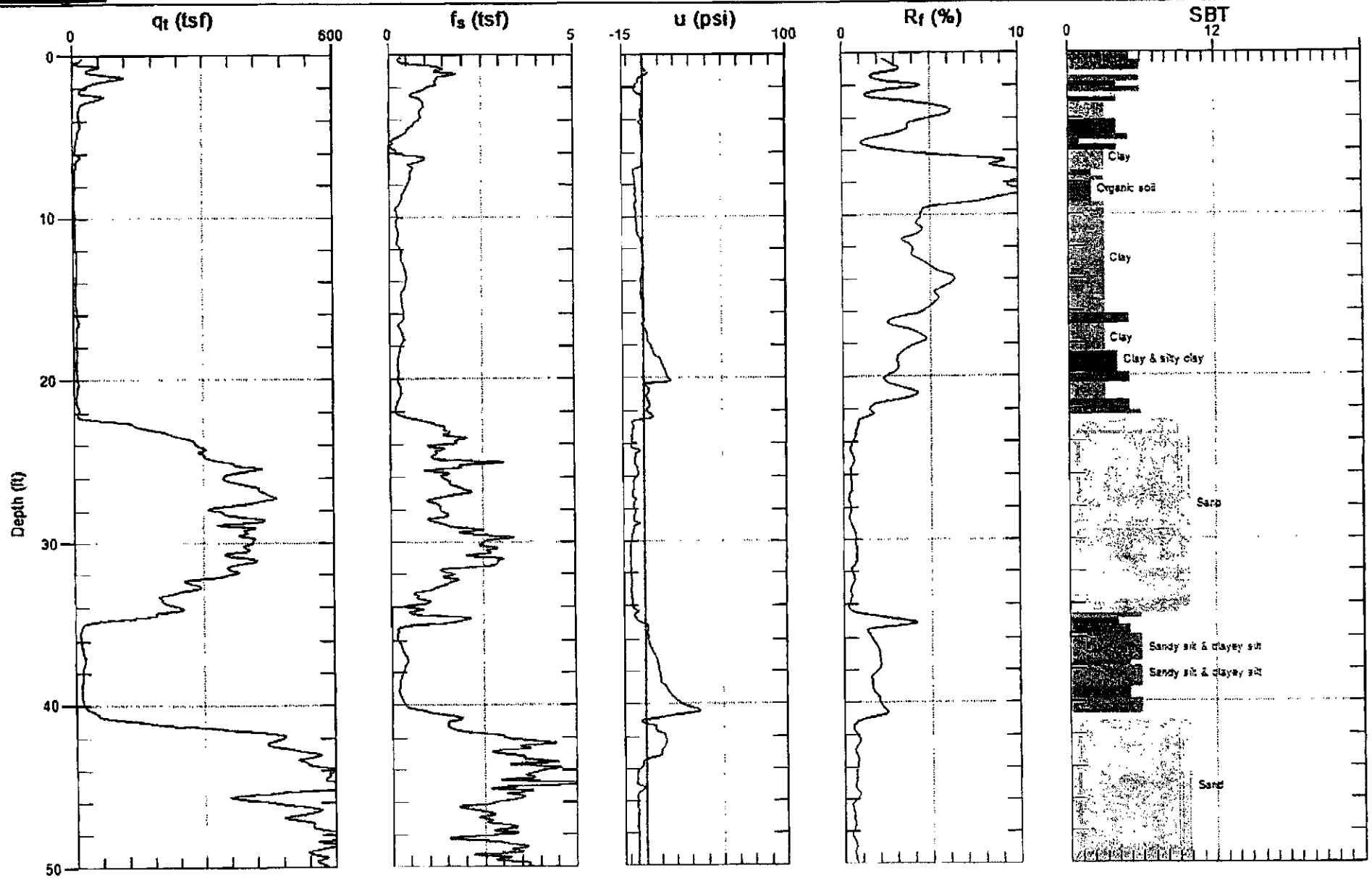
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CORNERSTONE EARTH GROUP

Site: 1270 CAMPBELL AVE.
Sounding: CPT-01

Engineer: J.DYE
Date: 5/10/2007 11:15



Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

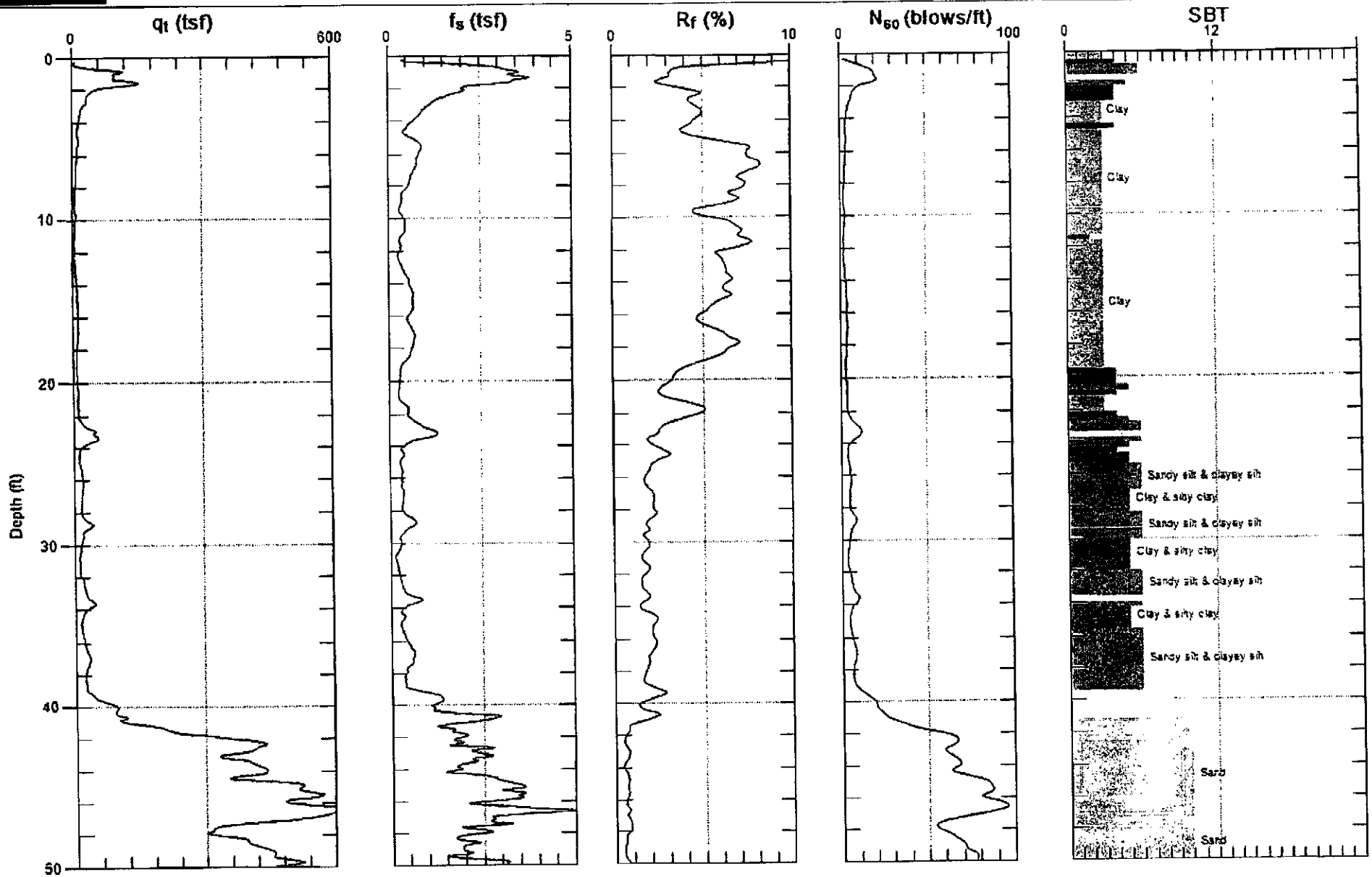
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CORNERSTONE EARTH GROUP

Site: 1270 CAMPBELL AVE.
Sounding: CPT-02

Engineer: J.DYE
Date: 5/10/2007 12:22



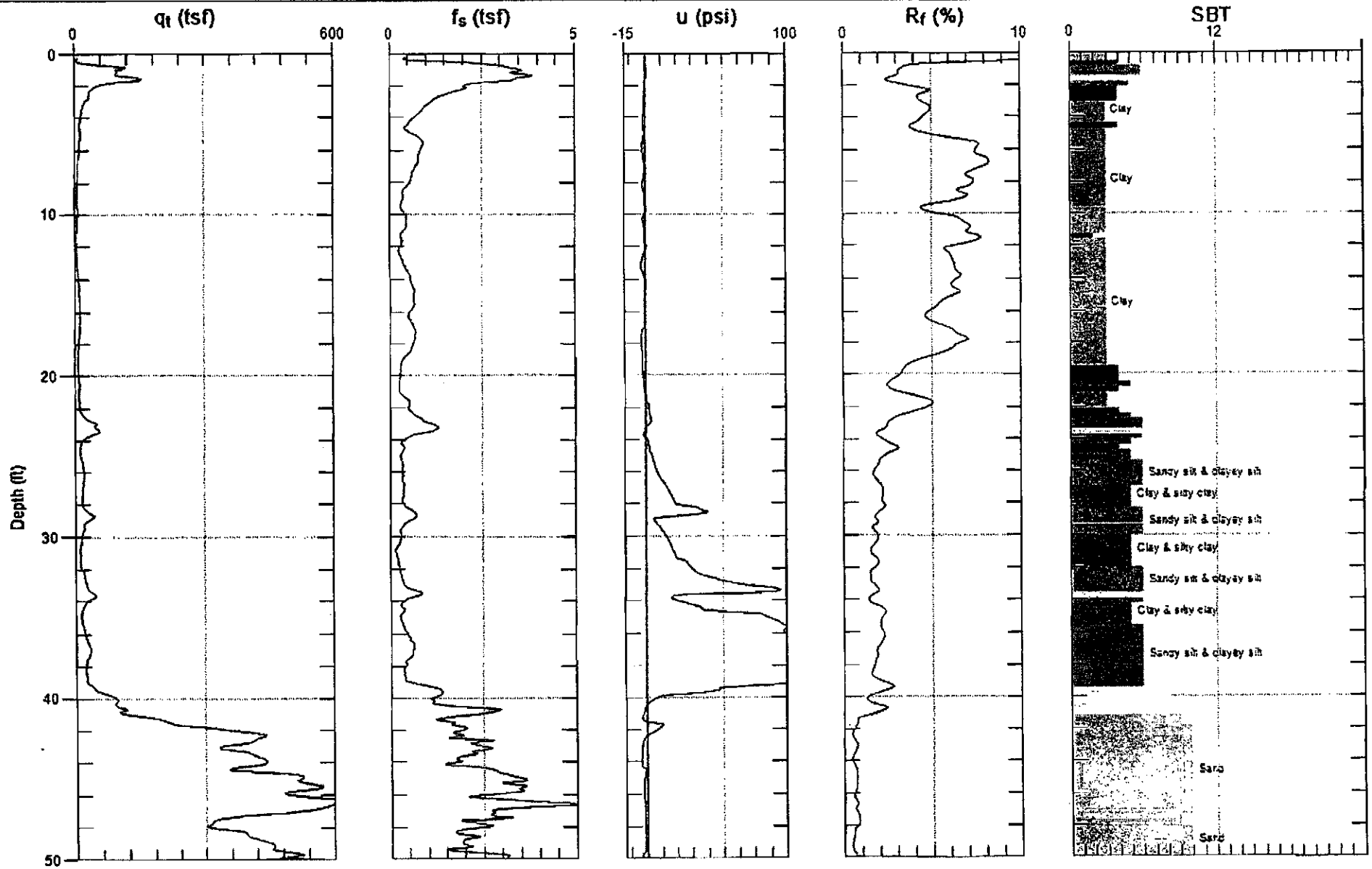
Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

CORNERSTONE EARTH GROUP

Site: 1270 CAMPBELL AVE.
Sounding: CPT-02

Engineer: J.DYE
Date: 5/10/2007 12:22



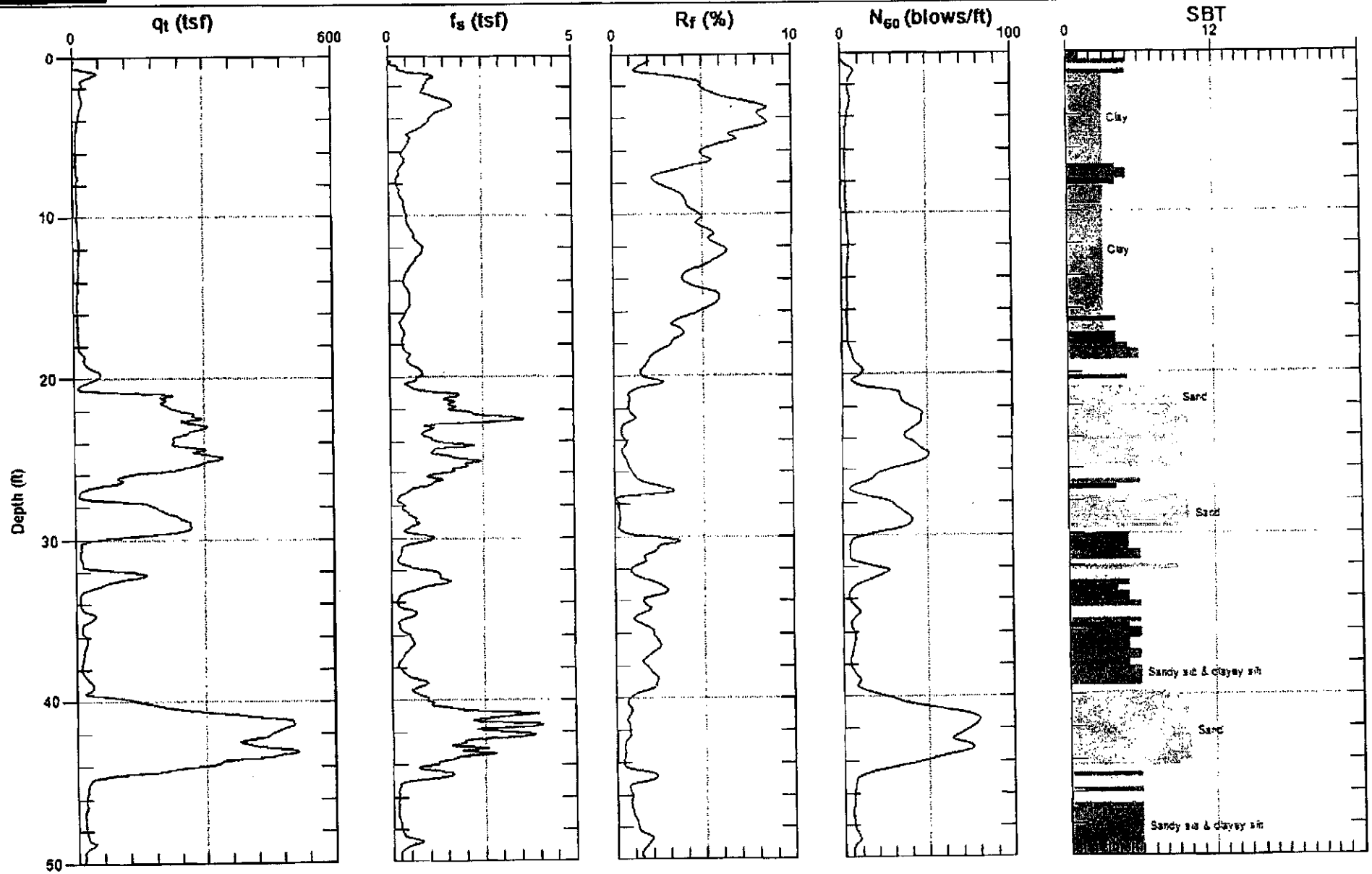
Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

CORNERSTONE EARTH GROUP

Site: 1270 CAMPBELL AVE.
Sounding: CPT-03

Engineer: J.DYE
Date: 5/10/2007 07:54



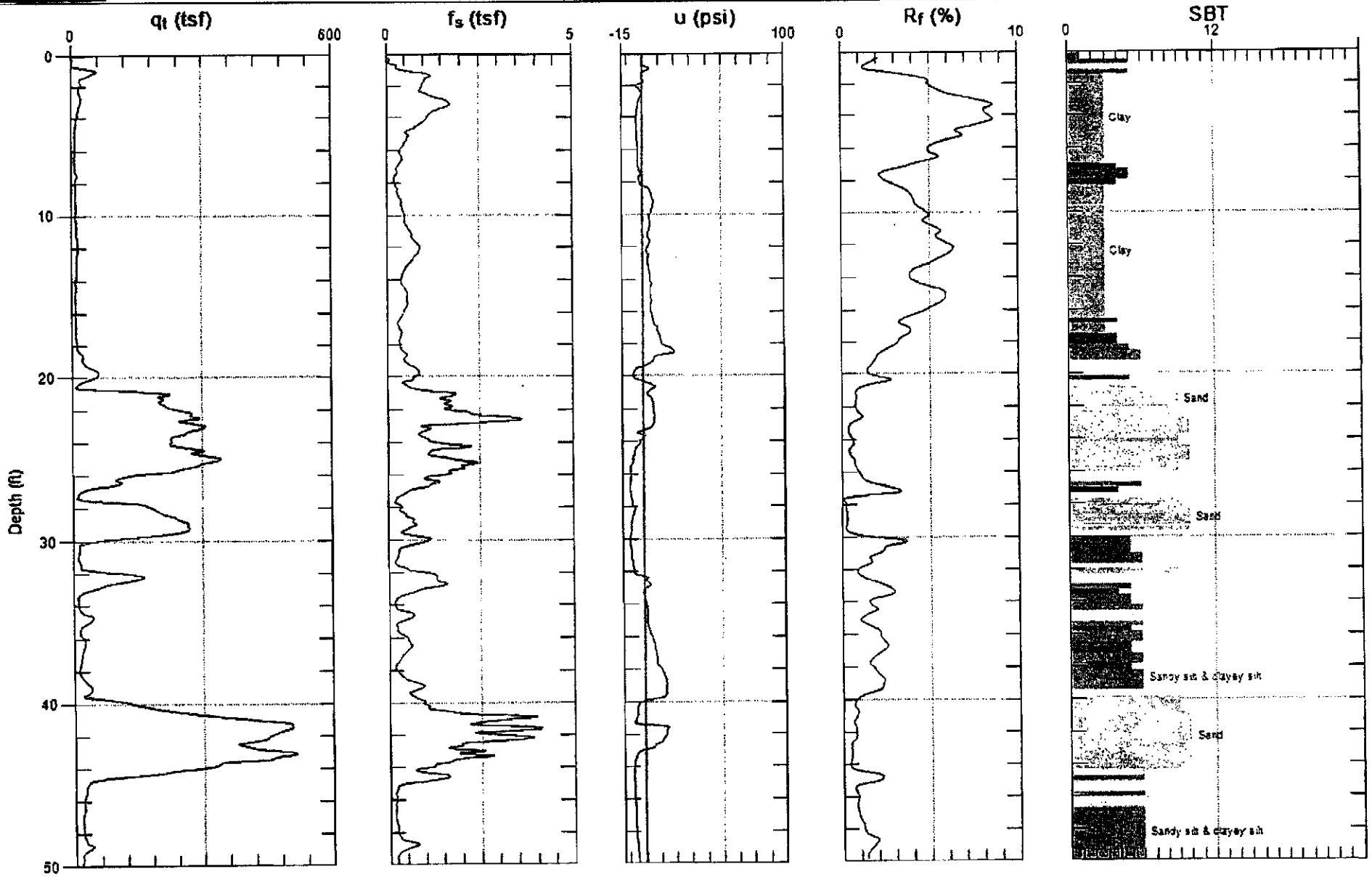
Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

CORNERSTONE EARTH GROUP

Site: 1270 CAMPBELL AVE.
Sounding: CPT-03

Engineer: J.DYE
Date: 5/10/2007 07:54



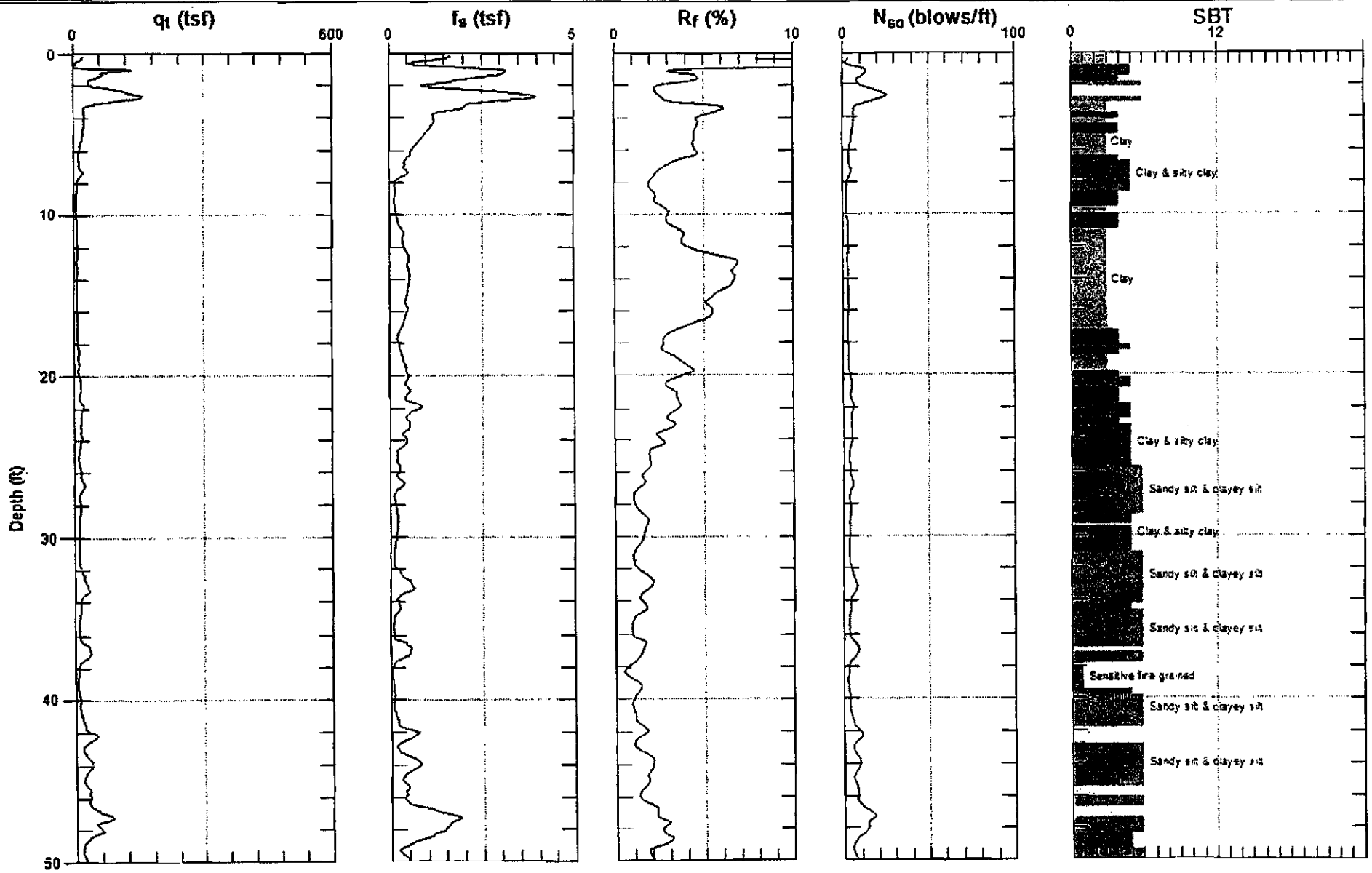
Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

CORNERSTONE EARTH GROUP

Site: 1270 CAMPBELL AVE.
Sounding: CPT-04

Engineer: J.DYE
Date: 5/10/2007 09:11



Max. Depth: 50.197 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX B – LABORATORY TEST PROGRAM

The laboratory testing program was performed to evaluate the physical and mechanical properties of the soils retrieved from the site to aid in verifying soil classification.

Moisture Content
The natural water content was determined (ASTM D2216) on 31 samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

Dry Densities
In place dry density determinations (ASTM D2937) were performed on 11 samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

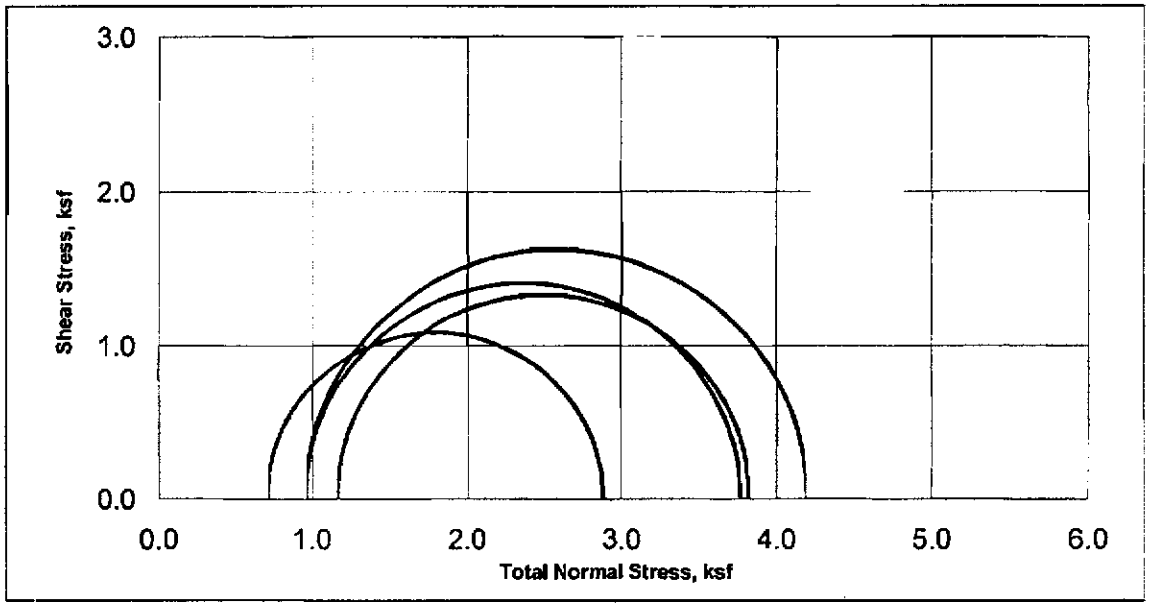
Washed Sieve Analyses
The percent soil fraction passing the No. 200 sieve (ASTM D1140) was determined on 11 samples of the subsurface soils to aid in the classification of these soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

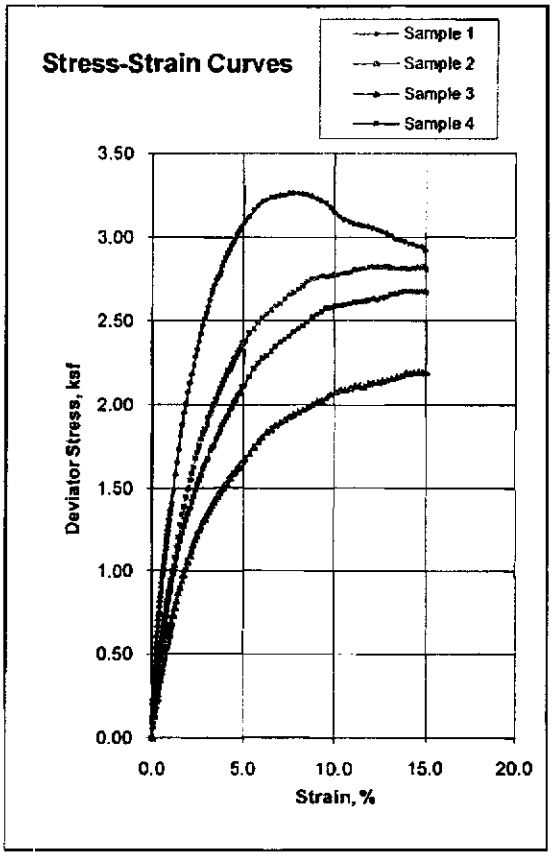
Plasticity Index: Two Plasticity Index determinations (ASTM D4318) were performed on samples of the subsurface soils to measure the range of water contents over which this material exhibits plasticity. The Plasticity Index was used to classify the soil in accordance with the Unified Soil Classification System and to evaluate the soil expansion potential. Results of these tests indicate that the surficial soil is low plasticity.

Triaxial Undrained Unconsolidated Shear Strength: The undrained shear strength was determined on four samples by undrained unconsolidated triaxial shear strength testing. The results of these tests are shown on the log at the appropriate depth and included as part of this appendix.

Consolidation: Two consolidation tests (ASTM D2435) were performed on undisturbed samples of the subsurface clayey soils to assist in evaluating the compressibility property of this soil. Results of the consolidation tests are presented graphically in this appendix.

Unconsolidated-Undrained Triaxial Test
ASTM D-2850





Sample Data				
	1	2	3	4
Moisture %	35.7	37.0	30.4	32.4
Dry Den,pcf	85.9	82.9	91.8	89.8
Void Ratio	0.963	1.034	0.836	0.876
Saturation %	99.9	96.6	98.2	99.9
Height in	6.01	5.99	5.04	5.00
Diameter in	2.84	2.87	2.38	2.40
Cell psi	6.6	6.6	4.9	8.0
Strain %	7.50	11.60	13.80	13.80
Deviator, ksf	3.265	2.823	2.193	2.676
Rate %/min	1.00	1.00	0.99	1.00
in/min	0.060	0.060	0.050	0.050
Job No.:	640-013			
Client:	Cornerstone Earth Group			
Project:	1270 Campbell Ave - 102-3-1			
Boring:	EB-2	EB-3	EB-2	EB-3
Sample:	5	5	3B	6
Depth ft:	10-12	10-12	5.5	13.8

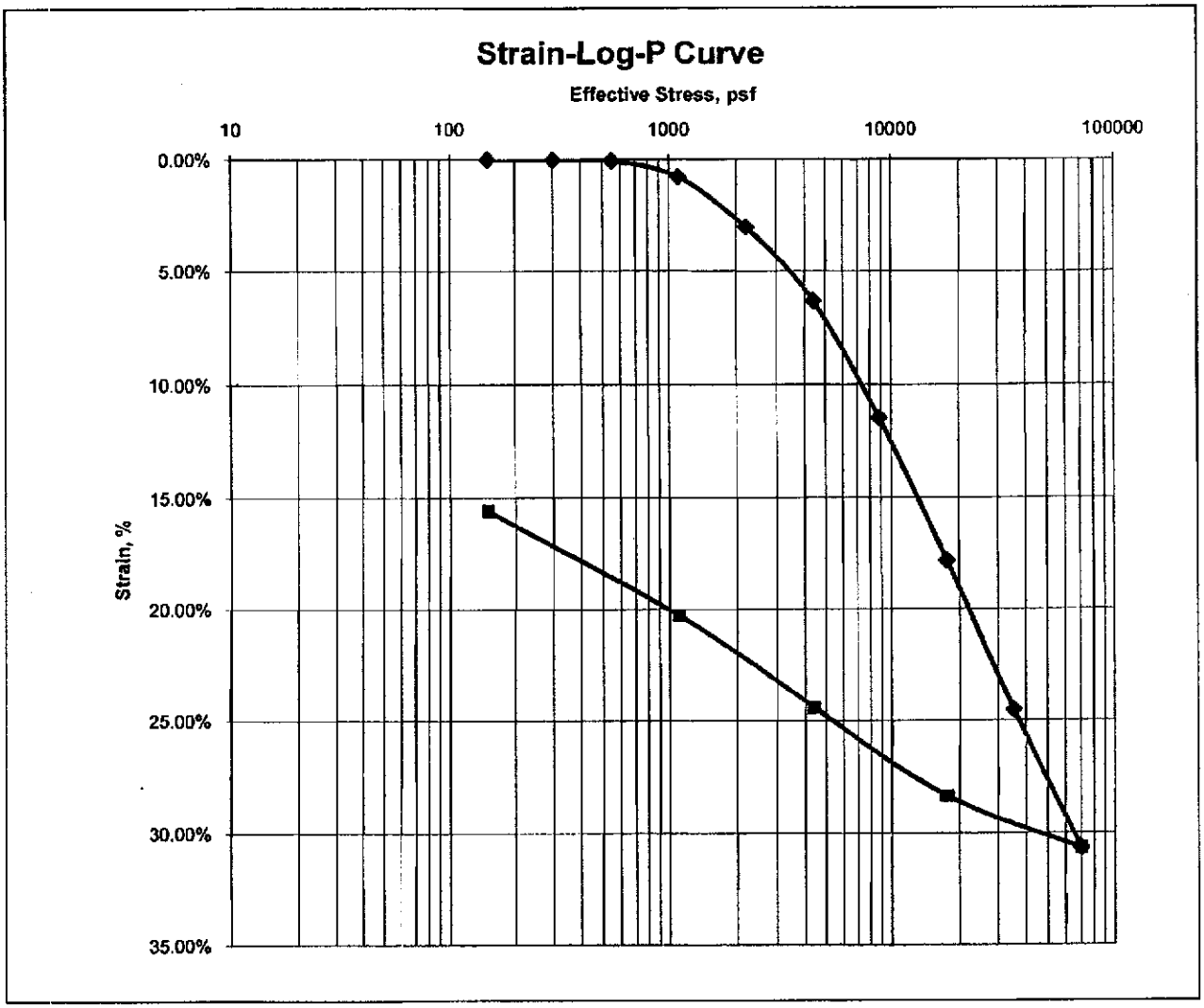
Visual Soil Description	
Sample #	
1	Dark Gray CLAY
2	Dark Gray CLAY
3	Gray CLAY
4	Dark Gray CLAY

Remarks:

FIGURE B-1

Consolidation Test
ASTM D2435

Job No.:	640-013	Boring:	EB-1	Run By:	MD
Client:	Cornerstone Earth Group	Sample:	6	Reduced:	PJ
Project:	1270 Campbell Ave - 102-3-1	Depth, ft.:	15-17	Checked:	PJ/DC
Soil Type:	Gray CLAY (Silty)			Date:	6/4/2007



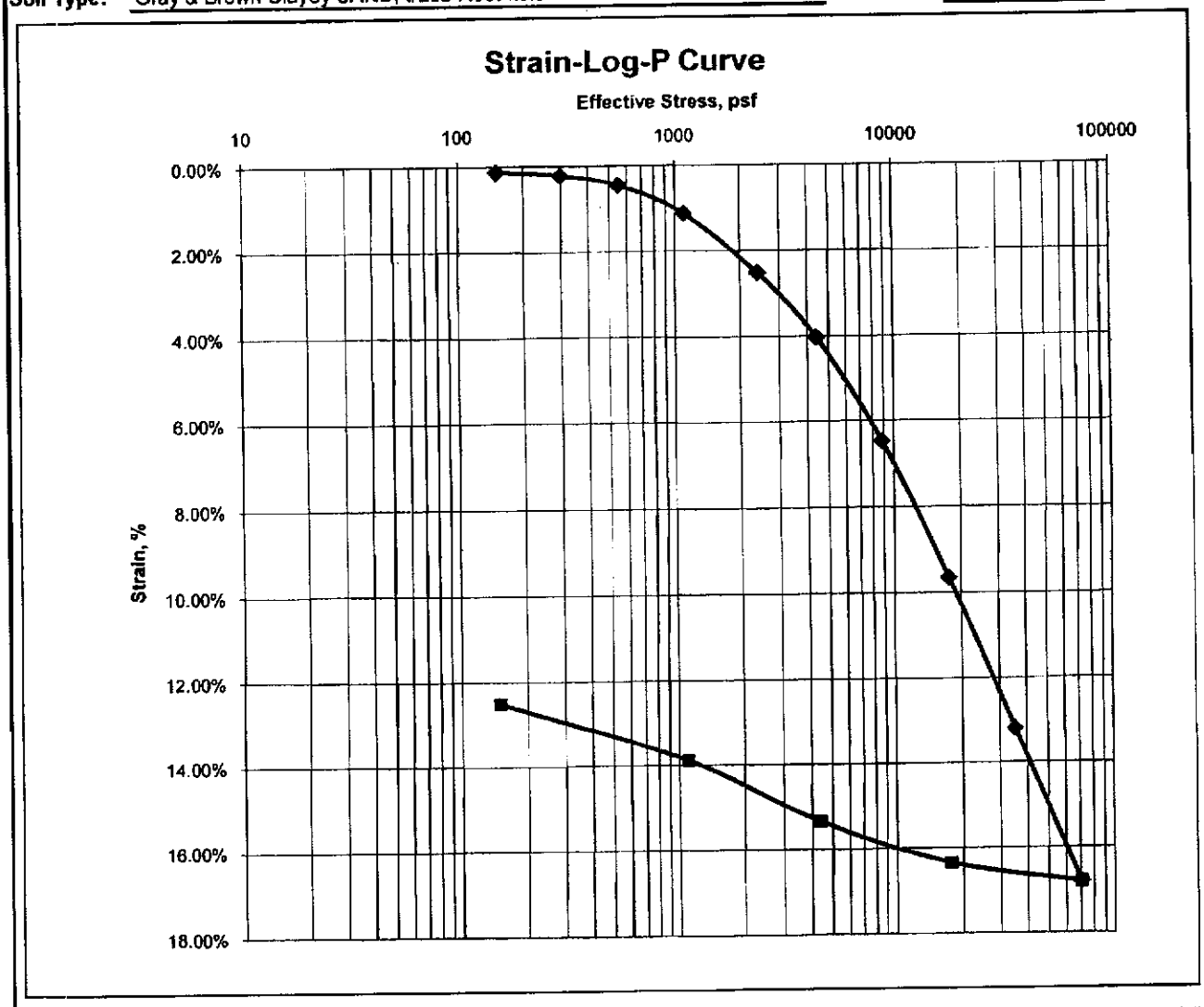
Ass. Gs = 2.7	Initial	Final
Moisture %:	49.4	37.8
Dry Density, pcf:	72.1	83.4
Void Ratio:	1.338	1.020
% Saturation:	99.8	100

Remarks:

FIGURE B-2

Consolidation Test
ASTM D2435

Job No.:	640-013	**Boring:**	EB-3	**Run By:**	MD
Client:	Cornerstone Earth Grou	**Sample:**	8	**Reduced:**	PJ
Project:	1270 Campbell Ave - 102-3-1	**Depth, ft.:**	20-22.5	**Checked:**	PJ/DC
Soil Type:	Gray & Brown Clayey SAND, trace Root holes			**Date:**	5/31/2007



Ass. Gs = 2.7	Initial	Final
Moisture %:	24.0	18.8
Dry Density, pcf:	98.6	111.9
Void Ratio:	0.709	0.506
% Saturation:	91.3	100

Remarks: The 2200 psf point was adjusted to 2400 psf in order to smooth the curve.

FIGURE B-3

APPENDIX C – SITE CORROSIVITY EVALUATION

JDH CORROSION CONSULTANTS REPORT DATED JUNE 21, 2007

JDH Corrosion Consultants
Incorporated

June 21, 2007

Cornerstone Earth Group
1259 Oakmead Parkway
Sunnyvale, California 94085

Attention: **Ms. Laura C. Knutson, P.E., G.E.**
Principal Engineer

Subject: **Site Corrosivity Evaluation**
1270 Campbell Ave.
Project No. 640-013

Dear Laura,

In accordance with your request, we have reviewed the laboratory soils data for the above referenced project site. Our evaluation of these results and our corresponding recommendations for corrosion control for the above referenced project foundations and buried site utilities are presented herein for your consideration.

SOIL TESTING & ANALYSIS

Soil Chemical Analysis

Five (5) soil samples from the project site were chemically analyzed for corrosivity by ***Cooper Testing Laboratories***. Each sample was analyzed for chloride and sulfate concentration, pH, resistivity at 100% saturation and moisture percentage. The test results are presented in Cooper Testing Laboratories *Corrosivity Test Summary* dated 5/23/07. The results of the chemical analysis were as follows:

Soil Laboratory Analysis

Chemical Analysis	Range of Results	Corrosion Classification*
Chlorides	32 -81 mg/kg	Non-corrosive – mildly corrosive
Sulfates	<5 - 8,250 mg/kg	Non-corrosive – severely corrosive **
pH	4.1 – 7.5	Corrosive - non- corrosive**
Moisture (%)	22.2 – 39.8	Not-applicable
Resistivity at 100% Saturation	691 – 1,112 ohm-cm	Corrosive

* With respect to bare steel or ductile iron
** With respect to mortar coated steel

424 N. Wiget Lane, Walnut Creek, CA 94598 Tel. No. 925.927.6630 Fax No. 925.927.6634

DISCUSSION

Reinforced Concrete Foundations

Due to the high levels of water-soluble sulfates in these soils, special sulfate resistant cement is recommended for concrete structures placed into these soils. Sulfate resistant concrete as recommended in the Uniform Building Code (UBC) for soils containing 0.825% water-soluble sulfate in soil by weight shall be used. Also, special consideration needs to be incorporated into the concrete design to resist the extremely acidic soils at this site.

Underground Metallic Pipelines

The soils at the project site are considered to be "corrosive" to ductile/cast iron, steel and dielectric coated steel based on the saturated resistivity measurements, pH levels and water soluble sulfate levels. Therefore, special requirements for corrosion control are required for buried metallic utilities at this site depending upon the critical nature of the piping. Pressure piping systems such as domestic and fire water should be provided with appropriate coating systems and cathodic protection, where warranted. In addition, all underground pipelines should be electrically isolated from above grade structures, reinforced concrete structures and copper lines in order to avoid potential galvanic corrosion problems.

LIMITATIONS

The conclusions and recommendations contained in this report are based on the information and assumptions referenced herein. All services provided herein were performed by persons who are experienced and skilled in providing these types of services and in accordance with the standards of workmanship in this profession. No other warrantees or guarantees, expressed or implied, are provided.

We thank you form the opportunity to be of service to ***Cornerstone Earth Group*** on this project and trust that you find the enclosed information satisfactory. If you have any questions or if we can be of any additional assistance, please feel free to contact us at (925) 927-6630.

Respectfully submitted,

J. Darby Howard, Jr.

J. Darby Howard, Jr., P.E.
JDH Corrosion Consultants, Inc.
Principal

Cc: File 27098

Corrosivity Test Summary

CTL # 640-013 Date: 5/23/2007 Tested By: PJ Checked: PJ

Client: Cornerstone Project: 1270 Campbell Ave Proj. No: 102-3-1

Remarks:

Sample Location or ID			Resistivity @ 15.5 °C (Ohm-cm)			Chloride	Sulfate-(water soluble)		pH	ORP	Sulfide	Moisture	Soil Visual Description
Boring	Sample, No.	Depth, ft.	As Rec.	Minimum	Saturated	mg/kg Dry Wt.	mg/kg Dry Wt.	% Dry Wt.		(Redox) mv	Qualitative by Lead	% At Test	
			ASTM G57	Cal 643	ASTM G57	Cal 422-mod.	Cal 417-mod.	Cal 417-mod	ASTM G51	SM 2580B	Acetate Paper	ASTM D2216	
EB-1	1B	1.5	-	-	925	81	<5	<0.0005	7.5	-	-	28.3	Very Dark Gray CLAY & Black organics
EB-2	4	9	-	-	691	67	8,250	0.8250	4.1	-	-	36.7	Dark Gray CLAY
EB-3	1B	1.8	-	-	985	33	392	0.0392	6.9	-	-	22.2	Mottled Dark Grayish Brown CLAY w/ Sand
EB-3	3B	6	-	-	1,112	32	193	0.0193	7.3	-	-	26.2	Mottled Gray CLAY w/ Sand
EB-3	4	8.8	-	-	1,030	39	814	0.0814	4.4	-	-	39.8	Dark Grayish Brown CLAY

Corrosivity Test Summary

CTL # 640-022 Date: 7/5/2007 Tested By: PJ Checked: PJ

Client: Cornerstone Project: Campbell Ave Proj. No: 102-3-1

Remarks:

Sample Location or ID			Resistivity @ 15.5 °C (Ohm-cm)			Chloride	Sulfate-(water soluble)		pH	ORP	Sulfide	Moisture	Soil Visual Description
Boring	Sample, No.	Depth, ft.	As Rec.	Minimum	Saturated	mg/kg	mg/kg	%		(Redox)	Qualitative	%	
						Dry Wt.	Dry Wt.	Dry Wt.		mv	by Lead	At Test	
			ASTM G57	Cal 643	ASTM G57	Cal 422-mod.	Cal 417-mod.	Cal 417-mod.	ASTM G51	SM 2580B	Acetate Paper	ASTM D2216	
3	3A	5	-	-	-	-	281	0.0281	7.1	-	-	33.2	Very Dark Gray CLAY
2	3A	5	-	-	-	-	5,541	0.5541	6.7	-	-	42.6	Very Dark Gray CLAY
3	2	3	-	-	-	-	782	0.0782	6.8	-	-	37.7	Very Dark Gray CLAY
2	3	3	-	-	-	-	519	0.0519	7.5	-	-	30.3	Very Dark Gray CLAY

APPENDIX C
ENVIRONMENTAL DOCUMENT REVIEW

APPENDIX C-1
SUMMARY OF ENVIRONMENTAL DOCUMENT REVIEW

PES Environmental, Inc.
Engineering & Environmental Services

A Report Prepared for:

Sobrato Development Companies
10600 North De Anza Boulevard
Cupertino, California 95014

Attention: Mr. Tim Steele

SUMMARY OF ENVIRONMENTAL DOCUMENT REVIEW
1270 CAMPBELL AVENUE
SAN JOSE, CALIFORNIA

OCTOBER 22, 2007

By:

Julie L. Turnross
Senior Hydrogeologist

William F. Frizzell, P.E.
Principal Engineer

126.049.01.002

1682 Novato Boulevard • Suite 100 • Novato, California 94947-7021 • Tel (415) 899-1600 • Fax (415) 899-1601

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ILLUSTRATIONS

APPENDIX A – REGULATORY AGENCY DATABASE REPORT

APPENDIX B – SCVWD UST CLOSURE LETTER

DISTRIBUTION

LIST OF ILLUSTRATIONS

Plate 1 Site Location Map

Plate 2 Site Plan and Vicinity Map

1.0 INTRODUCTION

PES Environmental, Inc. (PES) has prepared this report describing the findings of our review of environmental documents pertaining to hazardous materials conditions at the subject property located at 1270 Campbell Avenue in San Jose, California (Plate 1). The site consists of an approximately 85,000 square foot unoccupied commercial building. PES was retained by Sobrato Development Companies (Sobrato) to review historical and current environmental conditions at the subject property as part of an Environmental Impact Report (EIR) currently being prepared by others.

As part of the environmental assessment, PES performed the following tasks:

- Reviewed federal, state, and local agency records and databases to identify nearby sites which have reported the use, storage, or release of hazardous materials;
- Reviewed historical environmental documents provided by Sobrato;
- Reviewed records at the Santa Clara County Department of Environmental Health (SCCDEH), San Jose Fire Department (SJFD) and Department of Toxic Substances Control (DTSC) for the subject property and nearby sites with documented releases of hazardous materials and hazardous materials/waste storage; and
- Conducted an inspection of the subject property exterior and a reconnaissance of the surrounding area to provide an assessment of the potential for contamination of the subject property from onsite and/or offsite sources.

The following sections present: (1) a brief summary of the site history; (2) a discussion of prior environmental investigations conducted at the site; (3) the findings of the regulatory agency database search; and (4) a summary of current site conditions based on our site inspection and regulatory agency records.

2.0 SITE HISTORY

E2C, Inc. (E2C) conducted a Phase I Environmental Site Assessment (ESA) of the subject property in 2001 (E2C, 2001). E2C's historical research indicated the subject property was undeveloped land prior to the 1940 construction of a building occupied by a refrigeration company. The building on the subject property, which used the address of 390 Bellomy Street, was used for cold storage or food warehousing until it was demolished during construction of the existing building in 1992. The existing building was occupied by Sanmina since its construction. No environmental concerns were identified by E2C regarding historical use of the subject property.

3.0 SUMMARY OF SUBJECT PROPERTY ENVIRONMENTAL ACTIVITIES

Based on our review of available environmental documents and SJFD and SCCDEH files, a summary of environmental activities at the subject property buildings is presented below.

PES also reviewed an Environmental Data Resources, Inc. (EDR) report dated September 12, 2007 to identify subject property listings on environmental databases. This information is obtained from computerized databases of Federal, State and local records. The EDR database report is included as Appendix A.

Historical Underground Storage Tanks (USTs)

Four USTs were historically present at the subject property associated with the former cold storage/warehousing operations. The approximate locations of these USTs are shown on Plate 2. Santa Clara Valley Water District (SCVWD) documents (SCVWD, 1995) indicate that two gasoline USTs (one 750-gallon and one 1,500-gallon) were closed in place in August 1986 by filling them with cement slurry. The closed-in-place USTs are located in the north portion of the site. Two soil samples were collected from beneath the tanks and analyzed for the presence of total petroleum hydrocarbons as gasoline (TPHg) (R.B. Construction, 1993). No contaminants were detected. Four additional soil samples were collected at the UST locations during the 1993 UST removals discussed below. The samples were analyzed for the presence of TPHg and benzene, toluene, ethylbenzene and xylenes (BTEX). No analytes were detected in any of the soil samples analyzed.

In 1993, two diesel USTs (one 5,000-gallon and one 10,000-gallon), also associated with former cold storage/warehousing operations, were removed from the central portion of the site. Initial soil samples collected from beneath the tank identified the presence of TPH quantified as diesel (TPHd) at concentrations as high as 4,100 milligrams per kilogram (mg/kg). The tank pit was subsequently overexcavated to depth of 24 feet below ground surface and the excavated soil was disposed offsite. Confirmation soil samples indicated the presence of TPHd at concentrations of up to 4 mg/kg in sidewall samples and 560 mg/kg in one excavation bottom sample. Approximately 8,000 gallons of groundwater was extracted from the excavation pit. A groundwater sample was collected from the excavation pit after recharge and analyzed for TPHd and BTEX. TPHd was detected at 1,100 micrograms per liter (μg/L), and BTEX were reported at nondetectable to very low concentrations.

A Hydropunch survey was performed to evaluate the extent of TPHd in groundwater. Four groundwater monitoring wells installed at the site were sampled quarterly for five quarters. There were no detectable concentrations of TPHd or BTEX in any of the wells during any of the five samplings, except for one detection of TPHd in one well at 24,000 μg/L. Because TPHd was non-detectable in the well for the following three quarters, the detection was considered anomalous and not representative of actual conditions.

SCVWD issued case closure for all four USTs in June 1995. A copy of the closure letter is included as Appendix B.

2001 Phase I ESA

E2C performed a Phase I ESA for the building at 1270 Campbell Avenue in 2001. The subject property consisted of a three-story office building on approximately 8.86 acres.

E2C's historical research indicated the subject property was undeveloped land prior to the 1940 construction of a building occupied by a refrigeration company. The refrigeration company buildings were primarily located on property east of the subject property, but one building extended onto the subject property. The building on the subject property, which used the address of 390 Bellomy Street, was used for cold storage or food warehousing until it was demolished during construction of the existing building in 1992. Sanmina Corporation (Sanmina) has occupied the existing building since its construction.

E2C noted that the subject property was listed on the LUST database as a result of USTs removed from the site in 1993. The site received case closure in 1995, as discussed above. E2C noted that four groundwater monitoring wells installed as part of the LUST investigation remained at the subject property, and recommended that they be destroyed in accordance with applicable regulations.

At the time of E2C's site inspection, the subject property was occupied by Sanmina. Sanmina used the building for offices and circuit board punching. E2C reported that no chemicals were mixed or handled on site.

Based on a review of environmental databases, no offsite sources of environmental concern were identified by E2C.

No further investigations were recommended.

Groundwater Monitoring Well Destruction

In 2002, E2C destroyed the four onsite groundwater monitoring wells associated with the former LUST investigation (E2C, 2002). The wells were destroyed under a permit from SCVWD.

Environmental Document Review

In 2005, PES performed a review of environmental records concerning the subject property and vicinity, and performed an inspection of the parking lot and exterior of the building (PES, 2005). PES did not note any concerns regarding the historical removal and abandonment in place of former USTs at the site, but noted that the locations of the closed-in-place USTs remaining at the site should be appropriately noted for future site development

considerations. PES further noted that should future development activities involve disturbance of the residual hydrocarbons (TPHd) in soil, the soils should be properly managed.

PES did not identify any other documented evidence of significant hazardous materials issues. Based on a review of environmental databases, no offsite sources of significant environmental concern to the subject property were identified.

During PES's site inspection, a partially full 55-gallon drum of unknown contents was observed stored outside the building.

SJFD/SCCDEH Records

When operating at the subject property building, Sanmina maintained a Hazardous Material Management Plan (HMMP) with SJFD. The HMMP reports that the facility used and stored small quantities of thinners, resin, epoxy, paints, stains and gases. Small quantities of waste compressor oil were generated at the facility. No violations for Sanmina are on file at SJFD.

Environmental Database Listings

The subject property, as 390 Bellomy Street, is listed on the following databases:

HIST UST: The Hazardous Substance Storage Container Database is a historical listing of UST sites. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

LUST: The Leaking Underground Storage Tank Incident Reports database contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

HAZNET: The HAZNET database is derived from copies of hazardous waste manifests received each year by the Department of Toxic Substances Control.

Market Distributors, occupant of the site prior to construction of the existing building, is listed on the Historical UST database with one 5,000-gallon and one 9,980-gallon diesel USTs, both installed in 1971. These USTs correspond to the USTs removed from the site in 1993 as discussed above.

Zycon Corporation Property is listed on the LUST and HAZNET databases. The LUST listing corresponds to the UST removals discussed above. The LUST database listing indicates the site received case closure in 1995. The HAZNET database listing indicates a one-time disposal of unspecified oil-containing waste. This disposal likely corresponds to the offsite disposal of soil excavated during the UST removals, as discussed above. Zycon Corporation was the former name of Sanmina.

4.0 SURROUNDING AREA REGULATORY AGENCY DATABASE REPORT

An Environmental Data Resources, Inc. (EDR) report dated September 12, 2007 containing listings of sites located within a 1-mile radius, selected in accordance with ASTM E-1527-05 standards, was reviewed to identify potential offsite sources of environmental concern to the subject property. This information is obtained from computerized databases of Federal, State and local records.

Several sites within the ASTM search radius are listed on regulatory agency databases. The sites closest to the subject property are discussed below.

Custom Food Machinery, 1180-1184 Campbell Avenue, is located approximately 1/8 mile east-southeast of the subject property. The site is listed on the LUST, HAZNET and SLIC databases. Investigations performed at the site identified the presence of PCBs in soil and volatile organic compounds (VOCs) in groundwater (Environ, 2005). A northerly groundwater flow was measured at the site, indicating this facility is cross-gradient from the subject property. Because no source for the VOCs was identified in soil, Environ suggested the presence of an unknown upgradient source. The results of a soil gas survey performed at the site indicated that the threat to future residents at the site from inhalation of VOCs from soil gas or groundwater was within acceptable limits. Remedial activities performed at the site include long-term monitoring of groundwater to evaluate biodegradation of VOCs detected in groundwater, and excavation of PCB-containing soil. Some PCBs remain at the facility at depths greater than 15 feet below ground surface. A Land Use Covanent (LUC) was placed on the property in 2007 which prevents excavation activities in areas where PCBs are known to exist at the site. Based on the cross-gradient location of this facility from the subject property, this facility does not pose a significant concern to the subject property.

AJ Commercial Laundry/AllChem Supply, 1173-1175 Campbell Avenue, is located approximately 1/4 mile southeast of the subject property. Investigations performed at the site have identified the presence of VOCs in soil and groundwater at the site (Georestoration, 2007). Additional investigations have been requested by DTSC to identify the offsite extent of contamination. Groundwater flow ranging from the southeast to northeast has been measured at the property, indicating the facility is located down - to cross-gradient from the subject property. Based on the down- to cross-gradient location of this facility from the subject property, this facility does not pose a significant concern to the subject property.

The remaining sites listed in the EDR report are not likely to have affected the subject property based on one or more of the following: (1) the site has received case closure by the appropriate regulatory agency; (2) the site is either crossgradient or downgradient of the subject property with respect to the inferred northeasterly groundwater flow direction; (3) the site is listed as a soils-only affected case; and (4) the site is located at too great a distance to be a concern to the subject property.

5.0 SITE INSPECTION

PES conducted a cursory inspection of the exterior of the subject property buildings on September 20, 2007. The property consists of an unoccupied single-story office building with associated paved parking area. Some equipment was in the process of being removed from the subject property building at the time of our inspection, and four to five pieces of equipment were stored in the parking area.

The 55-gallon drum observed in the parking area during PES's 2005 site inspection (PES, 2005) was no longer present in the parking area. No significant staining was observed on the exterior grounds. No evidence of underground storage tanks was observed at the subject property.

6.0 SUMMARY OF ENVIRONMENTAL ISSUES

Based on our evaluation of environmental documentation for the subject property, PES notes the following:

- Two gasoline USTs were closed in place at the subject property in 1986 with no reported evidence of residual soil contamination. Two diesel USTs were removed from the site in 1993 and there was evidence of residual petroleum hydrocarbons in soil at this location. The maximum detected concentration of petroleum hydrocarbons in soil at the bottom of the 24 feet deep excavation was 560 mg/kg of TPHd. Although this concentration exceeds current Environmental Screening Levels (ESLs) for residential land use soils of 100 mg/kg it is only slightly above the commercial/industrial land use ESL of 500 mg/kg. In either case, it is not likely a risk to current or future users of the site due to: (1) the depth below ground surface and no direct route of exposure at the surface of the site; (2) the very low volatility and mobility of TPHd; (3) the absence of any significant concentration of more volatile BTEX compounds; (4) it is expected that further degradation of the TPHd in soil has likely occurred since the tanks were removed in 1993; and (5) the planned future use of the site discussed in Section 7 below.

- The results of groundwater sampling do not indicate any remaining environmental concerns at the subject property associated with the USTs. Additionally, there was no evidence of BTEX compounds in the groundwater samples from the monitoring wells. Regulatory case closure was issued for the site in 1995. Groundwater monitoring wells associated with the investigation were destroyed in 2002; and

- There was no other documented evidence of significant hazardous materials issues reviewed by PES, or evidence of documented hazardous materials issues that would preclude residential redevelopment of the property.

7.0 SITE DEVELOPMENT PLANS

PES reviewed the conceptual site development plans prepared by McLarand, Vasquez, Emsick & Partners dated November 10, 2007. It is PES' understanding that the site will be developed as a podium-style residential development with street level parking under a four-story residential structure with an open interior common space area in the central area of the development. The residential structures and the common areas will all be above the street level parking garage. The plans also include a perimeter private street and parking areas along the north, east and west boundaries of the development.

Based on a review of the site development plans, the USTs that were closed in-place are located under the planned perimeter street and parking area at the north side of the site. The USTs that were removed from the site in 1993 and received regulatory case closure were located in an area that will be under the street level parking lot and the overlying planned common area in the interior of the development. This site development design further reduces the likelihood of exposure to residual hydrocarbons to future users of the site.

8.0 RECOMMENDATIONS

PES recommends the following:

- The locations of the closed-in-place USTs remaining in the north portion of the site should be appropriately noted for future site development considerations. If necessary for site development, the USTs can be removed and disposed offsite; and

- The location of the formerly removed USTs and residual petroleum hydrocarbons in soil in the central portion of the site should be appropriately noted. Should future development activities involve disturbance of the residual hydrocarbons (TPHd) in subsurface soil, the soils should be properly managed.

9.0 REFERENCES

E2C, Inc., 2001. *Phase I Environmental Site Assessment, 1270 Campbell Avenue, San Jose, California.* October 29.

_____, 2002. *Letter Re: Monitoring Well Destruction Activities, 1270 Campbell Avenue, San Jose, California.* April 24.

Environ International Corporation (Environ), 2005. *Removal Action Workplan For Property Located at 1180, 1182 and 1184 Campbell Avenue, San Jose, California.* July 25.

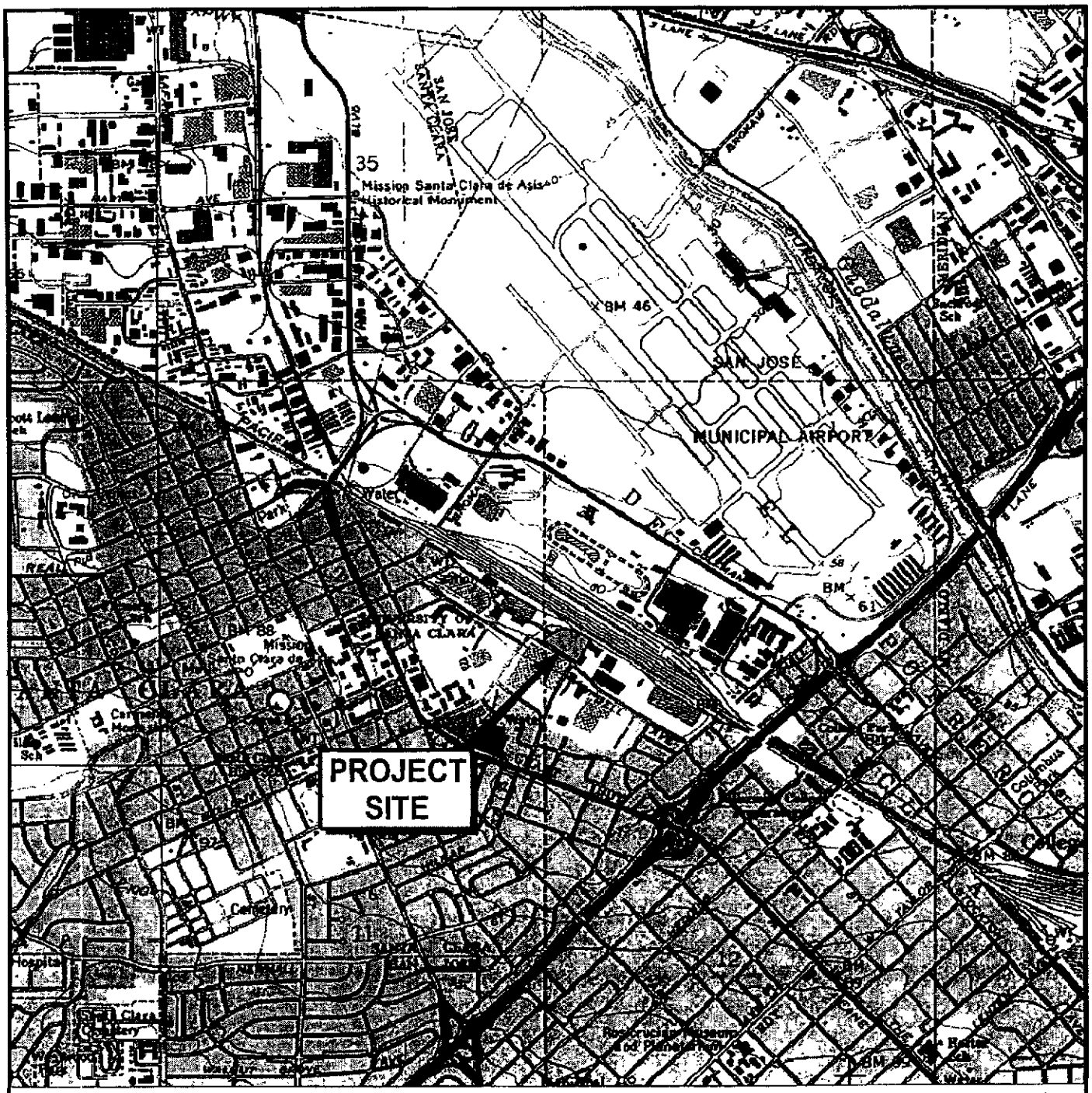
Georestoration, Inc., 2007. *Report for Site Investigation/Well Installation, 1173-1175 Campbell Avenue, San Jose, California.* July 16.

PES Environmental, Inc., 2005. *Summary of Environmental Document Review, 1270 Campbell Avenue, San Jose, California.* August 2.

R.B. Construction, Inc., 1993. *Letter Report Re: Soil Contamination, 390 Bellomy Street, Santa Clara, California.* June 29.

Santa Clara Valley Water District (SCVWD), 1995. *Underground Storage Tank Case Closure, Zycon Corporation Property, 390 Bellomy Street, San Jose, CA 95050.* June 19.

PLATES



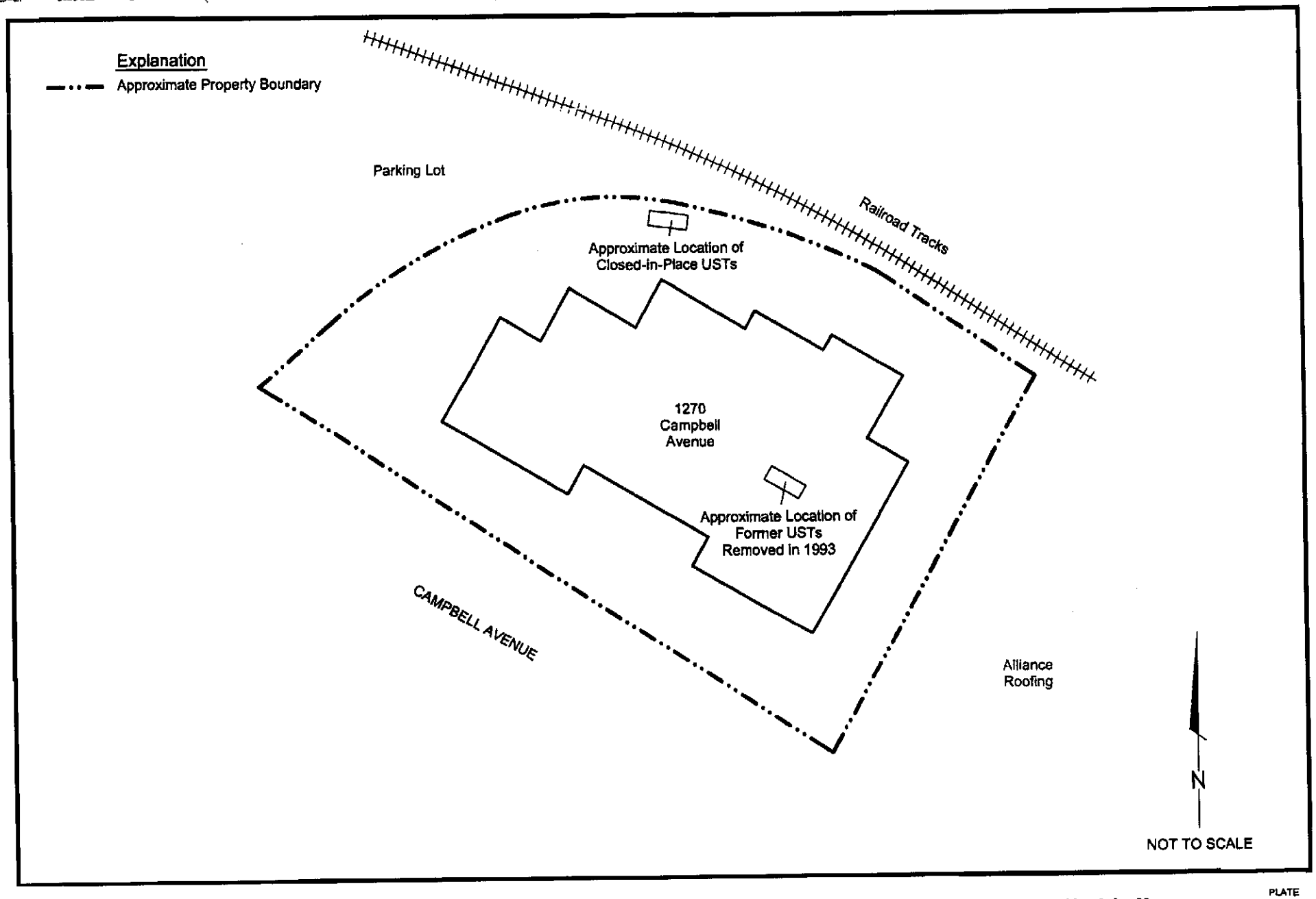
U.S.G.S. Topo Map - San Jose West, California, 7.5-minute quadrangle.1979

PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
1270 Campbell Avenue
San Jose California

PLATE
1

126.049.01.002	12604901002_ESA-update_1-2	*WFF*	10/07
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Vicinity Map
1270 Campbell Avenue
San Jose California

PLATE
2

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Copies of the appendices for this report are on file with City of San José Department of Planning, Building, and Code Enforcement.

APPENDIX C-2
POTENTIAL WORKER HEALTH AND SAFETY CONCERNS LETTER

PES Environmental, Inc.
Engineering & Environmental Services

July 18, 2008

RECEIVED

JUL 21 2008

DAVID J. POWERS
& ASSOCIATES, INC.

126.049.01.002

David J. Powers and Associates, Inc.
1885 The Alameda, Suite 204
San Jose, CA 95126

Attention: Mr. Will Burns

POTENTIAL WORKER HEALTH AND SAFETY CONCERNS
RESIDUAL HAZARDOUS MATERIALS
1270 CAMPBELL AVENUE PROJECT
SAN JOSE/SANTA CLARA, CALIFORNIA

Dear Mr. Burns:

On behalf of Sobrato Development Companies (Sobrato), this letter presents PES Environmental, Inc.'s (PES) discussion regarding the potential for worker health and safety concerns associated with exposure to residual hazardous materials at the 1270 Campbell Avenue property that is located partially within San Jose and partially within Santa Clara, California.

PES understands that recent review comments on the proposed redevelopment project from the City of Santa Clara included an inquiry regarding the potential for worker exposure to residual agricultural chemicals at this property. Also, as you know, there were previous concerns raised by the City of San Jose regarding the potential for hazardous materials concerns associated with the presence of former underground storage tanks located on the property and the potential for the use of pesticides/herbicides along the northern boundary of the property in the proximity of the adjacent off-site railroad tracks. These issues presented as the *italicized* items 1 through 4 below.

1. *There may be a potential for exposure to construction workers from residual pesticides associated with past use of the property.*

As you know, PES prepared a report *Summary of Environmental Document Review* dated August 2, 2005 and a follow-up report *Summary of Environmental Document Review*, dated October 22, 2007 on behalf of Sobrato. Within those reports, PES summarized historical site

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use as presented in E2C's Phase I Environmental Site Assessment (Phase I ESA) dated October 29, 2001. According to E2C's Phase I ESA, the property was undeveloped until the late 1940s with no mention of, or reference to, row crops, orchards or other agricultural use of the site that would suggest direct application of pesticides to the site soils prior to this time.

According to E2C, in the late 1940s, the site was developed for use as a cold storage facility. The site was subsequently redeveloped in 1992 for use by Sanmina for circuit board fabrication. The post-1940 uses of the property would not be expected to have had any significant pesticide application that typically occurs with properties that had contained row crops orchards or other agricultural use.

Based on the reported site use history, there does not appear to be a potential for residual pesticides that would be a concern to worker health and safety during the planned redevelopment of the site.

The potential hazardous material concerns presented below (Items 2 through 4) were raised by Mr. Napp Fukuda of the City of San Jose Environmental Services Department in an email dated March 27, 2008 to Jeannie Hamilton of the City of San Jose Planning Department. For reference, copies of the email correspondences between the City of San Jose, County of Santa Clara Department of Environmental Health and PES addressing and resolving all these items are attached.

2. *Residual total petroleum hydrocarbons in subsurface soils associated with underground storage tanks that were removed in 1993 should be reevaluated by the County of Santa Clara Department of Environmental Health (SCCDEH).*

This item was addressed as documented in the attached May 12, 2008 letter: *Request for Review, Closed Underground Storage Tank Case, Former 390 Bellomy Street Site, San Jose, California* to Ms. Lani Lee of the SCCEHD from PES and the attached response email dated May 12, 2008 from SCCEHD to PES. The SCCEHD indicated that the residual contamination does not require additional remediation prior to redevelopment of the property. It is noted that the depth of the residual low level petroleum hydrocarbon contamination in soil is approximately 24 feet below ground surface. Soils at this depth will not be encountered during redevelopment activities and do not represent a worker health and safety concern.

3. *It was recommended that removal of the two underground storage tanks that were abandoned in place in 1986 be conducted during site redevelopment.*

Sobrato has agreed to remove these tanks. Previous investigation of these tanks and surrounding soil has not indicated any significant signs of contamination and there is not expected to be exposure of hazardous materials to construction workers in this area.

4. *Further assessment of the potential for residual herbicides and pesticides along the railroad corridor adjacent to the northern boundary of the property should be conducted.*

As stated in the attached response to the City, it is not expected that soils in this area will be disturbed during site redevelopment. Additionally, there is no evidence that on-site soils have been affected by herbicide application from the off-site railroad activities.

In our experience, typical hazardous materials impacts to soils near railroad tracks (either through historic chlorinated herbicide application or leaching of wood preserving compounds from railroad ties) is usually very limited in lateral and vertical extent. These types of compounds have limited mobility in the environment due to their low solubility and affinity for adsorption to near surface soils. It is not expected that there would be any significant detection of railroad related chemicals outside the railroad right-of-way. In consideration of the excavation of the two abandoned-in-place underground storage tanks along the northern boundary of the site, these tanks are located about 80 feet from the off-site railroad tracks. Because of the distance from the tracks, the proposed excavation in this area would not be expected to encounter railroad-related chemicals.

Based on the site use history and, as presented in the attached documentation, there is no evidence of the potential for significant exposure of construction workers to hazardous materials during redevelopment of the site. It is expected that the contractors working on the redevelopment project (including site grading, utility installation and removal of the closed-in-place USTs) will incorporate routine safe work practices and dust control measures and will adhere to their standard worker health and safety procedures as required under the California Department of Occupational Safety and Health Administration (Cal-OSHA) regulations.

In the event that there is evidence of unanticipated hazardous materials conditions encountered, the contractor(s) should immediately contact Sobrato personnel so that professional environmental oversight for assessment and mitigation can be arranged.

We trust that this is the information you require.

If you have any questions, please call.

Yours truly

PES ENVIRONMENTAL INC.

William F. Frizzell, P.E.
Principal Engineer

Attachments: Oversight agencies' email correspondences
PES' letter to SCEHD

cc: Mr. Tim Steele

ATTACHMENTS

Bill Frizzell

From: Fukuda, Napp [Napp.Fukuda@sanjoseca.gov]
Sent: Monday, May 12, 2008 5:42 PM
To: Bill Frizzell
Cc: tim@sobrato.com; Hamilton, Jeannie
Subject: RE: 1270 Campbell Avenue Project

I agree with your proposed follow up actions and have no further issue/comment.

Napp Fukuda
Environmental Compliance Officer
City of San Jose Environmental Services Department 200 E. Santa Clara Street, 10th Floor San Jose, CA 95113-1905
(408)975-2594
(408)292-6213 Fax

-----Original Message-----
From: Bill Frizzell [mailto:bfrizzell@pesenv.com]
Sent: Monday, May 12, 2008 4:46 PM
To: napp.fukuda@sanjoseca.gov
Cc: tim@sobrato.com; jeannie.hamilton@sanjoseca.gov
Subject: 1270 Campbell Avenue Project

Napp:

As we discussed on the phone last week, PES Environmental Inc. is assisting Sobrato Development Companies in addressing your environmental review comments on the proposed residential development project located at 1270 Campbell Avenue (formerly 390 Bellomy Street) in San Jose. Your comments were presented to Jeannie Hamilton in an email dated March 27, 2008.
Specifically, your comments/recommendations are reiterated below followed by PES' response. (Your March 27th email to Jeannie Hamilton is also included below for reference.)

Comment 1.

"I would recommend that the applicant obtain confirmation by the Santa Clara County Department of Environmental Health (which replaced the District in regulating leaking USTs) that the residual contaminants remaining at the site will not impact the proposed residential development since the case closure was based in part on the existing land use of that time (i.e. heavy industrial)."

Response 1.

PES prepared a letter dated May 12, 2008 to Ms. Lani Lee at the Santa Clara County Department of Environmental Health (SCCDEH) requesting their review of the USTs case closure and confirmation of the closure status considering the proposed change in land use. We also copied you on the letter to Ms.
Lee. The SCCDEH review is in progress and we will forward their response to you.

Comment 2.

"Furthermore, I would recommend that the abandoned-in-place USTs remaining at the site be removed during this opportune juncture in site development; or that the presence of these tanks is disclosed as necessary if they are to remain."

Response 2.

Sobrato plans to remove the two closed-in-place USTs as part of the redevelopment project. PES contacted the City of San Jose Fire Department regarding this item and was informed that there are no further permitting requirements for removal of the cement-slurry filled tanks since the tanks were already formally closed with the Fire Department's approval and there was no evidence of releases from the tanks.

Comment 3.

"Lastly, I would also recommend that surface soil at the site be further assessed to determine the presence or absence of contaminants related to the historical rail road operations adjacent to the northern boundary of the property. It is well known that historical uses of herbicides and pesticides along these corridors have impacted surface soils directly along the right of way as well as neighboring properties."

Response 3.

There are no exposed soils on the subject property in the proximity of the railroad with the exception of imported landscaping materials along the fence line bordering the railroad tracks. Previously exposed surface soils on the north end of the subject property (that were in the proximity of the off-site railroad tracks and that may have potentially been exposed to historical herbicide and pesticide application) were graded, compacted and capped with base rock and the existing asphalt parking and roadway in 1992.
As part of the redevelopment, Sobrato plans to raise the grade across the site by about 1 to 1.5 feet. It is anticipated that the existing asphalt on the site will be removed including the asphalt that is in closest proximity to the railroad tracks. Sobrato plans on leaving the baserock in place and will rebuild this area by raising the grade with imported soil and constructing a new asphalt covered perimeter roadway and parking areas for the new development. The redevelopment plans in the proximity of the railroad do not include disturbance of, or exposure to, subsurface soils that may have previously been exposed at the former surface of the pre-developed site.

It does not appear that soil sampling and analysis would be necessary to assess potential exposure to residual herbicides/pesticides, if present, from the railroad activities since there is no anticipated exposure to the previously existing surface soils on the site.

I trust that these responses address your comments on the project. Thank you for your assistance.

If you have any questions, please call.

Thanks.

Bill

William F. Frizzell, P.E.
Principal Engineer
PES Environmental Inc.
1682 Novato Boulevard, Suite 100
Novato, Ca. 94947

Phone (415) 899-1600
Fax (415) 899-1601
bfrizzell@pesenv.com

From: "Fukuda, Napp" <Napp.Fukuda@sanjoseca.gov>
Date: March 27, 2008 2:12:42 PM PDT
To: "Hamilton, Jeannie" <JEANNIE.HAMILTON@sanjoseca.gov>
Subject: 1270 Campbell Avenue (PDC07-081/APN 230-14-026)

At your request, I have reviewed the ADIS for a proposed project located at 1270 Campbell Avenue(formerly390 Bellomy Street). The property is an approximate 5-acre site with a small portion of which is located within the City ofSanta Clara. The property's current land use is for heavy industrial and is proposed to be rezoned for high density residential development. The property was noted to be undeveloped prior to 1940 when a building was constructed and occupied by a cold storage company; the site was later redeveloped in 1992 with the existing structure by Sanmina Corporation; the site is currently vacant. The only noted environmental condition of concern was of the former existence of underground storage tanks at the site.
Specifically, four underground storage tanks, 2-gasoline and 2-diesel, were removed in 1986 and 1993 respectively and case closure issued by the Santa Clara Valley Water District in 1995. No other recognized environmental concerns were noted by the applicant.

However, I would recommend that the applicant obtain confirmation by the Santa Clara County Department of Environmental Health (which replaced the District in regulating leaking USTs) that the residual contaminants remaining at the site will not impact the proposed residential development since the case closure was based in part on the existing land use of that time (i.e. heavy industrial). Furthermore, I would recommend that the abandoned-in-place USTs remaining at the site be removed during this opportune juncture in site development; or that the presence of these tanks is disclosed as necessary if they are to remain. Lastly, I would also recommend that surface soil at the site be further assessed to determine the presence or absence of contaminants related to the historical rail road operations adjacent to the northern boundary of the property. It is well known that historical uses of herbicides and pesticides along these corridors have impacted surface soils directly along the right of way as well as neighboring properties. I had made these similar comments in my review of the initial submittal of the Phase I Environmental Site Assessment for this subject site in September 2005; I have attached that memo for your reference.

If you have any questions, please feel free to contact me.

Napp Fukuda
Environmental Compliance Officer
City of San JoseEnvironmental Services Department 200 E. Santa Clara Street, 10th Floor San Jose,CA 95113-1905
(408)975-2594
(408)292-6213 Fax

PES Environmental, Inc.
Engineering & Environmental Services

May 15, 2008

126.049.01.002

County of Santa Clara
Environmental Resources Agency
Department of Environmental Health
1555 Berger Drive, Suite 300
San Jose, CA.

Attention: Lani Lee
Hazardous Materials Specialist II

REQUEST FOR REVIEW
CLOSED UNDERGROUND STORAGE TANK CASE
FORMER 390 BELLOMY STREET SITE
SAN JOSE, CALIFORNIA

Dear Ms. Lee:

This letter presents PES Environmental Inc.'s (PES) request, on behalf of the Sobrato Development Companies (Sobrato), for your review of the underground storage tank case file for the subject property formerly known as 390 Bellomy Street in San Jose, California. The current address of the property is 1270 Campbell Avenue. The property is owned by Sobrato and has historically been used for commercial/industrial activities. Underground storage tanks (USTs) for petroleum fuel products were formerly used on the property including two tanks that were closed in place and two tanks that were removed from the property. The City of San Jose Fire Department permitted and approved the two closed-in-place tanks and the Santa Clara Valley Water District (SCVWD) approved case closure for the two tanks that were removed from the property.

Sobrato is in the planning process to redevelop the site for high-density residential housing. In response to the City of San Jose Environmental Service Department's review comments on the proposed redevelopment, Mr. Napp Fukuda, Environmental Compliance Officer, recommended that the Santa Clara County Department of Environmental Health (SCCDEH) review their files for the two USTs that received case closure from the SCVWD under the former commercial/industrial use of the property. This request was made to receive confirmation from the SCCDEH regarding the adequacy of the closure in light of the proposed residential use of the site.

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With regard to the two closed-in-place USTs, previous soil investigations did not reveal evidence of releases from the tanks and Sobrato will likely remove the tanks as part of the site redevelopment activities. PES has contacted the City of San Jose Fire Department regarding those tanks to address their requirements prior to removal.

OVERVIEW OF FORMER USTS REMOVAL AND INVESTIGATION ACTIVITIES

PES reviewed available on-line files that were accessed through http://lustop.sccgov.org/files/07S1W01M01f/. According to the files, in 1993 two diesel USTs (one 5,000-gallon and one 10,000-gallon), associated with a former on-site cold storage/warehousing operation, were removed from the central portion of the site. Initial soil samples collected from beneath the tank identified the presence of TPH quantified as diesel (TPHd) at concentrations as high as 4,100 milligrams per kilogram (mg/kg). The tank pit was subsequently overexcavated to depth of 24 feet below ground surface and the excavated soil was disposed offsite. Confirmation soil samples indicated the presence of TPHd at concentrations of up to 4 mg/kg in sidewall samples and 560 mg/kg in one excavation bottom sample. Approximately 8,000 gallons of groundwater were extracted from the excavation pit. A groundwater sample was collected from the excavation pit after recharge and analyzed for TPHd and benzene, toluene, ethylbenzene and xylene (BTEX). TPHd was detected at 1,100 micrograms per liter (μg/L), and BTEX were reported at nondetectable to very low concentrations.

A Hydropunch survey was performed to evaluate the extent of TPHd in groundwater. A groundwater monitoring well (MW-1) was installed downgradient from the former tank excavation and was sampled quarterly for five quarters. This well was monitored in conjunction with three other onsite monitoring wells (LF1, 2 and 3). There were no detectable concentrations of TPHd or BTEX during any of the five sampling events, except for one detection of TPHd in MW1 at 24,000 μg/L. Because TPHd was non-detectable in the well for the following three quarters, the detection was considered anomalous and not representative of actual conditions.

SCVWD issued case closure for the USTs in June 1995. A copy of the closure letter is attached.

Based on PES' review of the file, it appears that the maximum detected concentration of petroleum hydrocarbons in soil at the bottom of the 24 feet deep excavation was 560 mg/kg reported as TPHd. Although this concentration exceeds current environmental screening levels (ESLs) for residential land use soils of 83 mg/kg, it is not likely a risk to future users of the site due to: (1) the depth below ground surface and no direct route of exposure at the surface of the site; (2) the very low volatility and mobility of TPHd; (3) the absence of any significant

concentration of more volatile BTEX compounds; (4) the likelihood of further degradation of the TPHd since 1993; (5) absence of groundwater contamination; and (6) the planned future use of the site as discussed below.

PROPOSED DEVELOPMENT PLAN

PES reviewed the conceptual site development plans prepared by McLarand, Vasquez, Emsick & Partners (MVEP) dated November 10, 2007. The site will be developed as a podium-style residential development with fully ventilated street level parking under a four-story residential structure with an open interior common space area in the central area of the development. For reference, the approximate location of the former UST excavation is shown on the attached proposed development plans. The attached MVEP Sheet Number 5-0 shows the conceptual building plan street level parking area overlying the former USTs location. The next building level above the street level parking is shown on the attached Sheet 3-0 which shows the common recreation area in the interior of the development with adjacent residential units around the recreation area. There will be no deep excavations into the soil containing the residual TPHd or direct exposure to these soils during, or subsequent to, site development.

After development, the residual TPHd reported at the bottom of the former UST excavation will be separated from the closest residential unit by 24 feet of soil, a compacted gravel subgrade supporting a reinforced concrete slab foundation for the street level parking; the ventilated parking level with another reinforced concrete slab above the parking level that will be supporting the common recreation area and the residential units at the second level. Therefore, there is no recognized pathway of exposure to residual hydrocarbons to future users of the site.

On behalf of Sobrato and as recommended by the City of San Jose's Environmental Service Department, we respectfully request your review of the file for this project with consideration of the case closed status and the proposed land use change.

We look forward to receiving your comments on this project

If you have any questions, please call.

Yours very truly,

PES ENVIRONMENTAL, INC.

William F. Frizzell, P.E.
Principal Engineer

Attachments: Case Closure Letter
Figures 3-0 and 5-0 from MVEP Plans

cc: Tim Steele
Napp Fukuda

June 19, 1995

Mr. John Sobrato
Sobrato Development Company
10600 North DeAnza Boulevard
Cupertino, CA 95014

Dear Mr. Sobrato:

Subject: Underground Storage Tank Case Closure—Zycon Corporation Property, 390 Bellomy Street, San Jose, CA; Case No. 12-031

This letter confirms the completion of site investigation and remedial action for the underground storage tanks formerly located at the above-described location.

Based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721 (e).

Please contact Mr. Mohammad Khan at the Santa Clara Valley Water District's Camden Office, (408) 927-0710, extension 2629, if you have any questions in this matter.

Sincerely,

ORIGINAL SIGNED BY

David J. Chesterman
Principal Engineer
Groundwater Quality Branch

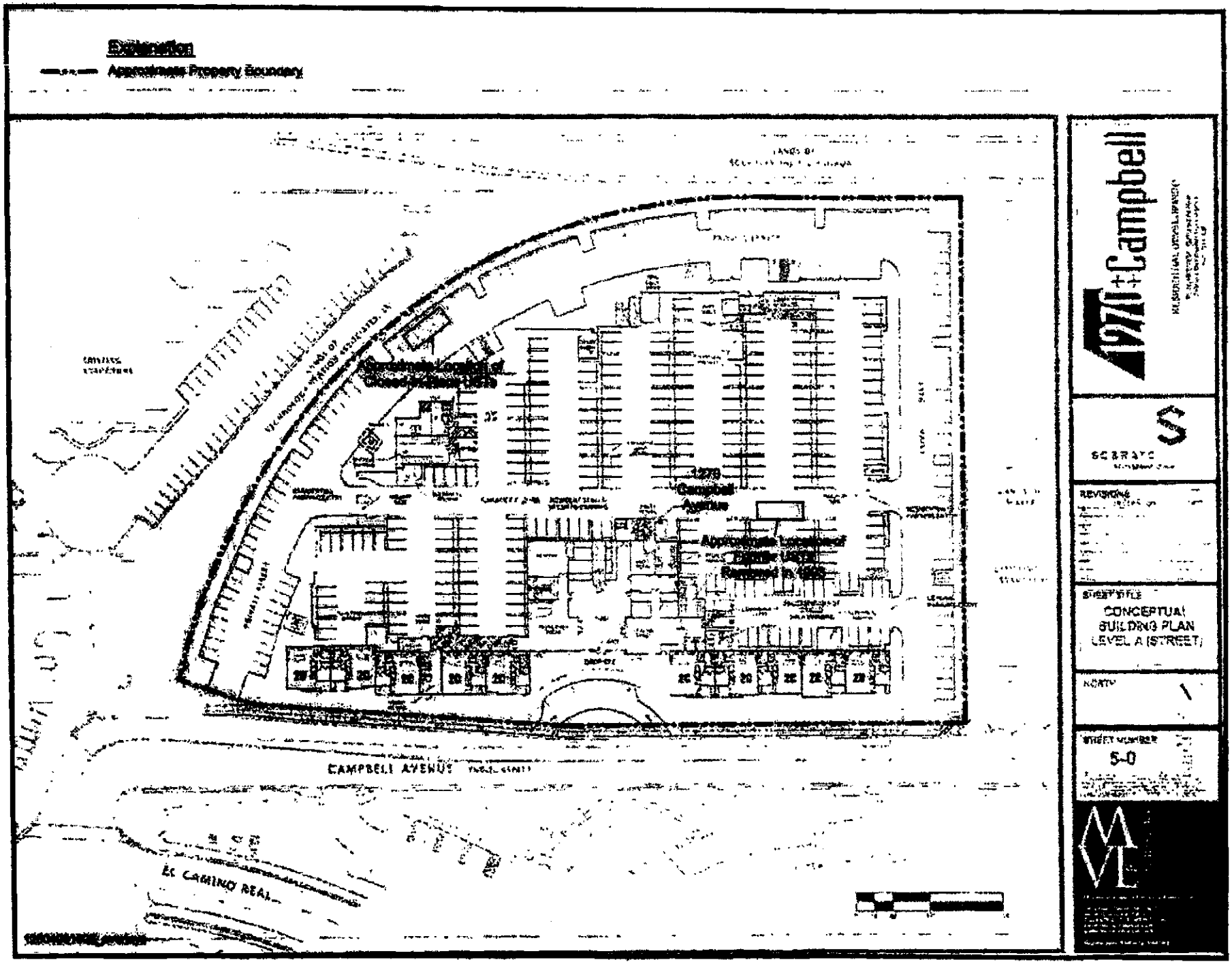
cc: Ms. Lori Casias (w/enc)
State Water Resources Control Board
Division of Clean Water Programs
P.O. Box 944212
Sacramento, CA 94244-2120

Mr. John West (w/enc)
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

Mr. David Ghilarducci
Central Fire Protection District
14700 Winchester Boulevard
Los Gatos, CA 95030-1818

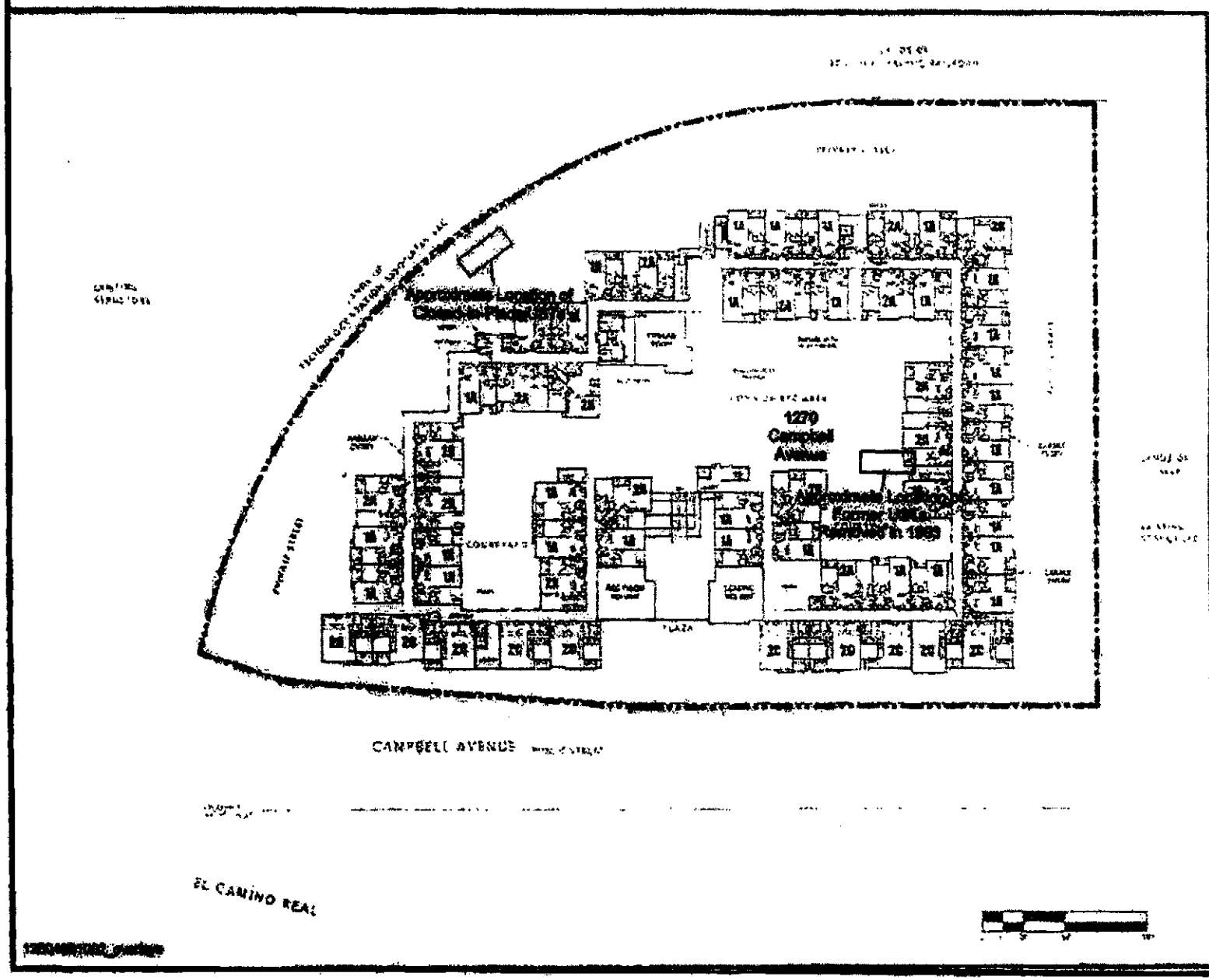
D. Chesterman, J. Crowley, M. Khan (w/original enc), Database (w/enc), Read

TH:cdh:FL9482ea


Explanation
Approximate Property Boundary
1270 Campbell Avenue
CAMPBELL AVENUE
EL CAMINO REAL
1270 Campbell
REVISIONS
SHEET TITLE
CONCEPTUAL BUILDING PLAN LEVEL A (STREET)
NORTH
SHEET NUMBER
5-0

Explanation

Approximate Property Boundary



1270 Campbell

REGISTERED PROFESSIONAL ENGINEER

S

SUBMITTED

REVISIONS

SHEET TITLE

CONCEPTUAL SITE PLAN LEVEL 1 (PODIUM)

NORTH

SHEET NUMBER

3-0

Bill Frizzell

From: Lee, Lani [Lani.Lee@deh.sccgov.org]
Sent: Tuesday, May 13, 2008 7:21 AM
To: Bill Frizzell
Cc: tim@sobrato.com; napp.fukuda@sanjoseca.gov; Lustop
Subject: RE: Request for Review - Closed UST Case, 390 Bellomy St., San Jose, SCVWDID No. 07S1W01M01f

Dear Bill -

We have reviewed your letter and the closure form for the referenced site. We concur with your conclusion that the residual contamination associated with the removed underground storage tanks does not require additional remediation prior to the property being developed residentially.

Lani Lee
Hazardous Materials Specialist II
Local Oversight Program
Phone: 408- 918-1977
Fax: 408-280-6479
NOTICE: This email message and/or its attachments may contain information that is confidential or restricted. It is intended only for the individuals named as recipients in the message. If you are NOT an authorized recipient, you are prohibited from using, delivering, distributing, printing, copying, or disclosing the message or content to others and must delete the message from your computer. If you have received this message in error, please notify the sender by return email.

-----Original Message-----
From: Bill Frizzell [mailto:bfrizzell@pesenv.com]
Sent: Monday, May 12, 2008 4:02 PM
To: Lee, Lani
Cc: tim@sobrato.com; napp.fukuda@sanjoseca.gov
Subject: Request for Review - Closed UST Case

Hello Lani:

As I discussed with you on the phone last week, on behalf of Sobrato Development Companies, we are requesting your review of the closed UST case file for the former 390 Bellomy Street (now 1270 Campbell Avenue) property in San Jose. The site is undergoing a change in land use from commercial/industrial to high density residential. The attached letter presents an overview of the project, the basis for the review request and a summary of the UST case history.

Thank you for your assistance on this project. If you have any questions, please call.

Thanks.

Bill

William F. Frizzell, P.E.
Principal Engineer
PES Environmental Inc.
1682 Novato Boulevard, Suite 100
Novato, Ca. 94947

Phone (415) 899-1600
Fax (415) 899-1601
bfrizzell@pesenv.com

APPENDIX D
HAZARDOUS MATERIALS RELEASE REPORTS

APPENDIX D-1
VICINITY HAZARDOUS MATERIALS USERS SURVEY

September 26, 2007

Mr. Will Burns
DAVID J. POWERS AND ASSOCIATES
1885 The Alameda, Suite 204
San Jose, California 95126

Re: Vicinity Hazardous Materials Users Survey, Proposed 1270 Campbell Avenue Redevelopment Project, San Jose, California

Dear Mr. Burns:

This vicinity hazardous materials users survey was performed for David J. Powers and Associates, who is preparing an Initial Study for the proposed redevelopment of the property located at 1270 Campbell Avenue in San Jose, California.

Purpose
The purpose of this study was to identify facilities in the vicinity of the project site having observed or reported hazardous substance usage, and to evaluate the significance of the identified hazardous substances to the proposed development if an accidental release were to occur. This letter was prepared in accordance with our agreement dated August 30, 2007.

Scope of Work
The scope of work performed for this study was the following.

- Performed a visual survey of the site vicinity to identify readily observable names and addresses of businesses, railroad tracks, and hazardous materials/waste pipelines located within a ½-mile radius of the project site (adjacent to site for pipelines), and appearing to have the potential to use, handle, and/or store significant quantities of toxic or hazardous materials and/or wastes (hazardous substances).

- Reviewed the list of registered hazardous gas facilities within the City of San Jose provided by the San Jose Fire Department (SJFD) and requested a similar list from within the City of Santa Clara from the Santa Clara Fire Department (SCFD). Reviewed the list of California Accidental Release Program (CalARP) facilities within Santa Clara County provided by the Santa Clara County Environmental Health Department (SCCEHD), to identify which are located within a 1-mile radius of the project site.

- Reviewed available hazardous materials files for the facilities identified through the first two tasks at the SJFD, SCFD, and SCCEHD as appropriate.

- Obtained and reviewed a regulatory agency database report to identify government agency-recorded facilities having significant hazardous substance usage or having significant reported air emissions or hazardous substance releases.

- Requested local pipeline location information from Chevron and Kinder-Morgan.

Observed Vicinity Hazardous Materials Facilities
On September 7, 2007, a visual survey of the businesses within approximately ½-mile of the project site was performed, in an attempt to identify those currently appearing likely to use, handle, and/or store significant quantities of hazardous substances. A summary of the businesses identified is presented in the table on the following page.

BELINDA P. BLACKIE, P.E., R.E.A.
1355 POE LANE
SAN JOSE, CA 95130
PHONE/FAX: (408) 260-8627

OBSERVED BUSINESSES WITH POTENTIALLY SIGNIFICANT QUANTITIES OF HAZARDOUS SUBSTANCES

Facility Name	Facility Address	Observations
Shell	2090 The Alameda, San Jose	Gas station with automotive repair facility
Raphael Photography	2124 The Alameda, San Jose	Photography studio
R+G	2216 The Alameda, San Jose	Office
Hewlett-Packard	1210 Aviation Avenue, San Jose	High-tech/light industrial facility with apparent parking of Hertz rental cars in associated parking lot
Hertz* V1 Aviation FAA FSDO Corporate Air Technology EWC West Lafferty Aircraft Sales LAC Avionics Pacific Jet Aviation, LLC	1250 Aviation Avenue, San Jose	Commercial/light industrial facility
BAE Systems	328 and 340 West Brokaw Road, Santa Clara	Light industrial facility with large expanses of yard area with parked military tanks and what appeared to be a vehicle test track and associated facilities
FedEx	335, 337, 349, and 351 West Brokaw Road, Santa Clara	Light industrial facility
Unknown Landmark Sign Manufacturing	1107 Campbell Avenue, San Jose 1111 Campbell Avenue, San Jose	Light industrial facility
Chavez Welder Machinist* Albro's Concrete Unknown	1115 Campbell Avenue, San Jose 1119 Campbell Avenue, San Jose 1125 Campbell Avenue, San Jose	Light industrial facility
Unknown	1135 Campbell Avenue, San Jose	Light industrial facility
A-Z Discount Skylights*	1141 Campbell Avenue, San Jose 1002 O'Brien Court , San Jose	Light industrial facility
Pacific Western Systems, Inc. Precision Specialties Variety Metal Finishing	1150 Campbell Avenue, San Jose 1158 Campbell Avenue, San Jose 1166 and 1170 Campbell Avenue, San Jose	Light industrial facility with hazardous materials placarding indicating health hazard of 4, flammability hazard of 1, and corrosivity hazard of 2, with oxidizers and corrosives also present
J. Brooks R. Gomez Davis Distributing	1173 Campbell Avenue, San Jose	Light industrial facility with hazardous materials placarding indicating health hazard of 3, with corrosives and oxidizers also present
A.J. Commercial Laundry A.L.L. Chem Supply	1175 Campbell Avenue, San Jose	Light industrial facility with large water ASTs and steel drums present at rear of building; hazardous materials placarding indicating health hazard of 3, with corrosives and oxidizers also present
Vacant	1179 Campbell Avenue, San Jose	Vacant light industrial facility
Zazzle	1185 Campbell Avenue, San Jose	High-tech/light industrial facility
T.W. Smith Company Kitchen and Bath Showplace	1200 Campbell Avenue, San Jose	Wholesale plumbing warehouse/shop and yard
Alliance Roofing	1250 Campbell Avenue, San Jose	Light industrial facility with large horizontal AST in yard area
Arcadia	1115 Coleman Avenue, San Jose	Light industrial facility
San Jose State University Department of Aviation	1120 Coleman Avenue, San Jose	School aviation training facility
N.T.C.S. Gate 2	1125 Coleman Avenue, Santa Clara	Yard area, possible construction area with what appeared to be a wastewater treatment system visible along Newhall Street frontage
Avbase	1144 Coleman Avenue, San Jose	High-tech/light industrial facility

(continued)

OBSERVED BUSINESSES WITH POTENTIALLY SIGNIFICANT QUANTITIES OF HAZARDOUS SUBSTANCES (CONTINUED)

Facility Name	Facility Address	Observations
Aero Geodetic Corporation	1180 Coleman Avenue, San Jose	Light industrial facility
On Chip Systems SAIC Form 10 Group Cimskil Canruflow Vidtek Associates Energy Compliance Systems	1190 Coleman Avenue, San Jose	Office building
All Floors San Jose Construction	1202 Coleman Avenue, Santa Clara 1210 Coleman Avenue, Santa Clara	Light industrial building
BAE Systems	1205 Coleman Avenue, Santa Clara	Light industrial facility
Vivo Tech ABB Progressive	451 El Camino Real, Santa Clara	High-tech/commercial/office facility
Roxio Cenzic Sonic	455 El Camino Real, Santa Clara	High-tech/commercial/office facility with generator observed at rear of facility with sign indicating presence of diesel; hazardous materials placarding indicating flammability hazard of 2
Parking Garage	467 El Camino Real, Santa Clara	Multi-level parking garage
Sequence Design Blach Construction Willow Technology Panasonic	469 El Camino Real, Santa Clara	High-tech/commercial/office facility
Silver Peak Magellan	471 El Camino Real, Santa Clara	High-tech/commercial/office facility
CPS APS Corfac International	475 El Camino Real, Santa Clara	Office
Santa Clara University	500 El Camino Real, Santa Clara	University-related buildings and facilities
Santa Clara Police Department	601 El Camino Real, Santa Clara	Police headquarters, warehouse, vehicle parking and vehicle fueling area with generator observed in parking area
Just Leaks, inc. Davis Auto and Truck Repair	1050 Elm Street, San Jose 1062 Elm Street, San Jose	Light industrial facility
Crane Plumbing and Heating A&B Doors San Jose Sheet Metal	1054, 1056, and 1058 Elm Street, San Jose 1064 Elm Street, San Jose 1068 and 1070 Elm Street, San Jose	Light industrial facility; generator visible at rear with hazardous materials placarding indicating health hazard of 1 and flammability hazard of 2; other hazardous materials placarding observed on building indicating health hazard of 3, flammability hazards up to 2, and reactivity hazard of 2, corrosives also present
Hammerschmidt Construction Air Conditioning Systems* Unique Concrete Creations	1065 Elm Street, San Jose 1073 Elm Street, San Jose 1079 Elm Street, San Jose	Light industrial facility
El Camino Self Storage	660 Fremont Street, Santa Clara	Self-storage facility
E.A.McLean and Sons Wood Products	951 Hamline Street, San Jose	Light industrial facility with hazardous materials placarding indicating health hazard of 2 and flammability hazard of 3
Kevin Burns Golf	961 Hamline Street, San Jose	Light industrial facility
Santa Clara University	301 Market Street, Santa Clara	University building, possibly cafeteria
Rail Yard	795 Newhall Street, San Jose	Railroad facility
Sprint	801 Newhall Street, San Jose	Light industrial facility

(continued)

OBSERVED BUSINESSES WITH POTENTIALLY SIGNIFICANT QUANTITIES OF HAZARDOUS SUBSTANCES (CONTINUED)

Facility Name	Facility Address	Observations
Ciari Plumbing and Heating Deemay Corporation Camarena Auto Repair South Bay Interiors	870 Newhall Street, San Jose 880 Newhall Street, San Jose 890 Newhall Street, San Jose	Light industrial facility
Commercial Tree Care	972 Newhall Street, San Jose	Light industrial facility
San Jose Search and Rescue	??? Newhall Street, San Jose	Large complex of apparently vacant buildings (former FMC complex), sign indicated presence of San Jose Search and Rescue
University Cleaners	2925 Park Avenue, Santa Clara	Dry cleaner
FMC Substation	1099 Stockton Avenue, San Jose	Electrical equipment yard with three large ASTs

* Facility name not observed at time of reconnaissance, but obtained through SJFD/SCFD documents and/or reverse telephone directories.

Vicinity Railroad Tracks

Numerous railroad lines were observed adjacent northeast of the project site at the time of this study, running generally parallel to Campbell Avenue. The railroad lines appeared to be operated by Union Pacific Railroad. In an attempt to gather information on transportation of hazardous materials on the rail lines, Mr. Don Snow of the Union Pacific Railroad was contacted. At the time this report was issued, Mr. Snow had not responded. Previously, Mr. Dave Peterson of Union Pacific Railroad had been contacted to obtain similar information. According to Mr. Peterson, Union Pacific rail lines are common carriers of freight, and any form of freight, including hazardous materials, could be transported on any rail line. Additional information on freight types reportedly was not available for security reasons.

Adjacent Hazardous Materials/Waste Pipelines

To obtain information on the presence of hazardous waste pipelines adjacent to the project site, Mr. Andrew Dyer of the SJFD was interviewed. Mr. Dyer was unaware of hazardous waste pipelines within the City of San Jose.

To obtain location information for the Kinder Morgan petroleum pipeline (reportedly a 10-inch diameter pipeline which transports gasoline, jet fuel, and diesel from Concord to the San Jose terminal located at 2150 Kruse Drive), Mr. Chuck Wagner of Kinder Morgan was contacted. Mr. Wagner indicated that the Kinder Morgan pipeline nearest the site was greater than 5 miles away. To obtain location information for the Chevron Bay Area Pipeline (another regional petroleum hydrocarbon pipeline), Mr. Cary Wages of Chevron was contacted. Mr. Wages indicated that the Chevron pipeline nearest the site was greater than 2 miles away. Mr. Dyer of the SJFD was unaware of any other hazardous materials pipelines which would transverse property lines within the City of San Jose, not including natural gas lines.

Registered Vicinity Hazardous Gas Facilities and CalARP Facilities

A list of registered hazardous gas facilities located within the City of San Jose was obtained from Mr. Mike Murtiff of the SJFD. Based on the recorded addresses of the registered facilities, none appeared to be located within 1 mile of the project site at the time of this study. Information on registered hazardous gas facilities located within the City of Santa Clara was requested from Mr. Dave Parker of the SCFD; a response from Mr. Parker had not been received at the time this report was issued.

A list of CalARP facilities located within Santa Clara County was obtained from the SCCDEH. Based on the recorded addresses of the registered facilities, one appeared to be located within 1 mile of the project site at the time of this study. Variety Metal Finishing, located at 1166 Campbell Avenue, is located approximately 0.2 miles southeast of the project site. The CalARP file for Variety Metal Finishing was reviewed at the SCCDEH in September 2006. Based on information provided in the remedial action plan (RMP) for the facility, the two CalARP-regulated chemicals present were nitric acid and potassium cyanide. Based on the risk assessment modeling data available in the RMP, the modeled distance to endpoint for nitric acid was 0.3 mile for the worst case and 0.1 mile for the alternative case and the modeled distance to

endpoint for potassium cyanide was 0.2 mile for the worst case and one alternative case and 0.1 mile for the second alternative case (Chemical Solutions, Inc. 2005).

Review of Available SJFD and SCFD Files

To evaluate the potential significance of the businesses identified during the visual survey discussed above, readily available information on hazardous materials usage and storage for the observed businesses was reviewed on the public access computer system at the SJFD in City Hall and at the SCFD. Information for previous businesses in the site vicinity was not reviewed, except in the case where the business type appeared similar to that of the current business and limited or no information on the current business was available. For the purposes of this study, primarily data on the chemical/waste inventories provided in the most recent HMBPs and hazardous materials inspection reports was reviewed. Many of the identified facilities had no hazardous materials files on record at the SJFD or SCFD and, if evidence of the presence of hazardous substances was not identified through other sources, these facilities were discounted as posing a potentially significant hazardous materials threat to the proposed development. The SJFD and SCFD information available for the facilities is summarized in the following table; key documents are included in an appendix to this letter.

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION

Document Date	Business Name	Document Type	Information Obtained
2090 The Alameda, San Jose			
2/28/05	AAA Shell	HMBP	Hazardous materials present reportedly included 24,000 gallons regular unleaded gasoline, 12,000 gallons premium unleaded gasoline, 90 gallons motor oil, 550 gallons used motor oil, and 200 pounds used oil filters.
2/17/06	AAA Shell	Record of Inspection (ROI)	Facility reportedly had flammable/combustible liquids, hazardous materials, and motor vehicle fueling station permits. Inspection notes indicated current monitoring certificate was needed but that station was in good condition.
3/25/06	AAA Shell	HMBP Certification Form	Form stated that 3/3/04 HMBP was accurate and complete; 3/3/04 HMBP not included in file.
1210 Aviation Avenue			
11/12/03	Hewlett Packard Aviation	ROI	Inspection notes indicated need to include parts washer cabinet on HMBP and an illegible note regarding oxygen storage.
11/19/03	Hewlett-Packard Company	HMBP	Business type indicated as corporate aircraft maintenance. Hazardous materials present reportedly included 25 gallons cleaning solvents, 50 gallons paint, 25 gallons lubrication oil, 220 cubic feet nitrogen, 125 cubic feet argon, 2,240 cubic feet oxygen, 176 cubic feet acetylene, 55 gallons Zep floor cleaner, 10 gallons Stoddard solvent, 200 gallons diesel, and 30 gallons Safety-Kleen solvent. Hazardous wastes reportedly included 220 gallons waste oil/lubricants and 25 gallons waste aerosol cans.
1250 Aviation Avenue			
8/23/06	Corporate Air Technology	HMBP	HMBP stated that hazardous materials were stored and hazardous wastes were generated by facility. Hazardous materials present reportedly included 4,044 cubic feet oxygen, 140 cubic feet acetylene, 60 gallons solvent/thinner, 15 gallons miscellaneous paint and supplies, 10 gallons isopropanol, 10 gallons methyl ethyl ketone, 1,348 cubic feet nitrogen, 20 gallons hydraulic fluid, 300 gallons engine oil, 20 gallons Skydrol (hydraulic fluid), 30 gallons petroleum grease, and 20 gallons de-icing fluid. Hazardous waste reportedly limited to 55 gallons waste oil and 15 gallons lead-acid batteries.
10/26/06	Corporate Air Technology	ROI	Facility reportedly had hazardous materials, flammable/combustible liquids, aircraft repair hangar, compressed gases, and hot works permits. Inspection notes indicated need for current HMBP, need to clean spills immediately, separate incompatible chemicals, provide secondary containment for all liquid and solid hazardous materials, label hazardous materials containers, and to provide separation between welding area and flammable/combustible cabinets.

(continued)

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION (CONTINUED)

Document Date	Business Name	Document Type	Information Obtained
10/15/99	Jim Lafferty Aircraft	ROI	Facility reportedly had flammable/combustible liquids and hazardous materials permits. No violations noted.
10/15/99	LAC Avionics	ROI	No permits noted; no violations noted.
1/21/03	San Jose Jet Center	HBMP	HMBP stated that hazardous materials were stored and hazardous wastes were generated by facility. USTs reportedly were present. Hazardous materials present reportedly included 35,000 gallons Jet A (kerosene), 18,000 gallons aviation gasoline, 1,000 gallons diesel, 700 gallons unleaded gasoline, 18 gallons propane, and 55 gallons glycol ether. Hazardous waste reportedly included 550 gallons waste fuel, 55 pounds waste oil, and 25 gallons waste aviation gasoline.
4/14/03	San Jose Jet Center	ROI	Facility reportedly had flammable/combustible liquids and hazardous materials permits. Inspection notes indicated need to include all chemicals in flammable cabinets on HMBP, install self-closing doors on flammable cabinets, and list hazardous materials storage bunker and oils on chemical inventory.
328 West Brokaw Road, Santa Clara			
2001&2003	United Defense, L.P.*	Excerpts from HMBPs	Excerpts from several HMBPs for different facilities present at the 328 Brokaw Road address were reviewed. Information obtained indicated that Building F2, Plant 7/Building 12, Plant 28, Plant 28B, Plant 29, Building 98, and CTC were present at the 328 Brokaw Road address. Hazardous materials usage areas/hazardous materials reported in these facilities included an electric drive laboratory, flammable locker, liquid argon tank storage, compressed gas cylinder storage rack, compressor oil/water separators, flammable/corrosive lockers, flammable lockers, new product oil storage tanks, hazardous waste satellite accumulation stations, propane bottle storage, acid storage, battery storage, general chemical storage (new and waste), and a diesel fuel storage tank. United Defense operated a research, development, and prototype manufacturing and repair facility for defense tracked vehicles at the facility. Plant 7 was the main prototype manufacturing building, primarily with metal and woodworking activities. Building 98 was the main prototype power integration laboratory building, primarily with automotive performance and power equipment testing. Plant 28 was a warehouse and Plant 28B was a drum storage yard, with primarily storage (parts, hazardous materials, and hazardous waste) and battery charging occurring. Facilities reportedly generated hazardous wastes and had ASTs, but no USTs. Hazardous materials reportedly present at Plant 7 (Building 12) included 4,618 cubic feet argon gas, 1,500 cubic feet oxygen, 1,008 cubic feet nitrogen, 600 cubic feet MAPP gas, and 500 gallons lubricating oil. Hazardous waste reportedly included 200 gallons compressor waste oily water, 100 gallons waste rags, 100 gallons waste antifreeze, 100 gallons used oil, 100 gallons compressor waste oily water, 100 gallons waste rags, 100 gallons waste antifreeze, 100 gallons used oil, 100 gallons waste diesel fuel, 55 gallons small dry cell batteries, 100 gallons aerosol cans, 100 gallons waste paint, and 100 gallons oily rags. Hazardous materials reportedly present at Plants 28 and 99 included 800 pounds propane, 400 pounds lead acid batteries, 110 gallons engine oil, 119 gallons hydrocarbon solvent blend, 110 gallons hydraulic oil, 110 gallons hydraulic fluid, 50 gallons polyurethane paint, 220 gallons steam cleaner, 14 gallons caulking compound, 55 gallons corrosion preventative, 110 gallons sulfuric acid, 5 gallons nitric acid, 10 pounds Alodine 600, 1,000 pounds lead acid batteries, 850 gallons diesel, and 850 gallons gasoline. Hazardous waste reportedly present at Plant included 480 pounds used lead acid batteries, 300 pounds absorbent

(continued)

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION (CONTINUED)

Document Date	Business Name	Document Type	Information Obtained
			containing oil and diesel, 80 pounds grease, 240 pounds antifreeze, 60 pounds adhesives, 60 pounds aerosol cans, 425 pounds used oil, 425 pounds diesel fuel, 200 pounds acetone, and 450 pounds miscellaneous paint. Hazardous materials reportedly present at Plant 7 (Building 98) included 165 gallons engine oil, 350 gallons diesel, 3,500 pounds lithium-ion batteries, and 3,500 pounds nickel cadmium batteries. Hazardous waste reportedly present at Building 98 included less than 10 pounds oil/diesel/rags/absorbent and less than 10 gallons used oil. Hazardous materials reportedly present in Plant 28/28B included 6,800 cubic feet propane, 4,400 pounds lead/acid batteries, 110 gallons engine oil, 110 gallons petroleum solvent blend, 110 gallons hydraulic oil, 850 gallons diesel, 850 gallons gasoline, 110 gallons hydraulic fluid, 110 gallons polyurethane paint, 220 gallons steam cleaner, 55 gallons caulking compound, 110 gallons corrosion preventative, 1,100 gallons sulfuric acid, 220 gallons nitric acid, and 220 gallons Alodine 1200S. Hazardous waste reportedly present at Plant 28/28B included 250 pounds used vehicle batteries, 600 gallons oil/coolant mix, 220 gallons oil/diesel/rags/etc., 55 gallons waste grease, 55 gallons spent antifreeze, 55 gallons adhesives, 55 gallons aerosol cans, 55 gallons spent NiCd batteries, 55 gallons spent alkaline batteries, 110 gallons used oil, 55 gallons paint debris, 55 gallons diesel, 55 gallons off-specification paint, and 55 gallons spent solvents.
3/21/05	United Defense*	Inspection Report	No violations noted. Facility indicated as hazardous waste generator and as having hazardous waste treatment.
7/5/05	BAE Systems	Letter	Letter to SCFD stating that on 6/24/05, BAE Systems, Inc. purchased United Defense Industries and changed the name of the facility to BAE Systems Land and Armaments L.P. The business type and management structure were to remain the same. Locations affected by the change in ownership reportedly included the 328 Brokaw Road and 1205 Coleman Avenue facilities.
7/5/05	BAE Systems Land & Armaments L.P.	HMBP Certification Form	Form stated that revisions to the HMBP were needed, but no copy of the revised HMBP was available in the file, only a Business Owner/Operator Identification Form which included no hazardous materials inventory.
335 West Brokaw Road, Santa Clara			
12/10/02	Federal Express Corp. – SJCRT/A	HMBP	HMBP stated that hazardous materials were stored and generated at the facility. Hazardous materials present reportedly included 480 gallons motor oil, 220 gallons antifreeze, 55 gallons gear oil, 110 gallons automatic transmission fluid, and 500 gallons diesel. Hazardous wastes reportedly included 480 gallons used oil and 150 gallons used antifreeze.
6/23/05	Federal Express	Inspection Report	Inspection notes indicated need to label 55-gallon used oil drum and complete an HMBP including the diesel generator.
337 West Brokaw Road, Santa Clara			
6/28/05	Federal Express	Inspection Report	Inspection notes indicated need for high-level alarm on used antifreeze tank, to keep 210-gallon plastic glass cleaner container in metal containers or in flammable liquid cabinet, to label hazardous waste roll-around, to complete new HMBP for 337 Brokaw and to put diesel generator on HMBP for 335 Brokaw facility, and to conduct daily inspections for waste oil and used antifreeze tanks.
7/12/06	FedEx Express – SJCRT/A Vehicle Maintenance Shop	HMBP	HMBP stated that hazardous materials were stored and generated at facility. Hazardous materials reportedly included 730 gallons base lubricating oils and 170 gallons ethylene glycol. Hazardous waste reportedly included 560 gallons used oil and 170 gallons used antifreeze.
340 West Brokaw Road, Santa Clara			
7/27/00	FMC Building 30*	Hazardous Materials Inventory Statement	Hand-written note on inventory stating no chemicals present.

(continued)

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION (CONTINUED)

Document Date	Business Name	Document Type	Information Obtained
1115 Campbell Avenue, San Jose			
2/25/04	Chavez Welding and Machining	ROI	Facility reportedly had hot works and hazardous materials permits. Hazardous materials inventory statement was needed.
10/28/04	Chavez Welding and Machining, Inc.	HMBP	HMBP stated that hazardous materials were stored and generated at facility. Hazardous materials present reportedly included 156 cubic feet oxygen, 52 cubic feet acetylene, 156 cubic feet argon/carbon dioxide, 80 cubic feet argon, and 45 gallons Valcool VNT 700 solution. Hazardous waste reportedly limited to 55 gallons Valcool VNT 700 waste.
1158 Campbell Avenue, San Jose			
7/14/05	Precision Specialties	ROI	Facility reportedly had flammable/combustible liquids, hazardous materials, and hot works permits. Current HMBP was needed.
7/20/05	Precision Specialties	HMBP	HMBP stated that hazardous materials were stored and generated at facility. Hazardous materials present reportedly included 35 gallons assorted oils, 5 gallons acetone, 55 gallons cutting fluid, and 55 gallons way lubricant. Hazardous waste reportedly included 55 gallons IPM/metal working fluid.
1166 Campbell Avenue, San Jose			
5/25/00	Variety Metal Finishing	Hazardous Materials Incident Report	Explosion at facility related to 50% nitric acid bath. Nitric acid and nitrous fumes emitted. Decontamination of facility and workers, as well as ventilation of structure, required.
3/1/03	Variety Metal Finishing, Inc.	HMBP	Business type indicated as plating. Hazardous materials present reportedly included from 5 to 500 gallons each of numerous plating-related chemicals and bath solutions, including acids, caustics, alkaline detergents, dyes, metal-containing solutions, ammonia solutions, and cyanide solutions, 1,100 additional gallons sodium hydroxide, 550 to 660 gallons each of several waste water solutions containing cyanide, caustics, and metals, and 2,000 pounds electroplating nickel cake.
10/14/03	Variety Metal Finishing	ROI	Facility reportedly had flammable/combustible liquids and hazardous materials permits. Inspection noted indicated need to provide labels on all plating tanks; training and inspection records reported to be good.
1170 Campbell Avenue, San Jose			
7/8/03	JRD Precision Machining**	ROI	Facility reportedly had flammable/combustible liquids and hazardous materials permits. No violations noted.
1175 Campbell Avenue, San Jose			
6/6/03	All Chem Supply	ROI	Facility reportedly had combustible materials storage, flammable/combustible liquids, and hazardous materials permits. No violations noted.
6/6/03	All Chem Supply	HMBP Certification Form	Form stated that 1999 (?) HMPB was complete and accurate; 1999 HMBP not included in file.
3/4/03	AJ Services	HMBP	HMBP stated that hazardous materials above 55 gallons/500 pounds, 200 cubic feet not present and hazardous waste not generated. Hazardous materials reportedly present included 60 gallons sodium thiosulfate, 60 gallons liquid laundry starch, 200 pounds sodium silicofluoride, 90 gallons liquid softener, 5 gallons Targo detergent, 200 pounds sodium percarbonate, 200 pounds + 120 gallons So-White, 165 pounds laundry starch, 1,100 pounds commercial detergent, 110 gallons hydrofluorsilicid acid, 550 pounds sodium hydroxide, 400 pounds dialkylmethylammonium, 55 gallons condensate treatment, 110 gallons boiler treatment, 15 gallons oil, 60 gallons resin cleaner, and 2 small cylinders acetylene.
1/23/04	A&J Services	ROI	Facility reportedly had hazardous materials and hot works permits. Note indicated need to verify that hazardous materials were not in use after shift and that covers and lids were in place; propane tank reportedly removed as not to code. No reportable/recordable spills reported. Monthly inspections and documentation of training of hazardous materials employees needed.

(continued)

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION (CONTINUED)

Document Date	Business Name	Document Type	Information Obtained
1185 Campbell Avenue, San Jose			
1/31/07	Zazzle	HMBP	Facility appeared to be an imaging business (mugs, shirts, etc.). HMBP stated that hazardous materials were stored and hazardous wastes were generated at facility. Hazardous materials reportedly present included 3 to 54 gallons each assorted inks, 12 gallons imaging oil, 10 gallons ethylene glycol, 45 gallons UV coating, 120 gallons fixer and developer, 106 gallons isopropyl alcohol, and 30 gallons inorganic nitrate. Hazardous waste reportedly included 110 gallons used oil/ink, 55 pounds oily rags, 55 gallons water-based inks, and 55 gallons Komit ink waste.
1250 Campbell Avenue, San Jose			
6/16/03	Alliance Roofing Co., Inc.	HMBP	HMBP stated that hazardous materials were stored and generated at facility. Hazardous materials present reportedly included 750 gallons propane, 30 pounds acetylene/oxygen, 60 gallons methylethylketone/xylene/toluene, 60 gallons toluene/diisolyanate, 240 gallons toluene/hexane, 25 gallons toluene/n-hexane, 150 gallons assorted asphalt primers, 421 gallons assorted Henry's roofing compounds, 150 gallons roof cement, 160 gallons Metacrylics, 600 tubes urethane, 380 gallons assorted asphalt/mineral spirits compounds, and 150 gallons top coat. Hazardous waste was limited to 50 gallons waste oil.
1120 Coleman Avenue, San Jose			
3/29/93	SJSU Aviation Campus	ROI	Facility reportedly had flammable/combustible liquid/tank, hazardous materials handling, spraying/dipping, and welding/cutting permits. Inspection notes indicated need for secondary containment for all regulated materials and revised HMBP. Additional note indicated County Health Toxics conducted hazardous materials inspections for the facility.
8/12/93	San Jose State University, Department of Aviation	Hazardous Materials Management Plan	Business type indicated as education. Hazardous materials present reportedly included 10 gallons methyl ethyl ketone, 110 gallons paint thinner, 165 gallons Stoddard solvent, 55 gallon lacquer thinner, 55 gallons Trichlor, 5 pounds alkaline etch, 15 pounds Iridite, 15 pounds deoxidizer, ½ gallon chromic acid, 4 gallons muriatic acid, 2 gallons alodine, 1 gallon nitric acid, 1 gallon hydrochloric acid, 5 gallons cadmium additive, 5 gallons Cad-Sol, 5 pounds potassium carbibate (?), 10 gallons NDT penetrant and developer, 2 gallons Alumiprep, 30 gallons enamel paint, 27 gallons assorted primer, 300 cubic feet oxygen, 200 cubic feet acetylene, 1,500 cubic feet argon, 20 pounds cadmium, 1 quart phosphoric acid, 166 quarts assorted oils, 4 gallons corrosion preventive, and 6 gallons Versilube. Hazardous wastes reportedly include 30 gallons waste solvents, 60 gallons waste oil, and 15 gallons waste paints (sludge).
1125 Coleman Avenue, Santa Clara			
5/2/90	FMC Corporation – Ground Systems Division	HMBP General Information Form	No hazardous materials inventory included.
1180 Coleman Avenue, San Jose			
6/23/04	Aero Geodetics Corporation	ROI	Facility reportedly had hazardous materials permit. Inspections notes indicated need for HMBP.
7/2/04	Aero-Geodetic Corporation	Hazardous Materials/Waste Registration Form (HMWRF)	Business type indicated as photo mapping professional service. Hazardous materials present reportedly included 33 gallons developer, 36 gallons fixer, and 4 gallons acetic acid. Hazardous wastes reportedly included 48 gallons fixer containing silver.

(continued)

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION (CONTINUED)

Document Date	Business Name	Document Type	Information Obtained
1205 Coleman Avenue, Santa Clara			
8/16/02	United Defense, L.P.*	Excerpts from HMBP	Excerpts from a HMBP for Building F2 at the facility were reviewed. Building F2 was the electric drive laboratory, with dynamometer testing, power electronics development and testing, and hydraulic systems development and testing. Hazardous materials reportedly present included 110 gallons hydraulic oil, 55 gallons ethylene glycol, 55 gallons engine oil, 2,500 pounds lithium-ion batteries, and 3,500 pounds nickel cadmium batteries. Hazardous wastes reportedly included 100 gallons used oil, 100 gallons oil/diesel/rags/etc., and 55 gallons ethylene glycol.
7/5/05	BAE Systems	Letter	Letter to SCFD stating that on 6/24/05, BAE Systems, Inc. purchased United Defense Industries and changed the name of the facility to BAE Systems Land and Armaments L.P. The business type and management structure were to remain the same. Locations affected by the change in ownership reportedly included the 328 Brokaw Road and 1205 Coleman Avenue facilities.
7/5/05	BAE Systems	HMBP	Revisions to a previously prepared HMBP stating that hazardous materials were present and that hazardous waste was generated. Hazardous materials reportedly present in Building E1 included 130 cubic feet acetylene, 990 cubic feet argon, 330 cubic feet oxygen/argon, 250 cubic feet argon/carbon dioxide, 244 cubic feet oxygen, and 330 cubic feet argon/helium. Hazardous materials reportedly present in Building E2 included 300 cubic feet nitrogen and 300 cubic feet nitrogen. Hazardous materials present in Building F included 345 cubic feet acetylene, 330 cubic feet oxygen, 1,680 cubic feet argon, and 381 cubic feet argon/carbon dioxide. Hazardous materials reportedly present in Building F2 included 110 gallons hydraulic oil, 55 gallons ethylene glycol, 55 gallons engine oil, 3,500 pounds lithium-ion batteries, 250 cubic feet acetylene, and 244 cubic feet oxygen. No hazardous materials reportedly were present in Building G (electrical power generator) and no hazardous wastes were reported in the Building F2 satellite accumulation area.
10/13/05	BAE Systems	Inspection Report	Inspection for facility reported to be hazardous waste generator. Inspection notes indicated need to submit a separate HMBP for each building, remove ammonium hydroxide and Nu Phase 23 stripper from flammable cabinet, separate incompatible materials, put up appropriate placarding and label hazardous waste storage area, label drums, secure compressed gas cylinders, clean out oil/water from secondary containment tray, and monitor secondary containment on diesel generator tank. Inspection notes indicated the presence of ammonium hydroxide, acid stripper, oil, antifreeze, acids and caustics, acetylene, diesel, bleach, flammable adhesives, liquid nitrogen, and acetylene.
1210 Coleman Avenue, Santa Clara			
10/21/05	San Jose Construction Company	Inspection Report	Inspection reported need to place used batteries in a plastic tray and label, dispose of flammable containers and liquids or place in a flammable liquid cabinet, dispose Silicoseal 2000 in an approved method, dispense kerosene properly with grounding, dispose of two 55-gallon waste oil drums and label others, update HMBP, document weekly inspections, properly dispose of used oil filters and contaminated rags, label flammable and oxidizing gases, maintain copies of waste disposal manifests/receipts, and train employees.
4/5/06	San Jose Construction Co.	HMBP	HMBP stated that hazardous materials were stored and generated at facility (although no hazardous wastes were reported on inventory form). Hazardous materials reportedly included 496 cubic feet oxygen, 500 cubic feet acetylene, and 80 gallons kerosene.

(continued)

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION (CONTINUED)

Document Date	Business Name	Document Type	Information Obtained
500 El Camino Real, Santa Clara			
1/31/05	Santa Clara University	HMBP	HMBP stated that hazardous materials were stored and generated at facility and that USTs and hydrocarbon ASTs were present; a UST facility information form indicated the presence of one motor vehicle fuel UST. Hazardous materials reportedly present in Building 404 (engineering) included 200 gallons calcium hydroxide, 684 cubic feet nitrogen gas, 676 cubic feet oxygen, 100 gallons hydraulic fluid, 6.61 pounds sodium hydroxide, 6.61 pounds aluminum sulfate, 6 gallons EDTA titrant, and 6 gallons sulfuric acid titrant. Hazardous materials reportedly present in Building 402 included 300 pounds aluminum alloy, 650 pounds carbon and alloy steels, 25 pounds stainless steel, 15 pounds Freeman wax, 1 brazing rod, 4 pounds Kool Mist Formula, 1 gallon Astro-Grind 2001, 1 ?? Kill-cide 700, 1 cubic foot acetylene, 228 cubic feet carbon dioxide and argon, 228 cubic feet nitrogen, and 228 cubic feet oxygen. Hazardous materials reportedly present in the Daly Science building included 0.0002 curies P32 and 0.001 curies Radium 226. Hazardous materials reportedly present within Building 208 included 0.023 curies unidentified material, 0.0002 curies P32, and 5 curies PuBe. Hazardous materials reportedly present campus wide included individual quantities of 100 to 2,000 gallons each diesel, individual quantities of less than 1 to 2 cubic feet (?) natural gas, 240 gallons new motor oil, 120 gallons used motor oil, and 1,500 gallons gasoline.
10/17/05	Santa Clara University	Inspection Report	Inspection report for Building 604 noted no deficiencies, however a monitoring report was indicated as being needed.
601 El Camino Real, Santa Clara			
8/16/04	City of Santa Clara, Police Administration Building	HMBP	HMBP stated that hazardous materials at or above 55 gallons/500 pounds/200 cubic feet were not present and that hazardous waste wasn't generated. Petroleum ASTs were reported to be present. Hazardous materials reportedly present at the facility included 2,000 gallons diesel, 4,000 gallons diesel, and 10,000 gallons gasoline.
8/12/05	Police Administration Building	HMBP Certification Form	Form stated that 8/18/04 HMBP was accurate and complete.
*1054 Elm Street/870 Newhall Street, San Jose***			
2/26/06	Frank Ciari Plumbing	HMBP	HMBP stated that hazardous materials above 55 gallons/500 pounds/ 200 cubic feet were not present and hazardous waste was not generated. Hazardous materials present reportedly included 500 gallons propane and 75 cubic feet acetylene. No hazardous wastes reported.
1062 Elm Street, San Jose			
3/29/02	Davis Auto and Truck Repair	HMWRF	Hazardous materials present at facility reportedly limited to 1 gallon solvent in washer. Hazardous waste reported to include 10 gallons waste oil. Site plan included in HMWFR depicted "bottle gases" in facility as well.
1/8/03	Davis Auto	HMBP Certification Form	Form stated that 2/39/02 HMBP was complete and accurate.
1070 Elm Street, San Jose			
1/21/05	Verizon Wireless – New Hall*	HMBP	HMBP stated that hazardous materials were stored at facility but no hazardous wastes were generated. Hazardous materials present at facility reportedly included 2,092 pounds valve-regulated lead-calcium batteries, 210 gallons low sulfur diesel fuel, and 90 pounds heptafluoropropane.
3/2/05	Metro PCS*	HMBP	HMWRF with 20.63 gallons electrolyte reported as only hazardous material present at facility; no hazardous waste reported.
951 Hamline Street, San Jose			
4/9/02	MacLean & Son E.A.	HMBP Certification Form	Form stated that 7/15/97 HMBP was complete and accurate; 7/15/97 HMBP not included in file.

(continued)

AVAILABLE SJFD AND SCFD FILE REVIEW INFORMATION (CONTINUED)

Document Date	Business Name	Document Type	Information Obtained
4/9/02	MacLean & Sons E.A.	ROI	Facility reportedly had flammable/combustible liquids, hazardous materials, spraying/dipping, and woodworking permits. No violations noted.
801 Newhall Street			
4/28/05	Sprint Communications	ROI	Facility reportedly had flammable/combustible liquids, hazardous materials, and battery system permits. Inspection note indicated need to replace secondary containment on outdoor AST, clean secondary containment in chiller room, identify unknown drum, label overhead phosphoric acid piping in chiller room, pump rain water out of diesel piping sump, label piping in diesel generator room, placard building and diesel tank, keep secondary containment clean in chiller room, label all hazardous materials drums, provide current HMBP, and add cooling treatment chemicals to HMBP.
5/3/05	San Jose, CA POP - Sprint	HMBP	HMBP indicated that facility stored hazardous materials but did not generate hazardous wastes; ASTs reportedly present. Hazardous materials present reportedly included 59,331 pounds or 8,275 gallons diesel, 112,594 pounds lead/lead compounds, 11,939 pounds or 778 gallons sulfuric acid, and 135 gallons sodium nitrite.
880 Newhall Street, San Jose			
7/20/05	Camarena Auto Repair	HMBP	HMBP stated that hazardous materials were stored and hazardous wastes were generated at facility. Hazardous materials present reportedly included 70 quarts oil, 3 gallons coolant, 3 gallons automatic transmission fluid, and 3 gallons batteries. Hazardous waste reportedly included 55 gallons oil filters, 110 gallons oil, and 40 gallons antifreeze.
7/26/06	Camarena Auto Repair	ROI	Facility reportedly had repair garage, hazardous materials, and flammable/combustible liquids permits. No violations noted.
8/3/06	Camarena Auto Repair	HMBP Certification Form	Form stated that 8/3/05 HMBP was complete and accurate.
972 Newhall Street, San Jose			
3/21/03	Commercial Tree Care	ROI	Facility reportedly had hot works, hazardous materials storage, and flammable/combustible liquids storage permits. No violations noted.
3/21/03	Commercial Tree Care	HMWRF	Business type reported to be tree services. Hazardous materials present reportedly included 120 cubic feet acetylene (?) and 25 gallons gasoline. No hazardous wastes reported.

* Business reportedly similar to current business and information appeared pertinent to current condition.
** Unconfirmed as current tenant due to lack of signage on building.
*** Business currently located at 870 Newhall Street, but no hazardous materials inventory was available for that address; hazardous materials usage likely similar to previous inventory available for 1054 Elm Street facility.

Regulatory Agency Database Review

A summary of the reported facilities identified in the regulatory agency database report appearing to be potentially significant to the project site, with respect to hazardous materials usage/hazardous waste generation, chemical releases to the environment, or significant air emissions, is presented in the table on the following page. The complete regulatory agency database report, including a list of the databases reviewed, the search distances, and a figure showing the business locations with respect to the project site (identified by map ID number), is included in an appendix to this letter.

POTENTIALLY SIGNIFICANT FACILITIES IDENTIFIED IN REGULATORY AGENCY DATABASE REPORT

Facility	Map ID No.	Address	Pertinent Information
Shell Service Station	V106/ V108	2090 The Alameda	Listed as RCRA small quantity generator with no violations reported. Present on Haznet database as generating less than 2 tons hazardous waste, primarily organics and oil-containing wastes. Listed on San Jose Hazmat database as a gasoline station.
Hewlett-Packard Aviation	Q94/Q95	1210 Aviation Avenue	Listed on San Jose Hazmat database as a miscellaneous complex firm and lab. Present on Haznet database as generating 23 tons assorted hazardous waste in 2005*. Listed on emissions inventory database as emitting 0.031 ton total organic hydrocarbon gases, 0.026 ton reactive organic gases, 0.087 ton carbon monoxide, 0.599 ton NOx, 0.001 ton SOx, and 0.028 ton particulate matter with 0.027 ton less than 10 um in diameter.
Corporate Air Tech	367	1250 Aviation Avenue	Present on Haznet database for generating approximately 1 ton assorted hazardous materials in 2005*.
San Jose Jet Center	O85/O87/ O89	1250 Aviation Avenue	Present on Haznet database as generating more than 200 tons assorted hazardous waste. Present on CHMIRS database for a 2/01 release of jet fuel to a storm drain. Listed on emissions inventory database for emissions of 2.68 tons total organic hydrocarbon gases and 2.38 tons reactive organic gases in 2005*.
BAE Systems Land and Armaments	138/ AL186	328 West Brokaw Road	Present on ERNS database for a 20 gallon diesel spill resulting from a ruptured line. Present on emissions inventory database for emitting 0.767 ton total organic hydrocarbon gases, 0.748 ton reactive organic gases, 0.005 ton carbon monoxide, 0.024 ton NOx, and 0.002 ton particulate matter with 0.0019 ton less than 10 um in diameter.
FMC Corporation**	AL189/ AL190	328 West Brokaw Road	Present on WDS database with primary waste reported to be contaminated ground water; listed as moderate threat to ground water quality.
Federal Express	AF155/ AF157/ AF152	335 West Brokaw Road 337 West Brokaw Road	Present on HMIRS database with numerous listings for spillage of materials resulting from damaged packaging. Present on Haznet database for generating approximately 12 tons assorted waste in 2005*. Listed on WDS database as a minor threat to ground water quality.
FMC Corporation LTL Engineering Labs**	AL185	340 West Brokaw Road	Listed as RCRA small quantity generator with no violations noted.
Chavez Welding and Machining***	J63	1115 Campbell Avenue	Listed on San Jose Hazmat database as an auto wrecking/miscellaneous simple facility.
Precision Specialties	D30/E35/ E36	1158 Campbell Avenue and 1170 Campbell Avenue	Listed on San Jose Hazmat database as a furniture refinishing/machine shop facility. Present on Haznet database as generating approximately 13 tons of primarily oil-related waste, with other assorted wastes as well, in 2005*. Present on Envirostor database with an entry dated 4/07 stating that California Department of Toxic Substance Control (DTSC) couldn't document a release of hazardous substances to soil or ground water, but that the usage of hazardous materials and poor housekeeping practices indicated the potential for a release existed; facility referred to the SJFD. Facility reported to be a metal plating shop.

(continued)

POTENTIALLY SIGNIFICANT FACILITIES IDENTIFIED IN REGULATORY AGENCY DATABASE REPORT (CONTINUED)

Facility	Map ID No.	Address	Pertinent Information
Variety Metal Finishing	D31/D32/ D34	1166 Campbell Avenue	Listed on San Jose Hazmat database as metal plating and fabrication facility. Present on CHMIRS database for a 5/07 release of "nitrate" acid from a plating tank; 22 employees reportedly taken to hospital. Listed on EMI database with no reported emissions more recent than 1990. Present on Envirostor database as a metal plating facility for which a site screening evaluation had been performed. Listed as a RCRA large quantity generator of 32 pounds D001 ignitable hazardous waste, approximately 4 tons D003 reactive hazardous waste, approximately 4 tons D011 silver waste, approximately 4 tons F007 spent cyanide plating bath solutions, approximately 272 tons D002 corrosive hazardous waste, approximately ½ ton D008 lead waste, approximately 33 tons F006 waste water treatment sludge from electroplating operation, and approximately ½ ton F009 spent stripping and cleaning bath solutions from plating operations using cyanide; four violations were recorded between 2001 and 2005. Present on Haznet database as generating approximately 29 tons assorted wastes in 2005*.
All Chem Supply	A4/C28	1175 Campbell Avenue	Listed on San Jose Hazmat database as auto wrecking/miscellaneous simple facility. Present on FTTS database (tracking administrative cases and enforcement and compliance actions for Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) facilities; no current or historical violations recorded for general product review inspections.
All Industrial Laundry	C27	1175 Campbell Avenue	Present on Haznet database as generating less than ½ ton tank bottom waste.
AJ Commercial Laundry/All Chem Supply	D29	1173 – 1175 Campbell Avenue	Present on RESPONSE and Envirostor databases; in-house site screening reportedly determined that further action was needed for compounds including perchloroethylene, trichloroethylene, vinyl chloride and gasoline; appeared site characterization and/or remediation would be required.
Zazzle	B12	1185 Campbell Avenue	Listed on San Jose Hazmat database as printing/painting facility.
TW Smith Plumbing Supply	A6	1200 Campbell Avenue	Present on Envirostor database for what appeared to have been a leaking UST case; in-house site screening report reportedly signed off. Present on Haznet database for generating less than 1 ton empty containers in 2005*.
Alliance Roofing	2	1250 Campbell Avenue	Listed on San Jose Hazmat database as auto wrecking/miscellaneous simple facility. Present on Haznet database for generating approximately 5 tons assorted hazardous wastes in 2005*.
United Defense LP-GSD/ FMC Corporation Ordnance Plant**	G42/G43/ G44/G45/ G46/G49/ G50/ G51/G52	1125 Coleman Avenue	United Defense listed as RCRA large quantity generator with no reported violations and present on Haznet database as generating less than 1 ton solvent mixture waste in 2005*. FMC listed as RCRA large quantity generator with numerous violations between 1989 and 1995 and was present on Haznet database as generating greater than 1,000 tons assorted wastes in 2005*. Present on emissions inventory database for emissions of 0.103 tons total organic hydrocarbon gases and 0.072 tons reactive organic gases in 2005*. Facility reportedly has on-going remediation. Listed on California WDS database with primary waste type being hazardous/Influent or solid waste that contains toxic, corrosive, ignitable, or reactive substances and is a moderate threat to water quality. Present on Envirostor database for detection of diesel, arsenic, hexavalent chromium, manganese, and motor oil during a site screening. Present

(continued)

POTENTIALLY SIGNIFICANT FACILITIES IDENTIFIED IN REGULATORY AGENCY DATABASE REPORT (CONTINUED)

Facility	Map ID No.	Address	Pertinent Information
			on WDS database as treating contaminated ground water which was a moderate threat to ground water quality. Present on ERNS database for one 3-gallon release of hydraulic oil and one 1-gallon release of miscellaneous lubrication oil; listed on CHMIRS database for a 1 gallon release of lube oil.
BAE Systems	G47/G55	1125 Coleman Avenue	Listed on San Jose Hazmat database as miscellaneous complex firms and labs. Present on Haznet database as generating less than 1 ton unreported waste in 2005*.
San Jose Open Wheel Racing, LLC***	G48	1125 Coleman Avenue	Listed as a major waste tire facility.
Aero-Geodetic Corporation	134	1180 Coleman Avenue	Listed on San Jose Hazmat database as auto wrecking/miscellaneous simple facility. Present on Haznet database for generating approximately 6 tons photochemicals/photoprocessing waste and metal sludge in 2005*.
BAE Systems Land and Armaments	W109	1205 Coleman Avenue	Present on emissions inventory database for emissions of 0.25 ton total organic hydrocarbon gases and 0.13 ton reactive organic gases in 2005*.
United Defense***	W110	1205 Coleman Avenue	Listed as RCRA small quantity generator with no violations noted. Present on Haznet database for generating approximately 21 tons assorted hazardous waste in 2005*. Present on CHMIRS database for a release of 48 pounds of Freon from a leaking air conditioning unit. Emissions reported on emissions inventory database were not reported more recently than 2004.
San Jose Construction	W118	1210 Coleman Avenue	Present on Haznet database as generating approximately ½ ton unspecified oil-containing waste in 2005*.
Santa Clara University	F38	455 El Camino Real	Present on Haznet database as generating approximately 24 tons assorted waste in 2005*.
Santa Clara University	orphan	500 El Camino Real	Present on Haznet database as generating approximately 75 tons assorted waste in 2005*. Also present on emissions inventory database for emitting 0.077 ton total reactive hydrocarbon gases, 0.064 ton reactive organic gases, 0.212 ton carbon monoxide, 0.98 ton NOx, 0.015 ton SOx, and 0.07 ton particulate matter with 0.068 ton less than 10 um in diameter. Listed on Material Licensing Tracking System as a facility that uses radioactive materials.
City of Santa Clara Police	X113/ X114/ X115	601 El Camino Real	Listed on Haznet database as generating less than 1 ton waste oil/mixed oil and less than 1 ton empty containers in 2005*. Present on emissions inventory database as emitting 0.009 ton total organic hydrocarbon gases, 0.008 ton reactive organic gas, 0.025 ton carbon monoxide, 0.117 ton NOx, 0.002 ton SOx, and 0.008 ton particulate matter with 0.0078 ton less than 10 um in diameter. A second listing on the emissions inventory database was for emitting 0.001 ton total organic hydrocarbon gases, 0.001 ton reactive organic gases, 0.003 ton carbon monoxide, and 0.007 ton NOx in 2005*.
Verizon Wireless	Y116	1070 Elm Street	Listed on San Jose Hazmat database as miscellaneous complex firm and lab. Present on Haznet database for generating less than 1 ton empty containers in 2005*.
Air Conditioning Systems	Y127/ Y128	1073 Elm Street	Present on Haznet database for generating approximately 2 tons assorted hazardous materials, primarily liquids with halogenated organic compounds, in 2005*.

(continued)

POTENTIALLY SIGNIFICANT FACILITIES IDENTIFIED IN REGULATORY AGENCY DATABASE REPORT (CONTINUED)

Facility	Map ID No.	Address	Pertinent Information
Santa Clara Valley Transit Authority/Union Pacific Railroad Yard	84/Z119/ Z120/ Z121/ Z122/ Z123/ Z124	795 Newhall Street	Listed on ERNS and CHMIRS databases for releases of ethanol and fuel related to rail car derailments and spills in 2000 and 2003. Present on Haznet database as generating less than ½ ton assorted hazardous wastes in 2005*. Present on ERNS database for a spill of an unknown volume of sodium hydroxide and hydrochloric acid from a rail car.
GTE Sprint Communication Corporation	Z129/ Z130/ Z131	801 Newhall Street	Listed on San Jose Hazmat database as a miscellaneous complex firm and lab. Present on AST database as having 6,000 gallons total AST capacity. Present on WDS database with primary waste listed as storm water run-off and miscellaneous and as a minor threat to ground water quality.
PG&E	AL142	Corner Newhall Street and Stockton Avenue	Listed on Haznet database for generating 1½ tons waste oil/mixed oil in 2005*.

* 2005 is most recent year for which data was available to EDR from referenced databases.
** Business reportedly similar to current business and information appeared pertinent to current condition.
*** Unconfirmed as current tenant due to lack of signage on building.

Conclusions

Railroad Tracks – Numerous rail spurs and main lines were observed within ½ mile of the site, including several adjacent northeast of the site. According to a representative of Union Pacific Railroad, any form of freight, including hazardous materials, could be transported on any rail line; several spills resulting from rail car derailments were reported in the regulatory agency database report. Based on the information available for this study, it appears that hazardous materials could be transported in rail tank cars traveling within a ½-mile radius of the project site. An accident involving such cars could result in a significant release of hazardous materials and, depending on the materials released, conditions created could potentially impact occupants of a vicinity development. Evaluation of mitigative measures for this potential impact should be considered.

Hazardous Materials/Waste Pipelines – Based on the data available for this study, there do not appear to be hazardous materials/waste pipelines adjacent to the project site.

Toxic Gas/CalARP Facilities – Based on information available from the SJFD, no registered toxic gas facilities within the City of San Jose appear to be located within 1 mile of the project site at the time of this study. Information on toxic gas facilities within the City of Santa Clara was not available at the time this report was issued.

Based on information available from the SCCDEH, one CalARP facility, Variety Metal Finishing located at 1166 Campbell Avenue, appears to be located within 1 mile of the project site. Based on modeling data available in the RMP for Variety Metal Finishing, the worst-case radius of impact for nitric acid would be 0.3 miles and the worst-case radius of impact for potassium cyanide would be 0.2 miles. Alternate release scenarios revealed radii of impact of 0.1 miles for both nitric acid and potassium cyanide. Variety Metal Finishing is located approximately 0.2 miles from the project site, and therefore a worst-case release of nitric acid or potassium cyanide could significantly impact the site. Evaluation of mitigative measures for this potential impact should be considered.

Significant Hazardous Substance Facilities – Of the facilities within an approximately ½-mile radius of the project site appearing likely to use, handle, and/or store significant quantities of hazardous substances, 31 had hazardous materials-related records on file with either the SJFD or the SCFD. Seven additional facilities (not having files available at the SJFD or SCFD) were recorded as using/handling/storing quantities of hazardous substances and/or generating hazardous wastes in the regulatory agency database report or were observed to have hazardous materials usage/hazardous materials placarding at the time of the reconnaissance. Based on the volume and type of materials reportedly present at these 38 facilities, as well as their distance from the project site, 17 appear unlikely to pose a significant threat to occupants of the site if a release were to occur. For two of these facilities, this conclusion was based on hazardous materials

inventories or other documents that were more than five years old (the most recent versions available in SJFD or SCFD files).

A summary of the 21 facilities for which additional evaluation is recommended is presented in the following table.

VICINITY FACILITIES FOR WHICH ADDITIONAL EVALUATION IS RECOMMENDED

Facility Name	Facility Address	Obtain Current Hazardous Materials Inventory*	T/IH Evaluate Hazardous Materials Inventory	T/IH Evaluate Reported Air Emissions
Jim Lafferty Aircraft	1250 Aviation Avenue	✓		
San Jose Jet Center	1250 Aviation Avenue		✓ (gasoline)	✓
BAE Systems	328 West Brokaw Road	✓		
BAE Systems	340 West Brokaw Road	✓		
Precision Specialties	1158 Campbell Avenue	✓**	✓	
Variety Metal Finishing	1166 Campbell Avenue		✓	
JRD Precision Machining	1170 Campbell Avenue	✓		
J. Brooks/R. Gomez/Davis Distributing	1173 Campbell Avenue, San Jose	✓		
All-Chem Supply/A.J. Commercial Laundry	1175 Campbell Avenue		✓	
Alliance Roofing Company	1250 Campbell Avenue		✓ (propane)	
N.T.C.S.	1125 Coleman Avenue	✓		
BAE Systems	1205 Coleman Avenue	✓		
City of Santa Clara, Police Administration Building	601 El Camino Real		✓ (gasoline)	
Crane Plumbing and Heating	1054, 1056, and 1058 Elm Street, San Jose	✓		
A&B Doors	1064 Elm Street, San Jose	✓		
San Jose Sheet Metal	1068 and 1070 Elm Street	✓		
Air Conditioning Systems	1073 Elm Street, San Jose	✓		
E.A. McLean and Sons	951 Hamline Street	✓		
Union Pacific Railroad Yard	795 Newhall Street	✓		
Sprint Communications	801 Newhall Street		✓	
PG&E Substation	1099 Stockton Avenue	✓		

* Adequate inventory unavailable on SJFD public access computer or in SCFD files.
** Based on DTSC inspection report comments dated 4/07.
T/IH – toxicologist/environmental hygienist

Reference

Chemical Solutions, Inc. *Risk Management Plan, Variety Metal Finishing, Inc.* June 2005.

Limitations

The conclusions and recommendations made in this letter regarding potentially significant hazardous substance users within the site vicinity were based on business names/addresses readily observable from accessible public right-of-ways and review of readily available documents containing data collected and/or reported by others at the time this study was performed. Other businesses using hazardous materials may have been located within ½ mile of the site, but were not observable or readily identifiable at the time this study was performed; data collected and/or reported by others may or may not have been accurate. The accuracy and completeness of hazardous materials information included in the available SJFD and SCFD files is unknown; more accurate information on types, quantities, and storage conditions of hazardous materials used at vicinity facilities could be obtained through performance of a site reconnaissance and/or interview with the business operators.

The data and conclusions presented in this letter are applicable only to the time this study was performed. Businesses within the site vicinity likely will change over time and this study should be updated as appropriate, to ensure that the most currently available data has been included. As with all hazardous materials surveys, the extent of information obtained was a function of client demands, time limitations, access limitations, and budgetary constraints.

This letter was prepared for the sole use of David J. Powers and Associates. No warranty, expressed or implied, has been made, except that the services have been performed in accordance with environmental principles generally accepted at this time and location.

Thank you for allowing me to assist you with this project. If you have any questions please do not hesitate to call me.

Sincerely,

Belinda P. Blackie

Belinda P. Blackie, P.E., R.E.A.
P.E. Number C56448
R.E.A. Number REA-06746

Copies of the appendices for this report are on file with City of San José Department of Planning, Building, and Code Enforcement.

APPENDIX D-2
SCREENING LEVEL VICINITY HAZARDOUS MATERIALS RISK APPRAISAL

RISICARE, LLC.
1461 NEWPORT AVENUE
SAN JOSE, CA 95125
(408) 292-3266
(408) 298-6591 Facsimile
toxichemdan@sprynet.com

Type of Services	**Screening Level Vicinity Hazardous Materials Risk Appraisal**
Location	**1270 Campbell Avenue** **San Jose, California**
Client	**David J. Powers & Associates**
Client Address	**1885 The Alameda, Suite 204** **San Jose, California 95126**
Project Number	**DJP-11-07**
Date	**November 29, 2007**

THE AMERICAN BOARD OF INDUSTRIAL HYGIENE
INCORPORATED
CERTIFICATION NUMBER
4060 CP
EXPIRES
6-1-2011
PENNSYLVANIA - 1960
DANIEL WILHELM HERNANDEZ C.I.H.

Daniel W. Hernandez, M.P.H., C.I.H., R.E.A.
Principal Risk Assessor

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Type of Services	**Screening Level Vicinity Hazardous Materials Risk Appraisal**
Location	**1270 Campbell Avenue San Jose, California**

SECTION 1: INTRODUCTION

This report presents the results of the Screening Level Vicinity Hazardous Materials Risk Appraisal performed for 1270 Campbell Avenue, San Jose, California (Site). This work was performed for David J. Powers & Associates in accordance with our November 13, 2007 Agreement. RISICARE, LLC, (RISICARE) understands that the Site may be converted from light industrial/commercial use to residential use.

1.1 PURPOSE

We performed this Screening Level Vicinity Hazardous Materials Risk Appraisal to evaluate selected hypothetical catastrophic release of hazardous materials and their potential impacts to the proposed residential development. Chemical inventories were reviewed from seven facilities of potential concern that were identified by Belinda Blackie, PE. (Blackie 2007). The seven facilities included:

- Sprint Communications (801 Newhall Street)
- Variety Metals (1166 Campbell Avenue)
- Alliance Roofing (1250 Campbell Avenue)
- A&J Services (1175 Campbell Avenue)
- Precision Specialties (1158 Campbell Avenue)
- San Jose Jet Center (1250 Aviation Avenue)
- City of Santa Clara Police Administration (601 E Camino Real, Santa Clara)

1.2 MODELING

The Screening Level Vicinity Hazardous Materials Risk Appraisal used screening level computer aided dispersion algorithms to evaluate potential Site impacts. Specifically, the ALOHA CAMEO, Screen3, and ARCHIE programs were used to conduct a screening level evaluation of potential impacts to the future Site development, assuming catastrophic releases of hazardous substances from nearby surrounding facilities. In accordance with U.S. EPA and Cal/EPA Guidelines, potential risks were estimated using conservative worst-case hypothetical

chemical releases that were evaluated to be representative of the surrounding industrial operations. Worst-case releases are generally defined as the loss of entire contents of a container over a ten-minute period. In addition, and in accordance with U.S. EPA and Cal/EPA Guidelines, all releases were modeled using stable meteorological conditions. During stable meteorological conditions and low wind speeds, the vertical and horizontal dispersion of a release is minimized; resulting in higher predicted downwind concentrations.

1.3 ERPG, IDLH, AND TEEL DEFINITIONS

Predicted downwind impacts are compared to emergency planning concentration criteria. The Bay Area Air Quality Management District (BAAQMD) recommends the use of Emergency Response Planning Guidelines exposure level 2 (ERPG-2) as criteria for evaluating significant impact. In addition, the U.S. EPA generally defines "distance to toxic endpoint" in the Risk Management Program (RMP) for off-site consequent analysis as the ERPG-2 concentration. In the absence of ERPG guidelines, the U.S. EPA has recommended 1/10 of the Immediately Dangerous to Life and Health (IDLH) concentrations for planning purposes. ERPGs and IDLH definitions are provided below.

Emergency Response Planning Guidelines (ERPGs) are values developed by the American Industrial Hygiene Association to assist emergency response personnel planning for accidental or intentional catastrophic chemical releases to the community. Due to the variability of human responses over a wide range of concentrations, AIHA cautions that ERPGs should not be expected to protect everyone, but should be applicable to most individuals in the general public. In addition, it must be recognized that in all populations, there are hypersensitive individuals who will show adverse responses at exposure concentrations far below levels at which most individuals normally would respond. ERPGs are defined below:

ERPG-1
The ERPG exposure level 1 is defined as the maximum airborne concentration that nearly all individuals could be exposed to for up to 1 hour without experiencing more than mild, transient adverse health effects or without perceiving a clearly defined objectionable odor.

ERPG-2
The ERPG exposure level 2 is defined as the maximum airborne concentration that nearly all individuals could be exposed to for up to 1 hour without experiencing or developing irreversible or other serious side effects of symptoms that could impair an individual's ability to take protective action.

ERPG-3
The ERPG exposure level 3 is defined as the maximum airborne concentration that nearly all individuals could be exposed to for up to 1 hour without experiencing or developing life-threatening health effects.

IDLH
Immediately Dangerous to Life and Health (IDLH) concentrations represent maximum concentrations from which, in the event of a respirator failure, one could escape within

30 minutes without a respirator and without experiencing escape impairing or irreversible health effects. IDLHs are assumed to be applicable to healthy adult workers in the work place and do not take into account exposure of more sensitive individuals.

TEEL

Temporary Emergency Exposure Limits (TEELs) are temporary Toxic Levels of Concern similar to ERPGs, and defined by the U.S. Department of Energy for use when ERPGs aren't available. Unlike ERPGs, TEELs are not peer-reviewed, and are intended as temporary guidance. They are designed to represent the predicted response of members of the general public to different concentrations of a chemical during an incident. There are three TEEL levels that are important for responders to consider:

TEEL-1: Maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing other than mild transient health effects or perceiving a clearly defined objectionable odor.

TEEL-2: Maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing or developing irreversible or other serious health effects or symptoms that could impair their abilities to take protective action.

TEEL-3: Maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing or developing life-threatening health effects.

SECTION 2: CHEMICAL INVENTORY SUMMARY

A general description of the chemical inventories reviewed from each facility is summarized in Table 1 below. In addition, the name of each facility and approximate distance from the Site is also included. Selected copies of readily available chemical inventories reviewed for each of the facilities listed below are presented in Blackie 2007.

Table 1. Screening Level Summary of Chemical Inventories

Facility Name and Approximate Distance	Summary Chemical Information (Largest Container Sizes)
Sprint Communications Approximately 2,220 feet from the Site	The primary chemicals of concern reported at this facility-included sulfuric acid (788 gallons), solid lead (693 pounds) and fuel oil (8000 gallons). Due to the low vapor pressures of sulfuric acid and fuel oil, the solid nature of lead reported, and due to distance from the Site, no chemicals of concern were noted at this facility.
Alliance Roofing Approximately 100 feet from the Site	This facility reports a variety of chemical compounds that include light and heavy hydrocarbon distillates, inorganic mixtures, small quantities of solvents, and of most concern a 500-gallon tank of propane. Of the chemicals reviewed, propane has the most potential for an offsite consequence if released.
Variety Metals Finishing Approximately 1,056 feet from the Site	Based on information reviewed, this facility reports a variety of corrosive (acidic and basic) compounds in relatively large quantities. As reported in Blackie 2007, the primary chemicals of concern include nitric acid and potassium cyanide. This facility's RMP document indicates threat zones that vary from 0.1 mile to 0.3 mile depending upon the release scenario assumed.
A&J Services Approximately 1,056 feet	A&J Services reported a variety of inorganic (aqueous) and organic formulations that appear to be related to cleaning and maintenance activities. Container sizes appear to range from 5 gallons to 60 gallons. Although not stated by the chemical inventory statement, a San Jose Fire Department Record of Inspection form dated January 2004

from the Site	indicated that the "propane tank was not to code". Non-withstanding the "propane", the primary chemical of concern at this facility is related to solvent compounds (morpholine) in 55-gallon containers. Acetylene also appears to be present; however, the quantity is illegible. At this facility, solvent related materials in bulk quantities are considered to have the most potential to migrate offsite in the unlikely event of a release. However, a solvent release scenario that approximates the risks from this facility (and others) is considered below.
Precision Specialties Approximately 1,056 feet from the Site	Of interest, the San Jose Fire Department Record of Inspection form dated July of 2003 indicated two street addresses (1158 and 1170 Campbell Avenue). This form only indicated the presence of flammable/combustible materials, and other hazardous materials, not quantities reported. The EDR Report provided by Powers and Associates indicated the address of 1170. However, Blackie 2007 reports the location at 1158. The EDR Report indicated poor housekeeping and presence of unspecified solvent wastes. The Hazardous materials inventory statement indicated the presence of cutting oils, solvents, and lubricants. Solvent related compounds are most likely the primary chemicals of concern at this facility.
San Jose Jet Center Approximately 2,640 feet from the Site	The primary chemicals of concern reported at this facility included aviation gasoline (20,000 gallons), Jet A fuel (20,000 gallons), and a 55-gallon quantity of an unspecified glycol ether compound. The fuels are stored underground. Due to the relatively short distance from the site and large quantities reported, a fuel related release scenario is selected for potential Site impacts.
Santa Clara Police Administration Building Approximately 6,864 feet from the Site	This facility reports a 10,000-gallon underground storage tank of gasoline. Gasoline is a high vapor pressure fuel (solvent related compound). However due to the distance of this facility from the Site, a fuel release from the San Jose Jet center will provide a conservative approximation of risks from this facility.

SECTION 3: SELECTED RELEASE SCENARIOS AND RESULTS OF SCREENING LEVEL MODELING

From a risk assessment perspective, the primary emphasis is to identify chemicals that are likely to have significant off-property consequences if catastrophically released. Generally, chemicals that are acutely toxic, exist in a form that readily allows off-property transport (after release), and are used/stored in sufficient quantities, are assumed to represent potential Chemicals of Concern (COCs).

For the six of the seven facilities considered, three release scenarios were chosen to approximate potential risks to the Site. As described in Table 1, distance, quantity, and chemical properties (including toxicity), were considered for release scenario selection. The scenarios appear improbable but should be considered possible. Releases were assumed to occur outside and were modeled assuming urban dispersion coefficients: wind speed of 1.5 meters per second, atmospheric stability class F (stable conditions) and an outside temperature of 60 degrees Fahrenheit. In addition, the scenarios selected were also deemed representative of the potential risks posed by facility chemicals not included in the assessment. Therefore, not all chemicals identified were considered for release risks.

However, the Variety Metals Finishing (VMF) Facility is treated separately in this risk appraisal since this facility is subject to the California Accidental Release Prevention (CalARP) program and due to the complexity of their release scenarios. As mentioned in Table 1, threat zones from this facility were reported to vary from 0.1 miles to 0.3 miles dependent upon specific release scenarios. Section 4 will further examine the VMF reported releases and evaluate

potential risks from this facility. COCs and the selected release scenarios are summarized below.

Alliance Roofing

For this facility, appeared to be located adjacent (100 feet) to the Site, this assessment will assume that liquid propane is released from the 500-gallon tank. ALOHA was used to simulate Site impacts using worst–case meteorology and wind speed to estimate plume centerline concentrations approximately 100 feet from the point of release.

Precision Specialties

This facility, located approximately 0.2 mile from the Site, reported numerous chemicals at significant quantities. For this facility, one release scenario was selected that includes a release into secondary containment of 55 gallons of methylene chloride. For this release, secondary containment is assumed to have a surface area of 200 square feet in size and a surface temperature of 90 degrees Fahrenheit. This scenario should be considered conservative since methylene chloride has a high degree of toxicity and high vapor pressure, thus adequately approximating potential risks associated with any solvent related spill of similar magnitude.

Using worst–case meteorology and wind speed ALOHA was used to simulate potential Site impacts.

San Jose Jet Center

Located approximately 0.5 miles feet from the Site, the most significant hazardous materials reported include the 20,000-gallon quantities of aviation fuels stored below ground. For a worst-case release from this facility, this assessment hypothetically assumes that 5,000 gallons of aviation gasoline is released during a tank (or jet) refill, and the evaporating pool generates flammable vapors for approximately 30-minutes (assuming emergency response within 30-minutes).

This release is unique in that fuel formulations are composed of hundreds of different hydrocarbon compounds, and the assumed volume of spilled material is great. ALOHA can model pure substances but has limited capabilities with respect to large volumes of complex fuel formulations.

Therefore, this release was modeled in two ways. First, the Automated Resource for Chemical Hazard Incident Evaluation (ARCHIE) was used to estimate the release rate from an evaporating pool and the potential consequences of a vapor cloud explosion. However, since ARCHIE does not offer a choice for either urban or rural dispersion conditions, U.S. EPA SCREEN3 was also used to estimate off-site consequences for an area source using urban dispersion parameters. The release rate estimates were developed using the average vapor pressures and molecular weights of gasoline formulations.

Results

The results of this screening level appraisal indicate that in an unlikely event of a worst-case release during worst-case atmospheric conditions, hazardous materials could impact the Site. Table 2 below summarizes the results of the screening level modeling.

The facility that could have potential impact at the Site (i.e. airborne chemical concentration at the Site exceeding exposure thresholds) is the Alliance Roofing facility, located at 1250 Campbell Avenue. Table 2 summarizes the results of the screening level modeling including the approximate threat zones from each potential facility of concern.

Table 2. Screening Level Appraisal Results

Release Location	Approximated Maximum Threat Zone	Approximated Maximum Site Outdoor Concentration[a]	Emergency Planning Guidelines (ppm)
Alliance Roofing (Approximately 100 feet from Site)			
1. Liquid propane release (500 gallons) Toxic End point	**612 feet** (TEEL)	**46,800 ppm**	TEEL-2 = 2,100 ppm
Flammable Area of Vapor Cloud	**231 feet**		60% LEL = 12,000 ppm
Peak Overpressure from vapor cloud explosion	Some Minor Damage Expected (0.95 psi)		1 psi overpressure
Precision Specialties (Approximately 1,056 feet from Site)			
1. Solvent Release (Assumes 55 gallons of methylene chloride spilled into 200 ft^2 containment)	216 feet (ERPG-2)	44 ppm	IDLH = 2,300 ERPG2 = 750 ERPG3 = 4,000
San Jose Jet Center (Approximately 2,640 feet from Site)			
1. Aviation Gasoline release (assumes 5,000 gallons released onto pavement during tank fill)			
Distance to Toxic Endpoint[b]	1837 feet (ERPG-2)	168 ppm	IDLH = 500 ERPG2 = 300 ERPG3 = 1,000
Peak Overpressure from vapor cloud explosion[c]	Low likelihood for damage (minor)	NA	NA
Flammable Area of Vapor Cloud[d]	160 feet		13,000 ppm (LFL)

Notes
All releases assume U.S. EPA Worst-Case conditions: loss of container contents over 10-minute period, Stability Class F and Wind Speed of 1.5 meters per second.
Bold = significant impact.
NA = Not applicable
a. The maximum outdoor concentration is the concentration predicted at the project exterior after the plume reaches the Project (ALOHA or SCREEN3 model).
b. Modeled using SCREEN3, toxicity criteria (as toluene) assume that toluene is equipotent to aviation gasoline.
c. Modeled using ARCHIE (which uses rural dispersion coefficients), see output for estimated damage description
d. Modeled using Screen3 incorporating urban dispersion coefficients

SECTION 4: VARIETY METALS FINISHING

Variety Metals Finishing (VMF) is located at 1166 Campbell Avenue, CA. VMF is reportedly engaged in the electroplating business that involves the dipping of metallic parts into cleaning and plating solutions. The solutions are generally characterized as acid, caustic, metallic, and cyanide containing solutions that serve to provide certain surface characteristics for processed parts. VMF, in compliance the California Accidental Release Prevention Program, conducted and Offsite Consequence Analysis (OCA) for nitric acid and cyanide compounds to estimate significant impact distances downwind from the facility in the unlikely event of a catastrophic release of these regulated substances. The results of their analysis indicated that distances to the toxic endpoint varied from 0.1 mile to 0.3 mile depending upon the substances released and assumptions underpinning each release scenario.

In June of 2007, Toxichem, on behalf of Santa Clara Development and Robson Homes, evaluated the release scenarios developed in the VMF OCA in order to assess site-specific impacts for a new residential development. The results of the evaluation, contained in the June 18, 2007 Toxichem report entitled; *Potential Chemical Release Consequences from Variety Metal Finishing 1166 Campbell Avenue, San Jose, CA,* indicated that distances to toxic endpoints were overstated by the VMF OCA. The release estimates contained in the Toxichem 2007 report are incorporated into this assessment to estimate Site-specific impacts.

This risk appraisal uses the U.S. EPA SCREEN3 program to conduct a screening level evaluation of potential impacts to the Site assuming catastrophic releases of hazardous substances from the VMF facility and predicted downwind impacts are compared to emergency planning concentration criteria.

Nitric Acid Releases

VMF's RMP presents two release scenarios involving nitric acid. The worst-case release assumed that 360 gallons of 34% solution is spilled inside the processing area, an inside air temperature of 95 degrees Fahrenheit, and an evaporating pool diameter of 42 feet. The alternative release scenario for this substance assumed an interior spill of 50 gallons of 67% solution, and an evaporating pool diameter of 16 feet.

Both releases represent evaporating pools of liquid resulting in releases to the interior of the building, which mix with the interior air and then ejected from the building from the building exhaust system. The rate of evolution of nitric acid vapor is based on the vapor pressure of the liquid, the temperature of the liquid, and the area of the spill. As detailed in Appendix B, vapor evolution rates are estimated using EPA methods, and the vapor pressures for the nitric acid solutions are taken from Perry 1950.

Cyanide Compound Releases

VMF's RMP included three release scenarios involving hydrogen cyanide (HCN). The worst-case release assumes that an interior located tank holding 90 gallons of copper plating solution spills into secondary containment then mixing with an ideal amount of acid that simultaneously spilled into the same containment mixing with the cyanide solution to generate hydrogen

cyanide gas. In addition, it was also assumed that 100% of the potassium cyanide reacts over a 10-minute period liberating 34 pounds of cyanide gas (3.4 lbs gas/minute).

Alternative Scenario No. 1, assumed solid potassium cyanide salts mixing with acids resulting in a 45-pound interior release over a ten-minute period (4.5 pounds gas/minute) during normal atmospheric conditions and a wind speed of 3 meters per second.

Similarly, Alternative Scenario No. 2 assumed a release of 55-gallons of waste copper plating solution that mixed with acids in the process area during normal atmospheric conditions. This scenario assumed the reaction of ½ of the available potassium cyanide with acid to yield 10.2 lbs of cyanide gas over a 10-minute period (1.02 lbs/minute).

Building Mitigation

Since the hypothetical releases described above are interior releases, U.S. EPA methods are used to estimate the discharge of contaminated air into the outdoors. EPA 1999D Section D.2.4 "Releases Inside Buildings" states that the rate at which contaminated air exits the building is what EPA is ultimately concerned about.

Section 3.2.3 of EPA 1999, "Releases of Toxic Liquids with Passive Mitigation", provides a conservative and qualitative method for calculating the release rate from a building's exterior. For a worst-case release, the evaporation rate is first determined (i.e., wind speed is 1.5 meters per second (3.4 miles per hour)), then the maximum rate of evaporated liquid exiting the building is taken to be 10 percent of the calculated worst-case scenario evaporation rate. For alternative release scenarios, release rates are first calculated using a 3-meter per second wind speed, and then a mitigation factor of 0.05 is applied (Section 7.2.3 EPA 1999).

Using this approach, Table 3 below summarizes the release rates to the exterior. Detailed calculation methods are provided in Appendix B to this report.

Table 3. Estimated Release Rates

Scenario	Exterior Release Rates (lbs/min)
Worst-Case Release 34% Nitric Acid Solution	0.005
Alternative Release 67% Nitric Acid Solution	0.013
HCN Worst Case	0.34
HCN Alternative Release # 1	0.23
HCN Alternative Release # 2	0.051

Table notes. Worst-Case Release rate for nitric acid calculated using interior wind speed assumed of 1.5 meters per second, a temperature correction factor of 1.6 (U.S. EPA 1999D Exhibit B-4), and an adjustment for building mitigation (Section 3.2.3 of EPA 1999). Alternative release for nitric acid calculated using interior wind speed assumed of 3 meters per second. Worst-case and alternative HCN release rates calculated using the building mitigation factor method.

Estimated Site Impacts

To evaluate potential offsite impacts, a point source model is required since the contaminant is leaving the building via the roof top exhaust system. U.S. EPA SCREEN3 is used to estimate downwind impacts. The SCREEN3 model is a recently updated version to ensure consistency with the dispersion algorithms in the Industrial Source Complex (ISC3) model (EPA, 1995b). For this modeling, inputs include source height, exhaust rate, release rate, and atmospheric and

wind speed conditions. Worst case meteorology (Stability Class F) and wind speed (1.5 meters per second) conditions are used in this assessment with average release rates over 10 minutes. Since the releases are from the roof top exhaust, the site-specific exhaust rate is assumed to be 5,500 cubic feet per minute in compliance with building code requirements that require 1 cfm/ft^2 exhaust. Finally, the height of the rooftop release is assumed to be 25 feet.

Screen3 modeling output is presented in Appendix B to this report.

Table 4 below summarizes Estimate Impacts at the Project Exterior

Table 4. Downwind Impacts (Plume Centerline)

Maximum Project Exterior Impact	Worst-Case Concentration (ug/m^3)	Alterative Case Concentration (ug/m^3)	Concentration of Concern (ERPG-2)[b] (ug/m^3)
Nitric Acid Release	7.7	20.2	15,465
Hydrogen Cyanide Release	526	NC[a]	11,052

Table notes. NC = not calculated
a. Alternative HCN release not calculated since the release rate is lower than worst-case release, thus worst-case projects maximum impacts.
b. The VMF RMP indicated that the nitric acid toxic endpoint is 0.026 mg/l = 26 mg/m3 = 26,000ug/m^3, however, the later ERPG-2 is 6 ppm = 15,456 ug/m^3. The HCN ERPG-2 = 10 ppm = 11,0552 ug/m^3.

Based on the above evaluation, following appropriate EPA guidance [EPA 1999], the ERPG-2 is not exceeded at any location on the Site. This analysis shows that the Variety Metal Finishing facility does not present unacceptable risks of a catastrophic release to residential occupants at the proposed Project Site to be located at 1270 Campbell Avenue.

SECTION 5: DISCUSSION

Of the seven facilities identified by Belinda Blackie, P.E., as facilities of potential concern (Table 1) in our opinion, one facility (Alliance Roofing) appears to pose a potential risk to the proposed residential use of the Site.

The most significant impact appears to be posed by a flammability hazard associated with a hypothetical leak of liquid propane at the Alliance Roofing Facility. This release assumes that 500 gallons of propane is released over a 10-minute period. In our opinion, this release scenario is highly unlikely as discussed below.

First propane is widely and commonly used in residential settings (i.e. Lake Tahoe and remote locations) to provide energy for heating and cooking. One should conclude that the presence of propane is not inconsistent with residential uses because of its common residential use.

Next, the likelihood of a worst-case release must be classified as improbable. The most common spills occur at the fill pipe when the delivery hose is disconnected. Fuel deliverers are trained to follow the industry standard practices for tank filling (API recommended Practice 1007, "Loading and Unloading of MC306 DOT 406 Cargo Tank Motor Vehicles" and NFPA 385 "Standard for Tank Vehicles for Flammable and Combustible Fuels"). In our opinion, based on

the large number of daily fuel deliveries throughout the Bay Area (and other locations), the lack of readily available information of such catastrophic releases of this nature actually occurring during filling operations, and the high level of training and procedural requirements for propane deliveries, this hypothetical scenario appears to be highly unlikely.

SECTION 6: UNCERTAINTY

RISICARE, LLC (RISICARE) performed this screening level risk appraisal to support David J. Powers & Associates in evaluating the impact to the Site from selected catastrophic releases of hazardous materials from nearby facilities. David J. Powers & Associates understand that no modeling assessment can wholly eliminate uncertainty regarding the impact to the Site from accidental and catastrophic releases of hazardous materials. This screening level risk appraisal modeling is intended to reduce, but not eliminate, uncertainty regarding the potential for impacts to the Site from such catastrophic releases. David J. Powers & Associates understand that the extent of information obtained for the modeling is based on the reasonable limits of time and budgetary constraints.

The primary uncertainties associated with this appraisal included the selection of facilities and chemicals for evaluation, the size of each release, assumptions concerning release location, distance of facilities from the Site, vapor pressures of released liquids, assumed area of liquid spills, and atmospheric conditions during the release. Others identified the selected facilities and David J. Powers & Associates provided chemical information for our review.

Information regarding facilities and the chemicals used, stored and generated at these facilities were provided by others and were based on information readily available in public records. Therefore, the accuracy and completeness of the information cannot be assessed. RISICARE cannot verify the accuracy or completeness of this data, nor is RISICARE obligated to identify mistakes or insufficiencies in the information obtained.

With respect to chemical selection provided by RISICARE, chemicals were selected based on volumes, recognized toxicity, and other physio-chemical properties. The chemicals selected appeared representative of potential release risks posed by each facility. With respect to evaporating pools of spilled hazardous materials, sources of uncertainty include assumptions concerning the areas of spilled liquids and the use of surrogates to simulate chemicals spilled. In general, the greater the area of an evaporating pool, the greater the emission rate of the substance, and the greater the distance of off-Site impacts.

Finally, atmospheric conditions considered assumed worst-case conditions. The conditions modeled generally represent nighttime or dark cloudy conditions (periods of calm) during which vertical and horizontal dispersion of the contaminant plume is minimized. These conditions generally occur at a low percentage of the time over any yearly time period. Further, all releases assumed that the Site was located plume centerline, downwind, at the time of the release. Wind speed and wind direction vary over time.

This report, an instrument of professional service, was prepared for the sole use of David J. Powers & Associates and may not be reproduced or distributed without written authorization from RISICARE. It is valid for 180 days. RISICARE makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

APPENDIX A – REFERENCES

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APPENDIX B – SCREENING LEVEL MODELING OUTPUT, NITRIC ACID AND HYDROGEN CYANIDE EMISSION RATE CALCULATIONS

SITE DATA:
Location: SAN JOSE, CALIFORNIA
Building Air Exchanges Per Hour: .5 (user specified)
Time: November 30, 2007 1206 hours PST (using computer's clock)

CHEMICAL DATA:
Chemical Name: DICHLOROMETHANE Molecular Weight: 84.93 g/mol
ERPG-1: 200 ppm ERPG-2: 750 ppm ERPG-3: 4000 ppm
LEL: 159000 ppm UEL: 191000 ppm
Carcinogenic risk - see CAMEO
Ambient Boiling Point: 103.5° F
Vapor Pressure at Ambient Temperature: 0.39 atm
Ambient Saturation Concentration: 391,245 ppm or 39.1%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 1.5 meters/second from 0° true at 10 meters
Ground Roughness: urban or forest Cloud Cover: 5 tenths
Air Temperature: 60° F
Stability Class: F (user override)
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Evaporating Puddle (Note: chemical is flammable)
Puddle Area: 200 square feet Puddle Volume: 55 gallons
Ground Type: Default soil Ground Temperature: 90° F
Initial Puddle Temperature: Ground temperature
Release Duration: 44 minutes
Max Average Sustained Release Rate: 27.1 pounds/min
(averaged over a minute or more)
Total Amount Released: 599 pounds

THREAT ZONE:
Model Run: Heavy Gas
Red : 72 yards --- (750 ppm = ERPG-2)

THREAT AT POINT:
Concentration Estimates at the point:
Downwind: 1056 feet Off Centerline: 0 feet
Max Concentration:
Outdoor: 43.7 ppm
Indoor: 10.7 ppm

Toxic Threat Zone

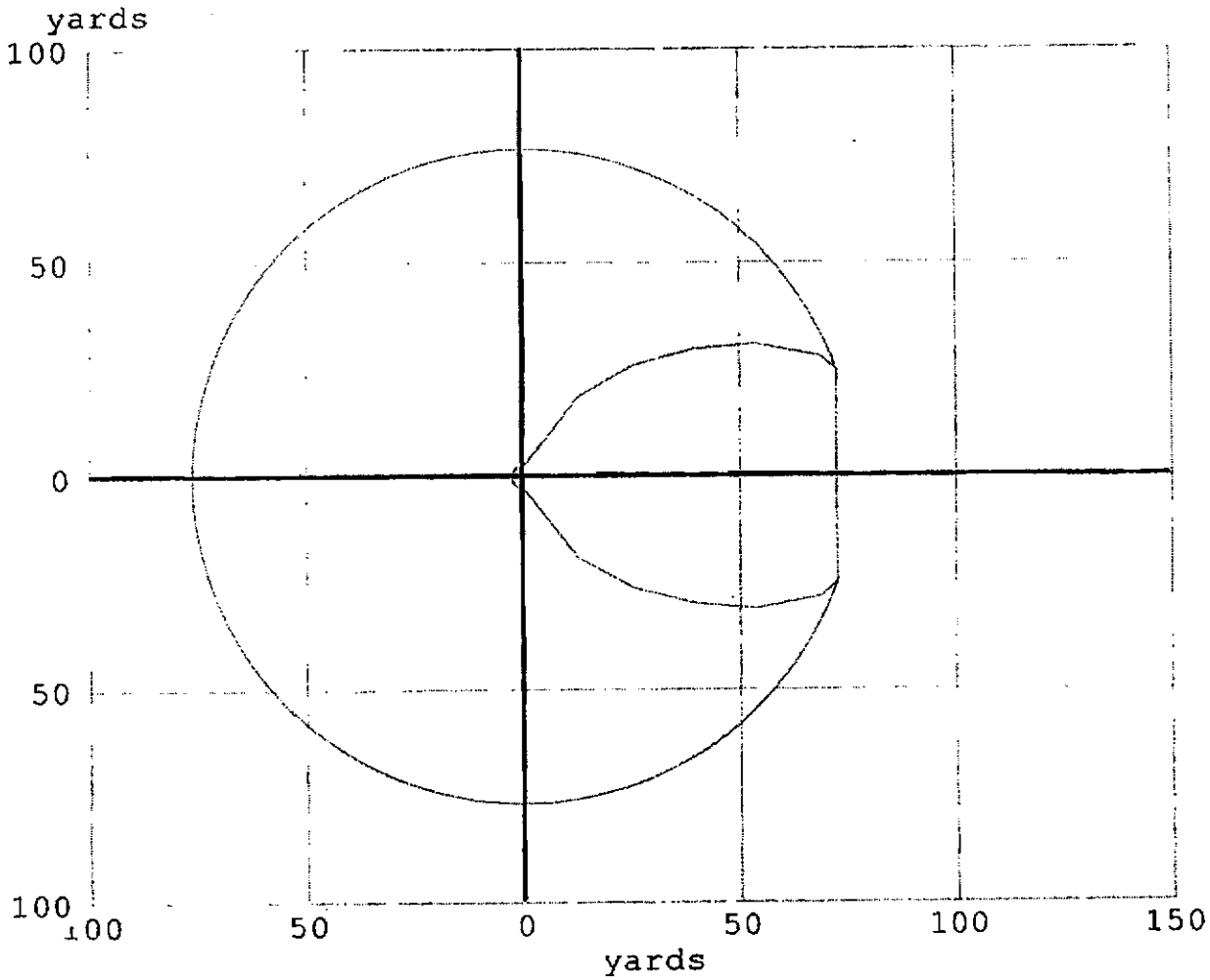
ALOHA® 5.4

Time: November 30, 2007 1206 hours PST (using computer's clock)

Chemical Name: DICHLOROMETHANE
Carcinogenic risk - see CAMEO

Wind: 1.5 meters/second from 0° true at 10 meters

THREAT ZONE:
Model Run: Heavy Gas
Red : 72 yards --- (750 ppm = ERPG-2)



>= 750 ppm = ERPG-2
Confidence Lines

Concentration at Point

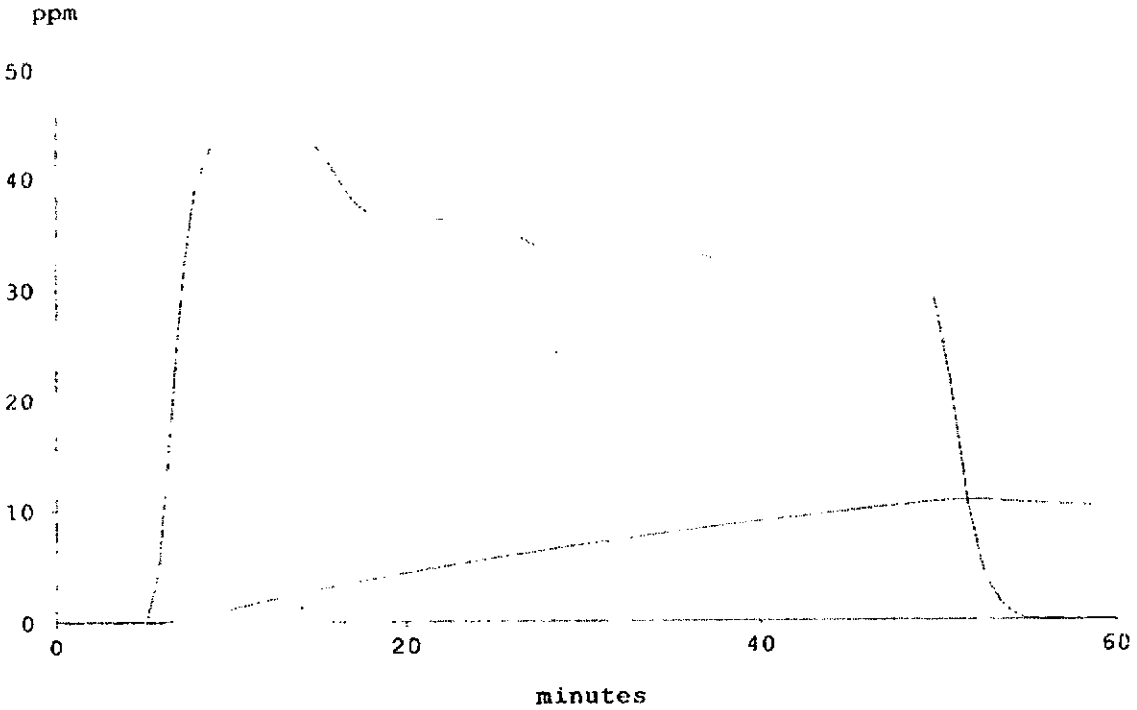
ALOHA® 5.4

Time: November 30, 2007 1206 hours PST (using computer's clock)

Chemical Name: DICHLOROMETHANE
Carcinogenic risk - see CAMEO

Building Air Exchanges Per Hour: .5 (user specified)

THREAT AT POINT:
Model Run: Heavy Gas
Concentration Estimates at the point:
Downwind: 1056 feet Off Centerline: 0 feet
Max Concentration:
Outdoor: 43.7 ppm
Indoor: 10.7 ppm



—— Outdoor Concentration
—— Indoor Concentration
At Point: Downwind: 1056 feet Off Centerline: 0 feet

Text Summary

ALOHA® 5.4

SITE DATA:
Location: SAN JOSE, CALIFORNIA
Building Air Exchanges Per Hour: .5 (user specified)
Time: November 30, 2007 1206 hours PST (using computer's clock)

CHEMICAL DATA:
Chemical Name: PROPANE Molecular Weight: 44.10 g/mol
TEEL-1: 2100 ppm TEEL-2: 2100 ppm TEEL-3: 2100 ppm
IDLH: 2100 ppm LEL: 20000 ppm UEL: 95000 ppm
Ambient Boiling Point: -43.9° F
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 1.5 meters/second from 0° true at 10 meters
Ground Roughness: urban or forest Cloud Cover: 5 tenths
Air Temperature: 60° F
Stability Class: F (user override)
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 50 gallons/min Source Height: 0
Source State: Liquid
Source Temperature: equal to ambient
Release Duration: 10 minutes
Release Rate: 211 pounds/min
Total Amount Released: 2,110 pounds
Note: This chemical may flash boil and/or result in two phase flow.

THREAT ZONE:
Model Run: Heavy Gas
Red : 204 yards --- (2100 ppm = TEEL-3)
Orange: 204 yards --- (2100 ppm = TEEL-2)
Yellow: 204 yards --- (2100 ppm = TEEL-1)

THREAT AT POINT:
Concentration Estimates at the point:
Downwind: 100 feet Off Centerline: 0 feet
Max Concentration:
Outdoor: 46,800 ppm
Indoor: 3,730 ppm

Toxic Threat Zone

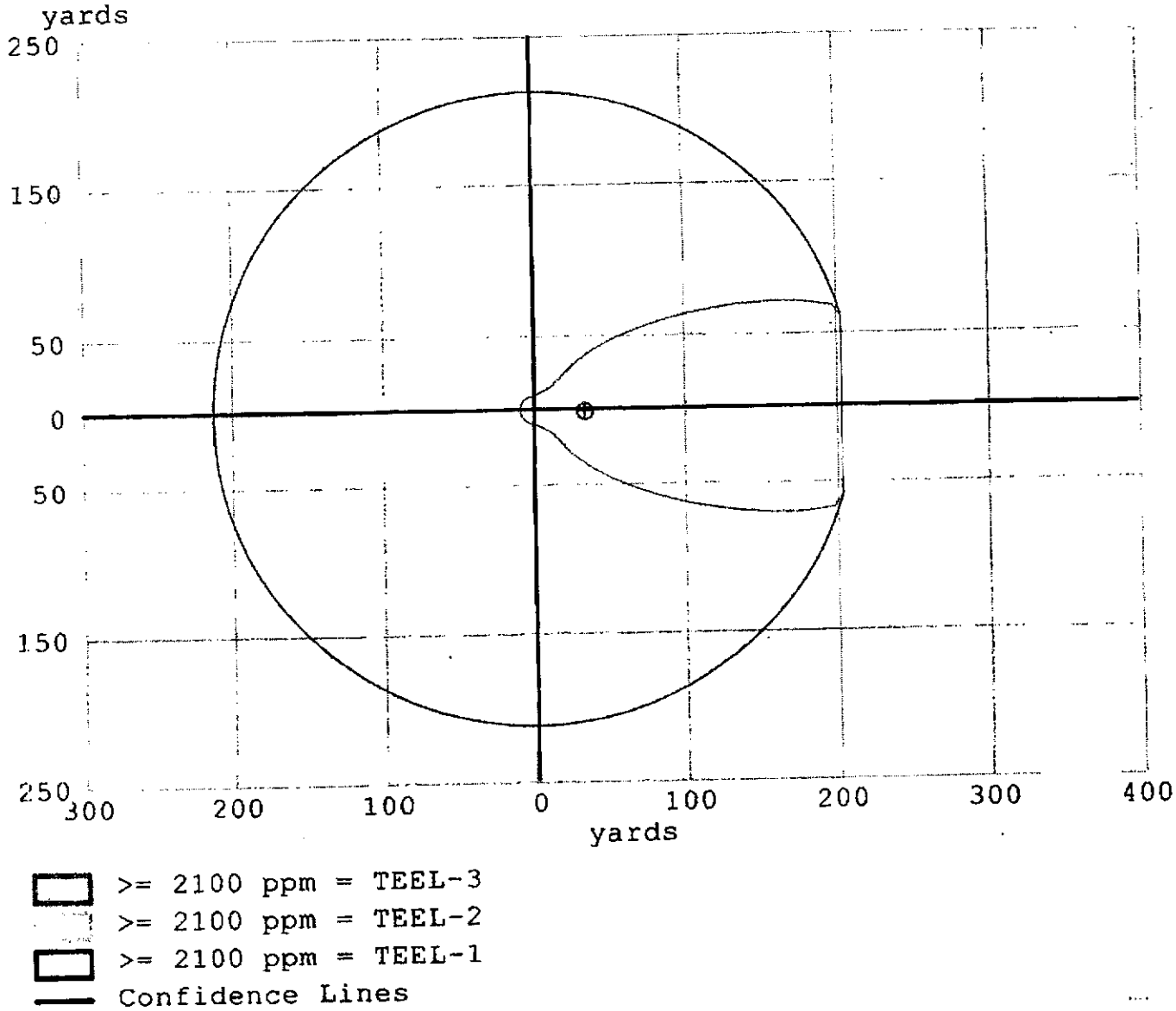
ALOHA® 5.4

Time: November 30, 2007 1206 hours PST (using computer's clock)

Chemical Name: PROPANE

Wind: 1.5 meters/second from 0° true at 10 meters

THREAT ZONE:
Model Run: Heavy Gas
Red : 204 yards --- (2100 ppm = TEEL-3)
Orange: 204 yards --- (2100 ppm = TEEL-2)
Yellow: 204 yards --- (2100 ppm = TEEL-1)



Concentration at Point

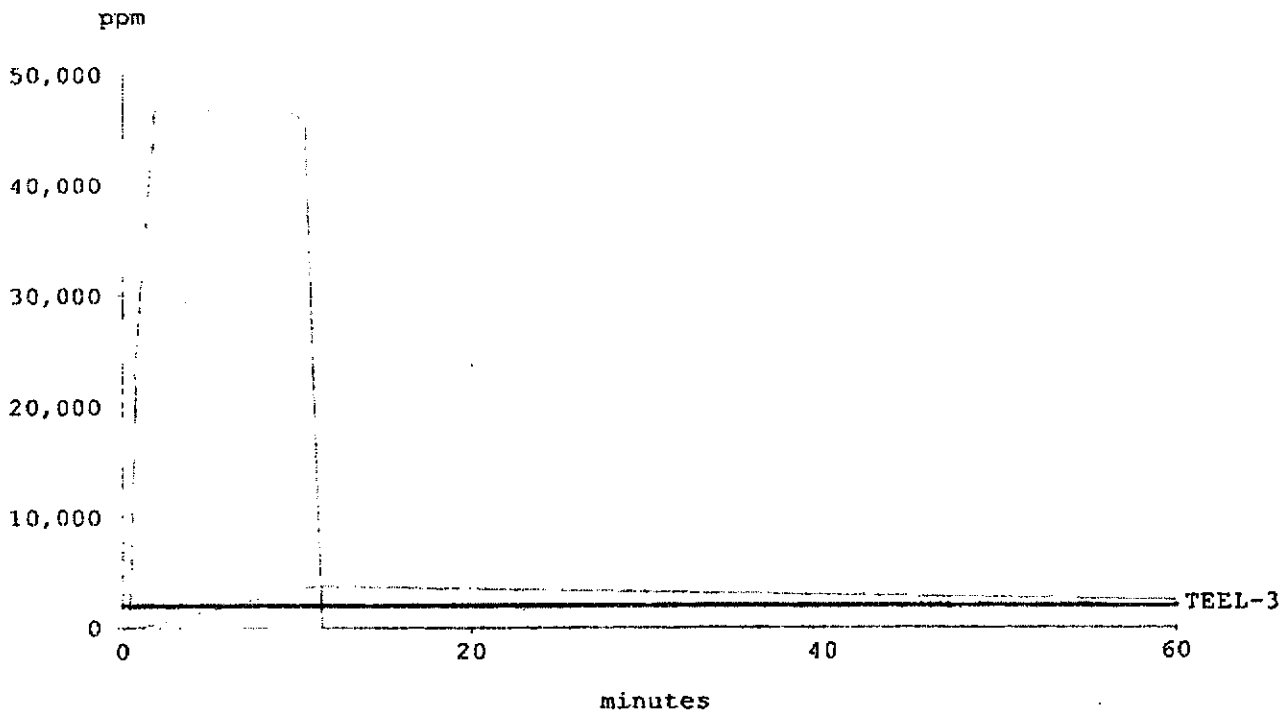
ALOHA® 5.4

Time: November 30, 2007 1206 hours PST (using computer's clock)

Chemical Name: PROPANE

Building Air Exchanges Per Hour: .5 (user specified)

THREAT AT POINT:
Model Run: Heavy Gas
Concentration Estimates at the point:
Downwind: 100 feet Off Centerline: 0 feet
Max Concentration:
Outdoor: 46,800 ppm
Indoor: 3,730 ppm



---- Outdoor Concentration
—— Indoor Concentration
At Point: Downwind: 100 feet Off Centerline: 0 feet

ALOHA® 5.4

Text Summary

SITE DATA:
Location: SAN JOSE, CALIFORNIA
Building Air Exchanges Per Hour: .5 (user specified)
Time: November 30, 2007 1206 hours PST (using computer's clock)

CHEMICAL DATA:
Chemical Name: PROPANE Molecular Weight: 44.10 g/mol
TEEL-1: 2100 ppm TEEL-2: 2100 ppm TEEL-3: 2100 ppm
IDLH: 2100 ppm LEL: 20000 ppm UEL: 95000 ppm
Ambient Boiling Point: -43.9° F
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 1.5 meters/second from 0° true at 10 meters
Ground Roughness: urban or forest Cloud Cover: 5 tenths
Air Temperature: 60° F
Stability Class: F (user override)
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 50 gallons/min Source Height: 0
Source State: Liquid
Source Temperature: equal to ambient
Release Duration: 10 minutes
Release Rate: 211 pounds/min
Total Amount Released: 2,110 pounds
Note: This chemical may flash boil and/or result in two phase flow.

THREAT ZONE:
Threat Modeled: Flammable Area of Vapor Cloud
Model Run: Heavy Gas
Red : 77 yards --- (12,000 ppm = 60% LEL = Flame Pockets)

THREAT AT POINT:
Concentration Estimates at the point:
Downwind: 100 feet Off Centerline: 0 feet
Max Concentration:
Outdoor: 46,800 ppm
Indoor: 3,730 ppm

Concentration at Point

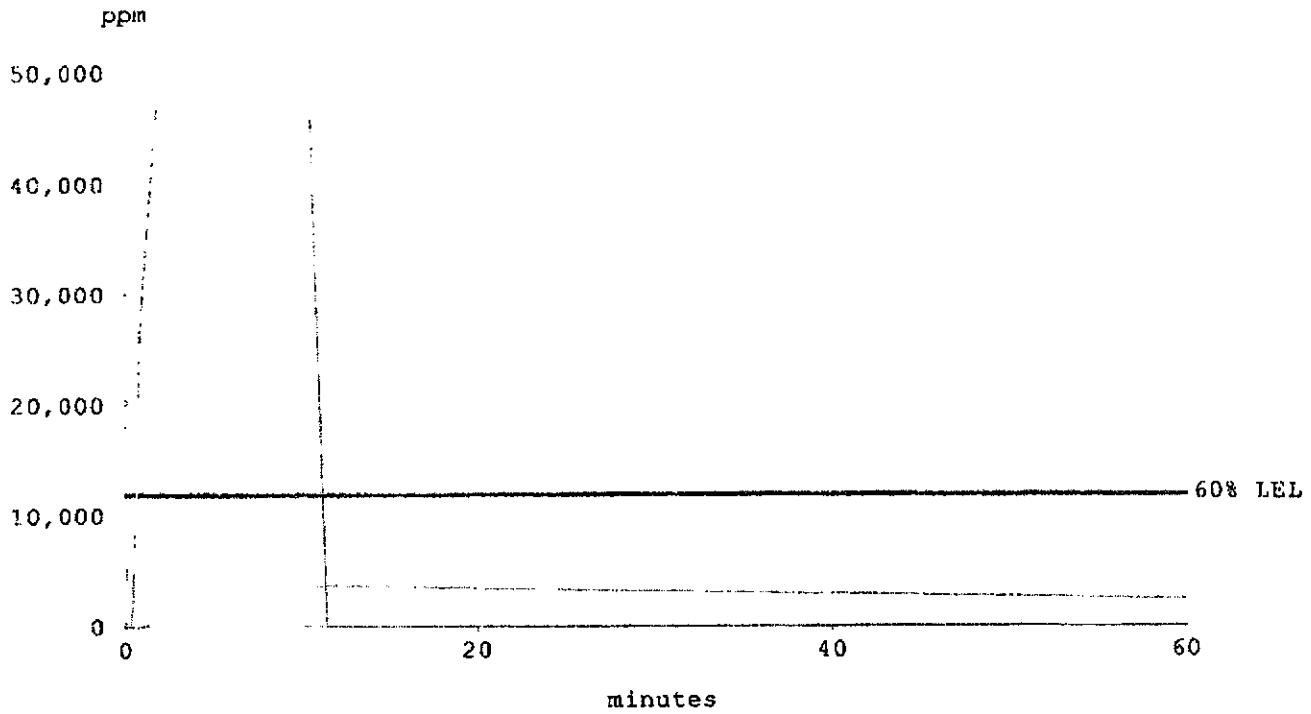
ALOHA® 5.4

Time: November 30, 2007 1206 hours PST (using computer's clock)

Chemical Name: PROPANE

Building Air Exchanges Per Hour: .5 (user specified)

THREAT AT POINT:
Model Run: Heavy Gas
Concentration Estimates at the point:
Downwind: 100 feet Off Centerline: 0 feet
Max Concentration:
Outdoor: 46,800 ppm
Indoor: 3,730 ppm



—— Outdoor Concentration
—— Indoor Concentration
At Point: Downwind: 100 feet Off Centerline: 0 feet

Flammable Threat Zone

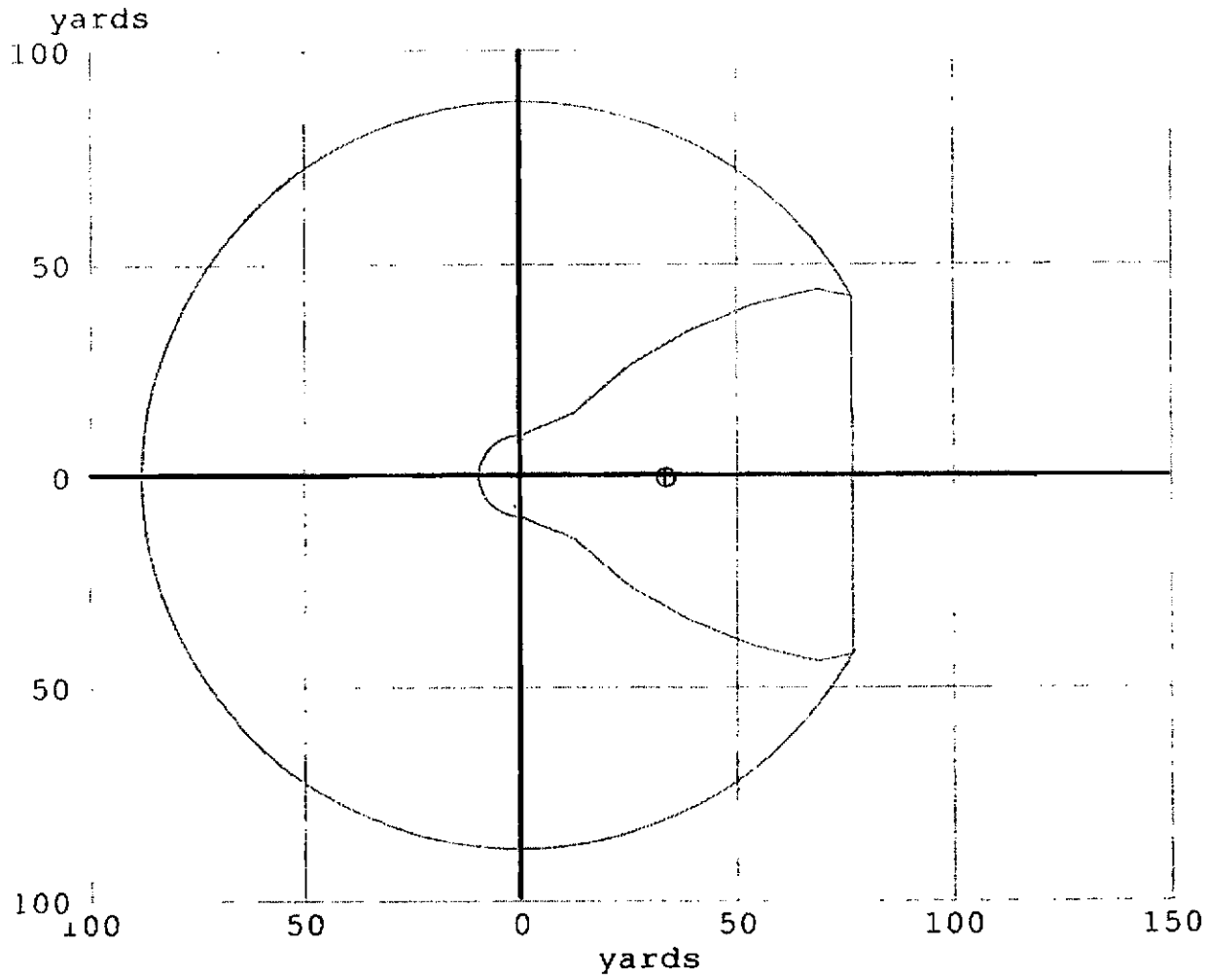
ALOHA® 5.4

Time: November 30, 2007 1206 hours PST (using computer's clock)

Chemical Name: PROPANE

Wind: 1.5 meters/second from 0° true at 10 meters

THREAT ZONE:
Threat Modeled: Flammable Area of Vapor Cloud
Model Run: Heavy Gas
Red : 77 yards --- (12,000 ppm = 60% LEL = Flame Pockets)



>= 12,000 ppm = 60% LEL = Flame Pockets
Confidence Lines

Overpressure at Point

ALOHA® 5.4

Time: November 30, 2007 1206 hours PST (using computer's clock)

Chemical Name: PROPANE

Building Air Exchanges Per Hour: .5 (user specified)

THREAT AT POINT:
Model Run: Heavy Gas
Overpressure Estimate at the point:
Downwind: 100 feet Off Centerline: 0 feet
Overpressure: 0.951 psi

Overpressure: 0.951 psi

At Point: Downwind: 100 feet Off Centerline: 0 feet

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12:40:38

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

Aviation Gasoline Spill

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =        AREA
   EMISSION RATE (G/(S-M**2)) =     5.41000
   SOURCE HEIGHT (M)          =       .0000
   LENGTH OF LARGER SIDE (M)  =     45.0000
   LENGTH OF SMALLER SIDE (M) =     45.0000
   RECEPTOR HEIGHT (M)        =      2.0000
   URBAN/RURAL OPTION         =       URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =     .000 M**4/S**3;  MOM. FLUX =     .000 M**4/S**2.

*** STABILITY CLASS  6 ONLY ***
*** ANEMOMETER HEIGHT WIND SPEED OF   1.50 M/S ONLY ***

**********************************
*** SCREEN DISCRETE DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
100.	.1794E+08	6	1.5	1.5	10000.0	.00	45.
200.	.6628E+07	6	1.5	1.5	10000.0	.00	45.
300.	.3444E+07	6	1.5	1.5	10000.0	.00	43.
400.	.2140E+07	6	1.5	1.5	10000.0	.00	45.
500.	.1480E+07	6	1.5	1.5	10000.0	.00	43.
600.	.1099E+07	6	1.5	1.5	10000.0	.00	2.
700.	.8570E+06	6	1.5	1.5	10000.0	.00	41.
805.	.6860E+06	6	1.5	1.5	10000.0	.00	1.

```
      ****************************************
      *** SUMMARY OF SCREEN MODEL RESULTS ***
```

HAZARDOUS MATERIAL = Gasoline
DATE OF ASSESSMENT = November 27, 2007
NAME OF DISK FILE = AVIATION.ASF

******* LIQUID POOL SIZE ESTIMATES

Evaporating pool area	=	21721	ft2
Burning pool area	=	3077	ft2

Note: Pool is assumed to ignite immediately upon initiation of discharge.

******* LIQUID POOL EVAPORATION RATE/DURATION ESTIMATES

Vapor evolution rate	=	1441.9	lbs/min
Evolution duration	=	23.2	minutes

******* TOXIC VAPOR DISPERSION ANALYSIS RESULTS

Downwind distance to concentration of 300 ppm
-- at groundlevel = 8148 feet

Note: Minimum computable answer is 33 feet!
Actual hazard distance may be less.

See attached table(s) for further details.

******* FLAMMABLE VAPOR CLOUD HAZARD RESULTS

For concentration of		1/2 LFL	LFL	
Downwind hazard distance	=	1066	733	feet
Max hazard zone width	=	959	660	feet
Max weight explosive gas	=	7314	5031	lbs
Relative gas/air density	=	1.84	1.84	initially
Model used in analysis	=	Heavy gas		

******* EXPLOSION HAZARDS: See attached table(s)

INPUT PARAMETER SUMMARY

PHYSIOCHEMICAL PROPERTIES OF MATERIAL

NORMAL BOILING POINT	=	130	degrees F
MOLECULAR WEIGHT	=	100	
LIQUID SPECIFIC GRAVITY	=	.75	
VAPOR PRES AT AMBIENT TEMP	=	5.01	psia
	=	258.7	mm Hg
LOWER FLAMMABLE LIMIT (LFL)	=	1.3	vol%
LOWER HEAT OF COMBUSTION	=	19000	Btu/lb
GAS EXPLOSION YIELD FACTOR	=	.03	
TOXIC VAPOR LIMIT	=	300	ppm

CONTAINER CHARACTERISTICS

TEMP OF CONTAINER CONTENTS	=	70	degrees F

ENVIRONMENTAL/LOCATION CHARACTERISTICS

AMBIENT TEMPERATURE	=	80	degrees F
WIND VELOCITY	=	3.4	mph
ATMOSPHERIC STABILITY CLASS	=	F	
LIQUID CONFINEMENT AREA	=	NONE	
VAPOR/GAS DISCHARGE HEIGHT	=	0	feet

KEY RESULTS PROVIDED BY USER INSTEAD OF BY EVALUATION METHODS

DISCHARGE RATE	=	3335	lb/min
DURATION DISCHARGE	=	10	minutes
AMOUNT DISCHARGED	=	33350	lbs

KEY RESULTS OVERRIDDEN BY USER AT SOME POINT AFTER COMPUTATION

NONE OBSERVED

UNCONFINED VAPOR CLOUD EXPLOSION EFFECTS

DISTANCE FROM EXPLOSION (feet)	EXPECTED DAMAGE
8941	Occasional breakage of large windows under stress.
1260	Some damage to home ceilings; 10% window breakage.
471 - 816	Windows usually shattered; some frame damage.
471	Partial demolition of homes; made uninhabitable.
121 - 471	Range serious/slight injuries from flying glass/object
284	Partial collapse of home walls/roofs.
217 - 284	Non-reinforced concrete/cinder block walls shattered.
97 - 251	Range 90-1% eardrum rupture among exposed population.
244	50% destruction of home brickwork.
181 - 217	Frameless steel panel buildings ruined.
158	Wooden utility poles snapped.
130 - 158	Nearly complete destruction of houses.
107	Probable total building destruction.
64 - 89	Range for 99-1% fatalities among exposed populations due to direct blast effects.

Note: The center of an unconfined gas/vapor explosion can be anywhere within the ground area passed over by the cloud or plume. See results of the vapor cloud fire hazard analysis for the maximum downwind distance and maximum width of this area. Explosion is assumed to take place on or near the ground.

TOXIC VAPOR DISPERSION ANALYSIS RESULTS

Downwind Distance (feet)	Downwind Distance (miles)	Groundlevel Concentration (ppm)	Source Height Concentration (ppm)	Initial Evacuation Zone Width* (feet)
100	.02	611897	611897	160
675	.13	16776	16776	580
1250	.24	5779	5779	1000
1825	.35	3073	3073	1420
2400	.46	1967	1967	1840
2974	.57	1395	1395	2250
3549	.68	1056	1056	2670
4124	.79	836	836	3090
4699	.89	684	684	3510
5274	1	574	574	3930
5848	1.11	491	491	4350
6423	1.22	427	427	4760
6998	1.33	376	376	5180
7573	1.44	335	335	5600
8148	1.55	300	300	1

*Usually safe for < 1 hour release. Longer releases or sudden wind shifts may require a larger width or different direction for the evacuation zone. See Chapters 3 and 12 of the guide for details. Source height specified by the user for this scenario was 0 feet.

TOXIC VAPOR DISPERSION ANALYSIS RESULTS

Downwind Distance (feet)	Downwind Distance (miles)	Contaminant Arrival Time at Downwind Location (minutes)	Contaminant Departure Time at Downwind Location (minutes)
100	.02	.4	23.9
675	.13	2.3	27.8
1250	.24	4.2	31.6
1825	.35	6.1	35.4
2400	.46	8.1	39.3
2974	.57	10	43.1
3549	.68	11.9	47
4124	.79	13.8	50.8
4699	.89	15.8	54.7
5274	1	17.7	58.5
5848	1.11	19.6	62.3
6423	1.22	21.5	66.2
6998	1.33	23.4	70
7573	1.44	25.4	73.9
8148	1.55	27.3	77.7

CAUTION: See guide for assumptions used in estimating these times.

Calculations for Table 3: Nitric Acid Interior Release Rates by Building Mtigation Factor

Nitric Acid	34%		Worst Case										
	Factor	Windspd U	MW	A	VP	Fact2	Temp K	QR lbs/min	Temp Corr Fact 95 deg C	Temp Corrected	Bld Factor	QRb lbs/min
	0.284	1.5	63.02	1387	0.09	82.05	298	0.031546	1.6	0.050474	0.1	0.005047

Nitric Acid	67%		Alternative								
	Factor	U	MW	A	VP	Fact2	Temp K	QR lbs/min	Building Factor		QRb lbs/min
	0.284	3	63.02	193	3.1	82.05	298	0.259627	0.05		0.012981

	Release Rate lbs/min	Building Factor	QRb lbs/min
HCN- Worst Case	3.4	0.1	0.34
HCN- Alt Case # 1	4.5	0.05	0.225
HCN- Alt Case # 2	1.02	0.05	0.051

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14:07:11

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

Worst Case Nitric Acid Release

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE              =        POINT
   EMISSION RATE (G/S)      =      .380000E-01
   STACK HEIGHT (M)         =       7.6000
   STK INSIDE DIAM (M)      =       1.0000
   STK EXIT VELOCITY (M/S)=         3.3050
   STK GAS EXIT TEMP (K)    =     298.0000
   AMBIENT AIR TEMP (K)     =     293.0000
   RECEPTOR HEIGHT (M)      =       2.0000
   URBAN/RURAL OPTION       =        URBAN
   BUILDING HEIGHT (M)      =        .0000
   MIN HORIZ BLDG DIM (M) =          .0000
   MAX HORIZ BLDG DIM (M) =          .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   STACK EXIT VELOCITY WAS CALCULATED FROM
   VOLUME FLOW RATE =   5500.0000     (ACFM)

BUOY. FLUX =      .136 M**4/S**3;  MOM. FLUX =    2.685 M**4/S**2.

*** STABILITY CLASS  6 ONLY ***
*** ANEMOMETER HEIGHT WIND SPEED OF   1.50 M/S ONLY ***

**********************************
*** SCREEN DISCRETE DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC              U10M   USTK  MIX HT   PLUME   SIGMA   SIGMA
   (M)   (UG/M**3)   STAB   (M/S)  (M/S)    (M)    HT (M)   Y (M)   Z (M)  DWASH
 -------  ----------  ----  -----  -----  ------  ------  ------  ------  -----
   322.    7.681       6     1.5    1.5 10000.0   18.68   33.49   21.39    NO

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

     ****************************************
```

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14:17:32

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

Alternative Nitric Acid Release

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE              =        POINT
   EMISSION RATE (G/S)      =      .100000
   STACK HEIGHT (M)         =       7.6000
   STK INSIDE DIAM (M)      =       1.0000
   STK EXIT VELOCITY (M/S)=         3.3050
   STK GAS EXIT TEMP (K)    =     298.0000
   AMBIENT AIR TEMP (K)     =     293.0000
   RECEPTOR HEIGHT (M)      =       2.0000
   URBAN/RURAL OPTION       =        URBAN
   BUILDING HEIGHT (M)      =        .0000
   MIN HORIZ BLDG DIM (M) =          .0000
   MAX HORIZ BLDG DIM (M) =          .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   STACK EXIT VELOCITY WAS CALCULATED FROM
   VOLUME FLOW RATE =   5500.0000     (ACFM)

BUOY. FLUX =      .136 M**4/S**3;  MOM. FLUX =    2.685 M**4/S**2.

*** STABILITY CLASS  6 ONLY ***
*** ANEMOMETER HEIGHT WIND SPEED OF   1.50 M/S ONLY ***

**********************************
*** SCREEN DISCRETE DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
322.	20.21	6	1.5	1.5	10000.0	18.68	33.49	21.39	NO

```
 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************
```

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	20.21	322.	0.

```
*****************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
*****************************************************
```

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14:22:10

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

Worst Case Hydrogen Cyanide Release

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE            =        POINT
   EMISSION RATE (G/S)    =      2.60000
   STACK HEIGHT (M)       =       7.6000
   STK INSIDE DIAM (M)    =       1.0000
   STK EXIT VELOCITY (M/S)=       3.3050
   STK GAS EXIT TEMP (K)  =     298.0000
   AMBIENT AIR TEMP (K)   =     293.0000
   RECEPTOR HEIGHT (M)    =       2.0000
   URBAN/RURAL OPTION     =        URBAN
   BUILDING HEIGHT (M)    =        .0000
   MIN HORIZ BLDG DIM (M) =        .0000
   MAX HORIZ BLDG DIM (M) =        .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   STACK EXIT VELOCITY WAS CALCULATED FROM
   VOLUME FLOW RATE =   5500.0000     (ACFM)

BUOY. FLUX =     .136 M**4/S**3;  MOM. FLUX =    2.685 M**4/S**2.

*** STABILITY CLASS  6 ONLY ***
*** ANEMOMETER HEIGHT WIND SPEED OF   1.50 M/S ONLY ***

**********************************
*** SCREEN DISCRETE DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC            U10M   USTK  MIX HT   PLUME   SIGMA   SIGMA
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)   (M)    HT (M)   Y (M)   Z (M)  DWASH
-------  ----------  ----  -----  -----  ------  ------  ------  ------  -----
   322.    525.5       6    1.5    1.5 10000.0   18.68   33.49   21.39    NO

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION         MAX CONC    DIST TO   TERRAIN
  PROCEDURE         (UG/M**3)    MAX (M)    HT (M)
--------------     -----------   -------   -------
SIMPLE TERRAIN       525.5         322.        0.

*****************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
*****************************************************
```

APPENDIX E
FLOODPLAIN IMPACTS MEMORANDUM

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

100 N. Winchester Blvd., Suite 200
Santa Clara, CA 95050
(408) 246-4848
FAX (408) 246-5624
s&w@swsv.com

MEMORANDUM

TO:	Will Burns, David J. Powers and Assoc.
FROM:	Charles D. Anderson, P.E.
DATE:	October 29, 2007
JOB #:	DPOW.51.07
SUBJECT:	1270 Campbell Avenue Floodplain Impacts

REGISTERED PROFESSIONAL ENGINEER
CHARLES D. ANDERSON
No. 43776
EXP. 6/30/09
CIVIL
STATE OF CALIFORNIA

This memorandum presents my opinion of potential floodplain impacts due to proposed development at 1270 Campbell Avenue in San Jose. As shown by Figure 1, the proposed development lies within a Special Flood Hazard Area (Zone AH, elevation 63 feet NGVD) mapped on the October 25, 2006 Letter of Map Revision for the City of San Jose.

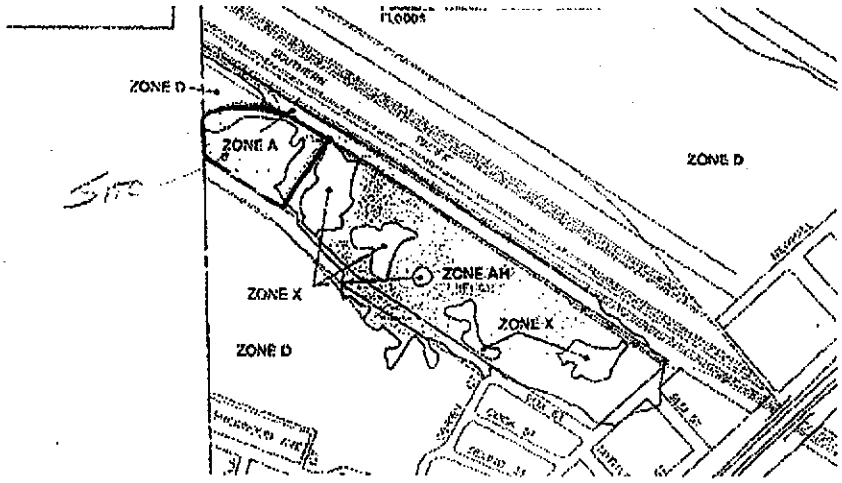


Figure 1: Site Location within Mapped Flood Hazard Area

This Flood Insurance Rate Map is based on an Interior Drainage Study prepared by AN-West, Inc. in 2005. (AN-West prepared the Interior Drainage Study within San Jose; Schaaf & Wheeler prepared a concurrent Interior Drainage Study within Santa Clara.) Work maps prepared for the Interior Drainage Study indicate that the ponding zone (AH) is controlled not by the volume of one-percent runoff, but by the elevation of release over the Southern Pacific Railroad to the northeast.

Thus as long as the development does not block the release of ponded water, and it does not, there is no impact to the mapped one-percent floodplain.

APPENDIX F
ENVIRONMENTAL NOISE ASSESSMENT

1270 CAMPBELL AVENUE PD REZONING PROJECT NOISE AND VIBRATION ASSESSMENT SAN JOSE, CALIFORNIA

June 9, 2008

♦ ♦ ♦

Prepared for:

Will Burns
David J. Powers & Associates
1885 The Alameda, Suite 204
San Jose, CA 95126

Prepared by:

Michael S. Thill
Richard R. Illingworth

ILLINGWORTH & RODKIN, INC.
Acoustics · Air Quality
505 Petaluma Boulevard South
Petaluma, CA 94952
(707) 766-7700

Job No.: 07-180

INTRODUCTION

This report presents the results of the noise and vibration assessment conducted for the proposed rezoning of the approximately 5.11 acre site at 1270 Campbell Avenue in San Jose, California to A (PD) – Planned Development from HI – Heavy Industrial. The conceptual plans for the project site propose development of approximately 248 units, including approximately 124 one-bedroom flats, 115 two-bedroom flats, and nine townhouse units. The proposed building would be a podium structure up to 70 feet in height with an at-grade parking garage and four levels of residential units atop the podium. The proposed nine townhouse units would be located along the site's Campbell Avenue frontage. Leasing offices and amenity space for residents would also be located on the ground floor of the building. The proposed townhouses and community facilities would shield views of the parking garage from street level. Additional parking is proposed surrounding the perimeter of the building. The project could result in potentially significant noise impacts at proposed residential receivers and at receivers within the project vicinity. This assessment presents the fundamentals of environmental noise and vibration, provides a discussion of policies and standards applicable to the project, presents the results of measurements conducted at the site, and provides an evaluation of the potential significance of impacts resulting from the project. Mitigation measures are presented to reduce potentially significant noise impacts to less-than-significant levels.

FUNDAMENTALS OF ENVIRONMENTAL NOISE

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table 1.

Most of the sounds which we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-weighted levels measured in the environment and in industry are shown in Table 2 for different types of noise.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources which create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L_{01}, L_{10}, L_{50}, and L_{90}, are commonly used. They are the A-weighted noise levels equaled or exceeded during 1%, 10%, 50%, and 90% of a stated time period. A single number descriptor called the L_{eq} is also widely used. The L_{eq} is the average A-weighted noise level during a stated period of time.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are

generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, DNL (day/night average sound level), was developed. The DNL divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

FUNDAMENTALS OF GROUNDBORNE VIBRATION

Railroad operations are potential sources of substantial ground vibration depending on distance, the type and the speed of trains, and the type of railroad track. People's response to ground vibration has been correlated best with the velocity of the ground. The velocity of the ground is expressed on the decibel scale. The reference velocity is 1×10^{-6} in./sec. RMS, which equals 0 VdB, and 1 in./sec. equals 120 VdB. Although not a universally accepted notation, the abbreviation "VdB" is used in this document for vibration decibels to reduce the potential for confusion with sound decibels.

Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans. Perceptible vibration levels inside residences are attributed to the operation of heating and air conditioning systems, door slams and foot traffic. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences. Table 3 illustrates some common sources of vibration and the association to human perception or the potential for structural damage.

One of the problems with developing suitable criteria for groundborne vibration is the limited research into human response to vibration and more importantly human annoyance inside buildings. The U.S. Department of Transportation, Federal Transit Administration has developed rational vibration limits that can be used to evaluate human annoyance to groundborne vibration. These criteria are primarily based on experience with passenger train operations, such as rapid transit and commuter rail systems. The main difference between passenger and freight operations is the time duration of individual events; a passenger train lasts few seconds whereas a long freight train may last several minutes, depending on speed and length. The FTA vibration limits are used in this assessment to evaluate the potential of vibration-induced annoyance on the site due to railroad trains.

Table 1 Definitions of Acoustical Terms Used in this Report

Term	Definitions
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{05}, L_{10}, L_{90}	The A-weighted noise levels that are exceeded 1%, 5%, 10%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Table 2 Typical Noise Levels in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 20 meters	100 dBA	
		Night club with live music
	90 dBA	
Large truck pass by at 15 meters		
	80 dBA	Noisy restaurant
		Garbage disposal at 1 meter
Gas lawn mower at 30 meters	70 dBA	Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
Suburban expressway at 90 meters	60 dBA	
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		
Quiet rural areas	30 dBA	Library
		Quiet bedroom at night
Wilderness area	20 dBA	
Most quiet remote areas	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

Table 3 Typical Levels of Groundborne Vibration

Human/Structural Response	Velocity Level, VdB (re 1μinch/sec, RMS)	Typical Events (50 –foot setback)
Threshold, minor cosmetic damage	100	Blasting, pile driving, vibratory compaction equipment
		Heavy tracked vehicles (Bulldozers, cranes, drill rigs)
Difficulty with tasks such as reading a video or computer screen	90	
		Commuter rail, upper range
Residential annoyance, infrequent events	80	Rapid transit, upper range
Residential annoyance, frequent events		Commuter rail, typical Bus or truck over bump or on rough roads
	70	Rapid transit, typical
Approximate human threshold of perception to vibration		Buses, trucks and heavy street traffic
	60	
		Background vibration in residential settings in the absence of activity
Lower limit for equipment ultra-sensitive to vibration	50	

Source: Illingworth & Rodkin, Inc. and U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006,FTA-VA-90-1003-0

REGULATORY BACKGROUND - NOISE

The State of California, Santa Clara County, and the City of San Jose establish guidelines, regulations, and policies designed to limit noise exposure at noise sensitive land uses. Appendix G of the State CEQA Guidelines, the Santa Clara County Airport Land Use Commission's Land Use Plan, and the City of San Jose Noise Element of the General Plan present the following:

State CEQA Guidelines. The California Environmental Quality Act (CEQA) contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. CEQA asks whether the proposed project would result in:

- 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?
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- 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?

CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 dBA DNL or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard (60 dBA DNL). Where noise levels would remain at or below the normally acceptable noise level standard with the project, noise level increases of 5 dBA DNL or greater would be considered significant.

2007 California Building Code. Multi-family housing in the State of California is subject to the environmental noise limits set forth in the 2007 California Building Code (Chapter 12, Appendix Section 1207.11.2). The noise limit is a maximum interior noise level of 45 dBA DNL. Where exterior noise levels exceed 60 dBA DNL, a report must be submitted with the building plans describing the noise control measures that have been incorporated into the design of the project to meet the noise limit.

Santa Clara County Airport Land Use Commission Land Use Plan. The Santa Clara County Airport land Use Commission has adopted a Land Use Compatibility Chart (not shown) for projects within the vicinity of San Jose International Airport. The chart indicates that residential land uses are compatible in noise environments less than 65 CNEL.

City of San Jose General Plan. The Noise Element of the City of San Jose's 2020 Plan identifies noise and land use compatibility standards for various land uses. The City's goal is to, "...minimize the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies."

Residential land uses are considered "satisfactory" up to 60 dBA DNL as the short-range exterior noise quality level, and 55 dBA DNL as the long-range exterior noise quality level. The guidelines state that where the exterior DNL is above the "satisfactory" limit (between 60 and 70 dBA DNL), and the project requires a full EIR, an acoustical analysis should be made indicating the amount of attenuation necessary to maintain an indoor level of a DNL less than or equal to 45 dBA. Noise levels exceeding 70 dBA DNL require that new development would only be permitted if uses are entirely indoors and building design limits interior levels to less than or equal to 45 dBA DNL. Outside activity areas should be permitted if site planning and noise barriers result in levels of 60 dBA DNL or less.

Policies presented in the Noise Element applicable to this project are as follows:

> Policy 1. The City's acceptable noise level objectives are 55 dBA DNL as the long-range exterior noise quality level, 60 dBA DNL as the short-range exterior noise quality level, 45 dBA DNL as the interior noise quality level, and 76 dBA DNL as the maximum exterior noise level necessary to avoid significant adverse health effects. These objectives are established for the City, recognizing that the attainment of exterior noise quality levels in the environs of the San Jose International Airport, the Downtown Core Area, and along major roadways may not be achieved in the time frame of this Plan. To achieve the noise objectives, the City should require appropriate site and building design, building construction and noise attenuation techniques in new residential development.
>
> Policy 9. Construction operations should use available noise suppression devices and technology.

REGULATORY CRITERIA - VIBRATION

The City of San Jose has not established vibration limits that can be used to evaluate the compatibility of sensitive land uses with respect to groundborne vibration. Although there are no local standards, the U.S. Department of Transportation's Federal Transit Administration (FTA) has developed vibration impact assessment criteria for evaluating vibration impacts associated with transit projects.[1] FTA has proposed vibration impact criteria based on maximum overall levels for a single event. The impact criteria for groundborne vibration are shown in Table 4. Note that there are criteria for frequent events (more than 70 events of the same source per day), occasional events (30 to 70 vibration events of the same source per day), and infrequent events (less than 30 vibration events of the same source per day).

[1]U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006, FTA-VA-90-1003-06.

Table 4 Groundborne Vibration Impact Criteria

Land Use Category	Groundborne Vibration Impact Levels (VdB re 1 µinch/sec, RMS)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1 Buildings where vibration would interfere with interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]
Category 2 Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3 Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Notes:

1. "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
3. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels. Ensuring low vibration levels in a building requires special design of HVAC systems and stiffened floors.

Source: U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006, FTA-VA-90-1003-06.

EXISTING NOISE ENVIRONMENT

The project site is located in the City of San Jose, north of Campbell Avenue. The project site is bounded to the north by active Union Pacific Railroad lines that carry freight and passenger trains. The three central rail lines carry the majority of through rail traffic (e.g., Caltrain and freight trains) and the outer rail lines are used primarily for storage. Light industrial uses bound the site to the northwest and southeast. The Santa Clara University Baseball Stadium bounds the site to the south. The noise environment on the project site results primarily from the adjacent railroad, vehicular traffic along Campbell Avenue, local light industrial activities, and aircraft associated with the San Jose International Airport.

To quantify the existing noise environment on the project site, a noise monitoring survey was conducted from August 22, 2005 to August 24, 2005. Four long-term noise measurements were conducted at representative locations to complete the noise monitoring survey. Noise measurement locations are shown on Figure 1A. The site was revisited in October of 2007 to evaluate any changes in noise sources or noise levels that may have occurred in the 2 years since the detailed measurement survey.

The first long-term noise measurement was made approximately 54 feet from the centerline of Campbell Avenue. This measurement location documented noise levels generated by vehicular traffic along Campbell Avenue and El Camino Real. The DNL noise level (day-night average) over the course of the measurement period ranged from 65 to 66 dBA. The data collected at Site LT-1 are summarized in Figures 2 and 3.

A second long-term noise measurement was conducted at the northeast corner of the project site near the adjacent railroad lines and Alliance Roofing. The noise monitor at Site LT-2 was located approximately 140 feet from the center of the nearest through railroad track (center of the third track from the site). The day-night average noise level (DNL) at Site LT-2 was 62 dBA. Noise levels resulted primarily from train passages, idling of train engines, and local activities at Alliance Roofing. The sound-level meter began recording data at about 12:00 p.m. on August 22, 2005. When the sound level meter began recording data, an ACE train was idling near the site. The data collected at Site LT-2 are summarized on Figure 4.

The third long-term noise measurement was conducted at the east property line of the project site adjacent to Alliance Roofing. The noise monitor at Site LT-3 was located approximately 300 feet from the center of the nearest through railroad track, and approximately 15 feet from the common property line with the roofing company. Noise levels measured at this site varied depending on the amount of activity occurring near the sound level meter. On the afternoon of August 23, 2005, noise levels resulting from activities at Alliance Roofing were most prevalent given the intermittent nature of the noise levels recorded. On the morning and early afternoon of August 24, 2005, the data indicates that the ACE Train idled near the site, generating fairly steady noise levels of about 60 dBA. The DNL noise level at Site LT-3 was 65 dBA. The data collected at Site LT-3 are summarized on Figure 5.

A fourth long-term noise measurement was conducted at the northernmost property line of the project site, approximately 80 feet from the center of the near through track. Noise levels measured at this site were primarily the result of train traffic along the railroad lines and aircraft. A similar trend in the noise data, as discussed previously in the paragraph above, indicates that the ACE Train idled near the site on the morning an early afternoon of August 24, 2005. The DNL noise level was 70 dBA. The data collected at Site LT-4 are summarized in Figure 6.

Observations made during several visits to the project site and neighboring sites indicate that the nearest railroad track is used primarily for the storage of rail cars The second track provides a location for the ACE train to idle between commute hours. The third, fourth, and fifth tracks are the primary through-travel rail lines used by freight and passenger trains. Beyond the through rail lines, there are several additional tracks used for storage of rail cars

Figure 1A – Noise and Vibration Measurement Locations

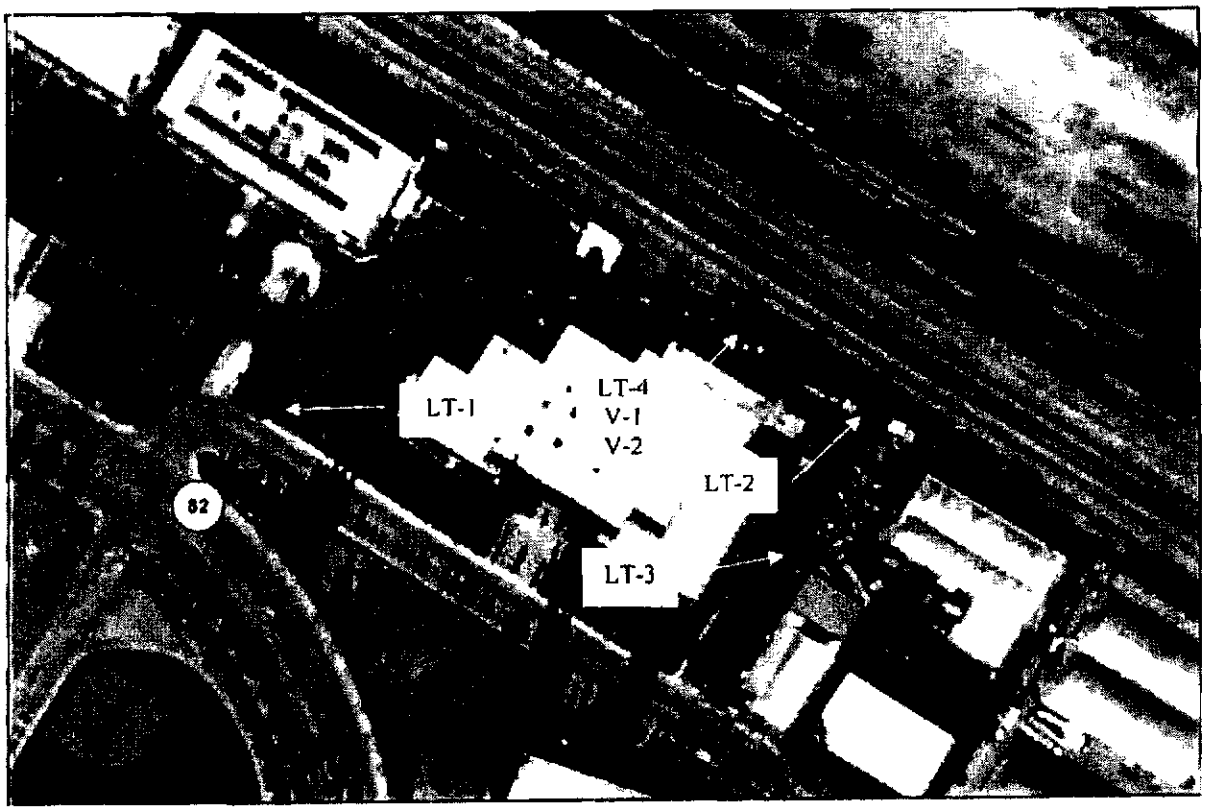


Figure 1B –Vibration Measurement Locations and Near Tracks

Noise Levels at LT 1
54 feet from the Center of Campbell Avenue
and 140 feet from the Center of El Camino Real
August 22 – 23, 2005

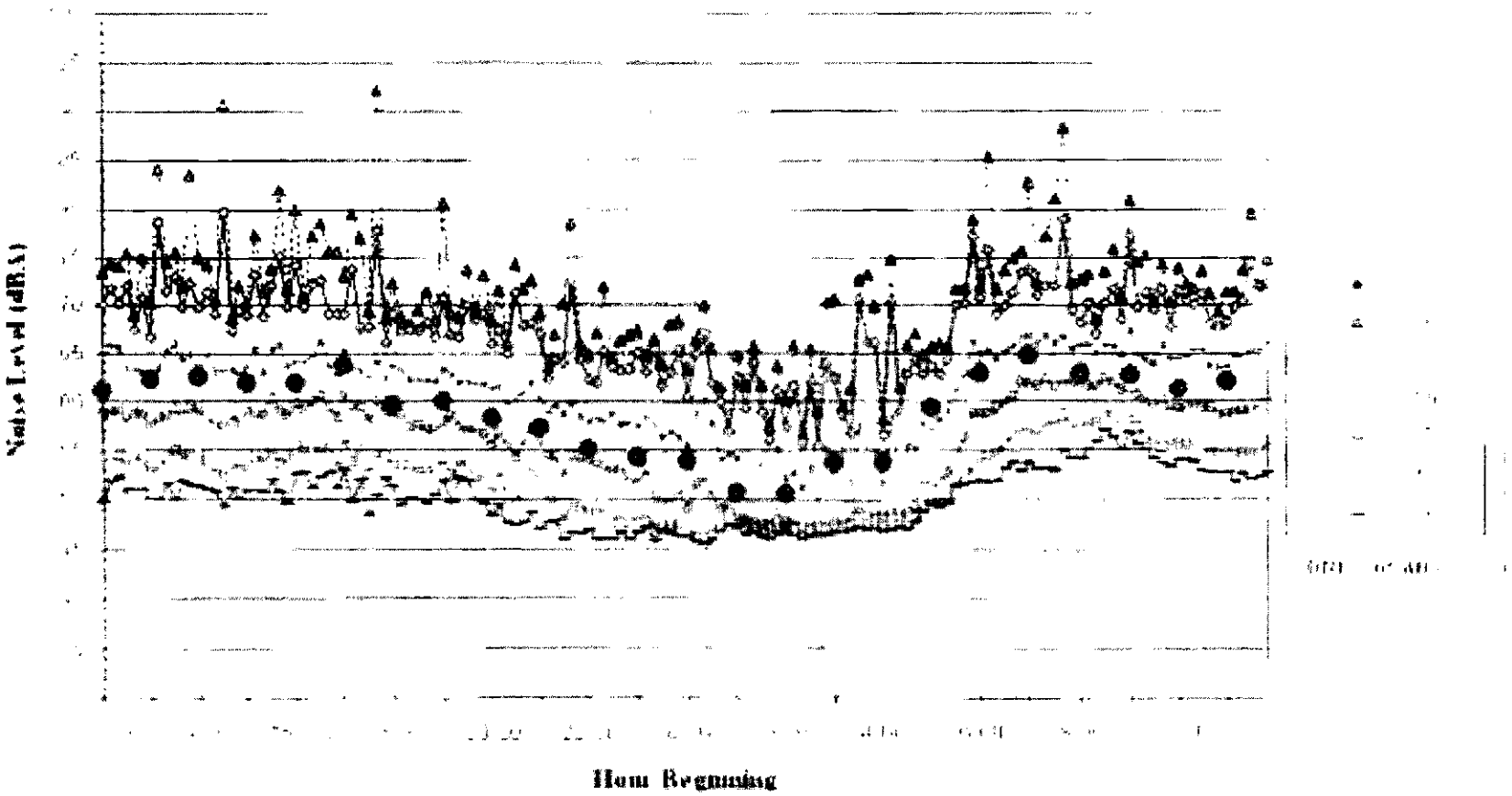


Figure 2

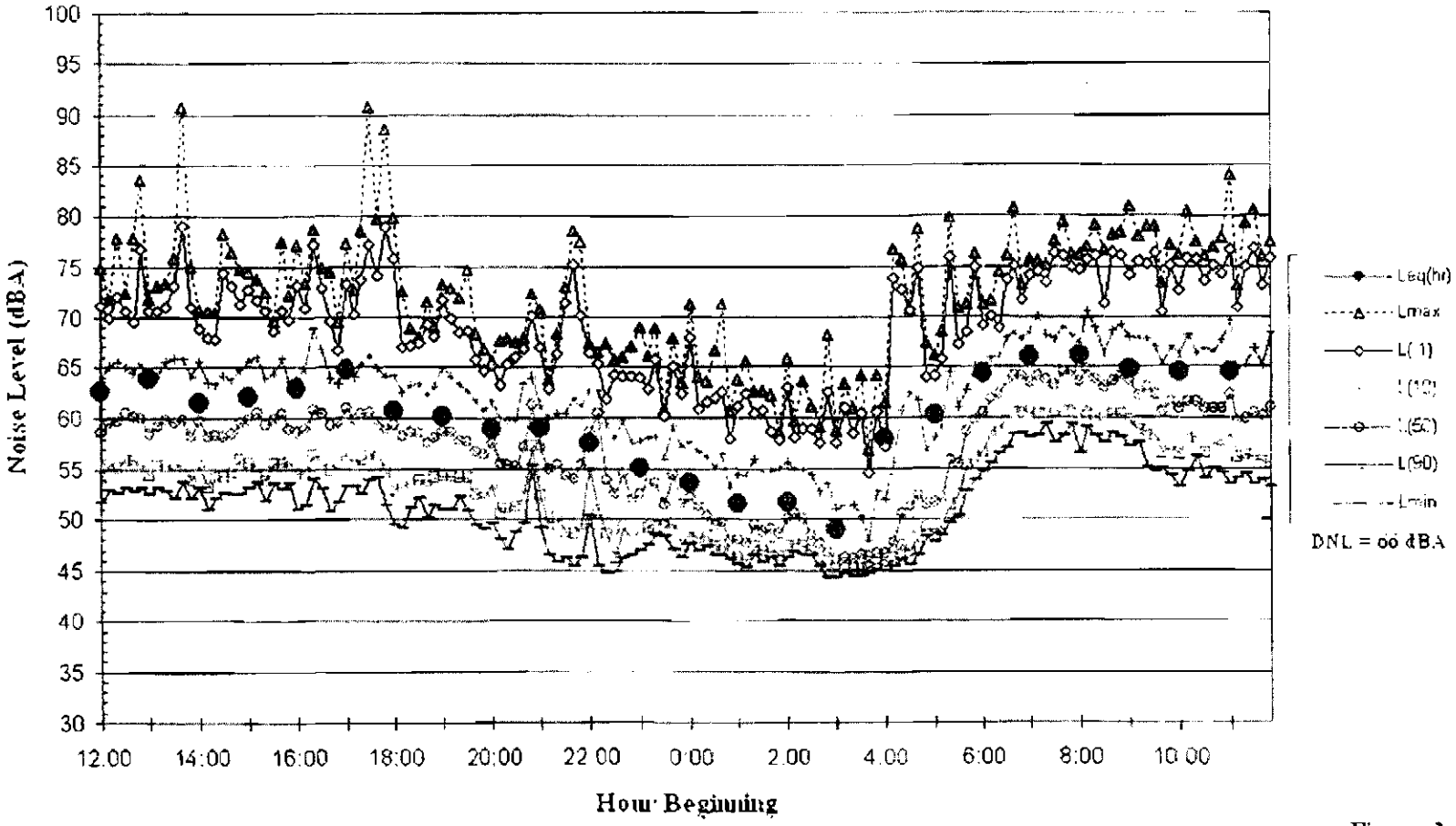

Noise Levels at LT-1
54 feet from the Center of Campbell Avenue
and 140 feet from the Center of El Camino Real
August 23 - 24, 2005
Noise Level (dBA)
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
12:00
14:00
16:00
18:00
20:00
22:00
0:00
2:00
4:00
6:00
8:00
10:00
Hour Beginning
Leq(hr)
Lmax
L(1)
L(50)
L(90)
Lmin
DNL = 66 dBA

Figure 3

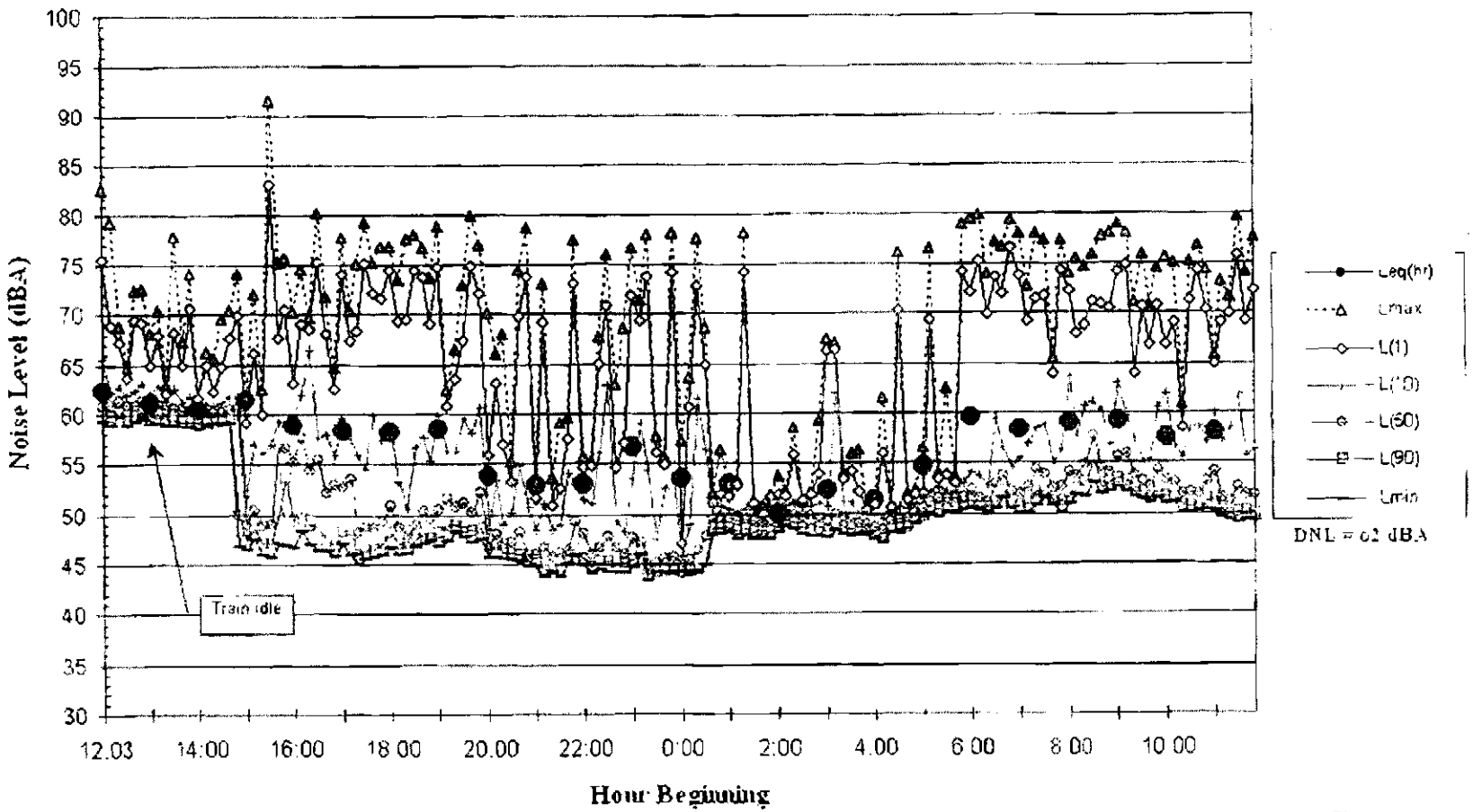

Noise Levels at LT-2
Northeast Corner of Site, ~ 140 feet from Near Through Track (=3)
August 22 - 23, 2005
Noise Level (dBA)
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
12:03
14:00
16:00
18:00
20:00
22:00
0:00
2:00
4:00
6:00
8:00
10:00
Hour Beginning
Train idle
Leq(hr)
Lmax
L(1)
L(10)
L(50)
L(90)
Lmin
DNL = 62 dBA

Figure 4

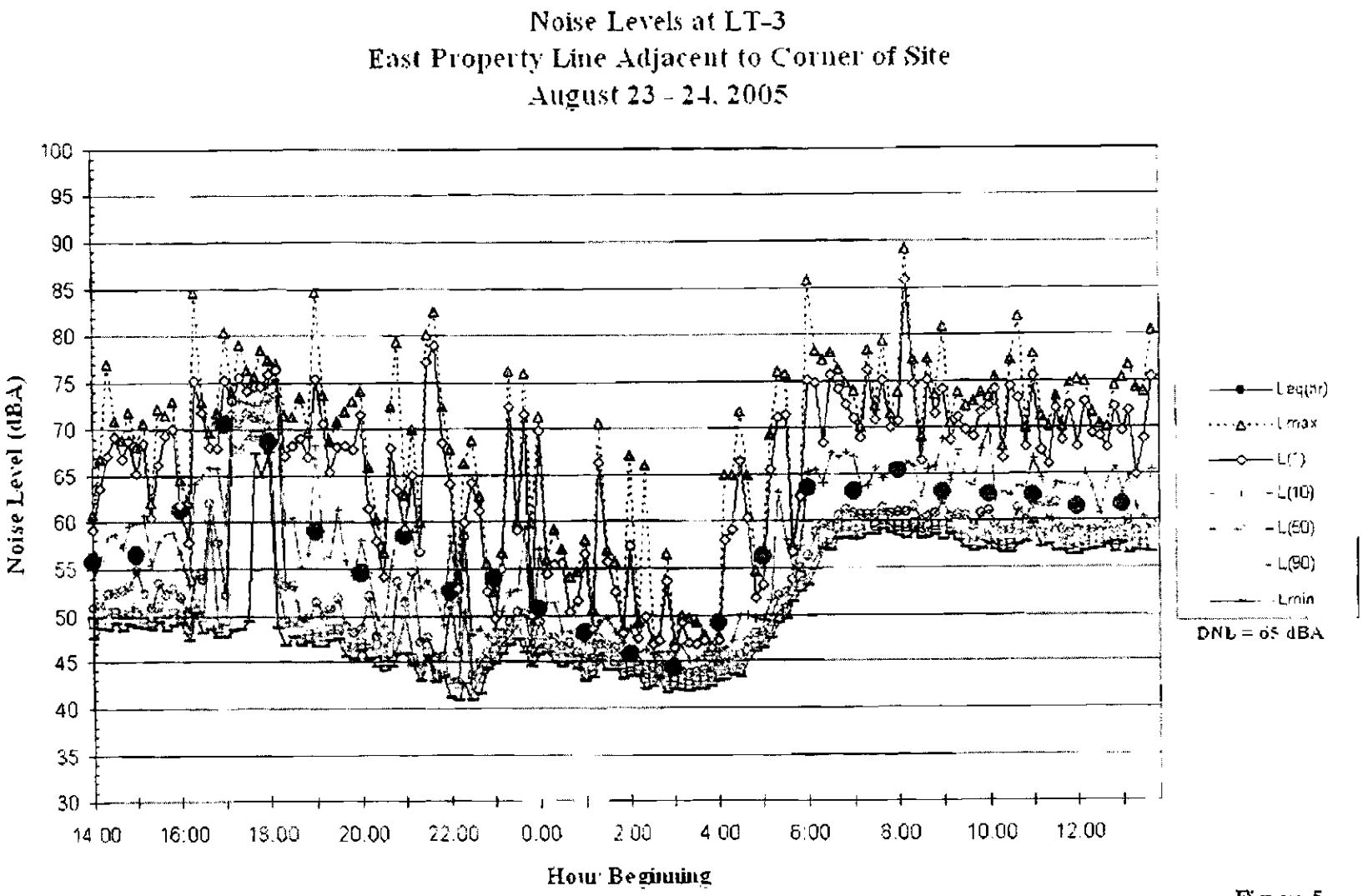

Noise Levels at LT-3
East Property Line Adjacent to Corner of Site
August 23 - 24, 2005
Noise Level (dBA)
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
14:00
16:00
18:00
20:00
22:00
0:00
2:00
4:00
6:00
8:00
10:00
12:00
Hour Beginning
Leq(hr)
Lmax
L(1)
L(10)
L(50)
L(90)
Lmin
DNL = 65 dBA

Figure 5

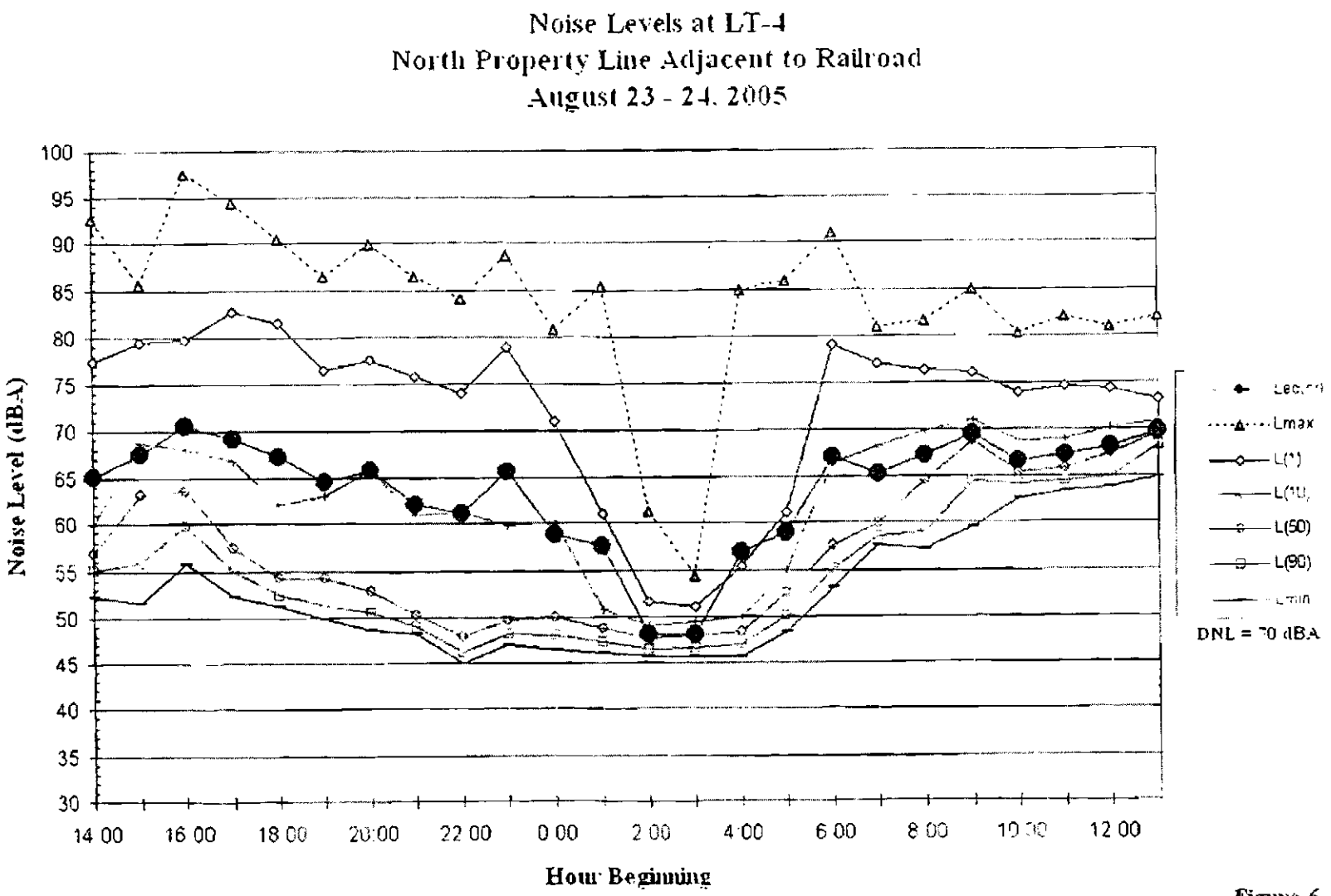

Noise Levels at LT-4
North Property Line Adjacent to Railroad
August 23 - 24, 2005
Noise Level (dBA)
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
14 00
16 00
18 00
20:00
22 00
0 00
2 00
4 00
6 00
8 00
10 00
12 00
Hour Beginning
Lmax
L(50)
L(90)
DNL = 70 dBA

Figure 6

VIBRATION MEASUREMENTS

The site is shown on Figure 1A and B with railroad lines bordering the site to the north. Vibration measurements were conducted Tuesday, August 23, 2005. The instrumentation used to conduct the measurements included a Sony Digital Audio Tape Recorder (DAT) and seismic grade, low noise accelerometers firmly fixed to the ground. This system is capable of measuring accurately very low vibration levels. Vibration levels measured on the site are representative of vibration levels at ground level, i.e. vibration levels that would enter the building foundation. There have been no known changes to the railroad tracks or trains utilizing the tracks since the 2005 vibration measurements that would result in measurably different vibration levels, therefore, these data are considered to be representative of current conditions (2008).

Vibration measurements were taken at two setbacks from the property line along the northern end of the property. Several tracks exist adjacent to the site and were found to be active. The nearest two tracks are predominantly used for storage and slow speed passbys. The three central tracks appear to be used by freight and passenger trains. The furthest tracks are also used for storage. Through trains were observed to travel at speeds ranging from approximately 20 mph to 45 mph adjacent to the project site

The measurement positions are also shown in Figure 1B. Position V-1 was approximately 10 feet from the property line, and Position V-2 was 30 feet from the property line. The two different setbacks were used to develop a drop-off rate for ground vibration with distance. Vibration levels were only measured in the vertical axis because ground vibration is typically most dominant on the vertical axis and the data are adequate in characterizing the exposure of the site to vibration from railroad trains.

Nine train passbys were measured between 11:00 a.m. and 2:00 p.m. on August 23, 2005. Caltrain was measured in both the northbound and southbound direction on six occasions. The measurements also included two northbound Amtrak trains and one southbound freight train. Southbound Caltrain passed the site along the third track (nearest through track) at approximately 24 to 34 mph. Northbound Caltrain passed the site at speeds of approximately 32 to 45 mph on the fourth railroad track (second through track) from the site. Amtrak and the freight train passed the site along the third through track from the site (Track 5) at speeds of approximately 20 to 32 mph. Vibration levels measured at each measurement position during train passby events are summarized in Table 5 and on Figures 7 and 8.

Table 5 – Results of Vibration Measurements

Activity	Vibration Level (VdB re 1 μinch/sec, RMS)		Track	Comments
	Position V-1	Position V-2		
Background	~ 45 VdB	~ 45 VdB	--	Ambient vibration levels
NB Caltrain (11:46 a.m.)	74 VdB	71 VdB	4	
NB Caltrain (12:16 p.m.)	77 VdB	74 VdB	4	45 mph, Engine + 4 Cars
SB Caltrain (12:32 p.m.)	73 VdB	68 VdB	3	34 mph, Engine + 5 Cars

Activity	Vibration Level (VdB re 1μinch/sec, RMS)		Track	Comments
	Position V-1	Position V-2		
NB Amtrak (12:37 p.m.)	70 VdB	66 VdB	5	32 mph, Engine + 7 Cars
NB Caltrain (12:45 p.m.)	78 VdB	75 VdB	4	Engine + 5 Cars
SB Caltrain (12:58 p.m.)	72 VdB	67 VdB	3	24 mph
NB Amtrak (1:15 p.m.)	78 VdB	75 VdB	5	
SB Caltrain (1:33 p.m.)	68 VdB	64 VdB	3	
SB Freight (1:37 p.m.)	70 VdB	65 VdB	5	20 mph

Notes:

Position V-1 – 10 feet from the property fence
Position V-2 - 30 feet from the property fence

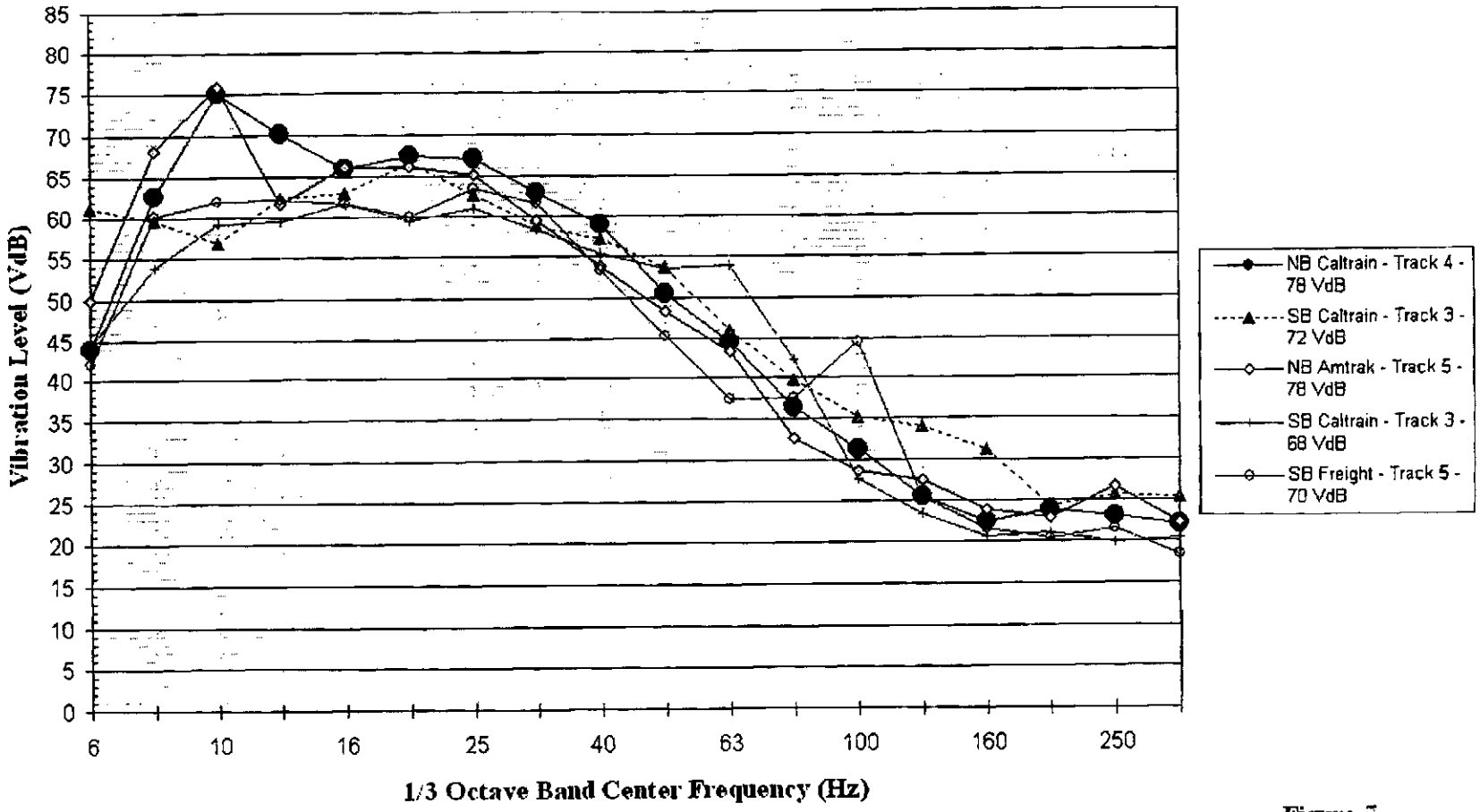

Vibration Levels at V-1
10 feet from North Property Line Adjacent to Railroad
August 23, 2005
Vibration Level (VdB)
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
6
10
16
25
40
63
100
160
250
1/3 Octave Band Center Frequency (Hz)
NB Caltrain - Track 4 - 78 VdB
SB Caltrain - Track 3 - 72 VdB
NB Amtrak - Track 5 - 78 VdB
SB Caltrain - Track 3 - 68 VdB
SB Freight - Track 5 - 70 VdB

Figure 7

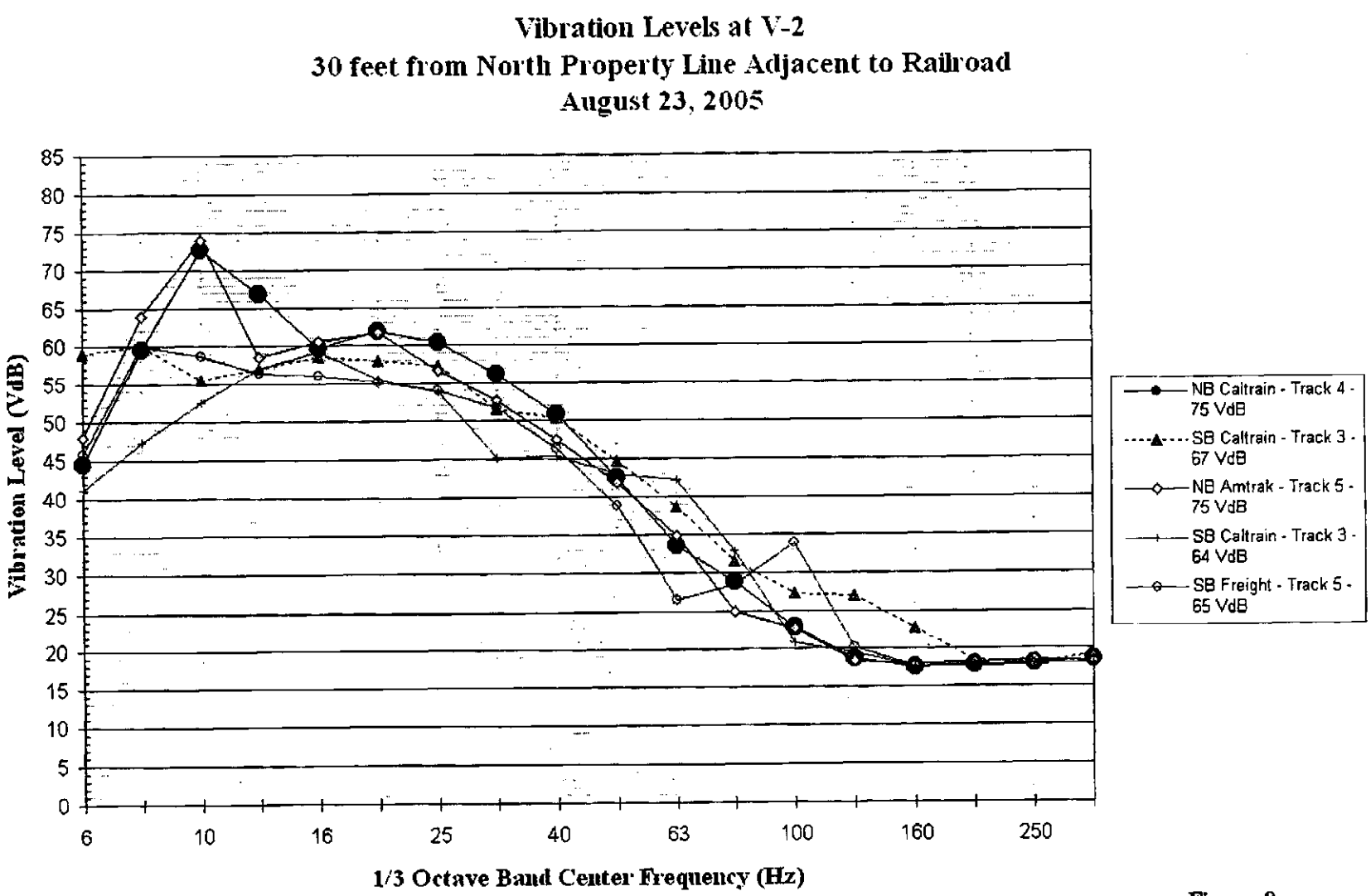

Vibration Levels at V-2
30 feet from North Property Line Adjacent to Railroad
August 23, 2005
Vibration Level (VdB)
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
6
10
16
25
40
63
100
160
250
1/3 Octave Band Center Frequency (Hz)
NB Caltrain - Track 4 - 75 VdB
SB Caltrain - Track 3 - 67 VdB
NB Amtrak - Track 5 - 75 VdB
SB Caltrain - Track 3 - 64 VdB
SB Freight - Track 5 - 65 VdB

Figure 8

NOISE IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the CEQA Guidelines states that a project would normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, if persons are exposed to excessive groundborne vibration, if noise levels generated by the project would substantially increase existing noise levels on a permanent or temporary basis, or if persons would be located within two miles of a public airport and exposed to excessive noise levels.

Impact 1: **Noise and Land Use Compatibility.** Future residential uses that would be developed at the project site would be exposed to exterior noise levels greater than 60 dBA DNL which exceeds the noise and land use compatibility standards presented in the City of Jose's General Plan. Interior noise levels would be expected to exceed 45 dBA DNL without the incorporation of noise insulation features in the project design. **This is a potentially significant impact.**

The noise environment at the project site exceeds the City's short-term noise level goal for exterior noise (60 dBA DNL) as a result of transportation noise sources in the site vicinity (i.e., railroad, Campbell Avenue, and the San Jose International Airport). BART has planned an extension of the regional transit network adjacent to the site. Noise generated with the operation of adjacent light-industrial uses would also continue to contribute to the future noise environment. Exterior noise levels throughout the project site would exceed the "satisfactory" compatibility standard for residential land uses established by the City of San Jose.

Exterior Noise Levels

The existing noise environment along the northernmost property line of the site results primarily from train activity and aircraft. Future noise levels along the northernmost property line of the project site are anticipated to increase assuming a moderate increase in train traffic and with the addition of BART. Based on the *Silicon Valley Rapid Transit Corridor EIS/EIR* project description map, the BART extension to Santa Clara would be located north of the existing through rail lines and the alignment would be at-grade. A BART maintenance facility would be located at the terminus of the BART alignment.

Existing noise levels at the property line of the project site are approximately 70 dBA DNL. Maximum noise levels resulting from railroad train engines are approximately 85 dBA during passby events. Trains do not normally sound their warning whistles when adjacent to the site. BART would be expected to generate 62 dBA DNL at a distance of 160 feet. This noise level estimate is based on noise measurements conducted adjacent to BART in Walnut Creek in February 2004 and assumes a similar level of operation. Noise generated by the BART maintenance facility would not be expected to add substantially to the noise environment. With the addition of BART and a moderate increase in railroad activity (up to 200 trains per day)[2], future noise levels at the property line would be approximately 72 dBA DNL.

Receivers adjacent to Campbell Avenue would be exposed to noise generated primarily by vehicular traffic and occasional events at the Santa Clara University Baseball Stadium. Future noise levels at a distance of 50 feet from the center of the Campbell Avenue (nearest residential outdoor use areas) could

2 Letter from Stephen Chao, Caltrain, to Stephen Hasse, City of San Jose, April 11, 2005.

be as high as 67 dBA DNL assuming future increases in traffic anticipated along Campbell Avenue. A noise barrier would be required to maintain exterior noise levels generated by Campbell Avenue at 60 dBA DNL or less.

The Santa Clara University Baseball Stadium is located at the southeast corner of Campbell Avenue and El Camino Real. The baseball stadium is used for NCAA baseball games and practice. Noise sources associated with a college baseball game include the public address system, cheers from the spectators, cheers from the team at bat, and individual shouts from coaches and players. Average attendance is about 300 people. Noise generation is concentrated around the home plate area where the coaches, players, spectators, and PA speakers are located.

The baseball field is oriented away from the project site. Given the intermittent use of the PA system, it is not anticipated that noise generated during baseball games would substantially increase day-night average noise levels at proposed residential land uses along Campbell Avenue.

CNEL noise levels from the airport would be expected to exceed 60 dBA CNEL on site and be less than 65 dBA CNEL, but the City of San Jose recognizes that in the environs of the airport, exterior noise levels may exceed the satisfactory noise levels goals. The noise environment resulting from aircraft would be considered acceptable for residential development by the Santa Clara County Airport Land Use Commission.

Receivers adjacent to Alliance Roofing would be exposed to intermittent noise as a result of the operation of the use. Day night average noise levels along the easternmost property line of the project site could range from 62 dBA DNL to 68 dBA DNL. Noise generated by the adjacent industrial use would be audible at times and could be annoying. Barriers should be constructed to shield private outdoor use areas proposed adjacent to Alliance Roofing.

There has recently been discussion of a potential professional soccer venue on the old FMC site across the railroad tracks from the site. The center of the stadium would be located approximately 1,650 feet from the project site. We have conducted noise measurements at the home field of Major League Soccer's Los Angeles Galaxy in Carson, California. Noise data gathered during a professional soccer match were projected to noise-sensitive land uses proposed at the project site assuming a standard propagation rate of 6 dB per doubling of distance between the noise source and receiver. Maximum noise levels resulting from cheering and the public address system are calculated to be 69 dBA L_{max} or less at the project site, and hourly average noise levels during a typical soccer match are calculated to be 55 dBA L_{eq} or less. The day-night average noise level resulting from the operation of the soccer stadium between 5:00 p.m. and 11:00 p.m. (time period when these events would most likely occur) would be 53 dBA DNL at the project site. At Site LT-2, maximum noise levels would typically be 1 to 11 dBA below ambient maximum noise levels resulting from railroad train passby events. Hourly average noise levels generated by a soccer game would be within the range of existing hourly average noise levels. Day-night average noise levels resulting from a soccer game would be about 9 dBA below ambient daily average noise levels, and would not substantially increase DNL noise levels at the project site. The noise generated during a game at a similar venue on the FMC site would be lower than the noise generated by the trains on rail lines adjacent to the site and would not measurably increase the DNL at the 1270 Campbell Ave.

The City of San Jose recommends that in general noise levels in the outdoor use areas of new residential development be maintained at or below 60 dBA DNL. The proposed site plan (Figure 9) shows that the common outdoor use area associated with the project would be in a courtyard on the podium, shielded

from offsite noise sources (including aircraft landing and taking off at Mineta San Jose International Airport) by the residential buildings. The noise level in the common outdoor space would be between 60 and 65 dBA DNL. The City of San Jose recognizes that noise levels in the vicinity of the airport and adjacent to major thoroughfares are difficult to reduce to a DNL of 60 dBA and therefore accepts noise levels in the 60 to 65 DNL range in these areas. Exterior noise levels at private decks are calculated to be about 70 dBA DNL adjacent to the railroad, 62 to 69 dBA DNL adjacent to Alliance Roofing, and 67 dBA DNL adjacent to Campbell Avenue. It is not possible to reduce exterior noise levels at these areas into compliance with the General Plan standards without full enclosures. Solid deck rails could be considered to provide some minor acoustical shielding for persons sitting on their decks.

Interior Noise Levels

Exterior noise levels at the facades of residential units adjacent to the railroad and BART would be expected to be approximately 70 dBA DNL. Exterior noise levels at receivers adjacent to Campbell Avenue could reach 66 dBA DNL. Exterior noise levels at proposed receivers adjacent to Alliance Roofing would be subject to exterior noise level ranging from 62 to 69 dBA DNL. Exterior noise levels at the facades of units within the central portion of the site would be expected to range from 63 to 64 dBA DNL as a result of aircraft.

Where exterior day-night average noise levels are 65 dBA DNL or less, interior noise level can typically be maintained below City and State standards (45 dBA DNL) with the incorporation of forced air mechanical ventilation systems in residential units. Typically, standard construction with a forced air unit (allowing the occupant to control noise by maintaining the windows shut) provides approximately 20 to 25 dBA of noise reduction in interior spaces.

Where noise levels exceed 65 dBA DNL, forced-air mechanical ventilation systems and sound-rated construction are normally required. The exact specifications of window and wall systems cannot be accurately predicted at this time, but once building elevations and floor plans are developed, the specifications can be made. To control interior maximum noise levels to minimize the potential for activity interference and sleep disturbance, noise insulation features such as stucco-sided walls and sound-rated windows and doors would be required for residences located near the adjacent railroad. Preliminary calculations indicate that proposed residential units would require windows and door with minimum sound ratings ranging from 28 STC to 34 STC depending on the project noise exposure. Noise insulation features to be included in the project's design will need to be developed once detailed plans are available. The noise control treatments should be designed to reduce noise levels from the railroad, airport, Campbell Avenue, and adjacent industrial uses to 45 dBA DNL or less.

Mitigation Measures:

The following mitigation measures shall be included in the project to reduce the impact to a less-than-significant level:

- Project-specific acoustical analyses are required by the City of San Jose to insure that interior noise levels will be reduced to 45 dBA DNL or lower. It is also recommended that maximum noise levels be limited to 50 dBA L_{max} within bedrooms and 55 dBA L_{max} within other habitable rooms to avoid sleep disturbance and activity interference indoors. Building sound insulation requirements would need to include the provision of forced-air mechanical ventilation for all new units, so that windows could be kept closed at the occupant's discretion to control noise. Special

building construction techniques (e.g., sound-rated windows and building facade treatments) may be required for new residential uses adjacent to the railroad. These treatments include, but are not limited to, sound rated windows and doors, sound rated wall constructions, acoustical caulking, etc. The specific determination of what treatments are necessary will be conducted on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these would adequately reduce interior average noise levels to 45 dBA DNL or lower and maximum noise levels to 50 dBA L_{max} in bedrooms and 55 dBA L_{max} in other habitable rooms.

With the implementation of the above measures, the impact would be less-than-significant.

Impact 2: **Groundborne Vibration.** Union Pacific Railroad tracks border the project site's northernmost property line. BART also plans an extension to Santa Clara north of the existing railroad lines. Vibration generated during railroad train passbys would exceed FTA guidelines for vibration within 60 feet of the north property line of the project site. **This is a not a significant impact.**

Approximately 98 Caltrain passenger trains pass the site during the course of a day. This number was calculated based on the published Caltrain schedule dated March 3, 2008. Additionally, Amtrak, ACE, and an unknown number of UPRR freight trains pass the site each day. It was not possible to confirm the total number of trains that pass the site per day because UPRR will not release this information for security reasons. The Public Utilities Commission states that the railroad corridor adjacent to the site carriers about 130 trains per day. Since the total number of trains passing the site exceeds 70 events per day, the 72 VdB limit is used in the evaluation of the project with respect to vibration compatibility.

Vibration levels measured on-site were typical for the primary through-tracks (3, 4, and 5) adjacent to the site. Based on the results of the vibration measurements, the calculated 72 VdB contour distance was 60 feet from the north property line and 135 feet from the center of the near through-track. The "Baby Bullet" train passes at a higher rate of speed than a typical Caltrain passenger train along a reconditioned track. Vibration levels resulting from "Baby Bullet" train passbys would not be substantially different from existing operations given the lighter trains and the refurbished track. If passenger or freight railroad trains were to pass the site on the first and second lines at similar speeds, a similar setback from the near railroad track would be warranted to meet the 72 VdB vibration limit.

No Residential units are proposed within 60 feet of the north property line. No units would therefore be exposed to vibration levels greater than the 72 VdB vibration limit for "frequent events". Vibration levels generated by BART would also be below 72 VdB given the lighter weight of the BART trains and the increased distance from the project site.

Mitigation Measures: **NONE**

Impact 3: **Off-Site Project-Generated Traffic Noise.** The proposed residential project will not measurably increase traffic noise levels along roadways in the project vicinity. **This is a less-than-significant impact.**

A traffic impact analysis was prepared for this project. Noise level increases on the roadways serving the site were calculated using the projected traffic volume increases. The calculations show that the traffic

added by the proposed project will increase the noise level on the local street system by less than 1 dBA DNL. This is an undetectable difference. Overall growth in the area will result in a 1 dBA DNL increase in noise levels along El Camino Real, also an undetectable increase.

Mitigation Measures: NONE

Impact 4: **Construction Noise.** The project site is located in a primarily commercial and industrial area. The nearest noise-sensitive land uses are located over 300 feet from the project site and are partially shielded by intervening structures. Future noise generated by the construction on the site would not be expected to adversely affect land uses in the immediate vicinity of the site or distant noise-sensitive land uses. **This is a less-than-significant impact.**

Future construction on the site would generate noise, and would temporarily increase noise levels at adjacent land uses. Commercial and light-industrial uses border the project site. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive receptors. Where noise from construction activities exceeds 60 dBA L_{eq} and exceeds the ambient noise environment by at least 5 dBA L_{eq} for more than one year at noise-sensitive uses in the project vicinity, the impact would be considered significant.

Construction activities generate considerable amounts of noise, especially during the demolition phase and the construction of project infrastructure when heavy equipment is used. Typical hourly average construction generated noise levels are about 81 dBA L_{eq} to 89 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.) In addition to this typical equipment, this project proposes to use a portable crusher to crush the existing concrete on the site. These portable crushers generate noise levels of up to 85 dBA L_{eq} at a distance of 50 feet. Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. At a distance of 300 feet, construction noise levels would be expected to be about 16 decibels lower as a result of increased distance from the noise source. Shielding by buildings would provide an additional 5 to 10 decibels of attenuation at distant receptors. Typically, small residential, commercial, or office construction projects do not generate significant noise impacts when standard construction noise control measures are enforced at the project site and when the duration of the noise generating construction period is limited to one construction season (typically one year) or less. Construction noises associated with projects of this type are disturbances that are necessary for the construction or repair of buildings and structures in urban areas. Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction materials, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life.

Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction durations last over extended periods of time. Limiting the hours when construction can occur to daytime hours is often a simple method to reduce the potential for noise impacts. In areas immediately adjacent to construction, controls such as constructing temporary noise barriers and utilizing "quiet" construction equipment can also reduce the potential for noise impacts.

Project construction would be expected to generate worst-case hourly average noise levels of up to 69 dBA L_{eq} at the nearest noise-sensitive receivers if the rock crushing plant were located at the southernmost portion of the project site. The noise generated by the other construction activity would be 5-10 dBA lower. As construction proceeds away from the southernmost portion of the project site, construction noise would be further reduced. Noise generated by the portable rock crusher could exceed an L_{eq} of 60 dBA at the nearest sensitive receptors. This is a potentially significant impact. The noise generated by all other construction activity would be at a level of 60 dBA L_{eq} or less.

Mitigation Measures:

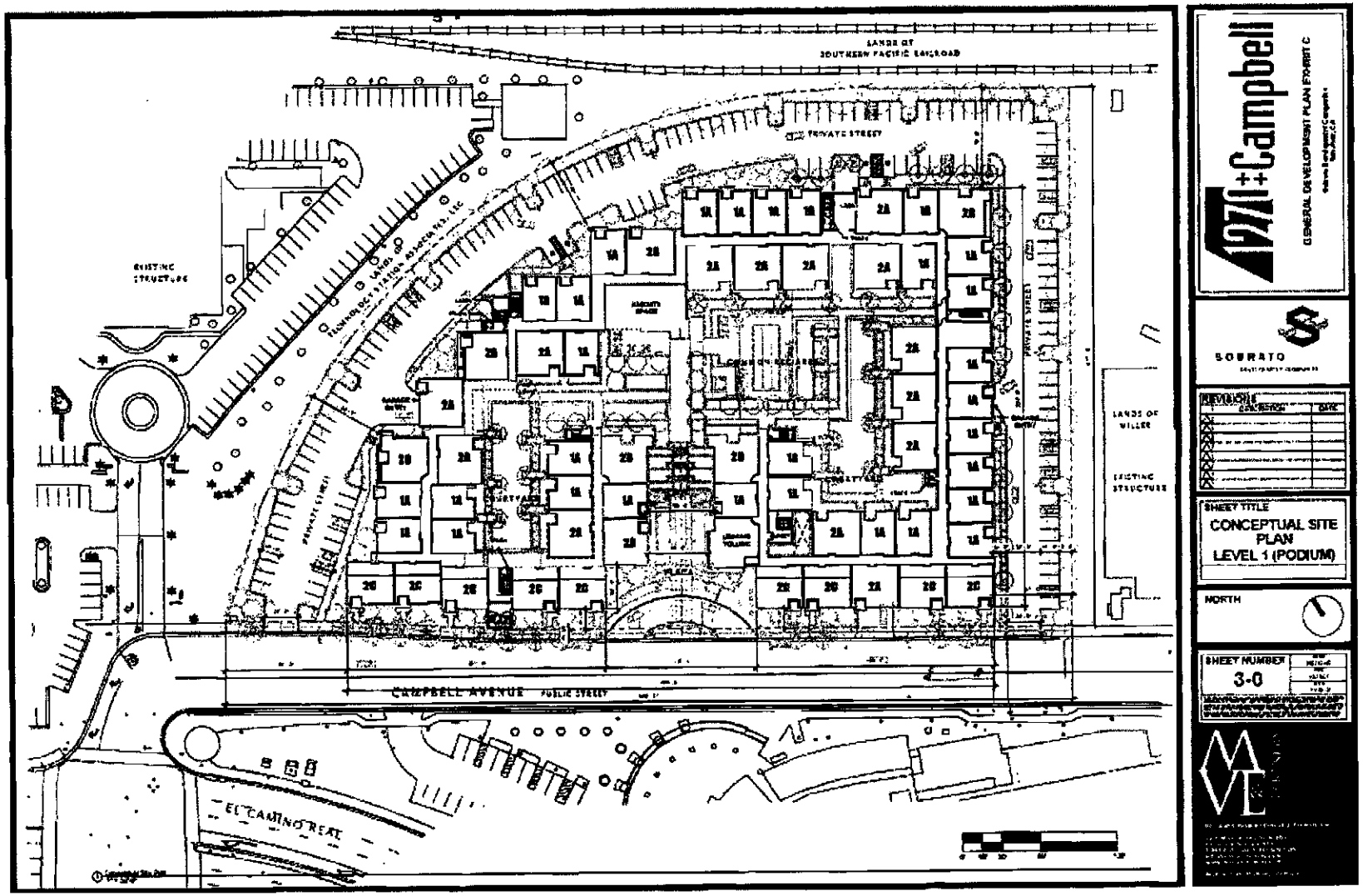
- Site the rock crusher on the northern portion of the site and construct noise barriers as necessary to reduce noise levels to an L_{eq} of 60 dBA at the nearest noise sensitive receptors to the south.

Impact 5: **Noise and Land Use Compatibility (Aircraft).** Residential uses developed at the site would be located in a compatible noise environment in the vicinity of the San Jose International Airport. **This is a less-than-significant impact.**

A review of the 65 CNEL noise contour map established by the Santa Clara County ALUC indicates that the project site is located outside of the future 65 CNEL noise contour. Where noise levels are less than 65 CNEL, residential land uses are considered compatible with the exterior noise environment. Interior noise levels resulting from aircraft, discussed in Impact 1, would be less than 45 dBA DNL with the incorporation of mitigation. This is a less-than-significant impact.

Mitigation Measures: NONE

Figure 9 –Conceptual Site Plan



APPENDIX G
TRANSPORTATION IMPACT ANALYSES

APPENDIX G-1
TRANSPORTATION IMPACT ANALYSIS

Campbell Avenue Sobrato Residential Development

Draft Transportation Impact Analysis

Prepared for:

David J. Powers & Associates, Inc.

Prepared by:

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Brian Jackson, Project Manager

March 11, 2008

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Executive Summary

This report presents the results of the traffic impact analysis (TIA) conducted for a proposed Sobrato residential development on the north side of Campbell Avenue in San Jose, California. The project would consist of replacing an approximately 82,000 square-foot Research and Development (R&D) building with 260 new attached residential units on a 5.13-acre site. Two driveways on Campbell Avenue would provide access to the site's parking areas. The project also proposes a centrally located one-way short-term loading and drop-off area on Campbell Avenue.

The potential impacts related to the proposed development were evaluated following the standards and methodologies set forth by the City of San Jose and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the County Congestion Management Program (CMP).

Although the project site is located in the City of San Jose, four of the study intersections are located within the City of Santa Clara. The City of Santa Clara level of service standard for signalized intersections the same as that for the City of San Jose (LOS D or better). Therefore, the City of San Jose methodology can be applied to the Santa Clara intersections as well, and a separate level of service analysis for these intersections is not necessary in order to satisfy both jurisdictions.

Five of the study intersections are CMP intersections and, therefore, were analyzed according to the CMP requirements. The CMP level of service methodology is the same as that used by the City of San Jose, except that the CMP level of service standard for signalized intersections is LOS E or better.

The traffic study includes an analysis of AM and PM peak hour traffic conditions for eight signalized intersections and eight directional freeway segments. A CMP freeway analysis was conducted since the project would generate more than 100 peak hour trips. The study also includes an operations analysis based on vehicle storage requirements at selected intersections and project driveways.

Project Trip Generation

The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. The recommended trip

generation rates for use in the City of San Jose are detailed in the *Interim Guidelines for Traffic Impact Analysis of Land Use Developments*, 1994.

Based on the residential rates recommended by the City of San Jose, the proposed project would generate 1,950 gross daily vehicle trips, with 195 trips occurring during both the AM and PM peak hours. Trip credits were estimated to account for the vacant 82,000 square-foot R&D building currently on the site. After subtracting the existing facility's potential vehicle trips, the residential project would generate 1,295 net daily trips, with 90 new AM peak hour trips and 103 new PM peak hour trips. Using the inbound/outbound splits recommended by the City of San Jose, the project would produce 16 fewer inbound and 106 new outbound trips during the AM peak hour, and 118 new inbound and 15 fewer outbound trips during the PM peak hour than the existing vacant R&D building could potentially generate.

The trip distribution pattern for the proposed project was estimated based on existing travel patterns in the area, the locations of complementary land uses, and previous traffic studies. Based on the project site's location, it was projected that the trip distribution patterns for the proposed residential use and the existing R&D use would be identical. However, the existing peak direction of travel at the site would be reversed. The City of San Jose staff is in agreement with these assumptions.

Project Intersection Level of Service

Table ES-1 summarizes the results of the intersection level of service analysis under project conditions. The results show that the signalized study intersection of Lafayette Street and El Camino Real would continue to operate at an unacceptable level of service (LOS E). However, based on the City of San Jose level of service standards, this study intersection would not be significantly impacted by the project. The other study intersections would operate at an acceptable level of service during both the AM and PM peak hours of traffic under project conditions.

Based on the CMP level of service standards, all of the CMP signalized study intersections, including Lafayette Street and El Camino Real, would operate at acceptable levels of service during both the AM and PM peak hours of traffic under project conditions. Therefore, none of the CMP intersections would be significantly impacted by the project.

Project Freeway Segment Level of Service Analysis

The results of the CMP freeway level of service analysis are summarized in Table ES-2. Traffic volumes on the study freeway segments under project conditions were estimated by adding project trips to the existing volumes obtained from the 2005 CMP Annual Monitoring Report. The results of the CMP freeway analysis show that the project would not cause significant increases in traffic volumes (more than one percent of freeway capacity) on any of the studied freeway segments.

Other Transportation Issues

The project driveways would be adequate to serve the needs of the project and to meet City of San Jose standards. The City has agreed to allow full access to and from the westernmost project driveway under the condition that the inbound left-turn movement at this driveway is monitored regularly. Should significant operational problems or substantial safety issues occur as a result of the inbound left-turn

movement, the City potentially could restrict this project driveway to right turns only. The traffic consultant recommends that the project applicant work closely with the City to develop a formal operational monitoring program for the westernmost project driveway.

The drive aisles within the garage would be 24 feet wide. The City's standard is 26 feet for drive aisle widths where 90-degree parking is provided in order to provide adequate room for backing out of the parking spaces. However, the City has made exceptions to the standard in the past and may allow aisle widths that are narrower than 26 feet. The City reviews each project's situation on a case-by-case basis.

Within the residential parking garage, three drive aisles would have parking at the very end of the aisles. At these locations vehicles would be required to perform a difficult three-point turning maneuver in order to exit. The majority of parking spaces within these three aisles have been designated compact, which would help to minimize maneuverability issues. The City of San Jose ultimately will determine whether the potential operational issues would be sufficient to warrant the reconfiguration of these parking spaces.

The proposed project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the project area. For this reason, no improvements would be necessary.

Table ES-1
Intersection Level of Service Summary

				Existing		Background		Project				Future Growth	
	Intersection	Peak Hour	Count Date	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg. Delay	LOS
1	Lafayette Sreet and El Camino Real*	AM	10/25/2006	51.0	D	55.2	E	55.4	E	0.3	0.00	58.9	E
		PM	9/19/2006	44.4	D	48.8	D	48.8	D	-0.1	0.00	50.4	D
2	El Camino Real and Benton Street	AM	3/7/2006	15.9	B	16.8	B	16.6	B	-0.2	0.01	--	--
		PM	3/7/2006	20.5	C	22.7	C	22.7	C	-0.1	0.01	--	--
3	El Camino Real and Campbell Avenue	AM	5/24/2006	14.3	B	16.3	B	21.1	C	5.1	0.04	--	--
		PM	5/24/2006	24.6	C	24.9	C	24.5	C	-0.5	-0.01	--	--
4	El Camino Real and The Alameda*	AM	9/21/2006	19.7	B	20.6	C	20.6	C	-0.1	0.00	21.3	C
		PM	9/21/2006	22.6	C	24.8	C	24.4	C	-0.2	0.00	26.0	C
5	The Alameda and Newhall Street	AM	6/5/2007	15.2	B	12.9	B	12.8	B	0.0	0.00	--	--
		PM	6/5/2007	13.2	B	10.4	B	10.3	B	0.0	0.00	--	--
6	I-880 SB and The Alameda (N)*	AM	9/21/2006	24.6	C	24.9	C	24.8	C	-0.2	-0.01	25.3	C
		PM	9/21/2006	14.3	B	15.8	B	17.1	B	1.8	0.02	17.4	B
7	I-880 NB and The Alameda (S)*	AM	9/21/2006	23.3	C	23.4	C	23.4	C	0.0	0.00	23.9	C
		PM	9/21/2006	18.8	B	19.1	B	19.4	B	0.0	0.00	19.7	B
8	The Alameda and Hedding Street*	AM	10/24/2006	39.6	D	40.8	D	40.7	D	0.0	0.00	41.6	D
		PM	10/24/2006	33.7	C	35.6	D	35.6	D	0.0	0.01	36.3	D

* Denotes CMP intersection.

Table ES-2
Freeway Segment Level of Service Summary

					Existing Plus Project Trips							Project Trips		
					Mixed-Flow							Mixed-Flow		
Freeway	Segment		Dir.	Peak Hour	Avg. Speed/a/	# of Lanes	Capacity (vph)	Vol. /a/	Density	LOS	Total Vol.	Vol.	% Capacity	Impact?
I-880	Stevens Creek	to N. Bascom Ave	NB	AM	18	3	6,900	4,750	88.0	F	0	0	0.0%	*NO*
				PM	61	3	6,900	6,625	36.2	D	35	35	0.5%	*NO*
I-880	N. Bascom Ave	to Stevens Creek	SB	AM	66	3	6,900	5,572	28.1	D	32	32	0.5%	*NO*
				PM	36	3	6,900	6,050	56.0	F	0	0	0.0%	*NO*
I-880	N. Bascom Ave	to The Alameda	NB	AM	36	3	6,900	6,050	56.0	F	0	0	0.0%	*NO*
				PM	65	3	6,900	5,695	29.2	D	35	35	0.5%	*NO*
I-880	The Alameda	to N. Bascom Ave	SB	AM	66	3	6,900	5,382	27.2	D	32	32	0.5%	*NO*
				PM	27	3	6,900	5,510	68.0	F	0	0	0.0%	*NO*
I-880	The Alameda	to Coleman Ave	NB	AM	32	3	6,900	5,982	62.3	F	32	32	0.5%	*NO*
				PM	64	3	6,900	6,340	33.0	D	0	0	0.0%	*NO*
I-880	Coleman Ave	to The Alameda	SB	AM	65	3	6,900	5,850	30.0	D	0	0	0.0%	*NO*
				PM	24	3	6,900	5,365	74.5	F	35	35	0.5%	*NO*
I-880	Coleman Ave	to SR 87	NB	AM	37	3	6,900	6,142	55.3	F	32	32	0.5%	*NO*
				PM	59	3	6,900	6,550	37.0	D	0	0	0.0%	*NO*
I-880	SR 87	to Coleman Ave	SB	AM	58	3	6,900	6,610	38.0	D	0	0	0.0%	*NO*
				PM	26	3	6,900	5,575	71.5	F	35	35	0.5%	*NO*

/a/ Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2005.

1. Introduction

This report presents the results of the traffic impact analysis (TIA) conducted for a proposed Sobrato residential development on the north side of Campbell Avenue in San Jose, California. The project would consist of replacing an approximately 82,000 square-foot Research and Development (R&D) building with 260 new attached residential units on a 5.13-acre site. Two driveways on Campbell Avenue would provide access to the site's parking areas. The project also proposes a centrally located one-way short-term loading and drop-off area on Campbell Avenue. The project site and surrounding study area are shown on Figure 1. The project site plan is shown on Figure 2.

Scope of Study

The potential impacts related to the proposed residential development were evaluated following the standards and methodologies set forth by the City of San Jose and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the County Congestion Management Program (CMP). Because the project was estimated to generate more than 100 peak hour trips, a CMP freeway analysis was conducted. Traffic conditions associated with converting the R&D uses on Campbell Avenue to residential uses also was evaluated.

The traffic study includes an analysis of AM and PM peak hour traffic conditions for eight signalized intersections and eight directional freeway segments. All signalized study intersections were evaluated against the City of San Jose and CMP level of service standards. The study also includes an operations analysis based on vehicle-storage requirements at selected intersection locations and project driveways. The study intersections and freeway segments are identified below.

Study Intersections

1. El Camino Real and Lafayette Street*
2. El Camino Real and Benton Street
3. El Camino Real and Campbell Avenue
4. El Camino Real and The Alameda*
5. The Alameda and Newhall Street

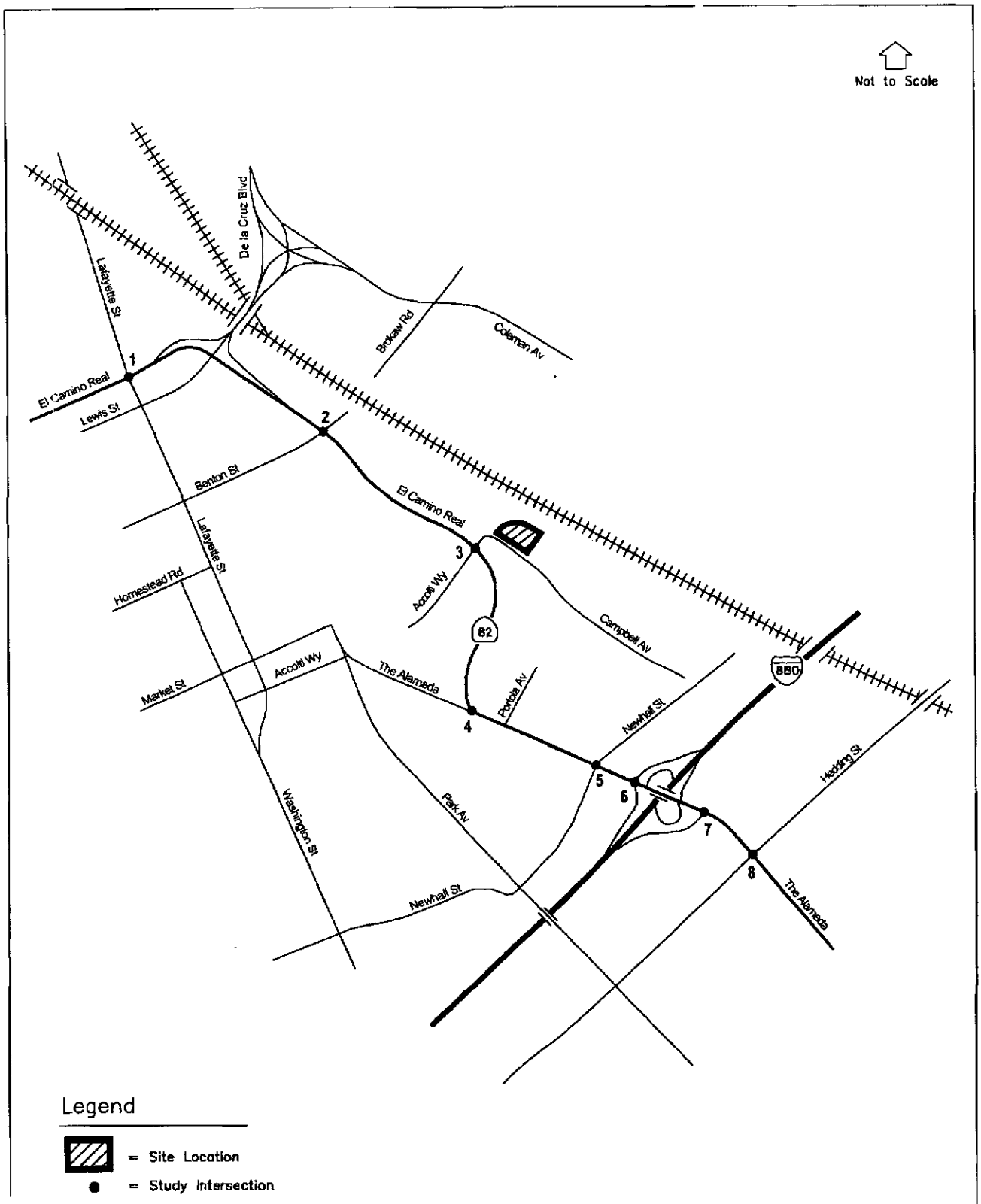
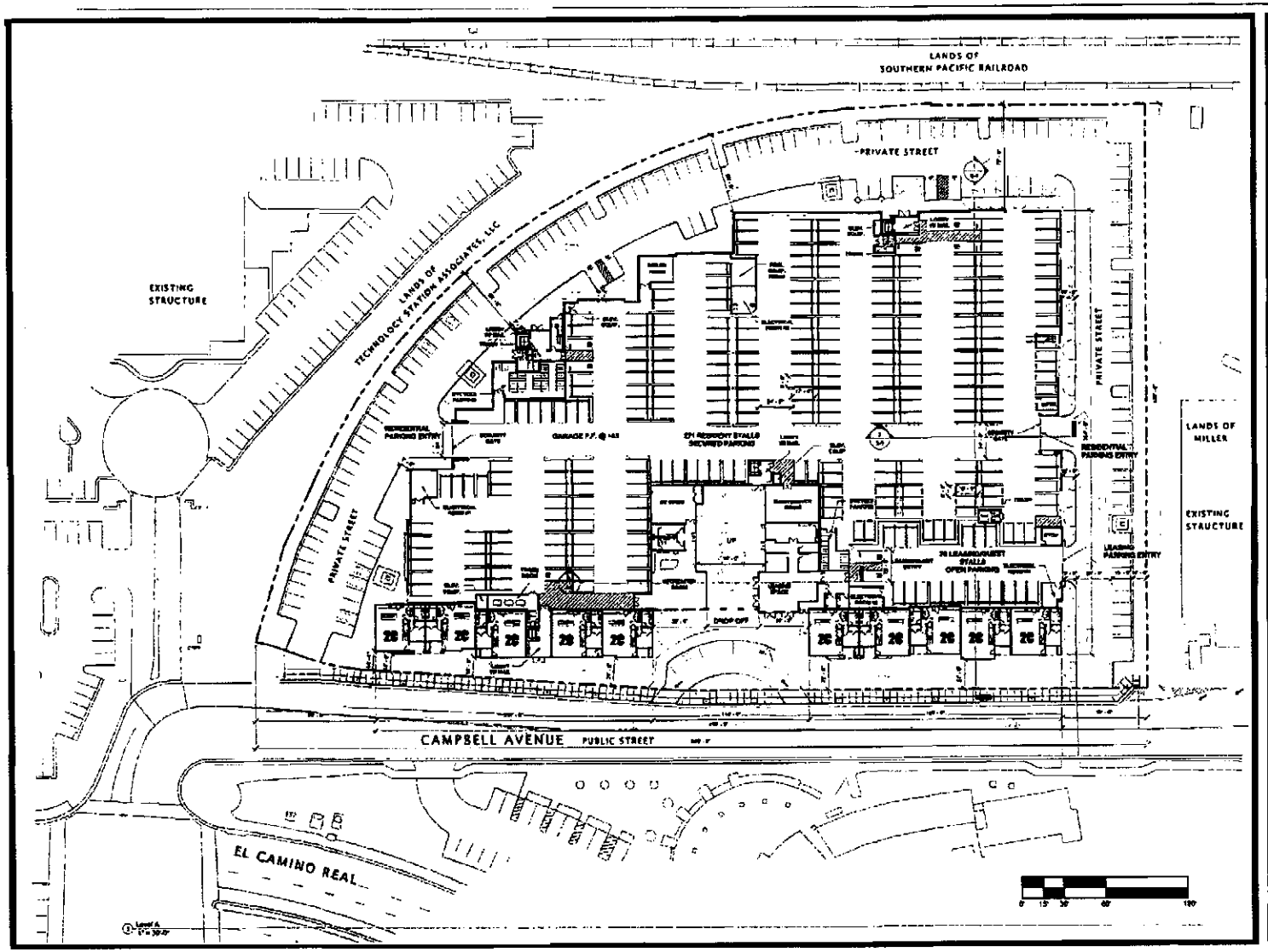


Figure 1

SITE LOCATION & STUDY INTERSECTIONS

Hexagon
Transportation Consultants, Inc.

Campbell Avenue Sobrato TIA



1271+Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE

SHEET TITLE
CONCEPTUAL BUILDING PLAN LEVEL A (STREET)

NORTH

SHEET NUMBER
5-0

Figure 2
SITE PLAN
Campbell Avenue Sobrato TIA

Hexagon
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6. I-880 and The Alameda (North)*
7. I-880 and The Alameda (South)*
8. The Alameda and Hedding Street*

Each CMP intersection is denoted with an asterisk (*).

Study Freeway Segments

I-880, between Stevens Creek Boulevard and Bascom Avenue
I-880, between Bascom Avenue and The Alameda
I-880, between The Alameda and Coleman Avenue
I-880, between Coleman Avenue and SR 87

Study Scenarios

Traffic conditions at the intersections were analyzed for the weekday AM and PM peak hours of traffic. The AM peak hour of traffic is generally between 7:00 and 9:00 AM, and the PM peak hour is typically between 4:00 and 6:00 PM. It is during these periods that the most congested traffic conditions occur on an average weekday. Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes were obtained from the City of San Jose and the City of Santa Clara and were supplemented with new manual turning-movement counts. Existing traffic volumes were used to estimate the current operations of the major transportation facilities in the vicinity of the project site. New count data is contained in Appendix A.

Scenario 2: *Background Conditions.* Background traffic volumes were estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments in the project area. The added traffic from approved but not yet completed developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI). Approved trips for the City of Santa Clara also were estimated. Additional ATI was generated by estimating the potential trips that could be generated by the existing vacant R&D building if it were occupied. The ATI sheets are contained in Appendix C.

Scenario 3: *Project Conditions.* Projected peak hour traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Scenario 4: *Future Growth Conditions.* Future growth conditions represent future traffic volumes on the future transportation network at the time the proposed project is anticipated to be complete. Traffic volumes under future growth conditions were estimated by applying an annual growth factor of 1.2% to existing traffic volumes and adding to this background traffic and project trips. The anticipated date of occupancy is 2011. This scenario is evaluated in fulfillment of CMP guidelines and includes an intersection analysis of CMP intersections only.

Methodology

This section describes the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis was obtained from the Cities of San Jose and Santa Clara and field observations. The following data were collected from these sources:

- existing intersection and freeway volumes
- lane configurations
- intersection signal timing and phasing
- average speeds (for freeway segments only)
- trips from approved but not yet constructed projects (ATI)

Analysis Methodologies and Level of Service Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The correlation between delay and level of service is shown in Table 1.

Table 1
Intersection Level of Service Based on Average Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Operations with very low delay occuring with extremely favorable progressions and/or short cycle lengths.	10.0 or less
B	Operations with low delay occruing with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, 2000 Highway Capacity Manual (Washington, D.C., 2000) pp. 10-16.

Signalized Intersections

The signalized study intersections are subject to the City of San Jose level of service standards. The City of San Jose level of service methodology is TRAFFIX, which is based on the Highway Capacity Manual (HCM) 2000 method for signalized intersections. TRAFFIX evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX also is the CMP-designated intersection level of service methodology, the City of San Jose methodology employs the CMP default values for the analysis parameters. The City level of service standard for signalized intersections is LOS D or better.

Although the project site is located in the City of San Jose, four of the study intersections are located within the City of Santa Clara. The City of Santa Clara level of service standard for signalized intersections also is LOS D or better. Therefore, the City of San Jose methodology can be applied to the Santa Clara intersections as well, and a separate level of service analysis for these intersections is not necessary.

Five of the study intersections are CMP intersections and, therefore, were analyzed according to the CMP requirements. The CMP level of service methodology is the same as that used by the City of San Jose, except that the CMP level of service standard for signalized intersections is LOS E or better.

Freeway Segments

As prescribed in the CMP technical guidelines, the level of service for freeway segments is estimated based on vehicle density. Density is calculated by the following formula:

$$D = V / (N*S)$$

where:

D= density, in vehicles per mile per lane (vpmpl)
V= peak hour volume, in vehicles per hour (vph)
N= number of travel lanes
S= average travel speed, in miles per hour (mph)

The vehicle density on a segment is correlated to level of service as shown in Table 2. The CMP specifies that a capacity of 2,300 vehicles per hour per lane (vphpl) be used for mixed-flow lane segments that are three lanes or wider in one direction, and a capacity of 2,200 vphpl be used for mixed-flow lane segments that are two lanes wide in one direction. A capacity of 1,800 vphpl was used for high occupancy vehicle (HOV) lanes. The CMP defines an acceptable level of service for freeway segments as LOS E or better.

Intersection Operations

The operations analysis is based on vehicle queuing for high-demand turning movements at intersections. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x=n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P (x=n) = probability of "n" vehicles in queue per lane

n = number of vehicles in the queue per lane

λ = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 20 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future storage requirements at intersections.

Table 2
Freeway Level of Service Definitions Based on Density

Level of Service	Description	Density (vehicles/mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	0-11
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	>11-18
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	>18-26
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	>26-46
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	>46-58
F	Vehicular flow breakdowns occur. Large queues form behind breakdown points.	>58

Source: Santa Clara County 2004 CMP (Based on the *Highway Capacity Manual* (2000), Washington, D.C.).

Report Organization

The remainder of this report is divided into 6 chapters. Chapter 2 describes existing conditions in terms of the existing roadway network and other transportation facilities. Chapter 3 presents the intersection operations under background conditions. Chapter 4 describes the method used to estimate project traffic and its impact on the transportation system. Chapter 5 describes any non-level of service operational issues associated with the proposed project. Chapter 6 presents the traffic conditions under a future growth scenario. Chapter 7 presents the conclusions of the traffic impact analysis.

2.
Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the project site, including the roadway network, transit service, and bicycle and pedestrian facilities.

Existing Roadway Network

I-880 is a north/south freeway providing regional access to the project site from East Bay cities to San Jose, where it becomes SR 17. I-880 is oriented in a northeast/southwest direction with six mixed-flow lanes in the vicinity of the site. I-880 provides access to the site via its interchange with The Alameda.

Local access to the project site is provided via Lafayette Street, El Camino Real, Benton Street, Campbell Avenue, The Alameda, Newhall Street, and Hedding Street. These roadways are described below.

Lafayette Street is a four-lane arterial that extends north-south from Gold Street north of SR 237 to the project area. North of El Camino Real and in the project vicinity, Lafayette Street is a four-lane arterial. South of El Camino Real Lafayette Street is a two-lane collector with a shared center left turn lane until it reaches Bellomy Street/Accolti Way, where it again becomes a four lane arterial as it begins its merge into Washington Street. Lafayette Street provides access to the site via its signalized intersection with El Camino Real.

El Camino Real is a six-lane major arterial that is aligned in a northwest/southeast orientation in the vicinity of the site. El Camino Real extends northward through San Francisco and southward through San Jose. El Camino Real provides access to the site via its signalized intersection with Campbell Avenue.

Benton Street is an east/west, two-lane collector street that provides direct access to the surrounding commercial and residential uses. It runs from El Camino Real in the east to just west of Lawrence Expressway. Benton Street provides access to the site via El Camino Real.

Campbell Avenue is a two-lane local roadway that provides direct access to the project site. West of El Camino Real, Campbell Avenue is renamed Accolti Way, which is a segmented road, with a short western segment that is broken by a pedestrian mall on the campus of Santa Clara University. West of

campus, Accolti Way resumes to terminate at Washington Street. Due to traffic calming measures implemented in 2001 by the City of San Jose, access to Newhall Street from Campbell Avenue is closed. Thus, Campbell Avenue can only be accessed via El Camino Real and the western segment of Accolti Way.

The Alameda is a northwest/southeast, four-lane divided arterial that extends from South Autumn Street in downtown San Jose to Market Street in Santa Clara. The Alameda has a full-access interchange with I-880 and provides access to the site via its intersection with El Camino Real.

Hedding Street is a four-lane arterial that extends from North Winchester Boulevard in the south, to Berryessa Road just north of I-280. Hedding Street provides access to the site via The Alameda.

Existing Bicycle and Pedestrian Facilities

The only County-designated bicycle facilities within the project study area are located along Poplar Street and a small segment of The Alameda between Park Avenue and El Camino Real. However, according to the City of San Jose Transportation Bicycle Network (TBN) Planning Map The Alameda is designated a Class III bike route south of its junction with El Camino Real. Due to low traffic volumes and vehicle speeds, the surrounding residential streets also provide safe routes for bicyclists. Figure 3 shows the existing bicycle facilities.

Pedestrian facilities in the study area consist of sidewalks along most of the surrounding roadways. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. The existing pedestrian facilities provide good connectivity between the surrounding residential areas and the Santa Clara Transit Center, located approximately ½ of a mile northwest of the project site. Two schools are located approximately ¾ of a mile southwest of the project site: Washington Elementary School and Emil R Buchser Middle School. Although some may feel that the distance between the project site and the schools is greater than what is considered ideal for walking, a walkway where Accolti Way dead-ends cuts straight through the Santa Clara University campus and provides a safe and direct route for children to walk to school.

Existing Transit Service

The study area is served by several local VTA bus lines, which are shown on Figure 4.

The 10 Local bus route is the Airport Flyer Service between the Metro/Airport LRT station and the Santa Clara Transit Center. It operates along El Camino Real and De La Cruz Boulevard from 5:00am to midnight with 15- to 30-minute headways depending on the time of day.

The 22 Local bus route provides service between the Eastridge Mall and Palo Alto/Menlo Park. It runs 24 hours a day with 10- to 15-minute headways during the commute hours. Line 22 operates along El Camino Real and provides service to the Santa Clara Transit Center.

The 32 Local bus route provides service between the Santa Clara Transit Center and the San Antonio shopping center. It runs between 5:30am and 7:30pm with 30-minute headways. Line 32 operates along Benton Street and El Camino Real near the site.

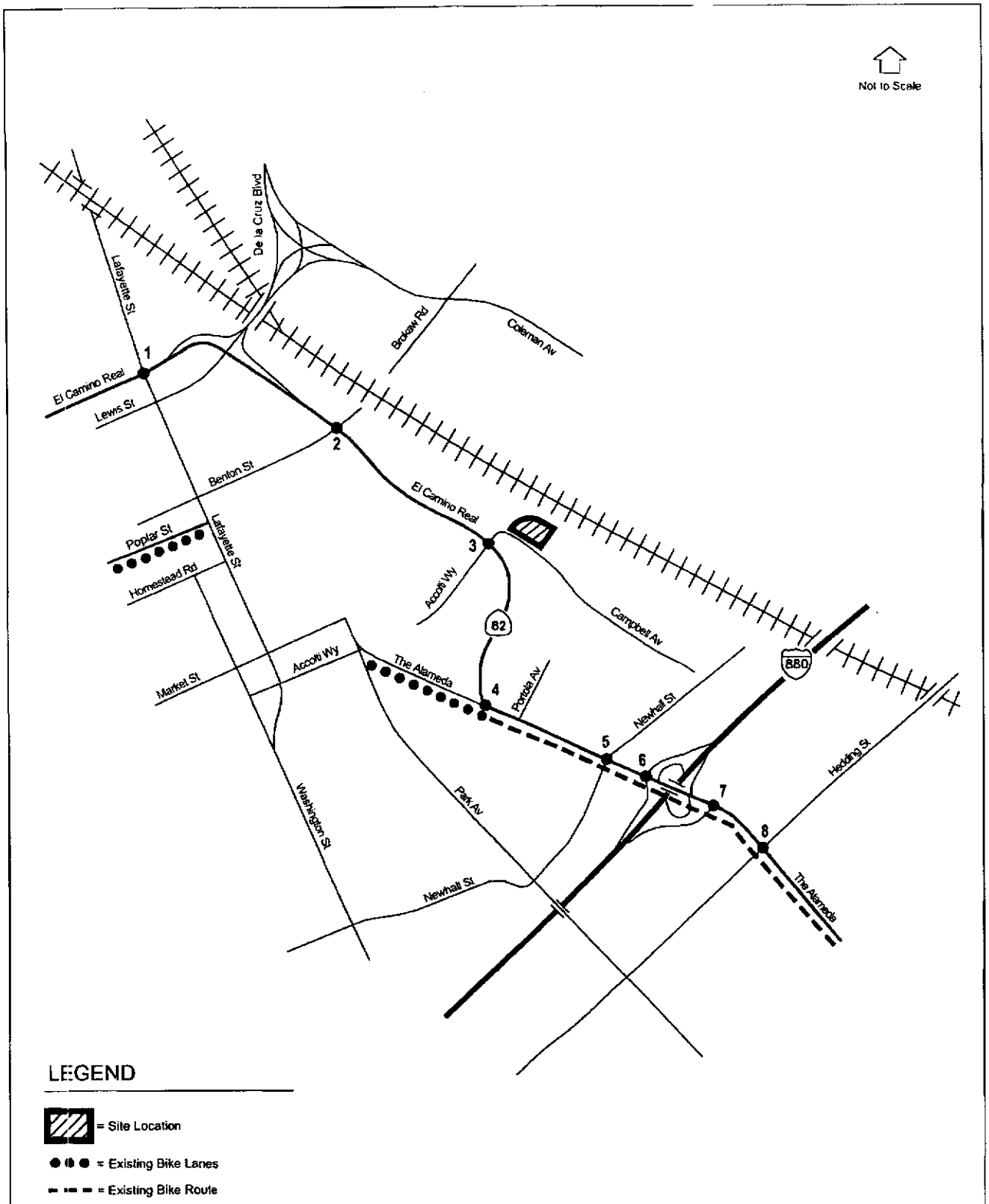

Figure 3

EXISTING BICYCLE FACILITIES

Campbell Avenue Sobrato TIA

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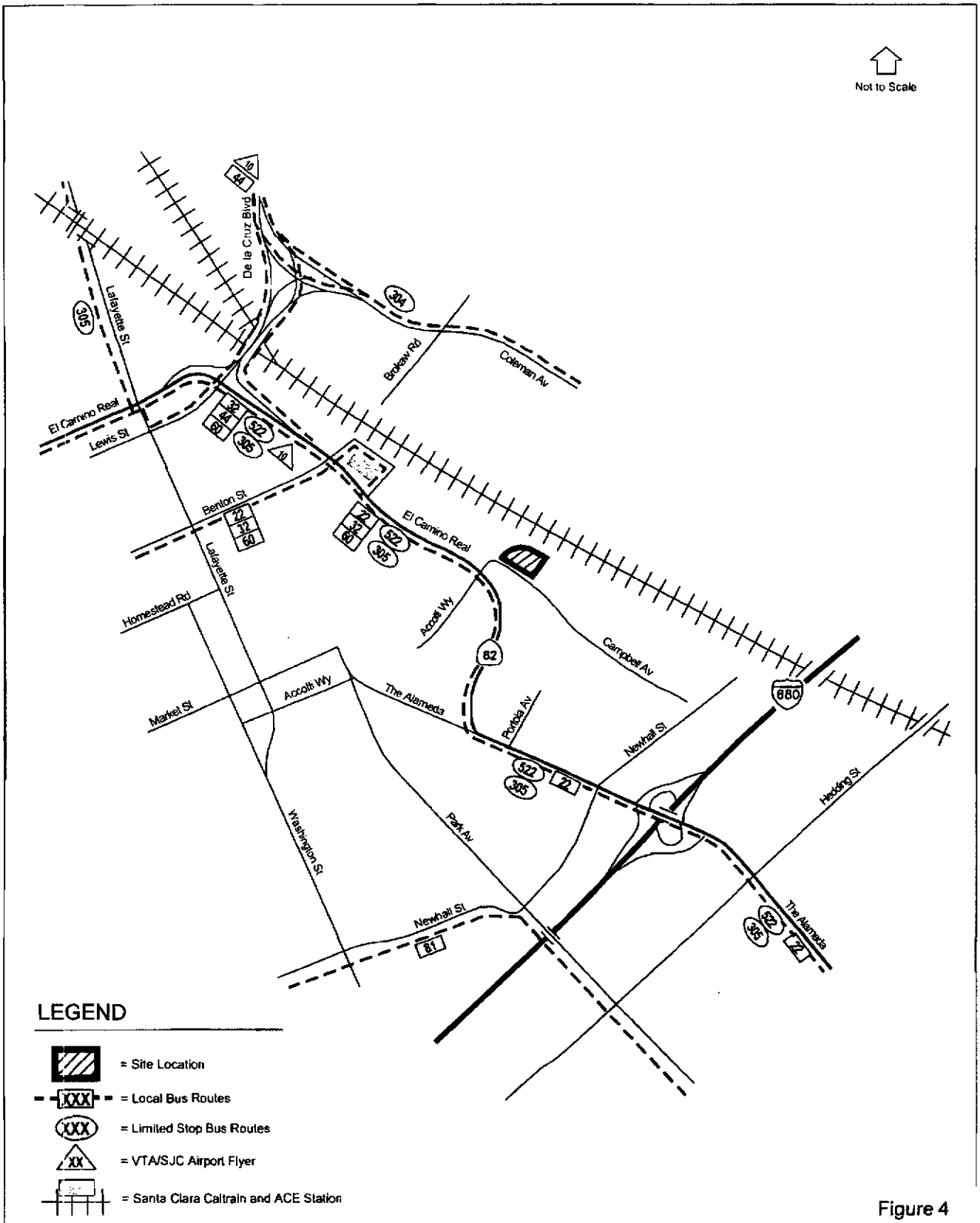

Figure 4

EXISTING TRANSIT SERVICE

Campbell Avenue Sobrato TIA

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The 44 Local bus route provides service between the Santa Clara Transit Center and the North 1st/River Oaks intersection in north San Jose. It operates from the hours of 6:30am to 9:00am and 3:30pm to 6:00pm with 30- to 60-minute headways. Line 44 operates along El Camino Real near the site.

The 60 Local bus route provides service between Los Gatos and Great America between the hours of 5:30am and 11:00pm, with 15- to 30-minute headways during the commute hours. Line 60 operates along El Camino Real and provides service to the Santa Clara Transit Center.

The 81 Local bus route runs between East San Jose and Valleo Park. In the general vicinity of the project route 81 runs along Park Avenue and Newhall Street. It operates between the hours of 6:00am and 10:30pm, with 30-minute headways during the commute hours.

The 304 Limited Stop bus route runs between south San Jose and Mountain View. It operates from 5:30am to 9:00am and 3:30pm to 7:00pm, with 30-minute headways during the hours of operation. Line 304 operates along De la Cruz Boulevard and Coleman Avenue.

The 305 Limited Stop bus route runs between south San Jose and Mountain View. It operates from 5:00am to 8:00am and 3:00pm to 6:30pm, with 60-minute headways during the hours of operation. Line 305 operates along El Camino Real and provides service to the Santa Clara Transit Center.

The 522 Rapid bus route runs between Eastridge Mall and the Palo Alto Transit Center. It operates between 5:00am and 9:00pm with 15-minute headways during the commute hours. The 522 line operates along The Alameda and El Camino Real near the project site and provides service to the Santa Clara Transit Center.

Commuter Rail Service

The project site is located within one half-mile of the Santa Clara Transit Center. Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy.

The Altamont Commuter Express (ACE) provides commuter passenger train service between Stockton and San Jose during the weekdays. ACE stops at the Santa Clara Transit Center three times in the morning and evening hours.

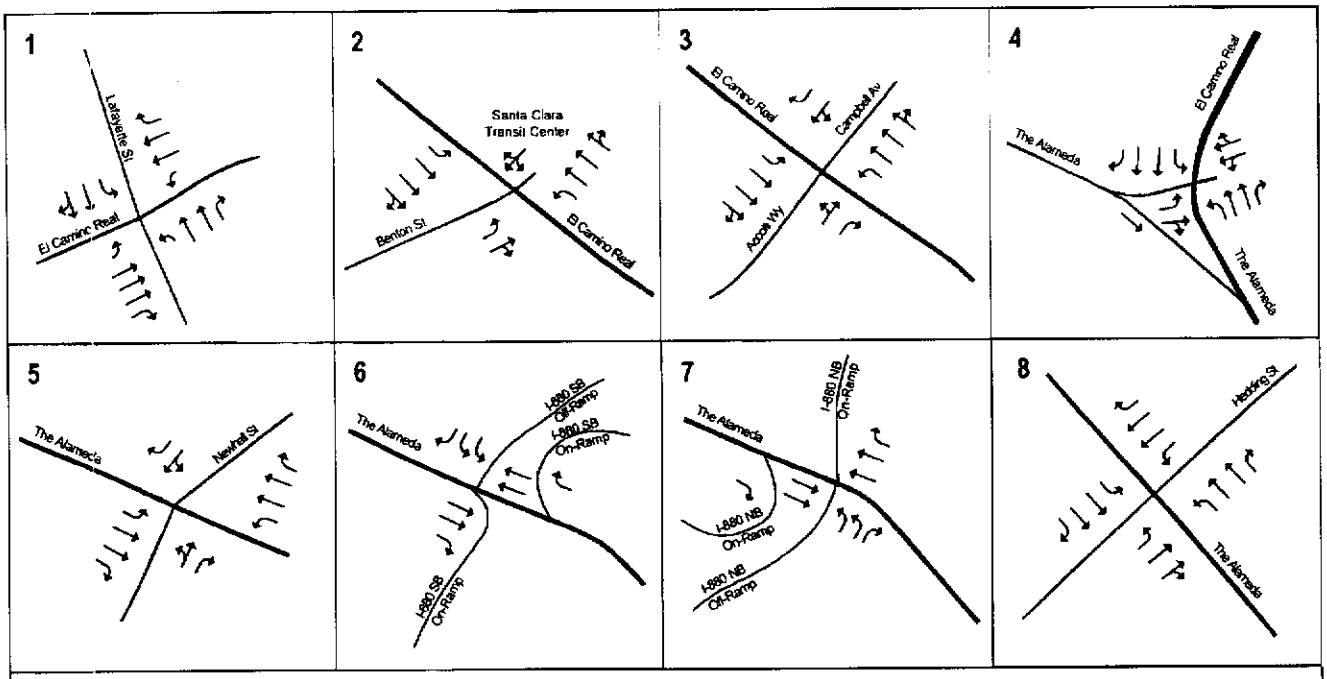
There is a Park & Ride lot as well as bicycle lockers located at the Santa Clara Transit Center.

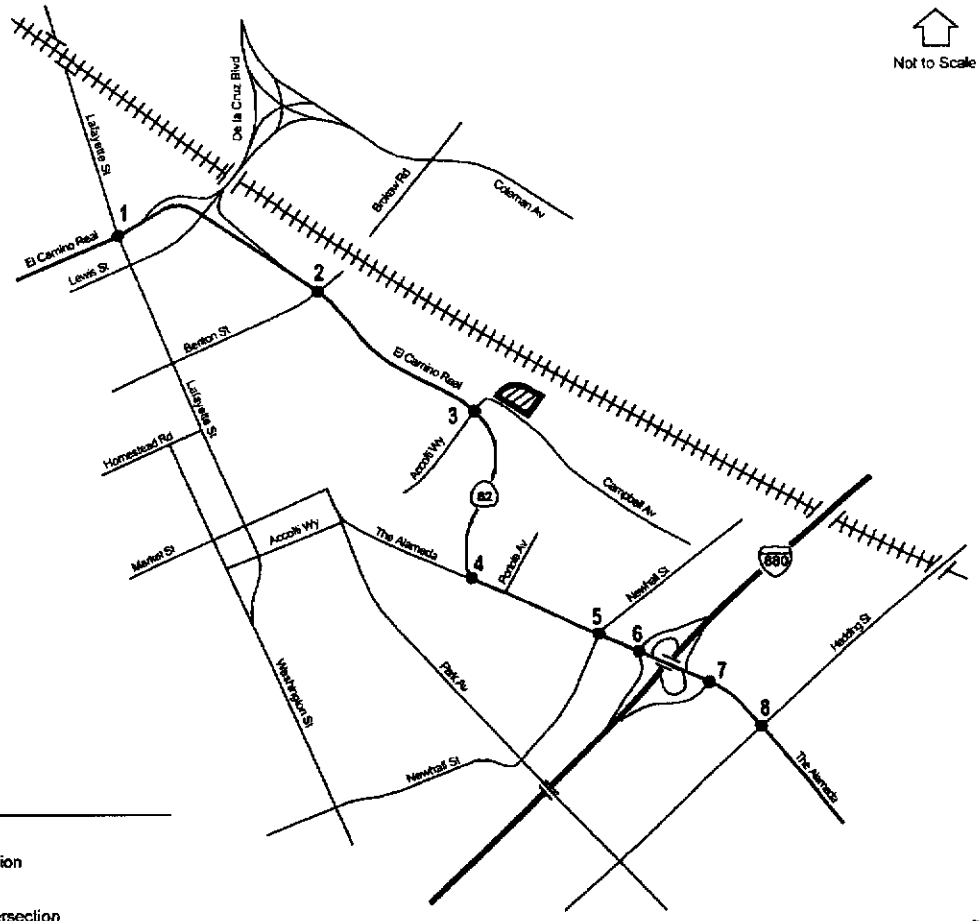
Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were provided by City staff and confirmed by observations in the field. The existing intersection lane configurations are shown on Figure 5.

Existing Traffic Volumes

Existing traffic volumes were obtained from the City of San Jose and new manual turning-movement counts. The existing peak hour intersection volumes are shown on Figure 6. Traffic volumes for all components of traffic are tabulated in Appendix B.





LEGEND

= Site Location

= Study Intersection

Figure 5

EXISTING LANE CONFIGURATIONS

Campbell Avenue Sobrato TIA

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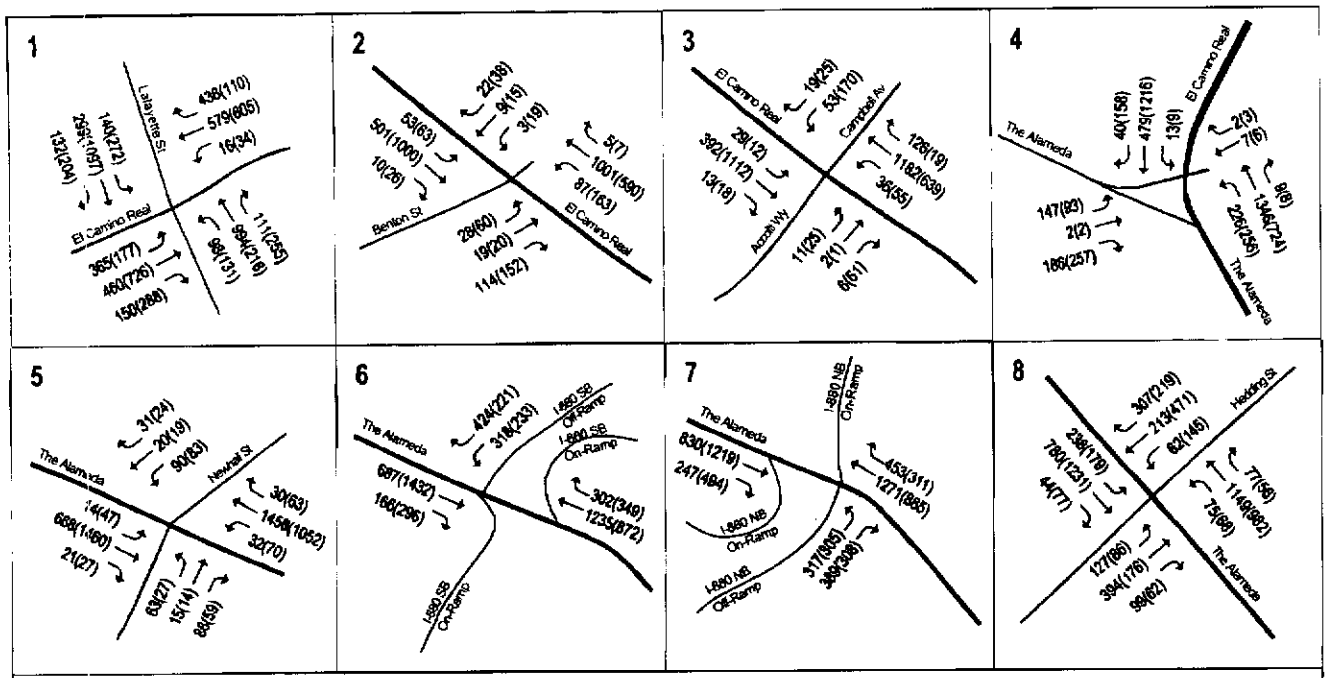


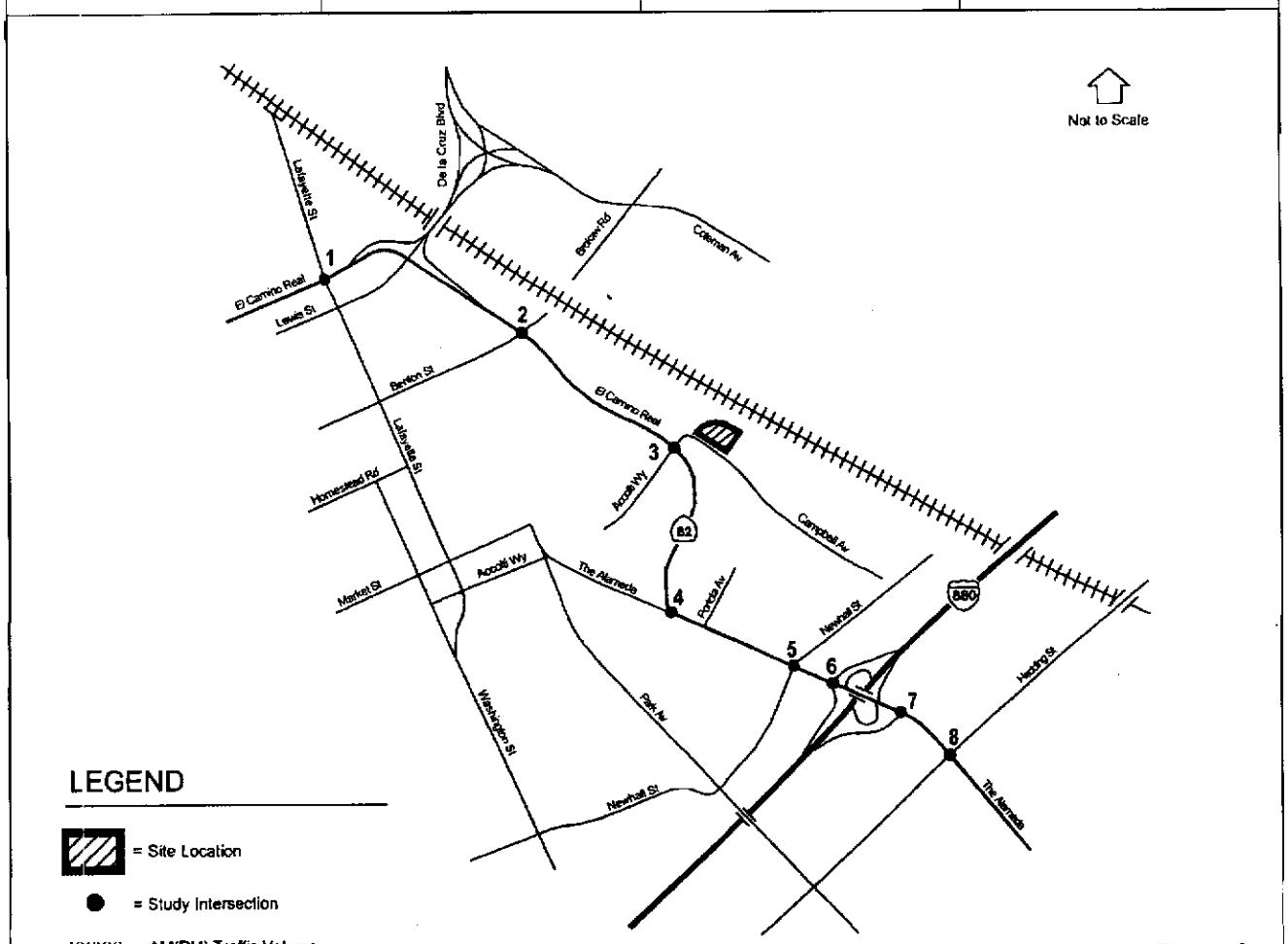


Figure 6

EXISTING TRAFFIC VOLUMES

Campbell Avenue Sobrato TIA

Hexagon
Transportation Consultants, Inc.

Existing Intersection Levels of Service

The results of the intersection level of service analysis under existing conditions are summarized in Table 3. The results show that, measured against City of San Jose and CMP standards, all of the signalized study intersections currently operate at acceptable levels of service during both the AM and PM peak hours of traffic. The level of service calculation sheets are included in Appendix D.

Table 3
Existing Intersection Levels of Service

	Intersection	Peak Hour	Count Date	Existing Avg. Delay	Existing LOS
1	Lafayette Sreet and El Camino Real*	AM	10/25/2006	51.0	D
		PM	9/19/2006	44.4	D
2	El Camino Real and Benton Street	AM	3/7/2006	15.9	B
		PM	3/7/2006	20.5	C
3	El Camino Real and Campbell Avenue	AM	5/24/2006	14.3	B
		PM	5/24/2006	24.6	C
4	El Camino Real and The Alameda*	AM	9/21/2006	19.7	B
		PM	9/21/2006	22.6	C
5	The Alameda and Newhall Street	AM	6/5/2007	15.2	B
		PM	6/5/2007	13.2	B
6	I-880 SB and The Alameda (N)*	AM	9/21/2006	24.6	C
		PM	9/21/2006	14.3	B
7	I-880 NB and The Alameda (S)*	AM	9/21/2006	23.3	C
		PM	9/21/2006	18.8	B
8	The Alameda and Hedding Street*	AM	10/24/2006	39.6	D
		PM	10/24/2006	33.7	C

* Denotes CMP intersection.

Existing Freeway Levels of Service

Traffic volumes for the study freeway segments were obtained from the 2005 CMP Annual Monitoring Report. The results of the analysis are summarized in Table 4. The results show that the following study freeway segments currently operate at LOS F in at least one direction during at least one of the peak hours of traffic as indicated below:

I-880, northbound between Stevens Creek Boulevard and Bascom Avenue – AM peak hour
I-880, southbound between Stevens Creek Boulevard and Bascom Avenue – PM peak hour
I-880, northbound between Bascom Avenue and The Alameda – AM peak hour
I-880, southbound between The Alameda and Bascom Avenue – PM peak hour
I-880, northbound between The Alameda and Coleman Avenue – AM peak hour
I-880, southbound between Coleman Avenue and The Alameda – PM peak hour
I-880, northbound between Coleman Avenue and SR 87 – AM peak hour
I-880, southbound between SR 87 and Coleman Avenue – PM peak hour

Table 4
Existing Freeway Levels of Service

Freeway	Segment			Direction	Peak Hour	Mixed-Flow Lanes Avg. Speed/a/	# of Lanes	Volume/a/	Density	LOS
I-880	Stevens Creek	to	N. Bascom Ave	NB	AM	18	3	4,750	88.0	F
					PM	61	3	6,590	36.0	D
I-880	N. Bascom Ave	to	Stevens Creek	SB	AM	66	3	5,540	28.0	D
					PM	36	3	6,050	56.0	F
I-880	N. Bascom Ave	to	The Alameda	NB	AM	36	3	6,050	56.0	F
					PM	65	3	5,660	29.0	D
I-880	The Alameda	to	N. Bascom Ave	SB	AM	66	3	5,350	27.0	D
					PM	27	3	5,510	68.0	F
I-880	The Alameda	to	Coleman Ave	NB	AM	32	3	5,950	62.0	F
					PM	64	3	6,340	33.0	D
I-880	Coleman Ave	to	The Alameda	SB	AM	65	3	5,850	30.0	D
					PM	24	3	5,330	74.0	F
I-880	Coleman Ave	to	SR 87	NB	AM	37	3	6,110	55.0	F
					PM	59	3	6,550	37.0	D
I-880	SR 87	to	Coleman Ave	SB	AM	58	3	6,610	38.0	D
					PM	26	3	5,540	71.0	F

/a/ Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2005.

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions.

Overall the study intersections operated well during the AM and PM peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions. However, field observations revealed that some operational problems currently occur at the locations listed below.

The Alameda and Hedding Street

During the AM peak hour, the left-turn vehicle queue on eastbound Hedding Street frequently extended out of the turn pocket.

El Camino Real and Campbell Avenue

During the AM and PM peak hours, the vehicle queues in the shared westbound through and left-turn lane on Campbell Avenue frequently block driveways and prohibit vehicles from entering the right-turn lane. The queues were often unable to clear the intersection in one signal cycle. There is a "Keep Clear" area on westbound Campbell Avenue 25 yards south of the intersection to allow for vehicle access to an adjacent business driveway. This area was routinely blocked by vehicle queues, which made it inconvenient for vehicles to enter the driveway during the AM peak hour. No vehicles were observed trying to access this driveway during the PM peak hour.

3.
Background Conditions

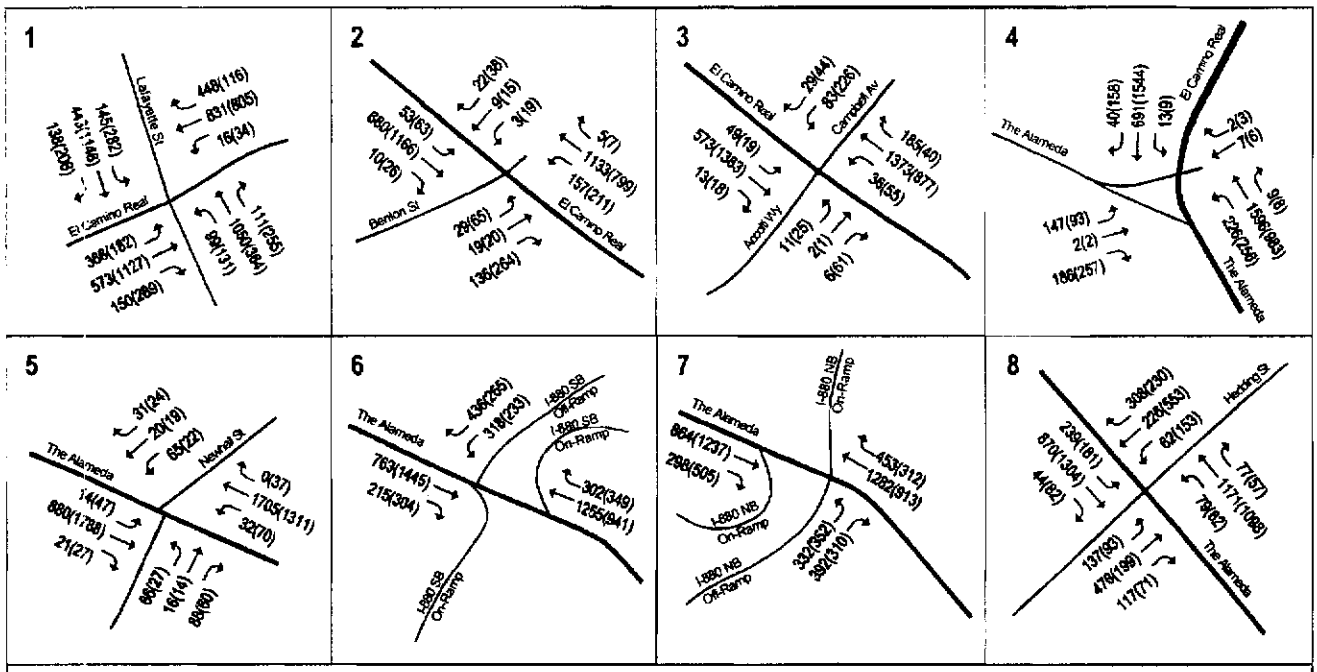
This chapter describes background traffic conditions. Background conditions are defined as conditions just prior to completion of the proposed development. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Background Roadway Network

It is assumed in this analysis that the transportation network under background conditions would be the same as the existing transportation network.

Background Traffic Volumes

Background peak hour traffic volumes were estimated by adding to existing traffic volumes, the volumes from approved but not yet completed developments in the vicinity of the project site. The added traffic from approved developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI). The added traffic from approved developments in the City of Santa Clara were gathered from the City's TRAFFIX network and previously prepared TIA reports. To account for the existing vacant R&D building on the project site, traffic that previously would have been generated by full occupancy of the building was estimated by multiplying the applicable City of San Jose trip generation rates by the amount of R&D space. The estimated trips were assigned to the surrounding roadway network according to the existing travel patterns in the project area and the locations of complementary land uses. These estimated R&D trips make up the final ATI component. Thus, background peak hour traffic volumes were estimated by adding to existing peak hour volumes the peak hour volumes due to approved but not yet constructed developments in the area and the estimated R&D building trips based on full occupancy. Background peak hour traffic volumes are shown on Figure 7. The ATI sheets are contained in Appendix C.



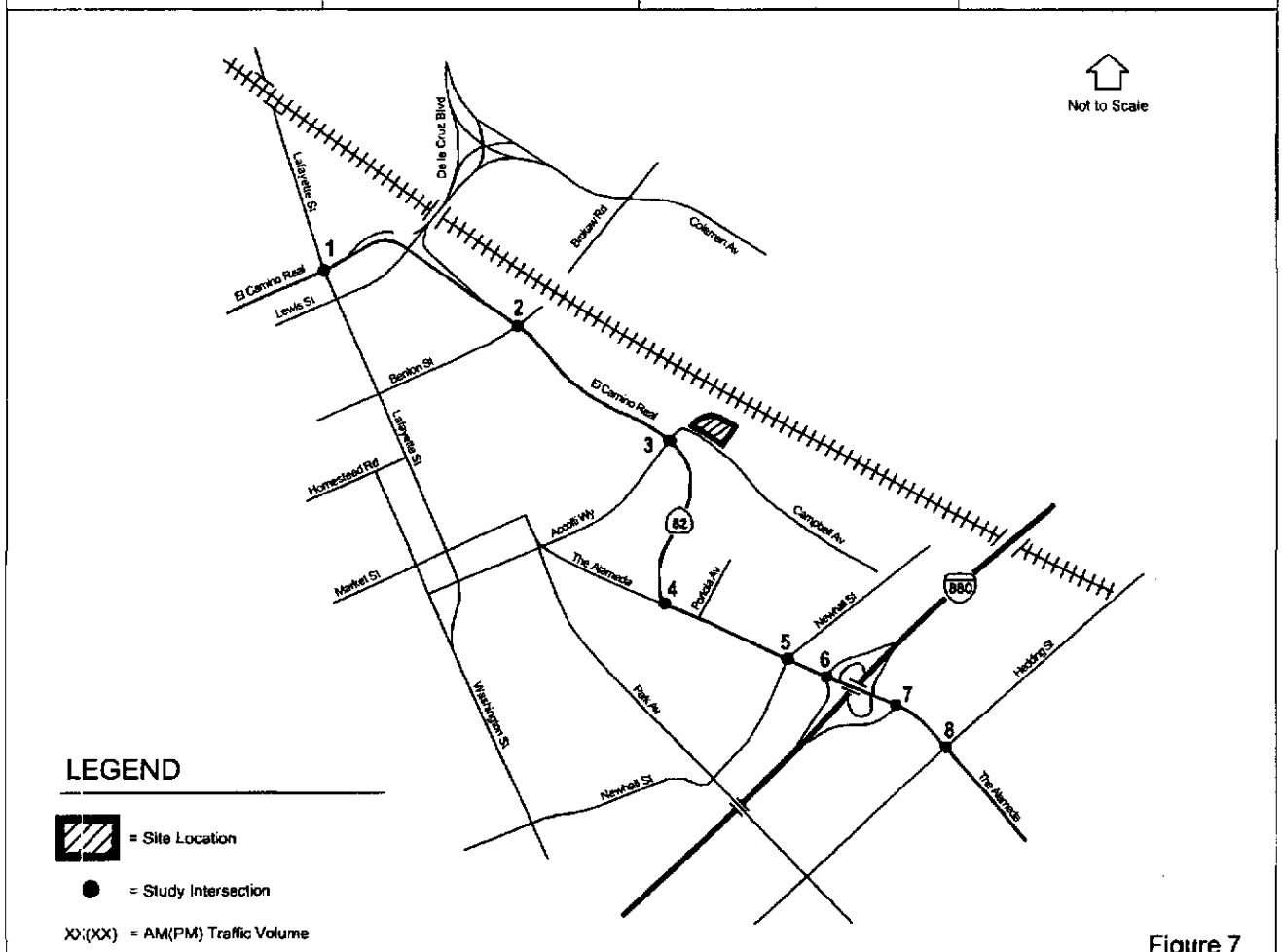


Figure 7

BACKGROUND TRAFFIC VOLUMES

Campbell Avenue Sobrato TIA

Hexagon Transportation Consultants, Inc.

Background Intersection Levels of Service

The results of the intersection level of service analysis under background conditions are summarized in Table 5. The results show that, measured against City of San Jose standards, the signalized study intersection of Lafayette Street and El Camino Real would operate at an unacceptable LOS E during the AM peak hour. All of the other signalized study intersections would operate at acceptable levels of service during both the AM and PM peak hours of traffic under background conditions.

According to CMP level of service standards, all of the CMP study intersections would operate at acceptable levels of service during the both the AM and PM peak hours of traffic under background conditions.

The level of service calculation sheets are included in Appendix D.

Table 5
Background Intersection Levels of Service

			Existing		Background	
	Intersection	Peak Hour	Avg. Delay	LOS	Avg. Delay	LOS
1	Lafayette Sreet and El Camino Real*	AM	51.0	D	55.2	E
		PM	44.4	D	48.8	D
2	El Camino Real and Benton Street	AM	15.9	B	16.8	B
		PM	20.5	C	22.7	C
3	El Camino Real and Campbell Avenue	AM	14.3	B	16.3	B
		PM	24.6	C	24.9	C
4	El Camino Real and The Alameda*	AM	19.7	B	20.6	C
		PM	22.6	C	24.8	C
5	The Alameda and Newhall Street	AM	15.2	B	12.9	B
		PM	13.2	B	10.4	B
6	I-880 SB and The Alameda (N)*	AM	24.6	C	24.9	C
		PM	14.3	B	15.8	B
7	I-880 NB and The Alameda (S)*	AM	23.3	C	23.4	C
		PM	18.8	B	19.1	B
8	The Alameda and Hedding Street*	AM	39.6	D	40.8	D
		PM	33.7	C	35.6	D

* Denotes CMP intersection.

4.
Project Conditions

The proposed project consists of replacing an approximately 82,000 square-foot existing R&D building located on the north side of Campbell Avenue with 260 new attached residential units. Access to the site would be provided via Campbell Avenue. This chapter describes traffic conditions that would occur with the project, including a description of the significance criteria used to establish what constitutes a project impact, a description of the transportation system under project conditions, the method by which project traffic is estimated, and any impacts caused by the project. Project conditions are represented by background traffic conditions with the addition of traffic generated by the project.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the criteria used to determine impacts on intersections is based on City of San Jose Level of Service standards. Project intersection impacts also were analyzed according to the County Congestion Management Program (CMP) methodology at the five CMP study intersections. It should be noted that although the project site is located within the City of San Jose, four of the study intersections are located within the City of Santa Clara. Since the Cities of San Jose and Santa Clara utilize identical criteria to determine significant intersection impacts, a separate LOS analysis for the City of Santa Clara is unnecessary.

City of San Jose Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of San Jose if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under project conditions, <u>or</u>

2. The level of service at the intersection is an unacceptable LOS E or F under background

conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds and the demand-to-capacity ratio (V/C) to increase by 0.01 or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by 0.01 or more.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

CMP Definition of Significant Intersection Impacts

The definition of a significant impact at a CMP intersection is the same as for the City of San Jose, except that the CMP standard for acceptable level of service at a CMP intersection is LOS E or better. A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to an acceptable LOS E or better.

CMP Definition of Significant Freeway Segment Impacts

The CMP defines an acceptable level of service for freeway segments as LOS E or better. A project is said to create a significant adverse impact on traffic conditions on a CMP freeway segment if for either peak hour:

1. The level of service on the freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under project conditions, or

2. The level of service on the freeway segment is an unacceptable LOS F under project conditions and the number of project trips on that segment constitutes at least one percent of capacity on that segment.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to better than background conditions.

Transportation Network Under Project Conditions

It is assumed in this analysis that the transportation network under project conditions would be the same as described under existing conditions.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. The recommended trip generation rates for use in the City of San Jose are detailed in the *Interim Guidelines for Traffic Impact Analysis of Land Use Developments*, 1994.

Based on the residential rates recommended by the City of San Jose, the proposed project would generate 1,950 gross daily vehicle trips, with 195 trips occurring during both the AM and PM peak hours. Trip credits were estimated to account for the vacant 82,000 square-foot R&D building currently on the site. After subtracting the existing facility's potential vehicle trips, the residential project would generate 1,295 net daily trips, with 90 new AM peak hour trips and 103 new PM peak hour trips. Using the inbound/outbound splits recommended by the City of San Jose, the project would produce 16 fewer inbound and 106 new outbound trips during the AM peak hour, and 118 new inbound and 15 fewer outbound trips during the PM peak hour than the existing vacant R&D building could potentially generate. The project trip generation estimates are presented in Table 6.

Table 6
Project Trip Generation Estimates

				AM Peak Hour				PM Peak Hour			
Land Use	Size	Daily Rate /a/	Daily Trips	Pk-Hr Factor	In	Out	Total	Pk-Hr Factor	In	Out	Total
Proposed											
Condominium/Townhouse	260 units	7.5	1,950	0.10	68	127	195	0.10	127	68	195
Existing											
Research & Development	82 ksf	8.0	655	0.16	84	21	105	0.14	9	83	92
Net Project Trips:			**1,295**		**-16**	**106**	**90**		**118**	**-15**	**103**

Notes:
/a/ Rate per unit for residential use; per 1,000 square feet for R&D space.

Source: City of San Jose Interim Guidelines for Traffic Impact Analysis for Land Developments, "Common Vehicular Trip Generation Rates for the San Jose Area," March 1994.

Trip Distribution

The trip distribution pattern for the proposed residential project was estimated based on existing travel patterns in the area, the locations of complementary land uses, and previous traffic studies. Based on the project site's location, it was assumed that the trip distribution patterns for the proposed residential development and the existing R&D use would be identical. However, the existing peak direction of travel at the site would be reversed. The City of San Jose staff is in agreement with these assumptions. The project trip distribution pattern is shown graphically on Figure 8.

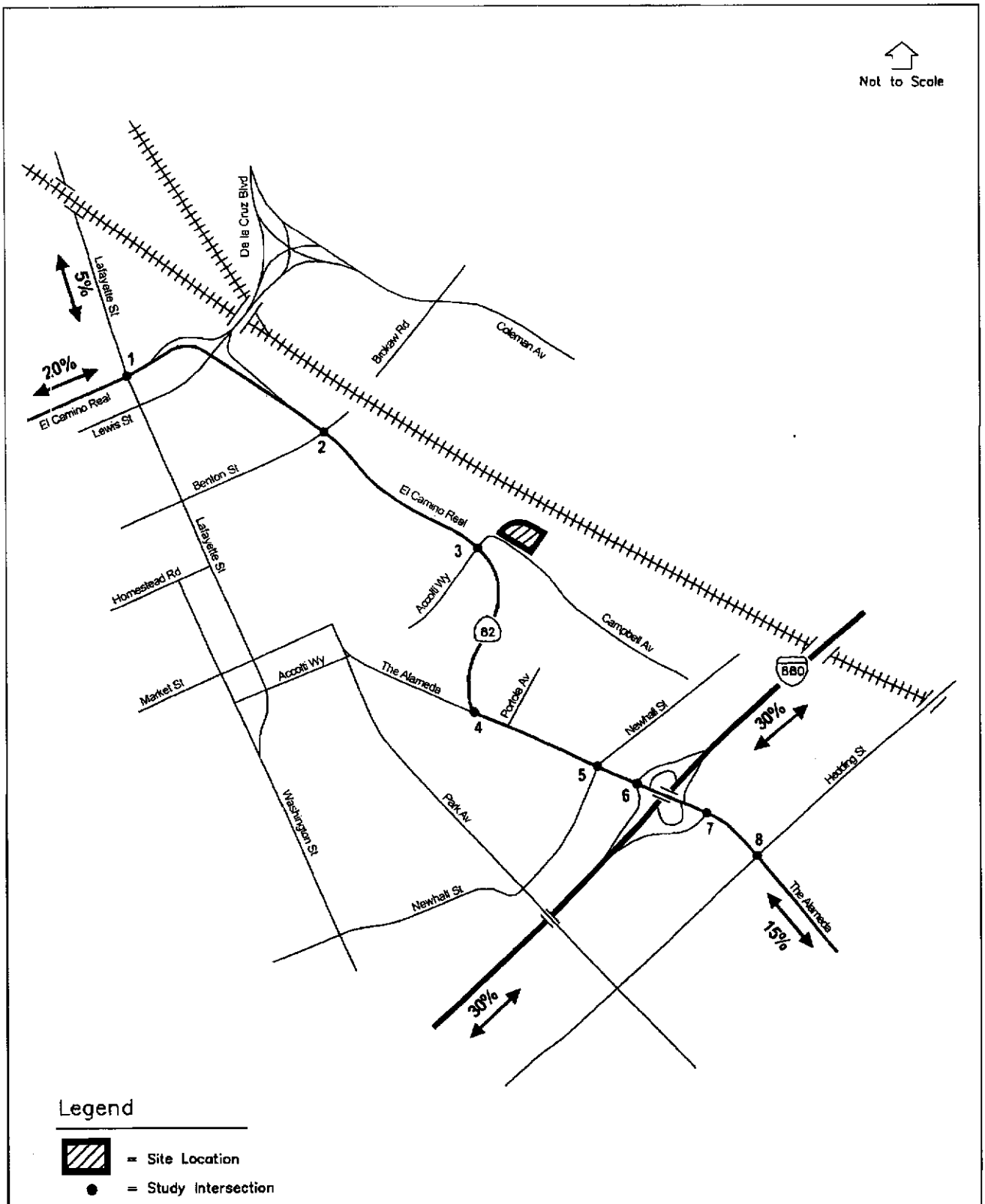


Figure 8

PROJECT TRIP DISTRIBUTION

Hexagon
Transportation Consultants, Inc.

Campbell Avenue Sobrato TIA

Trip Assignment

The peak hour trips generated by the proposed residential development and the existing R&D space were assigned to the roadway system in accordance with the trip distribution patterns discussed above. The gross vehicle trips generated by the proposed residential development that would replace the existing R&D building on the site are shown graphically on Figure 9. Figure 10 shows the estimated vehicle trips that could potentially be generated based on full occupancy of the existing R&D building. The net project trips are shown on Figure 11.

Project Traffic Volumes

Projected peak hour traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Project conditions were evaluated relative to background conditions in order to determine potential project impacts. The project traffic volumes are shown graphically on Figure 12.

Traffic volumes for all components of traffic are tabulated in Appendix B.

Project Intersection Levels of Service

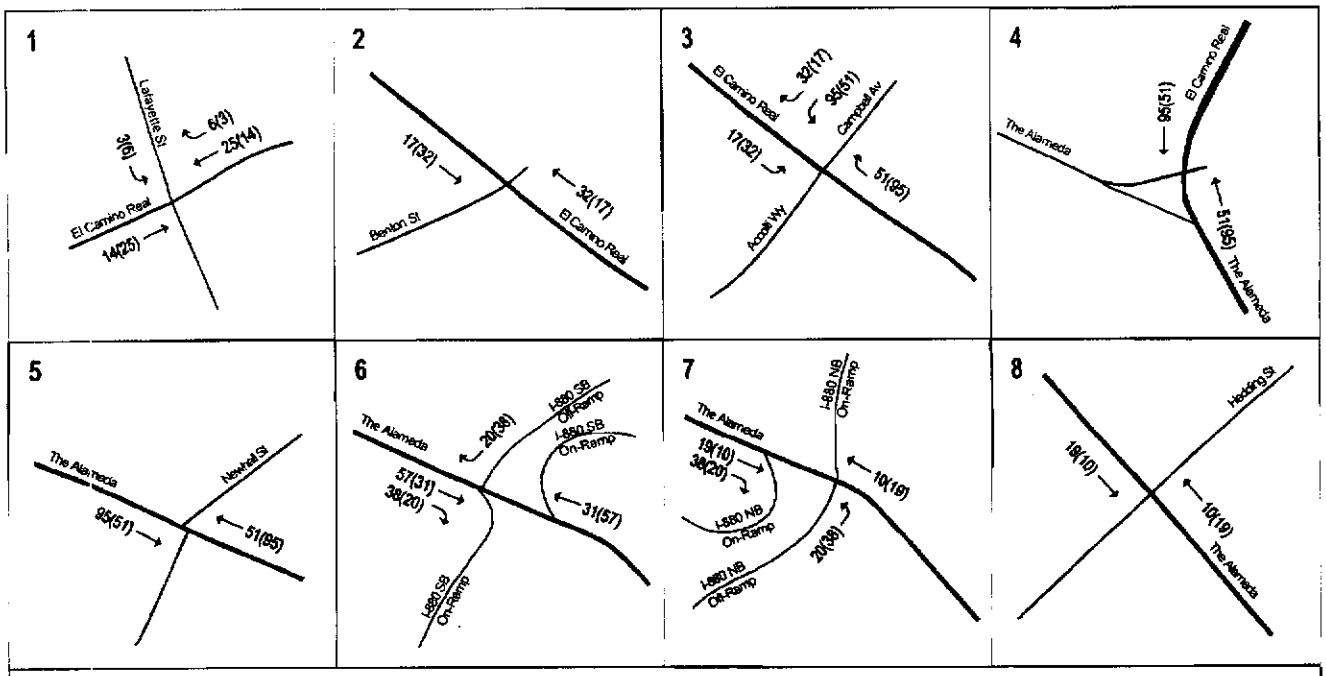
The results of the intersection level of service analysis under project conditions are summarized in Table 7. The results show that the signalized study intersection of Lafayette Street and El Camino Real would continue to operate at an unacceptable level of service (LOS E). However, based on the City of San Jose level of service standards, this study intersection would not be significantly impacted by the project. The other study intersections would operate at an acceptable level of service during both the AM and PM peak hours of traffic under project conditions.

Based on the CMP level of service standards, all of the CMP signalized study intersections, including Lafayette Street and El Camino Real, would operate at acceptable levels of service during both the AM and PM peak hours of traffic under project conditions. Therefore, none of the CMP intersections would be significantly impacted by the project.

The intersection level of service calculation sheets are included in Appendix D.

Project Freeway Segment Level of Service Analysis

The results of the CMP freeway level of service analysis under project conditions are summarized in Table 8. Traffic volumes on the study freeway segments under project conditions were estimated by adding project trips to the existing volumes obtained from the 2005 CMP Annual Monitoring Report. The results of the CMP freeway analysis show that the project would not cause significant increases in traffic volumes (more than one percent of freeway capacity) on any of the studied freeway segments.



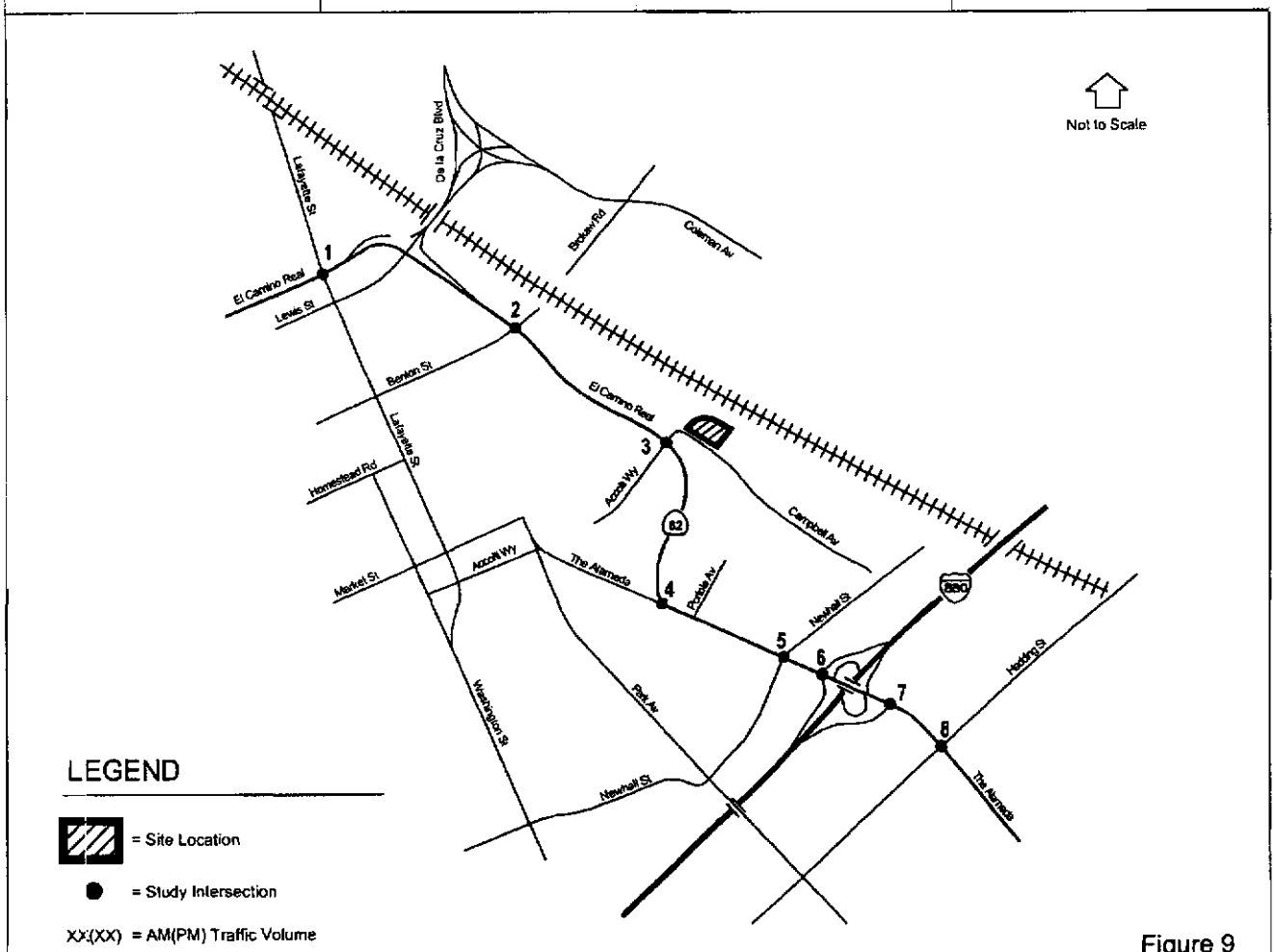
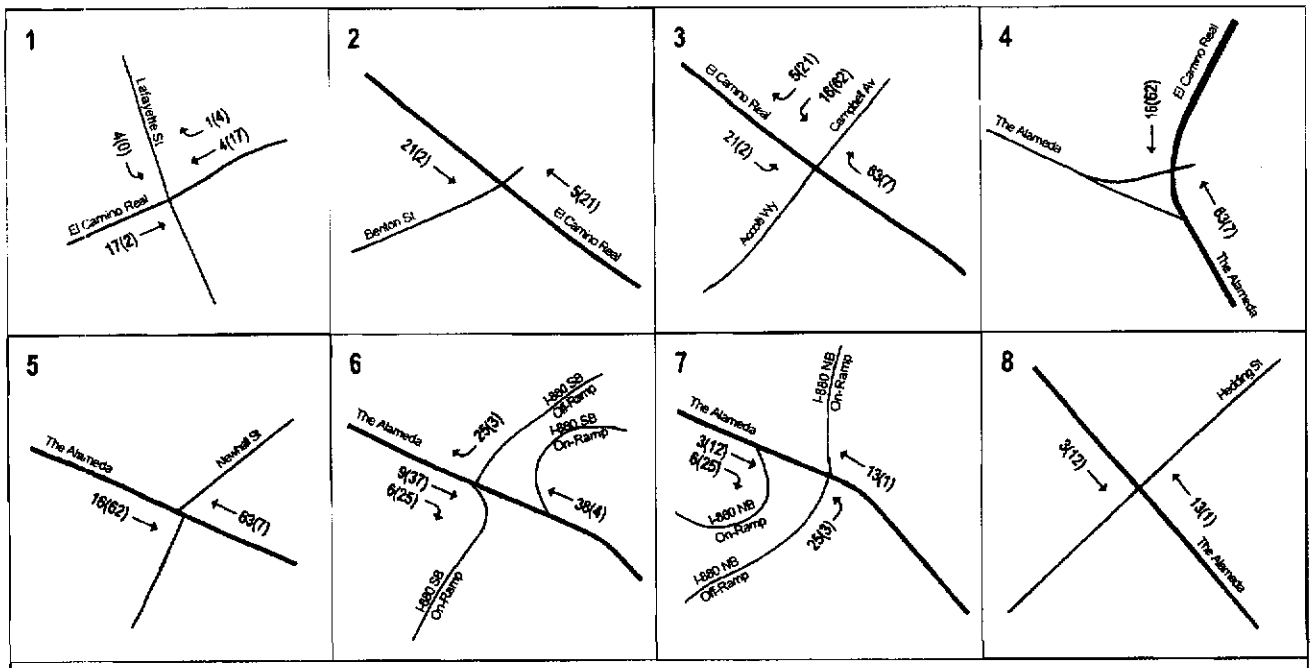


Figure 9

RESIDENTIAL PROJECT TRIP ASSIGNMENT

Hexagon Transportation Consultants, Inc.

Campbell Avenue Sobrato TIA



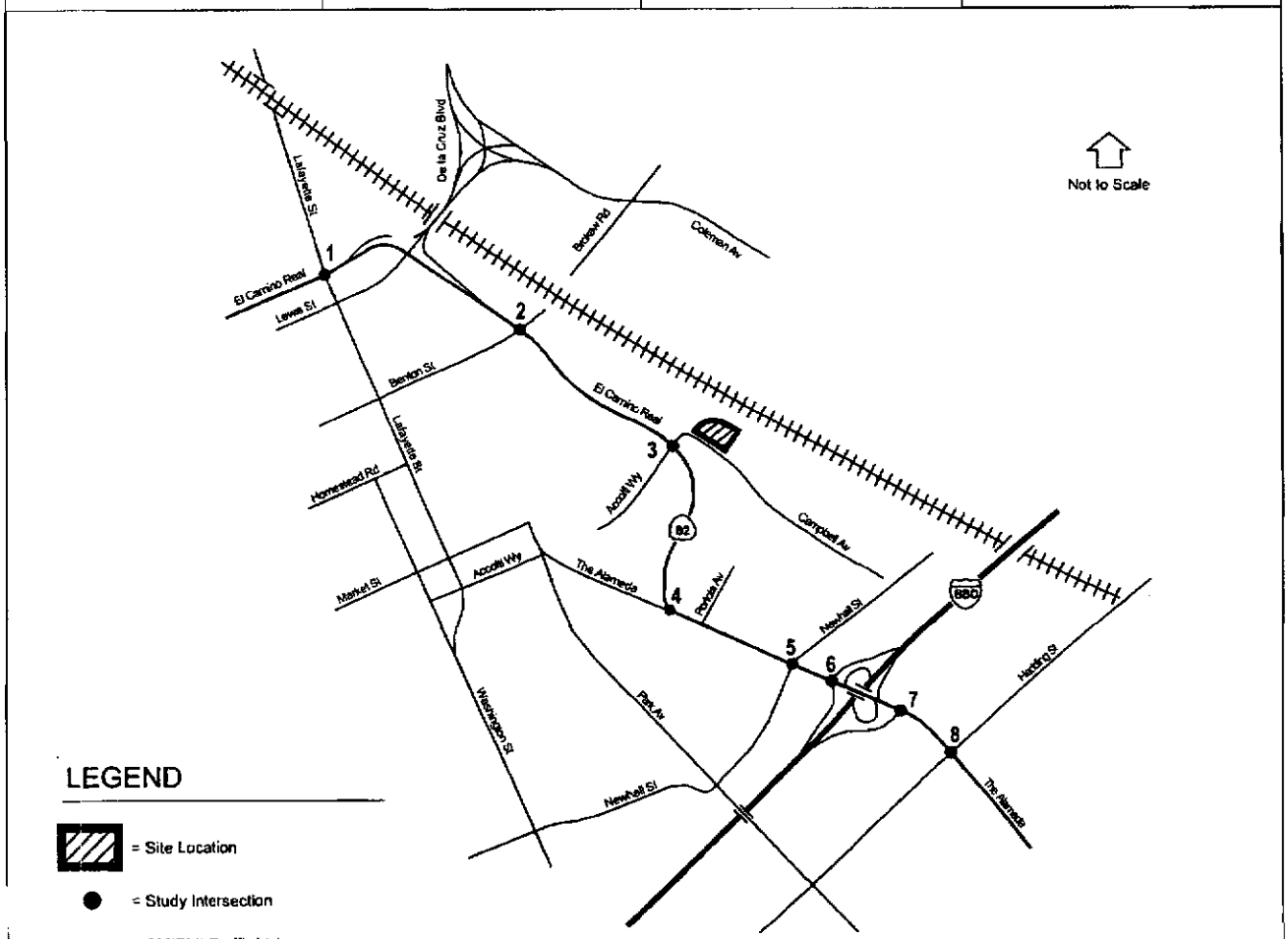
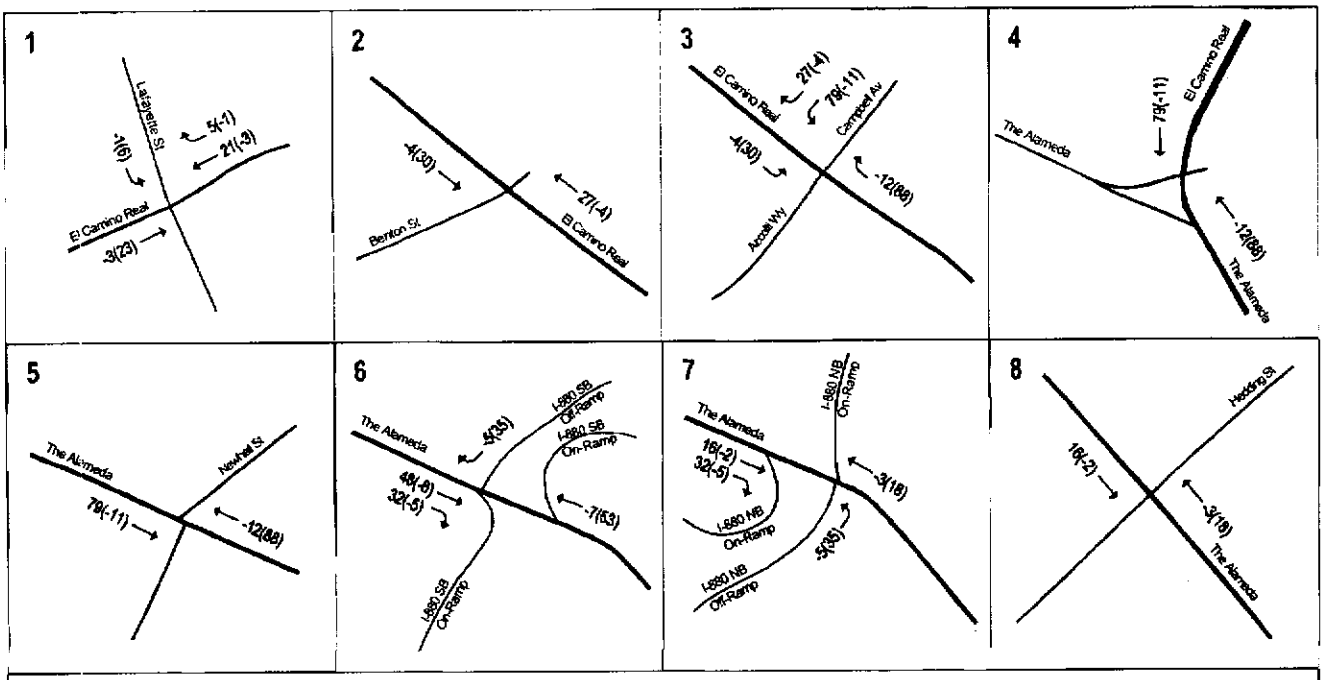


Figure 10

POTENTIAL R&D TRIPS

Campbell Avenue Sobrato TIA

Hexagon
Transportation Consultants, Inc.



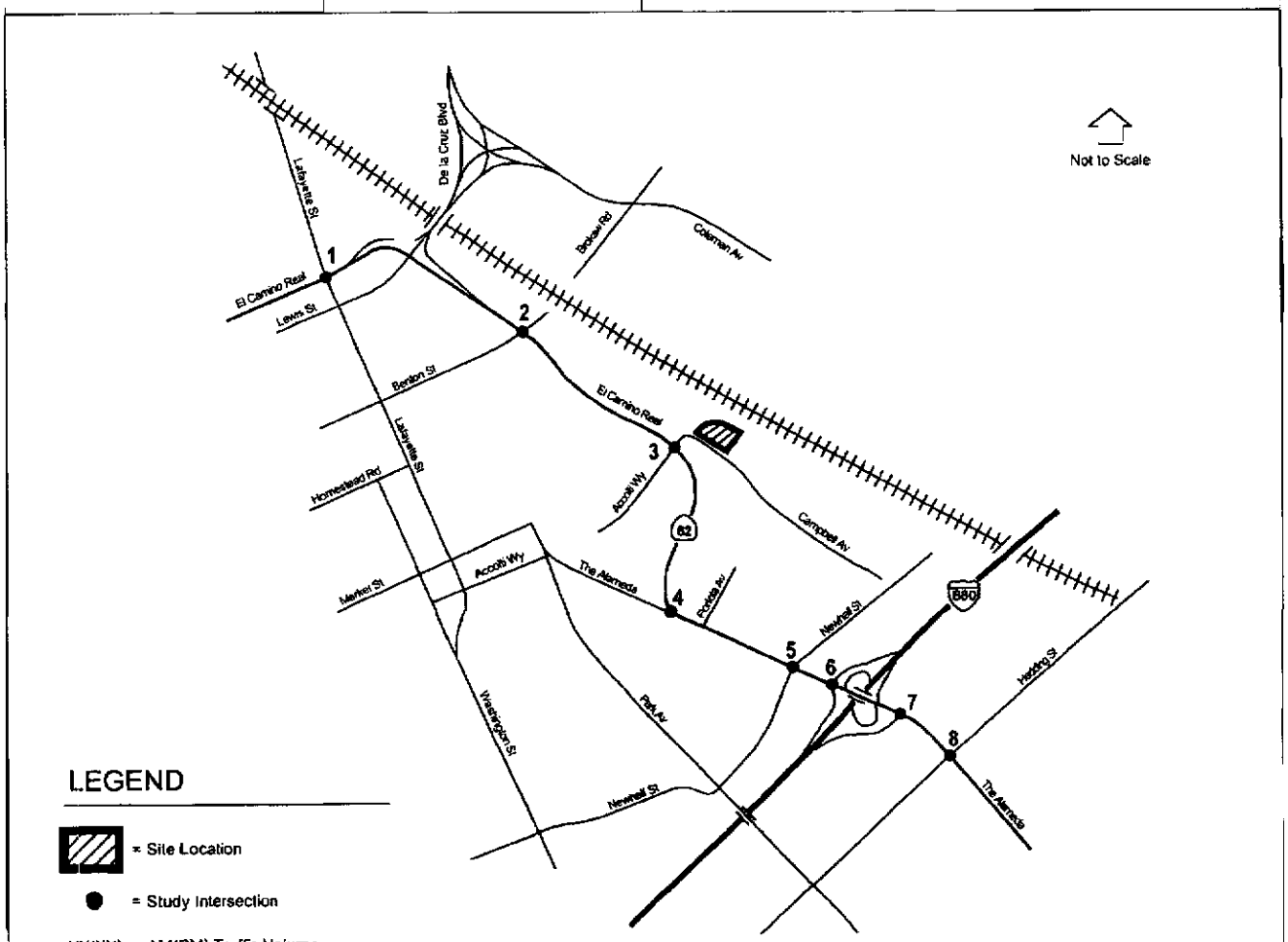
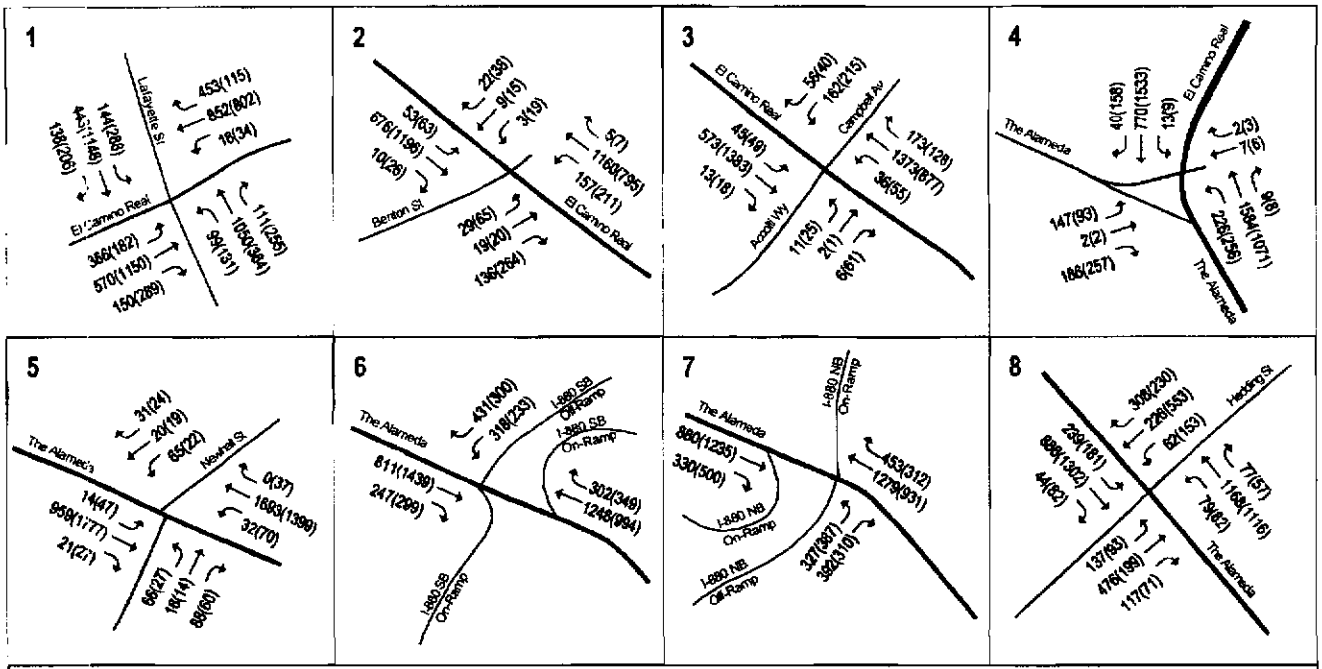


Figure 11

NET PROJECT TRIP ASSIGNMENT

Campbell Avenue Sobrato TIA

Hexagon Transportation Consultants, Inc.



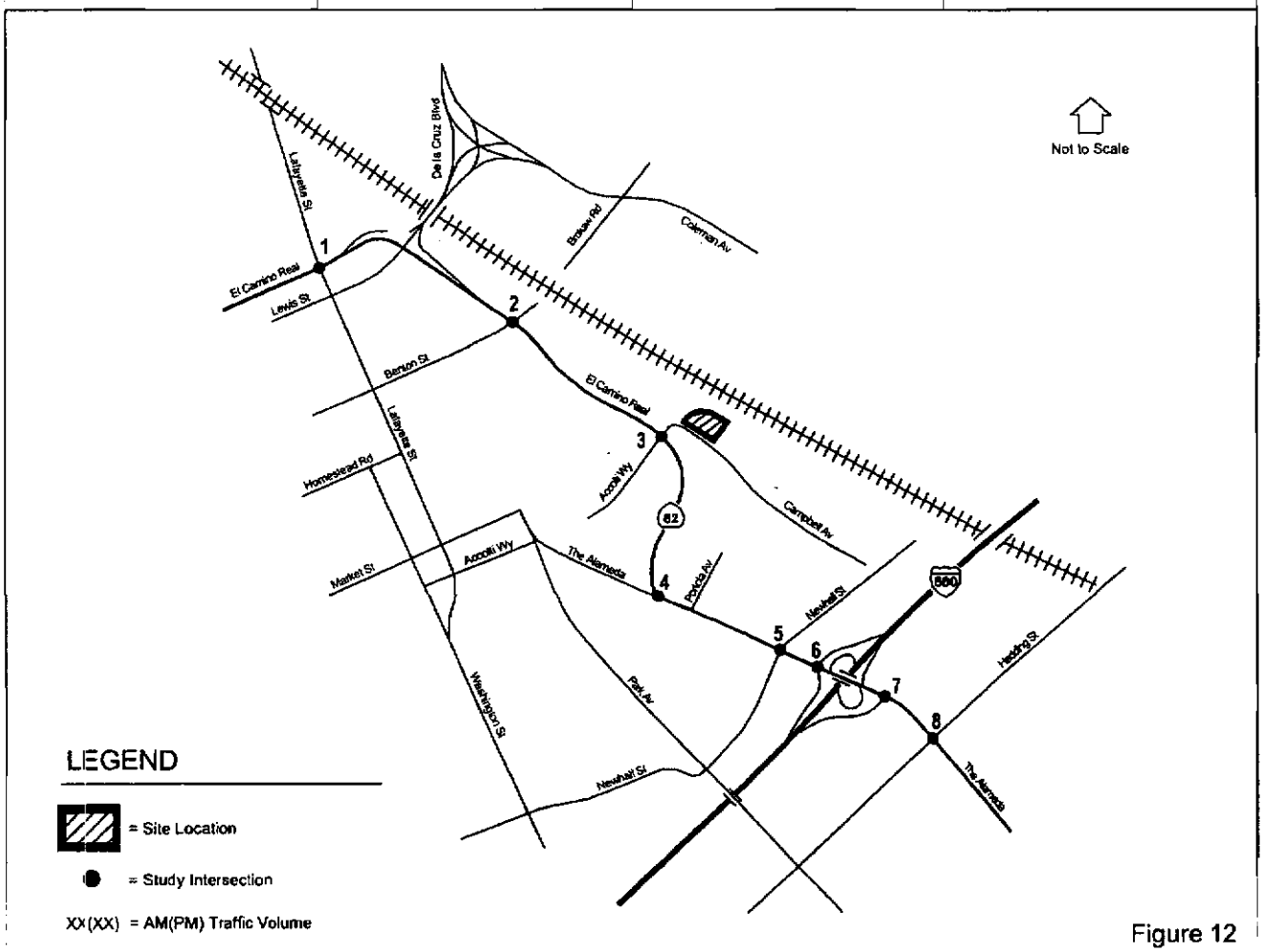


Figure 12

PROJECT TRAFFIC VOLUMES

Campbell Avenue Sobrato TIA

Hexagon
Transportation Consultants, Inc.

Table 7
Project Intersection Levels of Service

	Intersection	Peak Hour	Background Avg. Delay	Background LOS	Project Avg. Delay	Project LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	Lafayette Sreet and El Camino Real*	AM	55.2	E	55.4	E	0.3	0.00
		PM	48.8	D	48.8	D	-0.1	0.00
2	El Camino Real and Benton Street	AM	16.8	B	16.6	B	-0.2	0.01
		PM	22.7	C	22.7	C	-0.1	0.01
3	El Camino Real and Campbell Avenue	AM	16.3	B	21.1	C	5.1	0.04
		PM	24.9	C	24.5	C	-0.5	-0.01
4	El Camino Real and The Alameda*	AM	20.6	C	20.6	C	-0.1	0.00
		PM	24.8	C	24.4	C	-0.2	0.00
5	The Alameda and Newhall Street	AM	12.9	B	12.8	B	0.0	0.00
		PM	10.4	B	10.3	B	0.0	0.00
6	I-880 SB and The Alameda (N)*	AM	24.9	C	24.8	C	-0.2	-0.01
		PM	15.8	B	17.1	B	1.8	0.02
7	I-880 NB and The Alameda (S)*	AM	23.4	C	23.4	C	0.0	0.00
		PM	19.1	B	19.4	B	0.0	0.00
8	The Alameda and Hedding Street*	AM	40.8	D	40.7	D	0.0	0.00
		PM	35.6	D	35.6	D	0.0	0.01

* Denotes CMP intersection.

Table 8
Project Freeway Segment Level of Service Analysis

					Existing Plus Project Trips							Project Trips		
					Mixed-Flow							Mixed-Flow		
Freeway	Segment		Dir.	Peak Hour	Avg. Speed/a/	# of Lanes	Capacity (vph)	Vol. /a/	Density	LOS	Total Vol.	Vol.	% Capacity	Impact?
I-880	Stevens Creek	to N. Bascom Ave	NB	AM	18	3	6,900	4,750	88.0	F	0	0	0.0%	*NO*
				PM	61	3	6,900	6,625	36.2	D	35	35	0.5%	*NO*
I-880	N. Bascom Ave	to Stevens Creek	SB	AM	66	3	6,900	5,572	28.1	D	32	32	0.5%	*NO*
				PM	36	3	6,900	6,050	56.0	F	0	0	0.0%	*NO*
I-880	N. Bascom Ave	to The Alameda	NB	AM	36	3	6,900	6,050	56.0	F	0	0	0.0%	*NO*
				PM	65	3	6,900	5,695	29.2	D	35	35	0.5%	*NO*
I-880	The Alameda	to N. Bascom Ave	SB	AM	66	3	6,900	5,382	27.2	D	32	32	0.5%	*NO*
				PM	27	3	6,900	5,510	68.0	F	0	0	0.0%	*NO*
I-880	The Alameda	to Coleman Ave	NB	AM	32	3	6,900	5,982	62.3	F	32	32	0.5%	*NO*
				PM	64	3	6,900	6,340	33.0	D	0	0	0.0%	*NO*
I-880	Coleman Ave	to The Alameda	SB	AM	65	3	6,900	5,850	30.0	D	0	0	0.0%	*NO*
				PM	24	3	6,900	5,365	74.5	F	35	35	0.5%	*NO*
I-880	Coleman Ave	to SR 87	NB	AM	37	3	6,900	6,142	55.3	F	32	32	0.5%	*NO*
				PM	59	3	6,900	6,550	37.0	D	0	0	0.0%	*NO*
I-880	SR 87	to Coleman Ave	SB	AM	58	3	6,900	6,610	38.0	D	0	0	0.0%	*NO*
				PM	26	3	6,900	5,575	71.5	F	35	35	0.5%	*NO*

/a/ Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2005.

5.
Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project site, including:

- Traffic Operations on Campbell Avenue
- Vehicle queuing and left-turn storage capacity
- Vehicular site access and on-site circulation
- Truck access and circulation
- Potential impacts to bike, pedestrian and transit facilities

Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Traffic Operations on Campbell Avenue

Peak hour traffic volumes will continue to increase on Campbell Avenue as the light industrial land along Campbell Avenue is converted to residential development. Of particular concern is the traffic that will be added to the east leg of the El Camino Real and Campbell Avenue intersection. Currently, the lane geometry on the east leg of the intersection consists of one right-turn lane and one shared through/left-turn lane. Due in part to the sharp curve in the roadway, the existing turn lanes on Campbell Avenue are very short and provide limited vehicle storage. As a result, long vehicle queues are expected to occur on Campbell Avenue as more of the light industrial land is converted to residential development. In response to this operational issue, the project applicant has worked closely with the City of San Jose Department of Transportation to develop plans to improve the east leg of the intersection by increasing the curb radius at the curve location, adding a dedicated westbound left-turn lane, and restriping Campbell Avenue. The Plan Line, shown on Figure 13, would work well with the proposed project's site plan. The new intersection lane configuration – one left-turn lane, one shared through/left-turn lane, and one right-turn lane – would provide approximately 350 feet of left-turn vehicle storage per lane. The project will be required to make a fair share contribution toward the transportation improvements for Campbell Avenue.

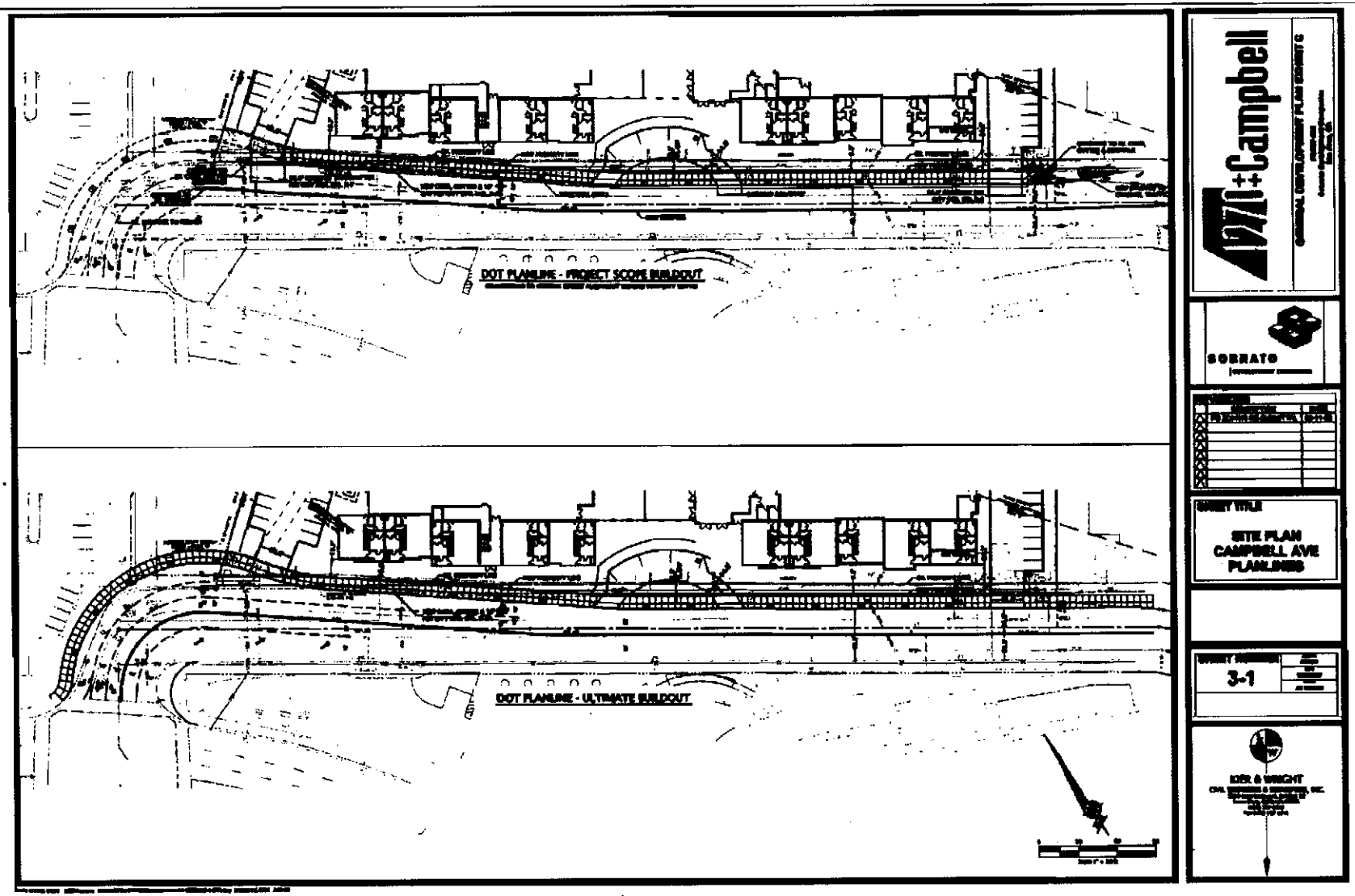


Figure 13

INTERSECTION IMPROVEMENTS

Campbell Avenue Subarea TIA

Hexagon
Road Transportation Consultants, Inc.

Signalized Intersection Operations Analysis

The operations analysis is based on vehicle queuing for high demand turning movements at intersections. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x=n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P (x=n) = probability of "n" vehicles in queue per lane
n = number of vehicles in the queue per lane
λ = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future storage requirements at intersections. The TRAFFIX queue estimates and a tabulated summary of the findings for the AM and PM peak hours are provided in Table 9.

Westbound Campbell Avenue and El Camino Real

As the results in Table 9 indicate, based on existing traffic volumes it is estimated that 95 percent of the time the westbound Campbell Avenue vehicle queue at El Camino Real is 10 vehicles in length or less during the PM peak hour. The PM peak hour period is when the longest vehicle queues are estimated to occur at this location. Under background and project conditions, this queue is estimated to be 12 vehicles. The storage capacity for this movement is 100 feet. The estimated length that the queue exceeds the storage space under existing conditions is 8 vehicles or 200 feet. Vehicles that exceed the existing storage capacity currently can overflow into the shared two-way center left-turn lane on Campbell Avenue east of the intersection.

As previously discussed, the project applicant has worked closely with the City of San Jose to develop improvements for this intersection. These improvements would include lengthening the westbound Campbell Avenue shared through/left-turn lane and adding a dedicated left-turn lane in order to provide approximately 350 feet of left-turn vehicle storage per lane. These changes would eliminate the existing left-turn storage deficiency.

Southbound Lafayette Street and El Camino Real

Based on project traffic volumes it is estimated that 95 percent of the time during the PM peak hour under existing conditions the southbound Lafayette Street vehicle queue at El Camino Real is 16 vehicles in length or less. The PM peak hour is the time period when the longest vehicle queues are expected to occur at this location. The existing storage space for this movement is 125 feet or 5 vehicles. Thus, the southbound left-turn pocket has a storage inadequacy of about 11 vehicles or 275 feet.

Currently vehicles that exceed the existing storage capacity spill out of the left-turn pocket and block southbound through vehicles. This action impedes the flow of through moving vehicles at the intersection. Lengthening the southbound left-turn lane or providing a second left-turn lane would require right-of-way acquisition along Lafayette Street. Due to constraints in acquisition and cost of right-of-way, it may not be feasible for an individual development to bear responsibility for implementing this improvement.

Table 9
Vehicle Queuing and Left-Turn Storage Capacity

Measurement	El Camino Real / Campbell Avenue SBL AM	El Camino Real / Campbell Avenue WBL AM	El Camino Real / Lafayette Street SBL AM	El Camino Real / Campbell Avenue SBL PM	El Camino Real / Campbell Avenue WBL PM	El Camino Real / Lafayette Street SBL PM
Existing						
Cycle/Delay[1] (sec)	120	120	140	120	120	140
Volume (vphpl)	29	53	140	12	170	272
Avg. Queue (veh/ln.)	1.0	1.8	5.4	0.4	5.7	10.6
Avg. Queue[2] (ft./ln)	24	44	136	10	142	264
95th %. Queue (veh/ln.)	3	4	10	2	10	16
95th %. Queue (ft./ln)	75	100	250	50	250	400
Storage (ft./ ln.)	200	100	125	200	100	125
Adequate (Y/N)	Y	Y	N	Y	N	N
Background						
Cycle/Delay[1] (sec)	120	120	140	120	120	140
Volume (vphpl)	49	83	145	19	226	282
Avg. Queue (veh/ln.)	1.6	2.8	5.6	0.6	7.5	11.0
Avg. Queue[2] (ft./ln)	41	69	141	16	188	274
95th %. Queue (veh/ln.)	4	6	10	2	12	17
95th %. Queue (ft./ln)	100	150	250	50	300	425
Storage (ft./ ln.)	200	100	125	200	100	125
Adequate (Y/N)	Y	N	N	Y	N	N
Project						
Cycle/Delay[1] (sec)	120	120	140	120	120	140
Volume (vphpl)	45	162	144	49	215	288
Avg. Queue (veh/ln.)	1.5	5.4	5.6	1.6	7.2	11.2
Avg. Queue[2] (ft./ln)	38	135	140	41	179	280
95th %. Queue (veh/ln.)	4	9	10	4	12	17
95th %. Queue (ft./ln)	100	225	250	100	300	425
Storage (ft./ ln.)	200	100	125	200	100	125
Adequate (Y/N)	Y	N	N	Y	N	N

[1] Vehicle queue calculations based on cycle length for signalized intersections.
[2] Assumes 25 Feet Per Vehicle Queued

Vehicular Site Access and Circulation

The proposed site plan dated March 11, 2008 and prepared by McLarand Vasquez Emsiek & Partners, Inc. was reviewed and measured against applicable City of San Jose standards. Below is a detailed discussion of the site plan, a portion of which is shown in Figure 2.

Site Access

Access to the project site would be provided via Campbell Avenue. The City of San Jose implemented neighborhood traffic calming measures in 2001, which closed the access to Campbell Avenue from Newhall Street. Thus, El Camino Real provides the only access to and from Campbell Avenue.

The site would include a parking garage with two resident site access driveways. A private perimeter street also would provide street-level 90-degree parking. The garage would have separate guest and resident parking areas, with separate garage access driveways. A centrally located short one-way loop driveway for loading and unloading would be located at the project's main entrance on Campbell Avenue.

The westernmost project driveway on Campbell Avenue would be 26 feet wide and would provide full access to and from the site. The driveway would have a throat length of about 40 feet, which would be sufficient for 2 car lengths in queue. The City has agreed to allow full access to and from the westernmost project driveway under the condition that the inbound left-turn movement at this driveway is monitored regularly. Should significant operational problems or substantial safety issues occur as a result of the inbound left-turn movement, the City potentially could restrict this project driveway to right turns only. The traffic consultant recommends that the project applicant work closely with the City to develop a formal operational monitoring program for the westernmost project driveway.

The easternmost project driveway would be 26 feet wide and have a throat length of about 30 feet. This length would be sufficient for one car length in queue. Full site access would be permitted and no operational monitoring program would be required for this driveway.

The private perimeter street would provide access to the western and eastern residential garage entrances, both of which would be 24 feet wide. The guest parking entrance would have a 23-foot throat width. All of the project driveways would be sufficient to serve the project.

Queues at the site's main access driveways on Campbell Avenue under project conditions are estimated to be between 1 to 5 vehicles, or 25 to 125 feet in length. Both driveways would have adequate storage space along the perimeter street to accommodate the estimated outbound vehicle queues.

Truck and Emergency Vehicle Access

The project would have a short loop driveway off of Campbell Avenue for deliveries and short-term parking. This one-way driveway would be 20 feet wide at the two curb interfaces and 24 feet wide along the curve where 3 parallel parking spaces would be provided. Analysis using the WB-40 and SU-30 truck turning templates shows that the one-way loop driveway and the perimeter street would be adequate to accommodate the turning movements of these trucks, which represent small semi-trailer trucks, emergency vehicles, garbage trucks, and delivery vehicles. It was assumed in this analysis that trucks would not be accessing the residential garages.

Sight Distance

The project driveways should be free and clear of any obstructions to optimize sight distance. The site plan shows no on-street parking along Campbell Avenue adjacent to the project site. Any landscaping and signage near the driveways should be located in such a way to ensure an unobstructed view for drivers entering and exiting the site.

On-Site Circulation

The internal roadway network would consist of a 26-foot wide private perimeter street circling the site and a parking garage with 24-foot wide drive aisles. All parking on-site would consist of 90-degree parking stalls.

The two residential garage access driveways would be connected within the garage by a central drive aisle spanning the garage east to west. The parking garage would have multiple drive aisles with 90-degree assigned resident parking. The dead-end drive aisles within the garage would not pose a problem since parking would be assigned to residents. The drive aisles within the garage would be 24 feet wide. The City's standard is 26 feet for drive aisle widths where 90-degree parking is provided in order to provide adequate room for backing out of the parking spaces. However, the City has made exceptions to the standard in the past and may allow aisle widths that are narrower than 26 feet. The City reviews each project's situation on a case-by-case basis.

Within the residential parking garage, three drive aisles would have parking at the very end of the aisles. At these locations vehicles would be required to perform a difficult three-point turning maneuver in order to exit. The majority of parking spaces within these three aisles have been designated compact, which would help to minimize maneuverability issues. The City of San Jose ultimately will determine whether the potential operational issues would be sufficient to warrant the reconfiguration of these parking spaces.

The visitor garage would consist of one aisle with 90-degree parking (20 spaces). The aisle would be 23 feet wide and would have a single dead-end. The dead-end would not pose a major problem for visitors due to the low volume of vehicles utilizing the guest garage.

Transit, Pedestrian and Bicycle Analysis

Numerous bus routes operate along El Camino Real. Additionally, the Santa Clara Transit Center is located approximately ½ of a mile walking distance from the project site. Due to the number of bus routes operating in the area and the nearby Transit Center, it is assumed that some residents would utilize the existing transit services for commuting purposes. Assuming up to 5 percent transit mode share during the peak commute periods yields an estimate of 5 new transit trips during both the AM and PM peak hours under project conditions. These new riders easily could be accommodated by the available ridership capacity of the existing transit service in the project study area.

Pedestrian facilities in the study area consist of sidewalks along most of the surrounding roadways. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. The existing sidewalks provide good connectivity between the surrounding residential areas and the Santa Clara Transit Center, located approximately ½ of a mile northwest of the project site. Two schools are located approximately ¾ of a mile southwest of the project site: Washington Elementary School and Emil R Buchser Middle School. Although the distance between the project site and the schools is greater than what may be considered ideal for walking, a pedestrian walkway where Accolti Way dead-ends cuts straight through the Santa Clara University campus and provides a safe and direct route for children to

walk to school. The existing pedestrian facilities in the study area would provide pedestrians with safe and easy access to the surrounding land uses and would be adequate to serve the anticipated pedestrian demand. The project would construct a standard 10-foot sidewalk along the project frontage on Campbell Avenue.

The only County-designated bicycle facilities within the project study area are located along Poplar Street and a small segment of The Alameda near Poplar Street. However, according to the City of San Jose Transportation Bicycle Network (TBN) Planning Map The Alameda is designated a Class III bike route south of its junction with El Camino Real. The TBN map also shows that future bicycle facilities are planned along Hedding Street and Park Avenue south of Hedding Street within the project area. Although some of the roadways in the project area are not considered ideal routes for bicyclists due to heavy traffic volumes, frequent bus service and stops, and relatively high vehicle speeds (e.g., El Camino Real), bicyclists may nonetheless choose to use them for commuting purposes since they often provide the shortest route. A reasonable assumption for bicycle trip generation would be a one percent mode share. This calculates to about 1 new bicycle trip during both the AM and PM peak hours under project conditions. Thus, the project would be expected to add very little bicycle traffic to the roadways in the study area.

The proposed project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the project area and no improvements would be necessary.

6.
Future Growth Conditions

This chapter presents a summary of the traffic conditions that would occur under future growth conditions. Traffic volumes under future growth conditions were estimated by applying to the existing volumes an annual growth rate of 1.2 percent, then adding the trips from approved developments and the project buildout trips. The roadway network under future growth conditions was assumed to be the same as described under existing conditions. The purpose of analyzing future conditions is to assess the traffic conditions that would occur at the time that the proposed development becomes occupied. For this analysis, the assumed occupancy date is 2011. The analysis of future growth conditions is required by the CMP and includes an analysis of intersection level of service for CMP intersections only.

Intersection Levels of Service Under Future Growth Conditions

The level of service results for the five CMP intersections in the study area under future growth conditions are summarized in Table 10. The results show that, measured against the CMP level of service standards, the CMP study intersections would operate at acceptable levels under future growth conditions. The intersection level of service calculations are included in Appendix D.

Table 10
Intersection Levels of Service Under Future Growth Conditions

		Background		Project		Future Growth	
Intersection	Peak Hour	Ave. Delay	LOS	Ave. Delay	LOS	Ave. Delay	LOS
Lafayette Sreet and El Camino Real*	AM	55.2	E	55.4	E	58.9	E
	PM	48.8	D	48.8	D	50.4	D
El Camino Real and The Alameda*	AM	20.6	C	20.6	C	21.3	C
	PM	24.8	C	24.4	C	26.0	C
I-880 SB and The Alameda (N)*	AM	24.9	C	24.8	C	25.3	C
	PM	15.8	B	17.1	B	17.4	B
I-880 NB and The Alameda (S)*	AM	23.4	C	23.4	C	23.9	C
	PM	19.1	B	19.4	B	19.7	B
The Alameda and Hedding Street*	AM	40.8	D	40.7	D	41.6	D
	PM	35.6	D	35.6	D	36.3	D

* Denotes CMP intersection.

7. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Jose and the CMP. The traffic analysis is based on peak-hour levels of service for eight signalized intersections and eight directional freeway segments. The study also includes an operations analysis based on vehicle storage requirements at selected intersections and project driveways. Project impacts on other transportation facilities, such as bicycle facilities and transit, were determined on the basis of engineering judgment.

Project Intersection Level of Service

Level of service calculations were conducted using TRAFFIX, which is the method approved by the City of San Jose. The results show that, based on City of San Jose level of service standards, none of the signalized study intersections would be significantly impacted by the project.

Based on the CMP level of service standards, all of the CMP signalized study intersections would operate at acceptable levels of service during both the AM and PM peak hours of traffic under project conditions.

Project Freeway Segment Level of Service Analysis

The results of the CMP freeway analysis show that the project would not cause significant increases in traffic volumes (more than one percent of freeway capacity) on any of the studied freeway segments.

Other Transportation Issues

The project driveways would be adequate to serve the needs of the project and to meet City of San Jose standards. The City has agreed to allow full access to and from the westernmost project driveway under

the condition that the inbound left-turn movement at this driveway is monitored regularly. Should significant operational problems or substantial safety issues occur as a result of the inbound left-turn movement, the City potentially could restrict this project driveway to right turns only. The traffic consultant recommends that the project applicant work closely with the City to develop a formal operational monitoring program for the westernmost project driveway.

The drive aisles within the garage would be 24 feet wide. The City's standard is 26 feet for drive aisle widths where 90-degree parking is provided in order to provide adequate room for backing out of the parking spaces. However, the City has made exceptions to the standard in the past and may allow aisle widths that are narrower than 26 feet. The City reviews each project's situation on a case-by-case basis.

Within the residential parking garage, three drive aisles would have parking at the very end of the aisles. At these locations vehicles would be required to perform a difficult three-point turning maneuver in order to exit. The majority of parking spaces within these three aisles have been designated compact, which would help to minimize maneuverability issues. The City of San Jose ultimately will determine whether the potential operational issues would be sufficient to warrant the reconfiguration of these parking spaces.

The proposed project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the project area. For this reason, no improvements would be necessary.

Campbell Avenue Sobrato Residential Development TIA Technical Appendices

Appendix A

Traffic Counts

Traffic Data Service
(408) 377-2988
tdsbay@cs.com

File Name : 1AMFINAL
Site Code : 00000001
Start Date : 03/07/2006
Page No : 1

Groups Printed- Unshifted

	EL CAMINO REAL Southbound					RAILROAD AVE Westbound					EL CAMINO REAL Northbound					BENTON ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	11	110	6	0	127	16	3	2	0	21	1	159	24	0	184	12	1	8	0	21	353
07:15 AM	4	117	12	0	133	8	2	3	0	13	4	197	17	0	218	20	11	8	0	39	403
07:30 AM	0	128	8	0	136	7	2	0	0	9	2	223	26	0	251	19	6	4	0	29	425
07:45 AM	0	125	11	0	136	7	5	1	0	13	1	261	22	0	284	21	6	9	0	36	469
Total	15	480	37	0	532	38	12	6	0	56	8	840	89	0	937	72	24	29	0	125	1650
08:00 AM	4	117	9	0	130	4	1	0	0	5	4	243	20	0	267	24	4	2	0	30	432
08:15 AM	1	127	21	0	149	2	1	2	0	5	0	264	14	0	278	32	3	8	0	43	475
08:30 AM	5	132	12	0	149	9	2	0	0	11	0	233	31	0	264	37	6	9	0	52	476
08:45 AM	9	135	16	0	160	9	1	1	0	11	1	211	24	0	236	31	6	14	0	51	458
Total	19	511	58	0	588	24	5	3	0	32	5	951	89	0	1045	124	19	33	0	176	1841
Grand Total	34	991	95	0	1120	62	17	9	0	88	13	1791	178	0	1982	196	43	62	0	301	3491
Apprch %	3.0	88.5	8.5	0.0		70.5	19.3	10.2	0.0		0.7	90.4	9.0	0.0		65.1	14.3	20.6	0.0		
Total %	1.0	28.4	2.7	0.0	32.1	1.8	0.5	0.3	0.0	2.5	0.4	51.3	5.1	0.0	56.8	5.6	1.2	1.8	0.0	8.6	

	EL CAMINO REAL Southbound					RAILROAD AVE Westbound					EL CAMINO REAL Northbound					BENTON ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	10	501	53	0	564	22	9	3	0	34	5	1001	87	0	1093	114	19	28	0	161	1852
Percent	1.8	88.8	9.4	0.0		64.7	26.5	8.8	0.0		0.5	91.6	8.0	0.0		70.8	11.8	17.4	0.0		
08:30 Volume	5	132	12	0	149	9	2	0	0	11	0	233	31	0	264	37	6	9	0	52	476
Peak Factor																					0.973
High Int.	08:15 AM					07:45 AM					07:45 AM					08:30 AM					
Volume	1	127	21	0	149	7	5	1	0	13	1	261	22	0	284	37	6	9	0	52	
Peak Factor					0.946					0.654					0.962					0.774	

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Site Code : 00000001
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	EL CAMINO REAL Southbound					BENTON ST Westbound					EL CAMINO REAL Northbound					RAILROAD AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	7	169	23	0	199	4	6	2	0	12	0	119	30	0	149	36	7	15	0	58	418
04:15 PM	4	189	8	0	201	11	6	4	0	21	2	112	25	0	139	28	6	4	0	38	399
04:30 PM	4	181	20	0	205	10	5	8	0	23	1	107	41	0	149	31	3	9	0	43	420
04:45 PM	9	219	22	0	250	11	7	4	0	22	0	125	44	0	169	32	7	14	0	53	494
Total	24	758	73	0	855	36	24	18	0	78	3	463	140	0	606	127	23	42	0	192	1731
05:00 PM	7	234	26	0	267	13	9	6	0	28	0	135	51	0	186	46	4	12	0	62	543
05:15 PM	9	260	13	0	282	9	1	6	0	16	4	152	44	0	200	46	4	16	0	66	564
05:30 PM	4	256	11	0	271	7	3	5	0	15	2	148	38	0	188	30	7	17	0	54	528
05:45 PM	6	250	13	0	269	9	2	2	0	13	1	155	30	0	186	30	5	15	0	50	518
Total	26	1000	63	0	1089	38	15	19	0	72	7	590	163	0	760	152	20	60	0	232	2153
Grand Total	50	1758	136	0	1944	74	39	37	0	150	10	1053	303	0	1366	279	43	102	0	424	3884
Apprch %	2.6	90.4	7.0	0.0		49.3	26.0	24.7	0.0		0.7	77.1	22.2	0.0		65.8	10.1	24.1	0.0		
Total %	1.3	45.3	3.5	0.0	50.1	1.9	1.0	1.0	0.0	3.9	0.3	27.1	7.8	0.0	35.2	7.2	1.1	2.6	0.0	10.9	

	EL CAMINO REAL Southbound					BENTON ST Westbound					EL CAMINO REAL Northbound					RAILROAD AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	26	1000	63	0	1089	38	15	19	0	72	7	590	163	0	760	152	20	60	0	232	2153
Percent	2.4	91.8	5.8	0.0		52.8	20.8	26.4	0.0		0.9	77.6	21.4	0.0		65.5	8.6	25.9	0.0		
05:15 Volume	9	260	13	0	282	9	1	6	0	16	4	152	44	0	200	46	4	16	0	66	564
Peak Factor																					0.954
High Int.	05:15 PM					05:00 PM					05:15 PM					05:15 PM					
Volume	9	260	13	0	282	13	9	6	0	28	4	152	44	0	200	46	4	16	0	66	
Peak Factor					0.965					0.643					0.950					0.879	

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Site Code : 00000004
Start Date : 03/07/2006
Page No : 1

Groups Printed- 1 - Unshifted

	EL CAMINO REAL Southbound					DRIVEWAY Westbound					THE ALAMEDA Northbound					THE ALAMEDA Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	2	72	0	0	74	1	1	0	0	2	0	236	22	0	258	26	1	18	0	45	379
07:15 AM	8	109	0	0	117	0	1	0	0	1	0	278	42	0	320	28	0	18	0	46	484
07:30 AM	9	107	1	0	117	0	1	0	0	1	1	334	76	0	411	38	1	34	0	73	602
07:45 AM	10	114	3	0	127	0	2	0	0	2	2	361	63	0	426	55	0	33	0	88	643
Total	29	402	4	0	435	1	5	0	0	6	3	1209	203	0	1415	147	2	103	0	252	2108
08:00 AM	12	126	4	0	142	0	2	0	0	2	3	320	48	0	371	58	1	41	0	100	615
08:15 AM	9	132	5	0	146	2	2	0	0	4	3	331	39	0	373	35	0	39	0	74	597
08:30 AM	18	100	4	0	122	1	2	0	0	3	4	315	26	0	345	35	0	31	0	66	536
08:45 AM	14	115	2	0	131	1	1	0	0	2	2	285	46	0	333	33	0	22	0	55	521
Total	53	473	15	0	541	4	7	0	0	11	12	1251	159	0	1422	161	1	133	0	295	2269
Grand Total	82	875	19	0	976	5	12	0	0	17	15	2460	362	0	2837	308	3	236	0	547	4377
Apprch %	8.4	89.7	1.9	0.0		29.4	70.6	0.0	0.0		0.5	86.7	12.8	0.0		56.3	0.5	43.1	0.0		
Total %	1.9	20.0	0.4	0.0	22.3	0.1	0.3	0.0	0.0	0.4	0.3	56.2	8.3	0.0	64.8	7.0	0.1	5.4	0.0	12.5	

	EL CAMINO REAL Southbound					DRIVEWAY Westbound					THE ALAMEDA Northbound					THE ALAMEDA Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	40	479	13	0	532	2	7	0	0	9	9	1346	226	0	1581	186	2	147	0	335	2457
Percent	7.5	90.0	2.4	0.0		22.2	77.8	0.0	0.0		0.6	85.1	14.3	0.0		55.5	0.6	43.9	0.0		
07:45 Volume	10	114	3	0	127	0	2	0	0	2	2	361	63	0	426	55	0	33	0	88	643
Peak Factor																					0.955
High Int.	08:15 AM					08:15 AM					07:45 AM					08:00 AM					
Volume	9	132	5	0	146	2	2	0	0	4	2	361	63	0	426	58	1	41	0	100	
Peak Factor					0.911					0.563					0.928					0.838	

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File Name : 4PMFINAL
Site Code : 00000004
Start Date : 03/07/2006
Page No : 1

Groups Printed- 1 - Unshifted

	EL CAMINO REAL Southbound					DRIVEWAY Westbound					THE ALAMEDA Northbound					THE ALAMEDA Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	29	223	3	0	255	1	2	0	0	3	0	143	67	0	210	51	1	17	0	69	537
04:15 PM	22	200	1	0	223	2	1	0	0	3	1	144	64	0	209	60	0	20	0	80	515
04:30 PM	37	237	1	0	275	0	1	0	0	1	1	179	48	0	228	47	0	17	0	64	568
04:45 PM	34	240	1	0	275	0	4	0	0	4	3	184	73	0	260	55	0	20	0	75	614
Total	122	900	6	0	1028	3	8	0	0	11	5	650	252	0	907	213	1	74	0	288	2234
05:00 PM	42	277	3	0	322	0	2	0	0	2	1	188	55	0	244	62	0	21	0	83	651
05:15 PM	48	334	2	0	384	0	1	0	0	1	2	200	69	0	271	66	2	20	0	88	744
05:30 PM	44	322	3	0	369	3	1	0	0	4	3	174	61	0	238	55	0	23	0	78	689
05:45 PM	24	283	1	0	308	0	2	0	0	2	2	162	71	0	235	74	0	29	0	103	648
Total	158	1216	9	0	1383	3	6	0	0	9	8	724	256	0	988	257	2	93	0	352	2732
Grand Total	280	2116	15	0	2411	6	14	0	0	20	13	1374	508	0	1895	470	3	167	0	640	4966
Apprch %	11.6	87.8	0.6	0.0		30.0	70.0	0.0	0.0		0.7	72.5	26.8	0.0		73.4	0.5	26.1	0.0		
Total %	5.6	42.6	0.3	0.0	48.6	0.1	0.3	0.0	0.0	0.4	0.3	27.7	10.2	0.0	38.2	9.5	0.1	3.4	0.0	12.9	

	EL CAMINO REAL Southbound					DRIVEWAY Westbound					THE ALAMEDA Northbound					THE ALAMEDA Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	158	1216	9	0	1383	3	6	0	0	9	8	724	256	0	988	257	2	93	0	352	2732
Percent	11.4	87.9	0.7	0.0		33.3	66.7	0.0	0.0		0.8	73.3	25.9	0.0		73.0	0.6	26.4	0.0		
05:15 Volume	48	334	2	0	384	0	1	0	0	1	2	200	69	0	271	66	2	20	0	88	744
Peak Factor																					0.918
High Int.	05:15 PM					05:30 PM					05:15 PM					05:45 PM					
Volume	48	334	2	0	384	3	1	0	0	4	2	200	69	0	271	74	0	29	0	103	
Peak Factor					0.900					0.563					0.911					0.854	

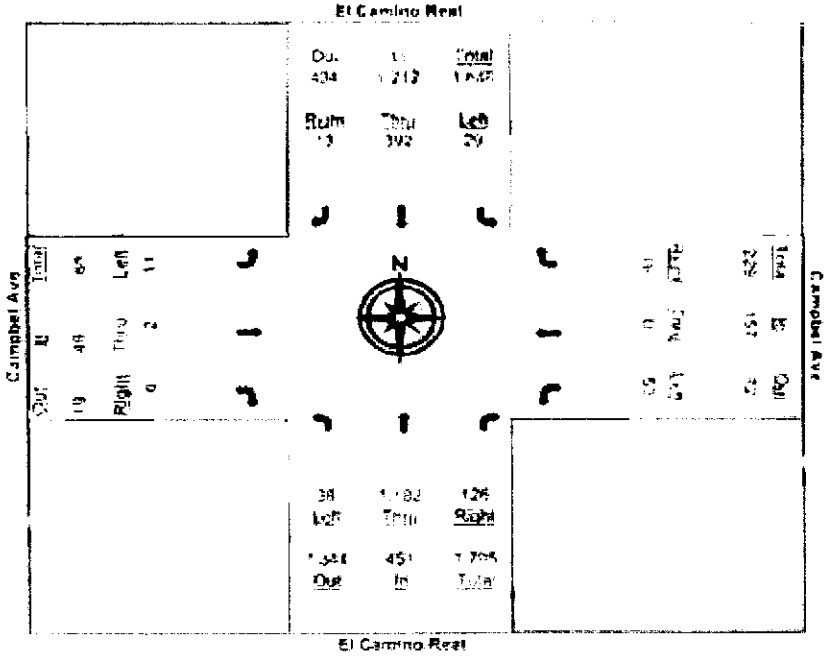
AM Peak-Hour Volume Count Worksheet

Date: 5/24/05
Counter: Kevin and Pat
Intersection Name: El Camino and Campbell Ave
Weather: Clear

AUTHENTIC
Traffic Monitoring and Analysis
19222 Vineyard Ln.
Saratoga, CA 95070
Phone 408-826-9673 Fax 408-872-1621

Start Time	El Camino Real North Approach Right	Thru	Left	Total	Campbel Ave East Approach Right	Thru	Left	Total	El Camino Real South Approach Right	Thru	Left	Total	Campbel Ave West Approach Right	Thru	Left	Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	[illegible]	69	12	82	9	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	201	[illegible]	[illegible]	[illegible]	[illegible]
7:30	3	131	18	150	17	0	41	58	58	[illegible]	3	492	4	0	5	[illegible]
7:45	8	[illegible]	17	244	[illegible]	[illegible]	56	81	92	[illegible]	[illegible]	[illegible]	9	[illegible]	[illegible]	[illegible]
8:00	7	328	23	358	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25	[illegible]	10	[illegible]	[illegible]	19
8:15	[illegible]	425	28	483	35	[illegible]	79	114	147	[illegible]	33	[illegible]	[illegible]	[illegible]	15	26
8:30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
8:45	[illegible]	614	[illegible]	878	44	0	[illegible]	153	218	1,888	[illegible]	2,155	[illegible]	2	19	38
9:00	21	734	57	812	54	0	118	172	246	[illegible]	[illegible]	[illegible]	[illegible]	2	21	41

Peak Hour	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Hourly Totals
7:00 - 8:00	7	328	23	358	32	0	68	100	118	1,010	25	1,151	10	0	9	19	1,628
7:15 - 8:15	9	356	16	381	[illegible]	0	[illegible]	[illegible]	101	[illegible]	[illegible]	1,272	8	0	12	20	1,752
7:30 - 8:30	12	365	24	429	24	0	50	74	122	1,140	36	1,304	10	0	13	23	1,830
7:45 - 8:45	13	392	29	434	[illegible]	0	[illegible]	[illegible]	126	[illegible]	[illegible]	1,344	8	2	11	19	1,869
8:00 - 9:00	14	406	34	454	22	0	50	72	130	1,066	29	1,248	8	2	12	22	1,794
Peak Volumes:	13	392	29	434	19	0	33	72	126	1,182	36	1,344	8	2	11	19	1,869



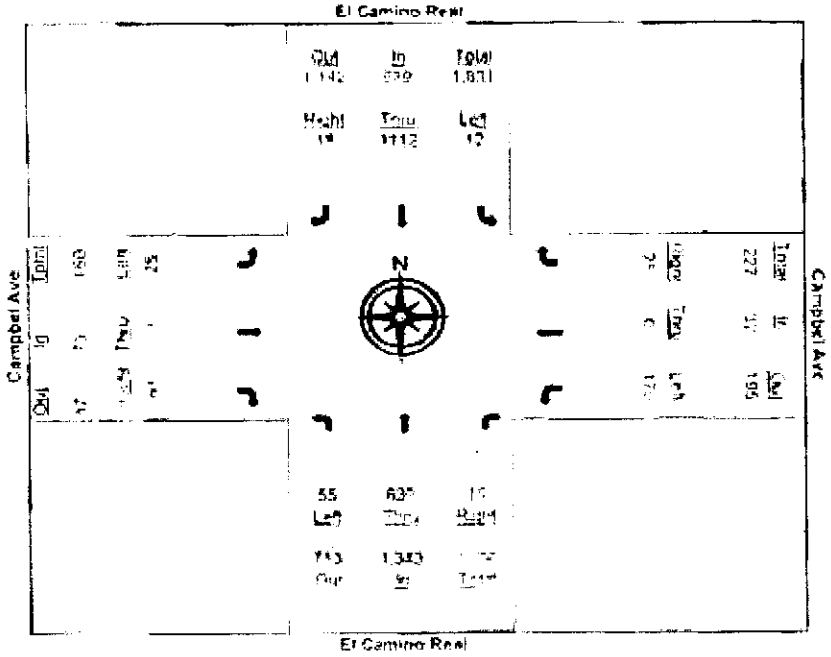
PM Peak-Hour Volume Count Worksheet

Date 5/24/06
Counter Kevin and Patti
Intersection Name El Camino and Campbell Ave
[illegible]

AUTO CENSUS
Traffic Monitoring and Analysis
19222 Vineyard Ln.
Saratoga, CA 95070
Phone 408 529-9673 Fax 408 877-1625

Start Time	El Camino Real North Approach Right	Thru	Left	Total	Campbel Ave East Approach Right	Thru	Left	Total	El Camino Real South Approach Right	Thru	Left	Total	Campbel Ave West Approach Right	Thru	Left	Total
4:00	[illegible]	[illegible]	0	0	0	0	[illegible]	0	0	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]
4:15	0	229	8	237	[illegible]	0	37	45	9	[illegible]	5	114	2	[illegible]	[illegible]	[illegible]
4:30	[illegible]	424	[illegible]	[illegible]	[illegible]	0	61	[illegible]	[illegible]	270	13	[illegible]	[illegible]	[illegible]	[illegible]	17
4:45	12	[illegible]	17	[illegible]	19	[illegible]	[illegible]	[illegible]	28	[illegible]	20	459	14	[illegible]	[illegible]	27
5:00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	575	31	[illegible]	16	[illegible]	[illegible]	[illegible]
5:15	23	1,156	20	1,205	33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21	[illegible]
5:30	[illegible]	1,486	20	1,520	[illegible]	[illegible]	235	[illegible]	[illegible]	911	67	[illegible]	[illegible]	[illegible]	33	[illegible]
5:45	30	1,735	20	1,794	44	1	[illegible]	[illegible]	[illegible]	1,050	[illegible]	1,172	75	[illegible]	38	114
6:00	32	[illegible]	33	[illegible]	46	1	[illegible]	354	51	[illegible]	88	1,207	78	[illegible]	[illegible]	[illegible]

Peak Hour	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Hourly Totals
4:00 - 5:00	18	870	21	[illegible]	25	1	[illegible]	164	33	575	31	[illegible]	18	0	18	32	1,744
4:15 - 5:15	23	927	15	[illegible]	25	1	157	[illegible]	28	684	48	738	36	0	[illegible]	54	1,943
4:30 - 5:30	24	1,042	14	[illegible]	20	1	174	[illegible]	28	641	54	715	47	0	25	72	2,052
4:45 - 5:45	18	1,112	12	1,142	25	0	170	[illegible]	19	639	55	713	61	1	25	87	2,137
5:00 - 6:00	14	1,128	12	1,154	21	0	[illegible]	[illegible]	18	583	57	[illegible]	62	1	29	91	2,043
Peak Volumes	18	1,112	12	1,142	25	0	170	195	19	639	55	713	61	1	25	87	2,137



AM Peak-Hour Volume Count Worksheet

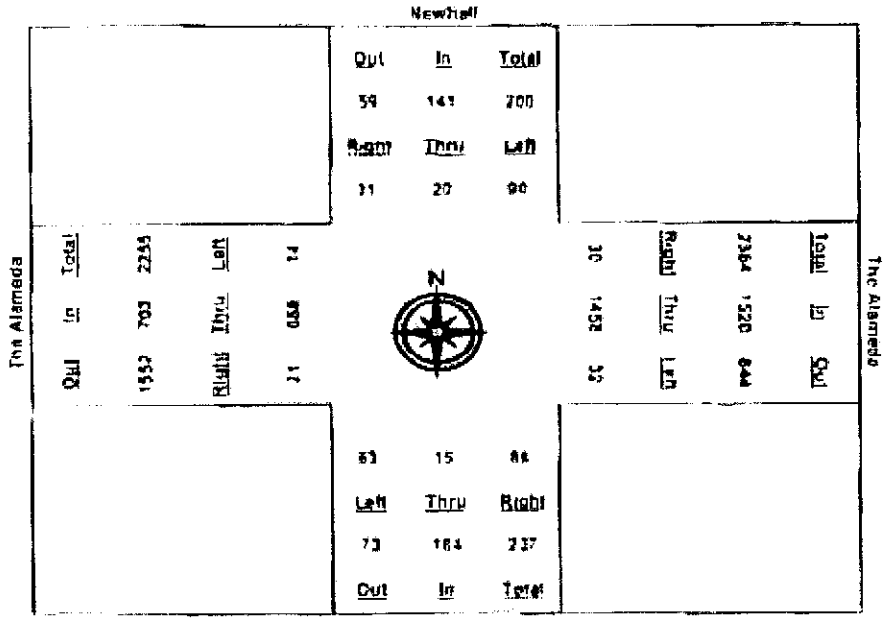
Date: 6/5/07
Counter: Logan and Jane
Intersection Name: Alameda and Newhall
Weather: Clear
San Jose 07B305

AUTO-CENSUS
Traffic Monitoring and Analysis
970 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1425

	Newhall				The Alameda				Newhall				The Alameda			
	North Approach				East Approach				South Approach				West Approach			
Start Time	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	7	0	21	28	16	244	3	263	21	0	7	28	1	101	1	103
7:30	15	10	44	69	27	564	5	596	45	2	17	64	12	235	2	252
7:45	28	11	69	108	29	898	8	935	79	6	25	110	17	361	2	380
8:00	40	15	86	143	39	1,340	16	1,395	106	9	35	150	23	511	8	542
8:15	43	19	114	176	48	1,686	17	1,751	119	12	51	182	28	602	10	730
8:30	52	27	141	220	54	2,012	30	2,096	143	15	66	224	35	974	15	924
8:45	59	31	159	249	59	2,356	40	2,455	165	21	88	274	38	1,029	16	1,083
9:00	66	31	167	264	67	2,707	54	2,828	181	23	91	295	41	1,172	19	1,232

Peak Hour	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	PK Hour
7:00 - 8:00	40	15	86	143	39	1,340	16	1,395	106	9	35	150	23	511	8	542	2,230
7:15 - 8:15	36	19	93	148	32	1,442	14	1,488	98	12	44	154	27	591	9	627	2,417
7:30 - 8:30	37	17	97	151	27	1,448	25	1,500	98	13	49	160	23	635	13	672	2,463
7:45 - 8:45	31	20	90	141	30	1,458	32	1,520	86	15	63	164	21	668	14	703	2,528
8:00 - 9:00	26	16	79	121	28	1,367	38	1,433	75	14	58	145	18	661	11	690	2,389
Peak Volumes	31	20	90	141	30	1,458	32	1,520	86	15	63	164	21	668	14	703	2,528

Cut and Paste	NR	NT	NL		ER	ET	EL		SR	ST	SL		WR	WT	WL
	31	20	90		30	1,458	32		86	15	63		21	668	14



PM Peak-Hour Volume Count Worksheet

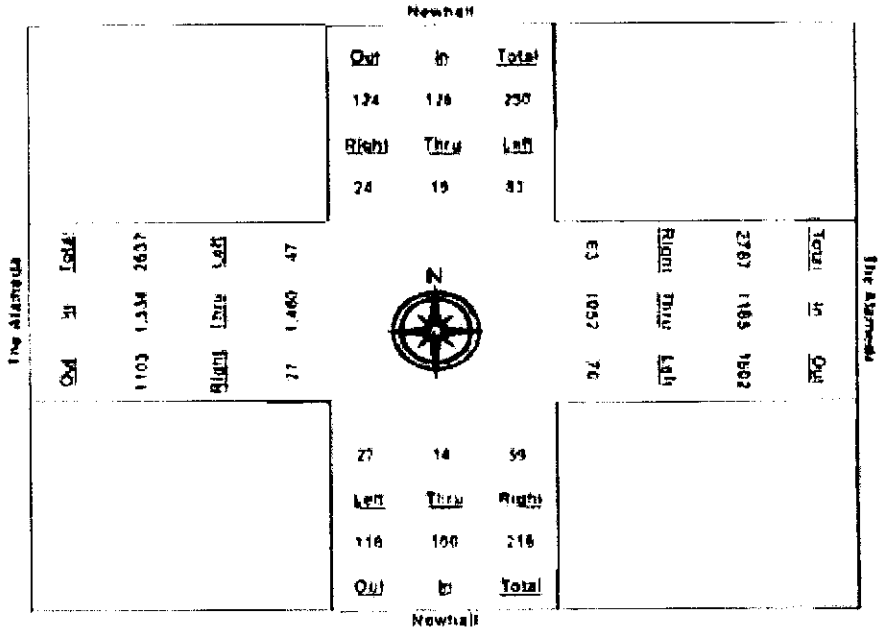
Date: 6/5/07
Counter: Logan and Byron
Intersection Name: Alameda and Newhall
Weather: Clear
San Jose 078/06

[illegible]
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone: 408 [illegible] Fax: [illegible]

Start Time	Newhall North Approach Right	Thru	Left	Total	The Alameda East Approach Right	Thru	Left	Total	Newhall South Approach Right	Thru	Left	Total	The Alameda West Approach Right	Thru	Left	Total
4:00	0	0	0	0	11	[illegible]	0	0	0	0	0	0	11	0	11	[illegible]
4:15	8	6	24	38	29	195	15	239	14	10	3	27	11	195	13	[illegible]
4:30	15	9	46	70	49	347	[illegible]	[illegible]	32	13	12	57	16	462	20	538
4:45	21	11	88	100	57	536	42	635	50	13	17	80	24	[illegible]	29	856
5:00	25	15	93	133	75	779	50	[illegible]	71	17	25	113	34	[illegible]	36	1,164
5:15	35	22	113	170	79	1,109	51	1,279	84	21	32	137	40	[illegible]	49	1,626
5:30	42	24	128	194	109	1,365	96	1,570	99	23	38	160	43	[illegible]	61	1,978
5:45	45	30	151	226	130	1,590	[illegible]	[illegible]	100	27	44	180	[illegible]	2,271	76	[illegible]
6:00	53	41	172	266	141	1,759	125	[illegible]	121	31	48	200	[illegible]	2,582	89	2,729

Peak Hour	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	PK Hour
4:00 - 5:00	25	15	93	133	75	779	50	904	71	17	25	113	34	1,114	36	1,184	2,334
4:15 - 5:15	27	16	89	132	50	414	76	1,040	70	11	29	110	34	1,342	36	1,412	2,694
4:30 - 5:30	27	15	82	124	63	1,018	70	1,151	67	10	26	103	27	1,370	41	1,438	2,815
4:45 - 5:45	24	19	83	126	63	1,052	70	1,185	59	14	27	100	27	1,460	47	1,534	2,945
5:00 - 6:00	29	26	79	133	65	1,010	78	1,153	50	14	23	87	24	1,469	53	1,546	2,918
Peak Volumes	24	19	83	126	63	1,052	70	1,185	59	14	27	100	27	1,460	47	1,534	2,945

Cut and Paste	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
	24	[illegible]	83		63	1,052	[illegible]		59	14	27		[illegible]	1,460	47



Appendix B

Volume Summary Tables

volumesSobratoCampbellAve

303 1
Intersection Name: El Camino Real & Benton St
Peak Hour: AM
Scenario:
(SJ) Growth Factor: 0.000
(SJ) Number of Months: 0.0

Date of Analysis: 8/25/2006
Count Date: 3/7/2006
Future Growth % Per Year: 0.012
Number of Years to Buildout: 4.0

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT
Existing Volumes	10	501	53	22	9	3	5	1001	87	114	19	28
San Jose Approved Trips (ATI)	0	120	0	0	0	0	0	33	0	0	0	0
Santa Clara Approved Trips	0	39	0	0	0	0	0	89	70	22	0	1
Total Approved Trips	0	159	0	0	0	0	0	122	70	22	0	1
Robson Homes	0	-1	0	0	0	0	0	5	0	0	0	0
R&D Trips	0	21	0	0	0	0	0	5	0	0	0	0
Background Volumes	10	680	53	22	9	3	5	1133	157	136	19	29
Existing R&D Trips	0	-21	0	0	0	0	0	-5	0	0	0	0
Gross Project Trips	0	17	0	0	0	0	0	32	0	0	0	0
Net Project Trips	0	-4	0	0	0	0	0	27	0	0	0	0
Project Conditions Volumes	10	676	53	22	9	3	5	1160	157	136	19	29
(vol check)	10	676	53	22	9	3	5	1160	157	136	19	29
Future Growth Conditions Volumes	10	700	56	23	9	3	5	1209	161	142	20	30

604 2
Intersection Name: El Camino Real & Campbell Av
Peak Hour: AM
Scenario:
(SJ) Growth Factor: 0.000
(SJ) Number of Months: 0.0

Date of Analysis: 8/25/2006
Count Date: 5/24/2006
Future Growth % Per Year: 0.012
Number of Years to Buildout: 4.0

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT
Existing Volumes	13	392	29	19	0	53	126	1182	36	6	2	11
San Jose Approved Trips (ATI)	0	120	0	0	0	0	0	33	0	0	0	0
Santa Clara Approved Trips	0	61	0	0	0	0	0	158	0	0	0	0
Total Approved Trips	0	181	0	0	0	0	0	191	0	0	0	0
Robson Homes	0	0	-1	5	0	14	-4	0	0	0	0	0
R&D Trips	0	0	21	5	0	16	63	0	0	0	0	0
Background Volumes	13	573	49	29	0	83	185	1373	36	6	2	11
Existing R&D Trips	0	0	-21	-5	0	-16	-63	0	0	0	0	0
Gross Project Trips	0	0	17	32	0	95	51	0	0	0	0	0
Net Project Trips	0	0	-4	27	0	79	-12	0	0	0	0	0
Project Conditions Volumes	13	573	45	56	0	162	173	1373	36	6	2	11
(vol check)	13	573	45	56	0	162	173	1373	36	6	2	11
Future Growth Conditions Volumes	14	592	46	57	0	165	179	1431	38	6	2	12

volumesSobratoCampbellAve

1202 3
Intersection Name: El Camino Real & Lafayette
Peak Hour: AM Date of Analysis: 8/25/2006
Scenario: PM Count Date: 10/25/06
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	132	299	140	436	579	16	111	994	98	150	460	365
San Jose Approved Trips (ATI)	0	120	0	0	0	0	0	33	0	0	0	0
Santa Clara Approved Trips	6	25	1	11	248	0	0	18	1	0	96	1
Total Approved Trips	6	145	1	11	248	0	0	51	1	0	96	1
Robson Homes	0	-1	0	0	0	0	0	5	0	0	0	0
R&D Trips	0	0	4	1	4	0	0	0	0	0	17	0
Background Volumes	138	443	145	448	831	16	111	1050	99	150	573	366
Existing R&D Trips	0	0	-4	-1	-4	0	0	0	0	0	-17	0
Gross Project Trips	0	0	3	6	25	0	0	0	0	0	14	0
Net Project Trips	0	0	-1	5	21	0	0	0	0	0	-3	0
Project Conditions Volumes	138	443	144	453	852	16	111	1050	99	150	570	366
(vol check)	138	443	144	453	852	16	111	1050	99	150	570	366
Future Growth Conditions Volumes	144	458	151	474	880	17	116	1099	104	157	592	384

1213 4
Intersection Name: El Camino Real & The Alameda
Peak Hour: AM Date of Analysis: 8/25/2006
Scenario: Count Date: 3/7/2006
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	40	479	13	2	7	0	9	1346	226	186	2	147
San Jose Approved Trips (ATI)	0	120	0	0	0	0	0	33	0	0	0	0
Santa Clara Approved Trips	0	62	0	0	0	0	0	158	0	0	0	0
Total Approved Trips	0	182	0	0	0	0	0	191	0	0	0	0
Robson Homes	0	14	0	0	0	0	0	-4	0	0	0	0
R&D Trips	0	16	0	0	0	0	0	63	0	0	0	0
Background Volumes	40	691	13	2	7	0	9	1596	226	186	2	147
Existing R&D Trips	0	-16	0	0	0	0	0	-63	0	0	0	0
Gross Project Trips	0	95	0	0	0	0	0	51	0	0	0	0
Net Project Trips	0	79	0	0	0	0	0	-12	0	0	0	0
Project Conditions Volumes	40	770	13	2	7	0	9	1584	226	186	2	147
(vol check)	40	770	13	2	7	0	9	1584	226	186	2	147
Future Growth Conditions Volumes	42	793	14	2	7	0	9	1650	237	195	2	154

volumesSobratoCampbellAve

3046 5
Intersection Name: I-880 & The Alameda (N)
Peak Hour: AM Date of Analysis: 8/25/2006
Scenario: Count Date: 9/21/2006
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	166	687	0	424	0	318	302	1235	0	0	0	0
San Jose Approved Trips (ATI)	38	58	0	-12	0	0	0	-16	0	0	0	0
Santa Clara Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	38	58	0	-12	0	0	0	-16	0	0	0	0
Robson Homes	5	9	0	-1	0	0	0	-2	0	0	0	0
R&D Trips	6	9	0	25	0	0	0	38	0	0	0	0
Background Volumes	215	763	0	436	0	318	302	1255	0	0	0	0
Existing R&D Trips	-6	-9	0	-25	0	0	0	-38	0	0	0	0
Gross Project Trips	38	57	0	20	0	0	0	31	0	0	0	0
Net Project Trips	32	48	0	-5	0	0	0	-7	0	0	0	0
Project Conditions Volumes	247	811	0	431	0	318	302	1248	0	0	0	0
(vol check)	0	811	0	431	0	318	0	1248	0	0	0	0
Future Growth Conditions Volumes	255	845	0	452	0	334	317	1308	0	0	0	0

3047 6
Intersection Name: I-880 & The Alameda (S)
Peak Hour: AM Date of Analysis: 8/25/2006
Scenario: Count Date: 9/21/2006
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	247	830	0	0	0	0	453	1271	0	389	0	317
San Jose Approved Trips (ATI)	40	28	0	0	0	0	0	-1	0	3	0	-9
Santa Clara Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	40	28	0	0	0	0	0	-1	0	3	0	-9
Robson Homes	5	3	0	0	0	0	0	-1	0	0	0	-1
R&D Trips	6	3	0	0	0	0	0	13	0	0	0	25
Background Volumes	298	864	0	0	0	0	453	1282	0	392	0	332
Existing R&D Trips	-6	-3	0	0	0	0	0	-13	0	0	0	-25
Gross Project Trips	38	19	0	0	0	0	0	10	0	0	0	20
Net Project Trips	32	16	0	0	0	0	0	-3	0	0	0	-5
Project Conditions Volumes	330	880	0	0	0	0	453	1279	0	392	0	327
(vol check)	0	880	0	0	0	0	0	1279	0	392	0	327
Future Growth Conditions Volumes	342	921	0	0	0	0	475	1341	0	411	0	342

volumesSobratoCampbellAve

3057 7
Intersection Name: The Alameda & Hedding St
Peak Hour: AM
Date of Analysis: 8/25/2006
Scenario:
Count Date: 10/24/2006
(SJ) Growth Factor: 0.000
Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0
Number of Years to Buildout: 4.0

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT
Existing Volumes	44	780	238	307	213	62	77	1149	75	99	394	127
San Jose Approved Trips (ATI)	0	84	1	1	13	0	0	10	4	18	82	10
Santa Clara Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	84	1	1	13	0	0	10	4	18	82	10
Robson Homes	0	3	0	0	0	0	0	-1	0	0	0	0
R&D Trips	0	3	0	0	0	0	0	13	0	0	0	0
Background Volumes	44	870	239	308	226	62	77	1171	79	117	476	137
Existing R&D Trips	0	-3	0	0	0	0	0	-13	0	0	0	0
Gross Project Trips	0	19	0	0	0	0	0	10	0	0	0	0
Net Project Trips	0	16	0	0	0	0	0	-3	0	0	0	0
Project Conditions Volumes	44	886	239	308	226	62	77	1168	79	117	476	137
(vol check)	44	886	239	308	226	62	77	1168	79	117	476	137
Future Growth Conditions Volumes	46	924	251	323	236	65	81	1224	83	122	495	143

3229 4
Intersection Name: The Alameda & Newhall St
Peak Hour: AM
Date of Analysis: 8/25/2006
Scenario:
Count Date: 6/5/2007
(SJ) Growth Factor: 0.000
Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0
Number of Years to Buildout: 4.0

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT
Existing Volumes	21	668	14	31	20	90	30	1458	32	86	15	63
San Jose Approved Trips (ATI)	0	120	0	0	0	-25	-57	30	0	2	1	3
Santa Clara Approved Trips	0	62	0	0	0	0	0	158	0	0	0	0
Total Approved Trips	0	182	0	0	0	-25	-57	188	0	2	1	3
Robson Homes	0	14	0	0	0	0	0	-4	0	0	0	0
R&D Trips	0	16	0	0	0	0	0	63	0	0	0	0
Background Volumes	21	880	14	31	20	65	-27	1705	32	88	16	66
Existing R&D Trips	0	-16	0	0	0	0	0	-63	0	0	0	0
Gross Project Trips	0	95	0	0	0	0	0	51	0	0	0	0
Net Project Trips	0	79	0	0	0	0	0	-12	0	0	0	0
Project Conditions Volumes	21	959	14	31	20	65	-27	1693	32	88	16	66
(vol check)	21	959	14	31	20	65	0	1693	32	88	16	66
Future Growth Conditions Volumes	22	992	15	33	21	69	-26	1764	34	92	17	69

volumesSobratoCampbellAve

303 1
Intersection Name: El Camino Real & Benton St
Peak Hour: PM Date of Analysis: 8/25/2006
Scenario: Count Date: 3/7/2006
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	26	1000	63	38	15	19	7	590	163	152	20	60
San Jose Approved Trips (ATI)	0	25	0	0	0	0	0	125	0	0	0	0
Santa Clara Approved Trips	0	134	0	0	0	0	0	65	48	112	0	5
Total Approved Trips	0	159	0	0	0	0	0	190	48	112	0	5
Robson Homes	0	5	0	0	0	0	0	-2	0	0	0	0
R&D Trips	0	2	0	0	0	0	0	21	0	0	0	0
Background Volumes	26	1166	63	38	15	19	7	799	211	264	20	65
Existing R&D Trips	0	-2	0	0	0	0	0	-21	0	0	0	0
Gross Project Trips	0	32	0	0	0	0	0	17	0	0	0	0
Net Project Trips	0	30	0	0	0	0	0	-4	0	0	0	0
Project Conditions Volumes	26	1196	63	38	15	19	7	795	211	264	20	65
(vol check)	26	1196	63	38	15	19	7	795	211	264	20	65
Future Growth Conditions Volumes	27	1245	66	40	16	20	7	824	219	271	21	68

604 2
Intersection Name: El Camino Real & Campbell Av
Peak Hour: PM Date of Analysis: 8/25/2006
Scenario: Count Date: 5/24/2006
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	18	1112	12	25	0	170	19	639	55	61	1	25
San Jose Approved Trips (ATI)	0	25	0	0	0	0	0	125	0	0	0	0
Santa Clara Approved Trips	0	246	0	0	0	0	0	113	0	0	0	0
Total Approved Trips	0	271	0	0	0	0	0	238	0	0	0	0
Robson Homes	0	0	5	-2	0	-6	14	0	0	0	0	0
R&D Trips	0	0	2	21	0	62	7	0	0	0	0	0
Background Volumes	18	1383	19	44	0	226	40	877	55	61	1	25
Existing R&D Trips	0	0	-2	-21	0	-62	-7	0	0	0	0	0
Gross Project Trips	0	0	32	17	0	51	95	0	0	0	0	0
Net Project Trips	0	0	30	-4	0	-11	88	0	0	0	0	0
Project Conditions Volumes	18	1383	49	40	0	215	128	877	55	61	1	25
(vol check)	18	1383	49	40	0	215	128	877	55	61	1	25
Future Growth Conditions Volumes	19	1437	50	41	0	223	129	908	58	64	1	26

volumesSobratoCampbellAve

1202 3
Intersection Name: El Camino Real & Lafayette
Peak Hour: PM
Scenario:
(SJ) Growth Factor: 0.000
(SJ) Number of Months: 0.0

Date of Analysis: 8/25/2006
Count Date: 9/19/2006
Future Growth % Per Year: 0.012
Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	204	1097	272	110	605	34	255	216	131	288	726	177
San Jose Approved Trips (ATI)	0	25	0	0	0	0	0	125	0	0	0	0
Santa Clara Approved Trips	2	19	10	2	183	0	0	25	0	1	399	5
Total Approved Trips	2	44	10	2	183	0	0	150	0	1	399	5
Robson Homes	0	5	0	0	0	0	0	-2	0	0	0	0
R&D Trips	0	0	0	4	17	0	0	0	0	0	2	0
Background Volumes	206	1146	282	116	805	34	255	364	131	289	1127	182
Existing R&D Trips	0	0	0	-4	-17	0	0	0	0	0	-2	0
Gross Project Trips	0	0	6	3	14	0	0	0	0	0	25	0
Net Project Trips	0	0	6	-1	-3	0	0	0	0	0	23	0
Project Conditions Volumes	206	1146	288	115	802	34	255	364	131	289	1150	182
(vol check)	206	1146	288	115	802	34	255	364	131	289	1150	182
Future Growth Conditions Volumes	216	1200	301	120	832	36	267	375	137	303	1185	191

1213 4
Intersection Name: El Camino Real & The Alameda
Peak Hour: PM
Scenario:
(SJ) Growth Factor: 0.000
(SJ) Number of Months: 0.0

Date of Analysis: 8/25/2006
Count Date: 9/21/2006
Future Growth % Per Year: 0.012
Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	158	1216	9	3	6	0	8	724	256	257	2	93
San Jose Approved Trips (ATI)	0	25	0	0	0	0	0	125	0	0	0	0
Santa Clara Approved Trips	0	247	0	0	0	0	0	113	0	0	0	0
Total Approved Trips	0	272	0	0	0	0	0	238	0	0	0	0
Robson Homes	0	-6	0	0	0	0	0	14	0	0	0	0
R&D Trips	0	62	0	0	0	0	0	7	0	0	0	0
Background Volumes	158	1544	9	3	6	0	8	983	256	257	2	93
Existing R&D Trips	0	-62	0	0	0	0	0	-7	0	0	0	0
Gross Project Trips	0	51	0	0	0	0	0	95	0	0	0	0
Net Project Trips	0	-11	0	0	0	0	0	88	0	0	0	0
Project Conditions Volumes	158	1533	9	3	6	0	8	1071	256	257	2	93
(vol check)	158	1533	9	3	6	0	8	1071	256	257	2	93
Future Growth Conditions Volumes	166	1592	9	3	6	0	8	1106	269	270	2	98

volumesSobratoCampbellAve

3046 5
Intersection Name: I-880 & The Alameda (N)
Peak Hour: PM Date of Analysis: 8/25/2006
Scenario: Count Date: 9/21/2006
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	296	1432	0	221	0	233	349	872	0	0	0	0
San Jose Approved Trips (ATI)	-15	-21	0	36	0	0	0	56	0	0	0	0
Santa Clara Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	-15	-21	0	36	0	0	0	56	0	0	0	0
Robson Homes	-2	-3	0	5	0	0	0	9	0	0	0	0
R&D Trips	25	37	0	3	0	0	0	4	0	0	0	0
Background Volumes	304	1445	0	265	0	233	349	941	0	0	0	0
Existing R&D Trips	-25	-37	0	-3	0	0	0	-4	0	0	0	0
Gross Project Trips	20	31	0	38	0	0	0	57	0	0	0	0
Net Project Trips	-5	-6	0	35	0	0	0	53	0	0	0	0
Project Conditions Volumes	299	1439	0	300	0	233	349	994	0	0	0	0
(vol check)	0	1439	0	300	0	233	0	994	0	0	0	0
Future Growth Conditions Volumes	313	1509	0	311	0	244	366	1037	0	0	0	0

3047 6
Intersection Name: I-880 & The Alameda (S)
Peak Hour: PM Date of Analysis: 8/25/2006
Scenario: Count Date: 9/21/2006
(SJ) Growth Factor: 0.000 Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0 Number of Years to Buildout: 4.0

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Existing Volumes	494	1219	0	0	0	0	311	885	0	308	0	305
San Jose Approved Trips (ATI)	-12	7	0	0	0	0	1	24	0	2	0	39
Santa Clara Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	-12	7	0	0	0	0	1	24	0	2	0	39
Robson Homes	-2	-1	0	0	0	0	0	3	0	0	0	5
R&D Trips	25	12	0	0	0	0	0	1	0	0	0	3
Background Volumes	505	1237	0	0	0	0	312	913	0	310	0	352
Existing R&D Trips	-25	-12	0	0	0	0	0	-1	0	0	0	-3
Gross Project Trips	20	10	0	0	0	0	0	19	0	0	0	38
Net Project Trips	-5	-2	0	0	0	0	0	18	0	0	0	35
Project Conditions Volumes	500	1235	0	0	0	0	312	931	0	310	0	387
(vol check)	0	1235	0	0	0	0	0	931	0	310	0	387
Future Growth Conditions Volumes	524	1295	0	0	0	0	327	974	0	325	0	402

volumesSobratoCampbellAve

3057 7
Intersection Name: The Alameda & Hedding St
Peak Hour: PM
Date of Analysis: 8/25/2006
Scenario:
Count Date: 10/24/2006
(SJ) Growth Factor: 0.000
Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0
Number of Years to Buildout: 4.0

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT
Existing Volumes	77	1231	179	219	471	145	56	982	68	62	176	86
San Jose Approved Trips (ATI)	5	62	2	11	82	8	1	112	14	9	23	7
Santa Clara Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	5	62	2	11	82	8	1	112	14	9	23	7
Robson Homes	0	-1	0	0	0	0	0	3	0	0	0	0
R&D Trips	0	12	0	0	0	0	0	1	0	0	0	0
Background Volumes	82	1304	181	230	553	153	57	1098	82	71	199	93
Existing R&D Trips	0	-12	0	0	0	0	0	-1	0	0	0	0
Gross Project Trips	0	10	0	0	0	0	0	19	0	0	0	0
Net Project Trips	0	-2	0	0	0	0	0	18	0	0	0	0
Project Conditions Volumes	82	1302	181	230	553	153	57	1116	82	71	199	93
(vol check)	82	1302	181	230	553	153	57	1116	82	71	199	93
Future Growth Conditions Volumes	86	1362	190	241	576	160	60	1164	85	74	208	97

3229 4
Intersection Name: The Alameda & Newhall St
Peak Hour: PM
Date of Analysis: 8/25/2006
Scenario:
Count Date: 6/5/2007
(SJ) Growth Factor: 0.000
Future Growth % Per Year: 0.012
(SJ) Number of Months: 0.0
Number of Years to Buildout: 4.0

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT
Existing Volumes	27	1460	47	24	19	83	63	1052	70	59	14	27
San Jose Approved Trips (ATI)	0	25	0	0	0	-61	-26	125	0	1	0	0
Santa Clara Approved Trips	0	247	0	0	0	0	0	113	0	0	0	0
Total Approved Trips	0	272	0	0	0	-61	-26	238	0	1	0	0
Robson Homes	0	-6	0	0	0	0	0	14	0	0	0	0
R&D Trips	0	62	0	0	0	0	0	7	0	0	0	0
Background Volumes	27	1788	47	24	19	22	37	1311	70	60	14	27
Existing R&D Trips	0	-62	0	0	0	0	0	-7	0	0	0	0
Gross Project Trips	0	51	0	0	0	0	0	95	0	0	0	0
Net Project Trips	0	-11	0	0	0	0	0	88	0	0	0	0
Project Conditions Volumes	27	1777	47	24	19	22	37	1399	70	60	14	27
(vol check)	27	1777	47	24	19	22	37	1399	70	60	14	27
Future Growth Conditions Volumes	28	1848	49	25	20	26	40	1450	73	63	15	28

Appendix C

Approved Trip Inventory

AM APPROVED TRIPS

05/15/2007

Intersection of: ALAMEDA/HEDDING

Traffix Node Number: 3057

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
DOWNTOWN DOWNTOWN STRATEGY PLAN 2000 DOWNTOWN CORE	0	0	0	0	0	0	0	0	0	0	0	0
NSJ NORTH SAN JOSE	0	0	0	1	5	0	10	23	7	0	1	1
PDC02-046 SJ WATER CO. DELMAS & SAN FERNANDO	4	12	0	0	25	0	0	0	11	0	0	0
PDC04-018 COUSIN'S COLEMAN ST AND W TAYLOR ST (SW/C)	0	0	0	0	2	0	0	0	0	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	-3	0	0	7	0	0	0	0	0	0	0
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	0	0	0	13	0	0	0	0	0	0	0
PDC84-07-059 RIVER PARK II PARK & WOZ (SE/C)	0	0	0	0	6	0	0	0	0	0	0	0
PDC96-12-082 CENTURY CENTER (PREV JOSE THEATRE) SECOND STREET	0	0	0	0	0	0	0	0	0	0	0	0
PDC98-12-104 FMC SITE 880/COLEMAN (NW/C)	0	0	0	0	0	0	0	59	0	0	12	0
RCP99-04-004 MARRIOTT HOTEL MARKET/SAN CARLOS	0	0	0	0	0	0	0	0	0	0	0	0

AM APPROVED TRIPS

05/15/2007

Intersection of: ALAMEDA/HEDDING

Traffix Node Number: 3057

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
RH00-05-005 BOSTON PROP ALMADEN BLVD/WOZ WAY (NW/C)	0	1	0	0	17	0	0	0	0	0	0	0
RH98-04-001 OPUS WEST SANTA CLARA/ALMADEN	0	0	0	0	2	0	0	0	0	0	0	0
RH98-04-003 SOBRATO RIVER CORPORATE CENTER JULIAN/87 (NW/C)	0	0	0	0	0	0	0	0	0	0	0	0
RH99-03-006 SOBRATO TOWER ALMADEN/BALBACH	0	0	0	0	7	0	0	0	0	0	0	0
TOTAL:	**4**	**10**	**0**	**1**	**84**	**0**	**10**	**82**	**18**	**0**	**13**	**1**

	LEFT	THRU	RIGHT
NORTH	1	84	0
EAST	0	13	1
SOUTH	4	10	0
WEST	10	82	18

Intersection of: ALAMEDA/HEDDING

Traffix Node Number: 3057

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
DOWNTOWN DOWNTOWN STRATEGY PLAN 2000 DOWNTOWN CORE	3	32	1	2	37	5	3	6	2	4	11	5
JOINTLIBRARY CSJ/SJSU JOINT LIBRARY SAN FERNANDO & FOURTH (SE/C)	0	0	0	0	0	0	0	0	0	0	0	0
NSJ NORTH SAN JOSE	0	0	0	0	7	0	4	8	2	4	12	6
PDC02-046 SJ WATER CO. DELMAS & SAN FERNANDO	11	25	0	0	14	0	0	0	5	0	0	0
PDC04-018 COUSIN'S COLEMAN ST AND W TAYLOR ST (SW/C)	0	5	0	0	5	0	0	0	0	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	7	0	0	-4	0	0	0	0	0	0	0
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	13	0	0	-1	0	0	0	0	0	0	0
PDC84-07-059 RIVER PARK II PARK & WOZ (SE/C)	0	5	0	0	1	0	0	0	0	0	0	0
PDC96-12-082 CENTURY CENTER (PREV JOSE THEATRE) SECOND STREET	0	0	0	0	0	0	0	0	0	0	0	0
PDC98-12-104 FMC SITE 880/COLEMAN (NW/C)	0	0	0	0	0	0	0	9	0	0	59	0

Intersection of: ALAMEDA/HEDDING

Traffix Node Number: 3057

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
RCP00-02-001 FOX THEATRE SOUTH FIRST STREET	0	0	0	0	0	0	0	0	0	0	0	0
RCP99-04-004 MARRIOTT HOTEL MARKET/SAN CARLOS	0	0	0	0	0	0	0	0	0	0	0	0
RH00-05-005 BOSTON PROP ALMADEN BLVD/WOZ WAY (NW/C)	0	16	0	0	2	0	0	0	0	0	0	0
RH98-04-001 OPUS WEST SANTA CLARA/ALMADEN	0	2	0	0	0	0	0	0	0	0	0	0
RH98-04-003 SOBRATO RIVER CORPORATE CENTER JULIAN/87 (NW/C)	0	0	0	0	0	0	0	0	0	0	0	0
RH99-03-006 SOBRATO TOWER ALMADEN/BALBACH	0	7	0	0	1	0	0	0	0	0	0	0
TOTAL:	**14**	**112**	**1**	**2**	**62**	**5**	**7**	**23**	**9**	**8**	**82**	**11**

	LEFT	THRU	RIGHT
NORTH	2	62	5
EAST	8	82	11
SOUTH	14	112	1
WEST	7	23	9

AM APPROVED TRIPS

05/15/2007

Intersection of: 880/ALAMEDA (S)

Traffix Node Number: 3047

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	0	2	0	0	8	2	3	0	3	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	-3	0	0	7	14	-7	0	0	0	0	0
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	0	0	0	13	24	-5	0	0	0	0	0
TOTAL:	**0**	**-1**	**0**	**0**	**28**	**40**	**-9**	**0**	**3**	**0**	**0**	**0**

	LEFT	THRU	RIGHT
NORTH	0	28	40
EAST	0	0	0
SOUTH	0	-1	0
WEST	-9	0	3

PM APPROVED TRIPS

05/15/2007

Intersection of: 880/ALAMEDA (S)

Traffix Node Number: 3047

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	0	4	1	0	12	3	3	0	2	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	7	0	0	-4	-8	13	0	0	0	0	0
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	13	0	0	-1	-7	23	0	0	0	0	0
TOTAL:	**0**	**24**	**1**	**0**	**7**	**-12**	**39**	**0**	**2**	**0**	**0**	**0**

	LEFT	THRU	RIGHT
NORTH	0	7	-12
EAST	0	0	0
SOUTH	0	24	1
WEST	39	0	2

AM APPROVED TRIPS

05/15/2007

Intersection of: 880/ALAMEDA (N)

Traffix Node Number: 3046

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	0	0	0	0	0	0	0	0	0	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	-10	0	0	21	14	0	0	0	0	0	-7
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	-6	0	0	37	24	0	0	0	0	0	-5
TOTAL:	**0**	**-16**	**0**	**0**	**58**	**38**	**0**	**0**	**0**	**0**	**0**	**-12**

	LEFT	THRU	RIGHT
NORTH	0	58	38
EAST	0	0	-12
SOUTH	0	-16	0
WEST	0	0	0

PM APPROVED TRIPS

05/15/2007

Intersection of: 880/ALAMEDA (N)

Traffix Node Number: 3046

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	0	0	0	0	0	0	0	0	0	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	20	0	0	-13	-8	0	0	0	0	0	13
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	36	0	0	-8	-7	0	0	0	0	0	23
TOTAL:	**0**	**56**	**0**	**0**	**-21**	**-15**	**0**	**0**	**0**	**0**	**0**	**36**

	LEFT	THRU	RIGHT
NORTH	0	-21	-15
EAST	0	0	36
SOUTH	0	56	0
WEST	0	0	0

AM APPROVED TRIPS

05/15/2007

Intersection of: ALAMEDA/NEWHALL

Traffix Node Number: 3229

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	0	1	0	0	0	0	3	1	2	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	-17	0	0	35	0	0	0	0	0	0	0
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	46	-57	0	85	0	0	0	0	-25	0	0
TOTAL:	**0**	**30**	**-57**	**0**	**120**	**0**	**3**	**1**	**2**	**-25**	**0**	**0**

	LEFT	THRU	RIGHT
NORTH	0	120	0
EAST	-25	0	0
SOUTH	0	30	-57
WEST	3	1	2

PM APPROVED TRIPS

05/15/2007

Intersection of: ALAMEDA/NEWHALL

Traffix Node Number: 3229

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ NORTH SAN JOSE	0	7	0	0	0	0	0	0	1	0	0	0
PDC04-068 SANTA CLARA DEVELOPMENT CAMPBELL AV (N/S), 1000 FT E/O NEWHALL	0	33	0	0	-21	0	0	0	0	0	0	0
PDC04-069 PULTE HOME NEWHALL ST AND CAMPBELL AV (NE/C)	0	85	-26	0	46	0	0	0	0	-61	0	0
TOTAL:	**0**	**125**	**-26**	**0**	**25**	**0**	**0**	**0**	**1**	**-61**	**0**	**0**

	LEFT	THRU	RIGHT
NORTH	0	25	0
EAST	-61	0	0
SOUTH	0	125	-26
WEST	0	0	1

Appendix D

Intersection Level of Service Calculations

Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Summary Scenario Comparison Report (With Average Critical Delay)
Future Volume Alternative

Intersection		Existing AM				Background AM				Project AM						Future AM			
		LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#303	El Camino Real / Benton St	B	15.9	0.315	13.6	B	16.8	0.355	13.7	B	16.6	0.360	+ 0.005	13.5	- 0.2	B	16.7	0.376	13.7
#604	El Camino Real / Campbell Av	B	14.3	0.319	11.5	B	16.3	0.400	14.2	C	21.1	0.443	+ 0.044	19.3	+ 5.1	C	21.0	0.459	19.4
#1202	ECR/Lafayette St. 1202	D	51.0	0.828	59.8	E	55.2	0.902	68.2	E	55.4	0.904	+ 0.002	68.5	+ 0.3	E	58.9	0.947	75.2
#1213	El Camino Real / The Alameda	B	19.7	0.517	18.1	C	20.6	0.593	19.5	C	20.6	0.589	- 0.004	19.4	- 0.1	C	21.3	0.615	20.4
#3046	I-880 / The Alameda (N)	C	24.6	0.591	26.2	C	24.9	0.604	26.7	C	24.8	0.599	- 0.005	26.5	- 0.2	C	25.3	0.628	27.2
#3047	I-880 / The Alameda (S)	C	23.3	0.580	24.7	C	23.4	0.585	24.8	C	23.4	0.584	- 0.001	24.8	+ 0.0	C	23.9	0.612	25.4
#3057	The Alameda / Hedding St	D	39.6	0.660	43.8	D	40.8	0.696	45.7	D	40.7	0.695	- 0.001	45.7	- 0.0	D	41.6	0.728	47.0
#3229	The Alameda / Newhall St	B	15.2	0.480	11.4	B	12.9	0.534	9.0	B	12.8	0.531	- 0.003	9.0	+ 0.0	B	13.1	0.554	9.4

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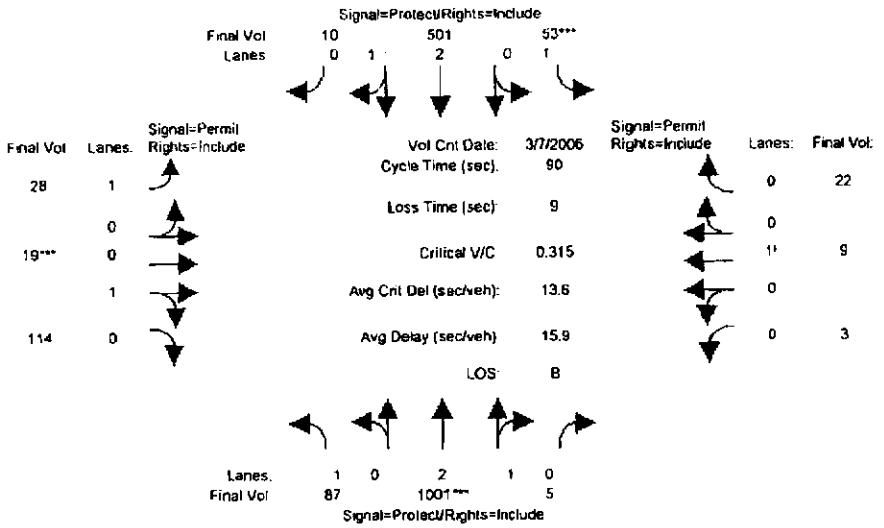
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #303: El Camino Real / Benton St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 7 Mar 2006 << 7:45-8:45AM												
Base Vol:	87	1001	5	53	501	10	28	19	114	3	9	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	87	1001	5	53	501	10	28	19	114	3	9	22
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	87	1001	5	53	501	10	28	19	114	3	9	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	87	1001	5	53	501	10	28	19	114	3	9	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	1001	5	53	501	10	28	19	114	3	9	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	1001	5	53	501	10	28	19	114	3	9	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.92	0.92
Lanes:	1.00	2.98	0.02	1.00	2.94	0.06	1.00	0.14	0.86	0.09	0.26	0.65
Final Sat.:	1750	5572	28	1750	5490	110	1750	257	1543	154	463	1132
Capacity Analysis Module:												
Vol/Sat:	0.05	0.18	0.18	0.03	0.09	0.09	0.02	0.07	0.07	0.02	0.02	0.02
Crit Moves:		****		****				****				
Green Time:	24.7	51.3	51.3	8.6	35.2	35.2	21.1	21.1	21.1	21.1	21.1	21.1
Volume/Cap:	0.18	0.32	0.32	0.32	0.23	0.23	0.07	0.32	0.32	0.08	0.08	0.08
Delay/Veh:	25.1	10.2	10.2	39.0	18.4	18.4	26.9	28.9	28.9	27.0	27.0	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.1	10.2	10.2	39.0	18.4	18.4	26.9	28.9	28.9	27.0	27.0	27.0
LOS by Move:	C	B	B	D	B	B	C	C	C	C	C	C
DesignQueue:	3	8	8	3	5	5	1	5	5	1	1	1

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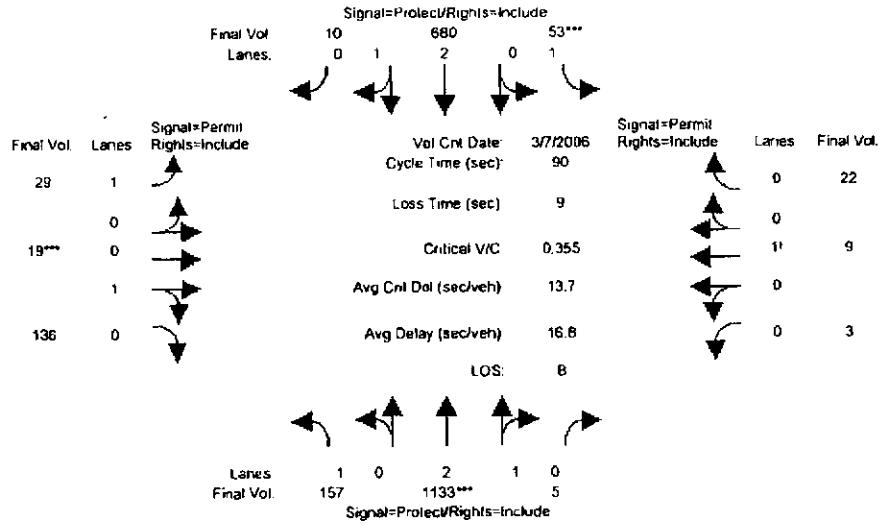
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #303: El Camino Real / Benton St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 7 Mar 2006 << 7:45-8:45AM												
Base Vol:	87	1001	5	53	501	10	28	19	114	3	9	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	87	1001	5	53	501	10	28	19	114	3	9	22
Added Vol:	0	5	0	0	21	0	0	0	0	0	0	0
ATI+SC+Robs:	70	127	0	0	158	0	1	0	22	0	0	0
Initial Fut:	157	1133	5	53	680	10	29	19	136	3	9	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	157	1133	5	53	680	10	29	19	136	3	9	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	1133	5	53	680	10	29	19	136	3	9	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	157	1133	5	53	680	10	29	19	136	3	9	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.92	0.92
Lanes:	1.00	2.99	0.01	1.00	2.95	0.05	1.00	0.12	0.88	0.09	0.26	0.65
Final Sat.:	1750	5575	25	1750	5519	81	1750	221	1579	154	463	1132
Capacity Analysis Module:												
Vol/Sat:	0.09	0.20	0.20	0.03	0.12	0.12	0.02	0.09	0.09	0.02	0.02	0.02
Crit Moves:		****		****				****				
Green Time:	24.9	51.5	51.5	7.7	34.2	34.2	21.8	21.8	21.8	21.8	21.8	21.8
Volume/Cap:	0.32	0.36	0.36	0.36	0.32	0.32	0.07	0.36	0.36	0.08	0.08	0.08
Delay/Veh:	26.2	10.4	10.4	40.3	19.8	19.8	26.3	28.8	28.8	26.4	26.4	26.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.2	10.4	10.4	40.3	19.8	19.8	26.3	28.8	28.8	26.4	26.4	26.4
LOS by Move:	C	B	B	D	B	B	C	C	C	C	C	C
DesignQueue:	6	9	9	3	7	7	1	6	6	1	1	1

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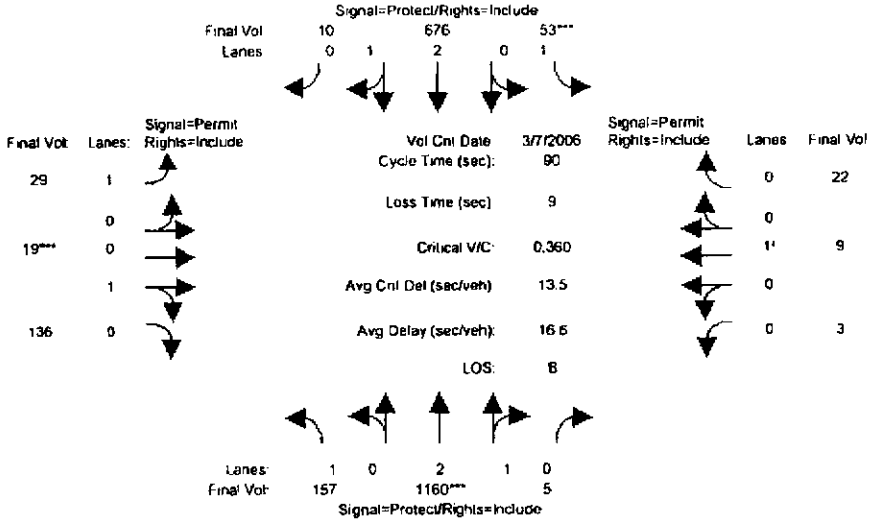
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #303: El Camino Real / Benton St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 7 Mar 2006 << 7:45-8:45AM												
Base Vol:	87	1001	5	53	501	10	28	19	114	3	9	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	87	1001	5	53	501	10	28	19	114	3	9	22
Added Vol:	0	32	0	0	17	0	0	0	0	0	0	0
ATI+SC+Robs:	70	127	0	0	158	0	1	0	22	0	0	0
Initial Fut:	157	1160	5	53	676	10	29	19	136	3	9	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	157	1160	5	53	676	10	29	19	136	3	9	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	1160	5	53	676	10	29	19	136	3	9	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	157	1160	5	53	676	10	29	19	136	3	9	22
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.92	0.92
Lanes:	1.00	2.99	0.01	1.00	2.95	0.05	1.00	0.12	0.88	0.09	0.26	0.65
Final Sat.:	1750	5576	24	1750	5518	82	1750	221	1579	154	463	1132
Capacity Analysis Module:												
Vol/Sat:	0.09	0.21	0.21	0.03	0.12	0.12	0.02	0.09	0.09	0.02	0.02	0.02
Crit Moves:		****		****				****				
Green Time:	25.2	51.9	51.9	7.6	34.3	34.3	21.5	21.5	21.5	21.5	21.5	21.5
Volume/Cap:	0.32	0.36	0.36	0.36	0.32	0.32	0.07	0.36	0.36	0.08	0.08	0.08
Delay/Veh:	26.0	10.2	10.2	40.4	19.7	19.7	26.6	29.0	29.0	26.7	26.7	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.0	10.2	10.2	40.4	19.7	19.7	26.6	29.0	29.0	26.7	26.7	26.7
LOS by Move:	C	B	B	D	B	B	C	C	C	C	C	C
DesignQueue:	6	9	9	3	7	7	1	6	6	1	1	1

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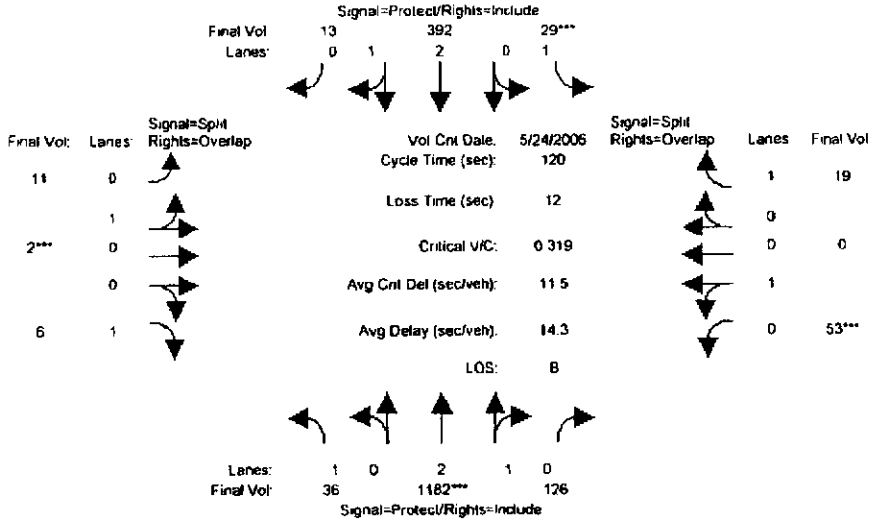
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #604: El Camino Real / Campbell Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 24 May 2006 << 7:45-8:45AM												
Base Vol:	36	1182	126	29	392	13	11	2	6	53	0	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	1182	126	29	392	13	11	2	6	53	0	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	1182	126	29	392	13	11	2	6	53	0	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	1182	126	29	392	13	11	2	6	53	0	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	1182	126	29	392	13	11	2	6	53	0	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	36	1182	126	29	392	13	11	2	6	53	0	19
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.95	0.92	0.98	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.70	0.30	1.00	2.90	0.10	0.85	0.15	1.00	1.00	0.00	1.00
Final Sat.:	1750	5060	539	1750	5420	180	1523	277	1750	1800	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.23	0.23	0.02	0.07	0.07	0.01	0.01	0.00	0.03	0.00	0.01
Crit Moves:		****		****				****		****		
Green Time:	36.2	80.8	80.8	7.0	51.7	51.7	10.0	10.0	46.2	10.2	0.0	17.2
Volume/Cap:	0.07	0.35	0.35	0.28	0.17	0.17	0.09	0.09	0.01	0.35	0.00	0.08
Delay/Veh:	30.0	8.4	8.4	55.6	21.0	21.0	51.0	51.0	22.8	53.1	0.0	44.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.0	8.4	8.4	55.6	21.0	21.0	51.0	51.0	22.8	53.1	0.0	44.7
LOS by Move:	C	A	A	E	C	C	D	D	C	D	A	D
DesignQueue:	2	10	10	2	5	5	1	1	0	3	0	1

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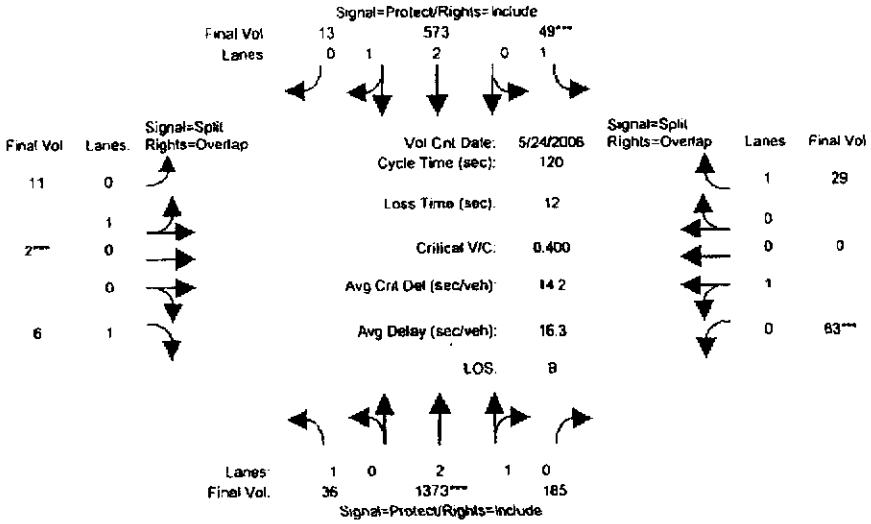
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #604: El Camino Real / Campbell Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 24 May 2006 << 7:45-8:45AM												
Base Vol:	36	1182	126	29	392	13	11	2	6	53	0	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	1182	126	29	392	13	11	2	6	53	0	19
Added Vol:	0	0	63	21	0	0	0	0	0	16	0	5
ATI+SC+Robs:	0	191	-4	-1	181	0	0	0	0	14	0	5
Initial Fut:	36	1373	185	49	573	13	11	2	6	83	0	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	1373	185	49	573	13	11	2	6	83	0	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	1373	185	49	573	13	11	2	6	83	0	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	36	1373	185	49	573	13	11	2	6	83	0	29
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.95	0.92	0.98	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.63	0.37	1.00	2.93	0.07	0.85	0.15	1.00	1.00	0.00	1.00
Final Sat.:	1750	4934	665	1750	5476	124	1523	277	1750	1800	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.28	0.28	0.03	0.10	0.10	0.01	0.01	0.00	0.05	0.00	0.02
Crit Moves:		****		****				****		****		
Green Time:	30.5	77.4	77.4	7.8	54.7	54.7	10.0	10.0	40.5	12.8	0.0	20.6
Volume/Cap:	0.08	0.43	0.43	0.43	0.23	0.23	0.09	0.09	0.01	0.43	0.00	0.10
Delay/Veh:	34.2	10.6	10.6	56.6	19.9	19.9	51.0	51.0	26.4	51.7	0.0	42.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.2	10.6	10.6	56.6	19.9	19.9	51.0	51.0	26.4	51.7	0.0	42.0
LOS by Move:	C	B	B	E	B	B	D	D	C	D	A	D
DesignQueue:	2	13	13	3	7	7	1	1	0	5	0	2

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Campbell Avenue, San Jose, CA
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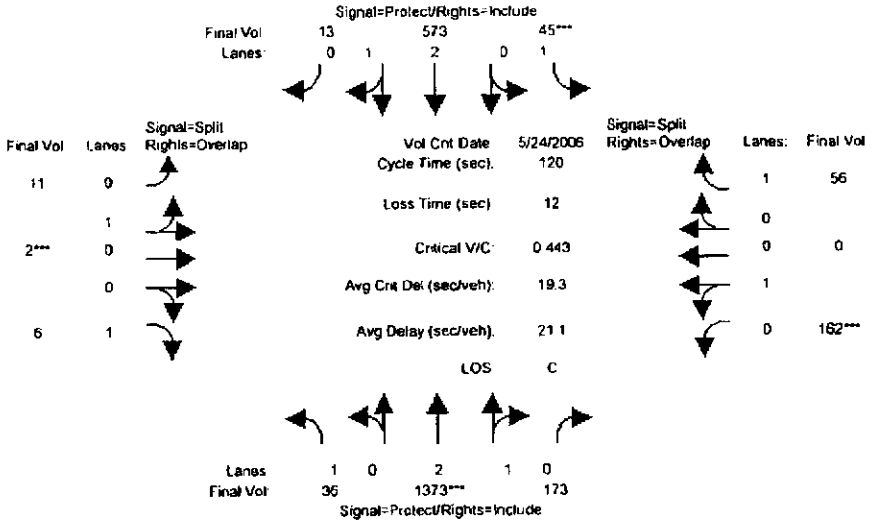
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #604. El Camino Real / Campbell Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 24 May 2006 << 7:45-8:45AM												
Base Vol:	36	1182	126	29	392	13	11	2	6	53	0	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	1182	126	29	392	13	11	2	6	53	0	19
Added Vol:	0	0	51	17	0	0	0	0	0	95	0	32
ATI+SC+Robs:	0	191	-4	-1	181	0	0	0	0	14	0	5
Initial Fut:	36	1373	173	45	573	13	11	2	6	162	0	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	1373	173	45	573	13	11	2	6	162	0	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	1373	173	45	573	13	11	2	6	162	0	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	36	1373	173	45	573	13	11	2	6	162	0	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.95	0.92	0.98	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.65	0.35	1.00	2.93	0.07	0.85	0.15	1.00	1.00	0.00	1.00
Final Sat.:	1750	4973	627	1750	5476	124	1523	277	1750	1800	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.28	0.28	0.03	0.10	0.10	0.01	0.01	0.00	0.09	0.00	0.03
Crit Moves:		****		****				****		****		
Green Time:	27.1	68.6	68.6	7.0	48.6	48.6	10.0	10.0	37.1	22.4	0.0	29.4
Volume/Cap:	0.09	0.48	0.48	0.44	0.26	0.26	0.09	0.09	0.01	0.48	0.00	0.13
Delay/Veh:	36.8	15.3	15.3	57.6	23.8	23.8	51.0	51.0	28.8	44.7	0.0	35.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.8	15.3	15.3	57.6	23.8	23.8	51.0	51.0	28.8	44.7	0.0	35.5
LOS by Move:	D	B	B	E	C	C	D	D	C	D	A	D
DesignQueue:	2	16	16	3	8	8	1	1	0	9	0	3

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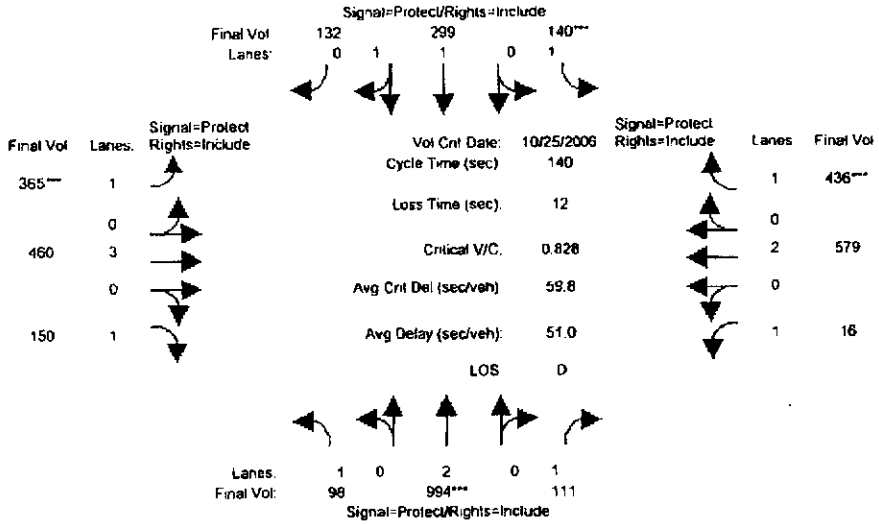
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1202: ECR/Lafayette St. 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 25 Oct 2006 << 7:45-8:45AM												
Base Vol:	98	994	111	140	299	132	365	460	150	16	579	436
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	994	111	140	299	132	365	460	150	16	579	436
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	98	994	111	140	299	132	365	460	150	16	579	436
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	994	111	140	299	132	365	460	150	16	579	436
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	994	111	140	299	132	365	460	150	16	579	436
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	994	111	140	299	132	365	460	150	16	579	436
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.39	0.61	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1900	3800	1900	1900	2636	1164	1900	5700	1900	1900	3800	1900
Capacity Analysis Module:												
Vol/Sat:	0.05	0.26	0.06	0.07	0.11	0.11	0.19	0.08	0.08	0.01	0.15	0.23
Crit Moves:		****		****			****					****
Green Time:	17.7	44.2	44.2	12.5	39.0	39.0	32.5	44.0	44.0	27.3	38.8	38.8
Volume/Cap:	0.41	0.83	0.18	0.83	0.41	0.41	0.83	0.26	0.25	0.04	0.55	0.83
Delay/Veh:	61.4	51.0	35.5	97.9	42.3	42.3	67.3	36.1	36.7	46.0	45.2	61.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.4	51.0	35.5	97.9	42.3	42.3	67.3	36.1	36.7	46.0	45.2	61.4
LOS by Move:	E	D	D	F	D	D	E	D	D	D	D	E
DesignQueue:	7	28	6	10	12	12	23	8	8	1	17	26

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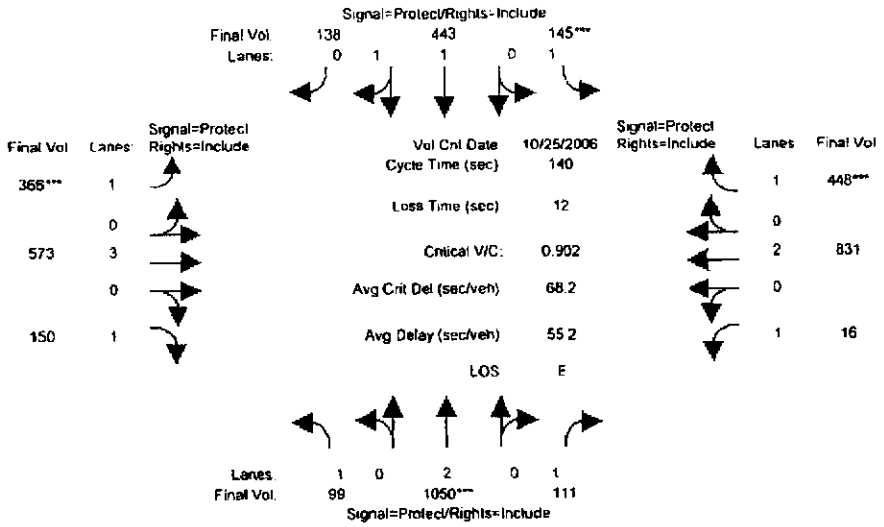
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1202: ECR/Lafayette St. 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:	>> Count Date: 25 Oct 2006 << 7:45-8:45AM											
Base Vol:	98	994	111	140	299	132	365	460	150	16	579	436
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	994	111	140	299	132	365	460	150	16	579	436
Added Vol:	0	0	0	4	0	0	0	17	0	0	4	1
ATI+SC+Robs:	1	56	0	1	144	6	1	96	0	0	248	11
Initial Fut:	99	1050	111	145	443	138	366	573	150	16	831	448
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	1050	111	145	443	138	366	573	150	16	831	448
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	1050	111	145	443	138	366	573	150	16	831	448
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	1050	111	145	443	138	366	573	150	16	831	448
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.51	0.49	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	2821	879	1750	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.28	0.06	0.08	0.16	0.16	0.21	0.10	0.09	0.01	0.22	0.26
Crit Moves:		****		****			****					****
Green Time:	14.8	42.9	42.9	12.9	41.0	41.0	32.5	48.2	48.2	24.0	39.8	39.8
Volume/Cap:	0.54	0.90	0.21	0.90	0.54	0.54	0.90	0.29	0.25	0.05	0.77	0.90
Delay/Veh:	70.1	57.8	36.8	111.7	43.4	43.4	77.9	33.8	33.9	48.8	51.3	70.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.1	57.8	36.8	111.7	43.4	43.4	77.9	33.8	33.9	48.8	51.3	70.4
LOS by Move:	E	E	D	F	D	D	E	C	C	D	D	E
DesignQueue:	8	30	7	11	17	17	25	10	8	1	24	29

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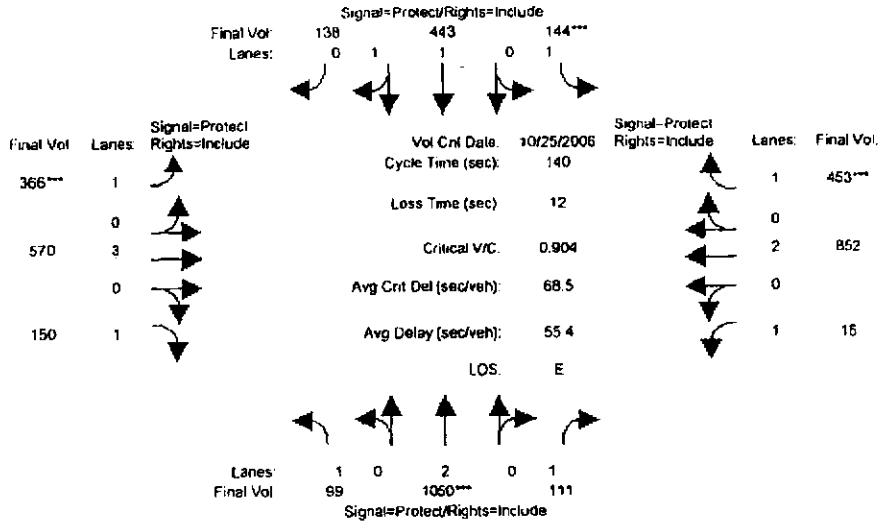
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #1202: ECR/Lafayette St. 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 25 Oct 2006 << 7:45-8:45AM												
Base Vol:	98	994	111	140	299	132	365	460	150	16	579	436
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	994	111	140	299	132	365	460	150	16	579	436
Added Vol:	0	0	0	3	0	0	0	14	0	0	25	6
ATI+SC+Robs:	1	56	0	1	144	6	1	96	0	0	248	11
Initial Fut:	99	1050	111	144	443	138	366	570	150	16	852	453
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	1050	111	144	443	138	366	570	150	16	852	453
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	1050	111	144	443	138	366	570	150	16	852	453
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	1050	111	144	443	138	366	570	150	16	852	453
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.51	0.49	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	2821	879	1750	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.28	0.06	0.08	0.16	0.16	0.21	0.10	0.09	0.01	0.22	0.26
Crit Moves:		****		****			****					****
Green Time:	14.7	42.8	42.8	12.7	40.8	40.8	32.4	48.3	48.3	24.2	40.1	40.1
Volume/Cap:	0.54	0.90	0.21	0.90	0.54	0.54	0.90	0.29	0.25	0.05	0.78	0.90
Delay/Veh:	70.3	58.2	36.9	112.6	43.6	43.6	78.4	33.7	33.8	48.7	51.6	70.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.3	58.2	36.9	112.6	43.6	43.6	78.4	33.7	33.8	48.7	51.6	70.4
LOS by Move:	E	E	D	F	D	D	E	C	C	D	D	E
DesignQueue:	8	30	7	11	17	17	25	10	8	1	25	29

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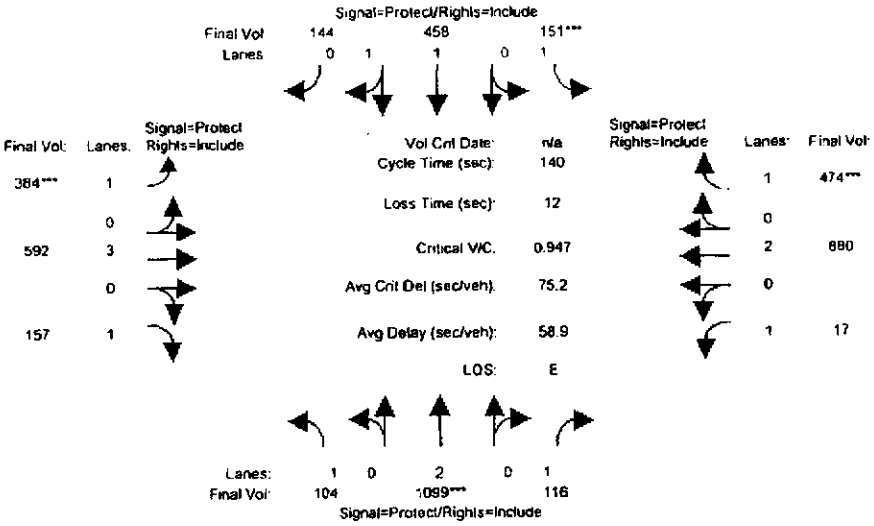
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future AM

Intersection #1202. ECR/Lafayette St. 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	104	1099	116	151	458	144	384	592	157	17	880	474
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	1099	116	151	458	144	384	592	157	17	880	474
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	1099	116	151	458	144	384	592	157	17	880	474
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	1099	116	151	458	144	384	592	157	17	880	474
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	1099	116	151	458	144	384	592	157	17	880	474
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	104	1099	116	151	458	144	384	592	157	17	880	474
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.51	0.49	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	2814	885	1750	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.29	0.07	0.09	0.16	0.16	0.22	0.10	0.09	0.01	0.23	0.27
Crit Moves:		****		****			****					****
Green Time:	14.8	42.8	42.8	12.8	40.7	40.7	32.4	48.9	48.9	23.6	40.0	40.0
Volume/Cap:	0.56	0.95	0.22	0.95	0.56	0.56	0.95	0.30	0.26	0.06	0.81	0.95
Delay/Veh:	71.1	63.9	37.1	121.7	44.2	44.2	86.1	33.4	33.6	49.3	53.0	77.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.1	63.9	37.1	121.7	44.2	44.2	86.1	33.4	33.6	49.3	53.0	77.9
LOS by Move:	E	E	D	F	D	D	F	C	C	D	D	E
DesignQueue:	8	32	7	12	18	18	26	10	9	1	26	30

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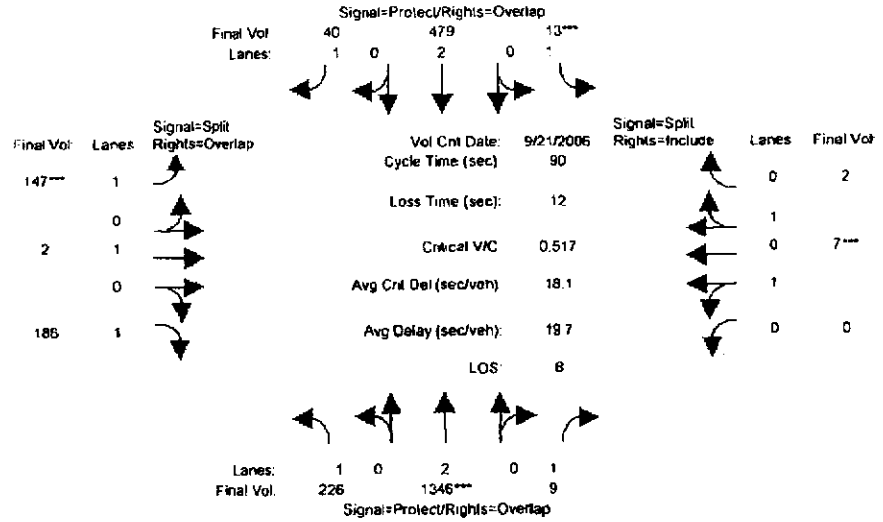
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1213: El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 21 Sep 2006 << 7:45-8:45AM												
Base Vol:	226	1346	9	13	479	40	147	2	186	0	7	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	226	1346	9	13	479	40	147	2	186	0	7	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	226	1346	9	13	479	40	147	2	186	0	7	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	226	1346	9	13	479	40	147	2	186	0	7	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	226	1346	9	13	479	40	147	2	186	0	7	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	226	1346	9	13	479	40	147	2	186	0	7	2
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.56	0.44
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2800	800
Capacity Analysis Module:												
Vol/Sat:	0.13	0.35	0.01	0.01	0.13	0.02	0.08	0.00	0.11	0.00	0.00	0.00
Crit Moves:		****		****			****				****	
Green Time:	28.5	49.3	59.3	7.0	27.8	39.5	11.7	11.7	40.2	0.0	10.0	10.0
Volume/Cap:	0.41	0.65	0.01	0.10	0.41	0.05	0.65	0.01	0.24	0.00	0.02	0.02
Delay/Veh:	24.6	15.0	5.3	38.9	24.8	14.5	43.5	34.1	15.6	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.6	15.0	5.3	38.9	24.8	14.5	43.5	34.1	15.6	0.0	35.7	35.7
LOS by Move:	C	B	A	D	C	B	D	C	B	A	D	D
DesignQueue:	9	16	0	1	9	1	7	0	6	0	0	0

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Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
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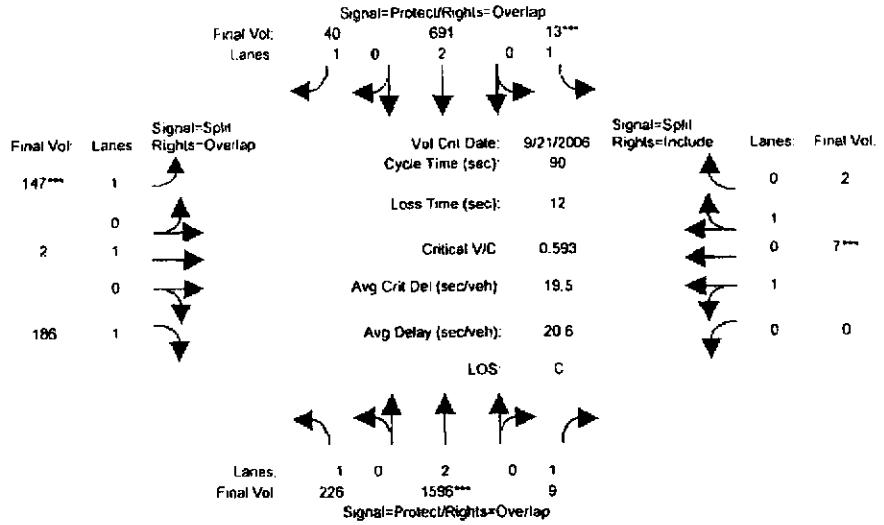
Background AM

Intersection #1213: El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 21 Sep 2006 << 7:45-8:45AM												
Base Vol:	226	1346	9	13	479	40	147	2	186	0	7	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	226	1346	9	13	479	40	147	2	186	0	7	2
Added Vol:	0	63	0	0	16	0	0	0	0	0	0	0
ATI+SC+Robs:	0	187	0	0	196	0	0	0	0	0	0	0
Initial Fut:	226	1596	9	13	691	40	147	2	186	0	7	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	226	1596	9	13	691	40	147	2	186	0	7	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	226	1596	9	13	691	40	147	2	186	0	7	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	226	1596	9	13	691	40	147	2	186	0	7	2
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.56	0.44
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2800	800
Capacity Analysis Module:												
Vol/Sat:	0.13	0.42	0.01	0.01	0.18	0.02	0.08	0.00	0.11	0.00	0.00	0.00
Crit Moves:		****		****			****				****	
Green Time:	24.0	50.8	60.8	7.0	33.8	44.0	10.2	10.2	34.2	0.0	10.0	10.0
Volume/Cap:	0.48	0.74	0.01	0.10	0.48	0.05	0.74	0.01	0.28	0.00	0.02	0.02
Delay/Veh:	28.6	16.1	4.8	38.9	21.7	12.1	52.8	35.5	19.6	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.6	16.1	4.8	38.9	21.7	12.1	52.8	35.5	19.6	0.0	35.7	35.7
LOS by Move:	C	B	A	D	C	B	D	D	B	A	D	D
DesignQueue:	9	19	0	1	11	1	7	0	6	0	0	0

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Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

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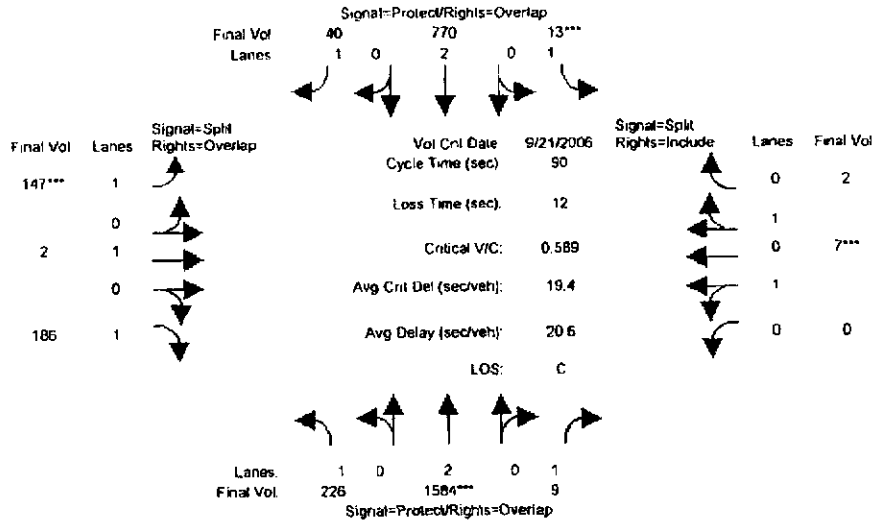
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #1213. El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 21 Sep 2006 << 7:45-8:45AM												
Base Vol:	226	1346	9	13	479	40	147	2	186	0	7	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	226	1346	9	13	479	40	147	2	186	0	7	2
Added Vol:	0	51	0	0	95	0	0	0	0	0	0	0
ATI+SC+Robs:	0	187	0	0	196	0	0	0	0	0	0	0
Initial Fut:	226	1584	9	13	770	40	147	2	186	0	7	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	226	1584	9	13	770	40	147	2	186	0	7	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	226	1584	9	13	770	40	147	2	186	0	7	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	226	1584	9	13	770	40	147	2	186	0	7	2
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.56	0.44
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2800	800
Capacity Analysis Module:												
Vol/Sat:	0.13	0.42	0.01	0.01	0.20	0.02	0.08	0.00	0.11	0.00	0.00	0.00
Crit Moves:		****		****			****				****	
Green Time:	22.5	50.8	60.8	7.0	35.3	45.5	10.2	10.2	32.7	0.0	10.0	10.0
Volume/Cap:	0.52	0.74	0.01	0.10	0.52	0.05	0.74	0.01	0.29	0.00	0.02	0.02
Delay/Veh:	30.2	16.1	4.8	38.9	21.2	11.3	52.2	35.4	20.7	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.2	16.1	4.8	38.9	21.2	11.3	52.2	35.4	20.7	0.0	35.7	35.7
LOS by Move:	C	B	A	D	C	B	D	D	C	A	D	D
DesignQueue:	9	19	0	1	12	1	7	0	7	0	0	0

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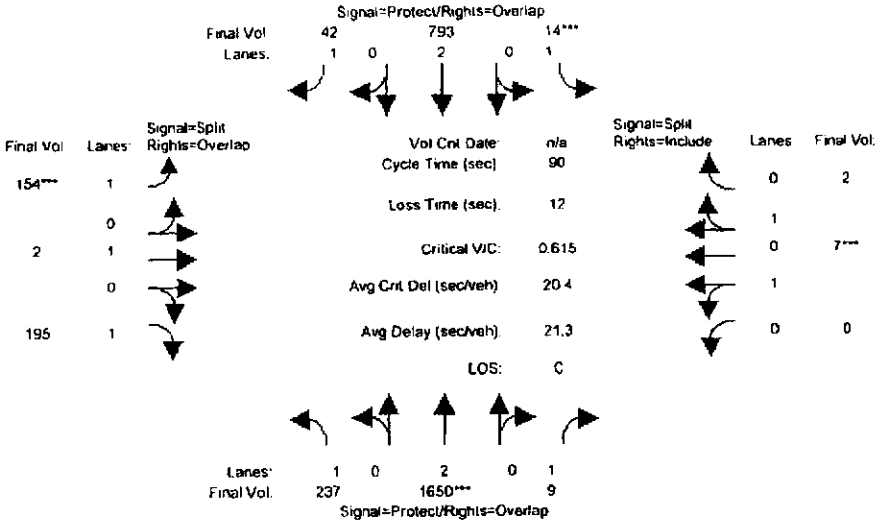
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future AM

Intersection #1213 El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module:												
Base Vol:	237	1650	9	14	793	42	154	2	195	0	7	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	237	1650	9	14	793	42	154	2	195	0	7	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	237	1650	9	14	793	42	154	2	195	0	7	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	237	1650	9	14	793	42	154	2	195	0	7	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	1650	9	14	793	42	154	2	195	0	7	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	237	1650	9	14	793	42	154	2	195	0	7	2
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.56	0.44
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2800	800
Capacity Analysis Module:												
Vol/Sat:	0.14	0.43	0.01	0.01	0.21	0.02	0.09	0.00	0.11	0.00	0.00	0.00
Crit Moves:		****		****			****				****	
Green Time:	22.7	50.7	60.7	7.0	35.0	45.3	10.3	10.3	33.0	0.0	10.0	10.0
Volume/Cap:	0.54	0.77	0.01	0.10	0.54	0.05	0.77	0.01	0.30	0.00	0.02	0.02
Delay/Veh:	30.4	16.9	4.8	38.9	21.6	11.4	55.3	35.4	20.6	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.4	16.9	4.8	38.9	21.6	11.4	55.3	35.4	20.6	0.0	35.7	35.7
LOS by Move:	C	B	A	D	C	B	E	D	C	A	D	D
DesignQueue:	10	20	0	1	13	1	8	0	7	0	0	0

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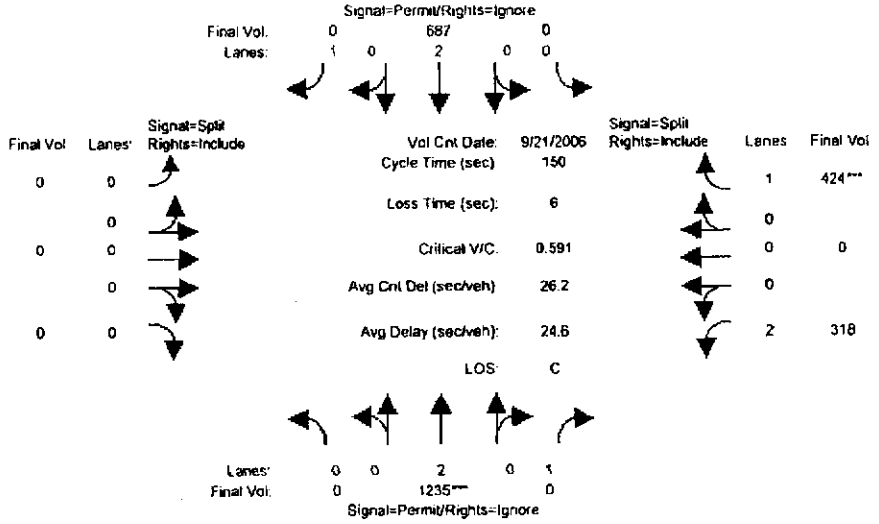
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3046: I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module: >> Count Date: 21 Sep 2006 << 7:30-8:30AM												
Base Vol:	0	1235	302	0	687	166	0	0	0	318	0	424
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1235	302	0	687	166	0	0	0	318	0	424
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1235	302	0	687	166	0	0	0	318	0	424
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1235	0	0	687	0	0	0	0	318	0	424
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1235	0	0	687	0	0	0	0	318	0	424
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1235	0	0	687	0	0	0	0	318	0	424
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.10	0.00	0.24
Crit Moves:		****										****
Green Time:	0.0	82.5	0.0	0.0	82.5	0.0	0.0	0.0	0.0	61.5	0.0	61.5
Volume/Cap:	0.00	0.59	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.25	0.00	0.59
Delay/Veh:	0.0	23.0	0.0	0.0	18.6	0.0	0.0	0.0	0.0	29.1	0.0	35.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.0	0.0	0.0	18.6	0.0	0.0	0.0	0.0	29.1	0.0	35.8
LOS by Move:	A	C	A	A	B	A	A	A	A	C	A	D
DesignQueue:	0	25	0	0	13	0	0	0	0	10	0	24

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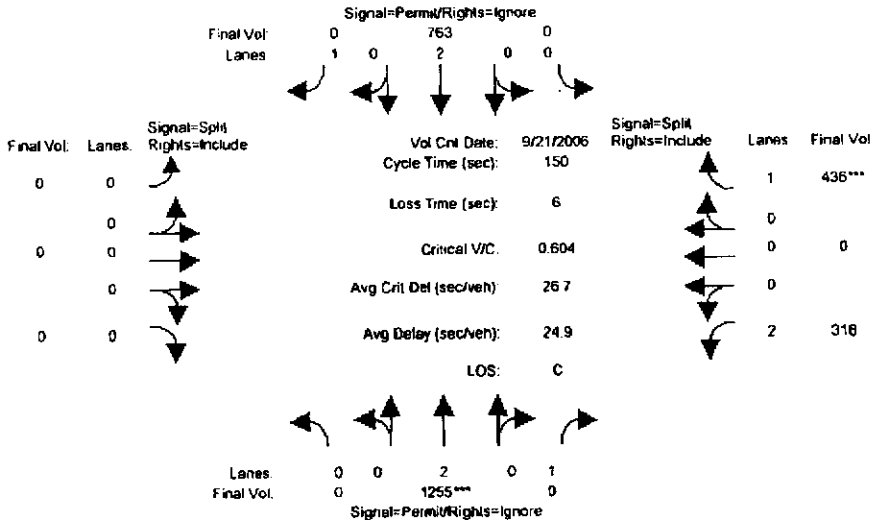
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #3046 I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module: >> Count Date: 21 Sep 2006 << 7:30-8:30AM												
Base Vol:	0	1235	302	0	687	166	0	0	0	318	0	424
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1235	302	0	687	166	0	0	0	318	0	424
Added Vol:	0	38	0	0	9	6	0	0	0	0	0	25
ATI+SC+Robs:	0	-18	0	0	67	43	0	0	0	0	0	-13
Initial Fut:	0	1255	302	0	763	215	0	0	0	318	0	436
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1255	0	0	763	0	0	0	0	318	0	436
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1255	0	0	763	0	0	0	0	318	0	436
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1255	0	0	763	0	0	0	0	318	0	436
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.10	0.00	0.25
Crit Moves:		****										****
Green Time:	0.0	82.1	0.0	0.0	82.1	0.0	0.0	0.0	0.0	61.9	0.0	61.9
Volume/Cap:	0.00	0.60	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.24	0.00	0.60
Delay/Veh:	0.0	23.5	0.0	0.0	19.4	0.0	0.0	0.0	0.0	28.9	0.0	35.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.5	0.0	0.0	19.4	0.0	0.0	0.0	0.0	28.9	0.0	35.9
LOS by Move:	A	C	A	A	B	A	A	A	A	C	A	D
DesignQueue:	0	25	0	0	15	0	0	0	0	10	0	24

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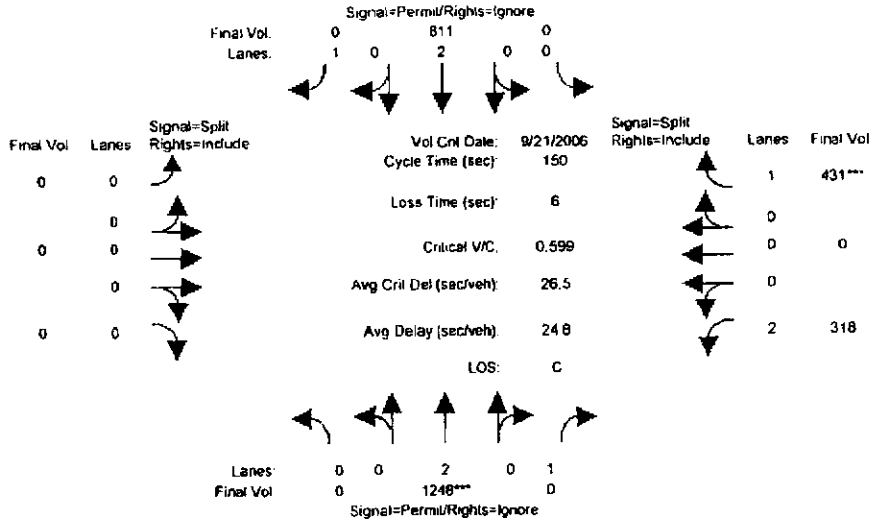
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #3046: I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module: >> Count Date: 21 Sep 2006 << 7:30-8:30AM												
Base Vol:	0	1235	302	0	687	166	0	0	0	318	0	424
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1235	302	0	687	166	0	0	0	318	0	424
Added Vol:	0	31	0	0	57	38	0	0	0	0	0	20
ATI+SC+Robs:	0	-18	0	0	67	43	0	0	0	0	0	-13
Initial Fut:	0	1248	302	0	811	247	0	0	0	318	0	431
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1248	0	0	811	0	0	0	0	318	0	431
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1248	0	0	811	0	0	0	0	318	0	431
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1248	0	0	811	0	0	0	0	318	0	431
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.10	0.00	0.25
Crit Moves:		****										****
Green Time:	0.0	82.3	0.0	0.0	82.3	0.0	0.0	0.0	0.0	61.7	0.0	61.7
Volume/Cap:	0.00	0.60	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.25	0.00	0.60
Delay/Veh:	0.0	23.2	0.0	0.0	19.5	0.0	0.0	0.0	0.0	29.0	0.0	35.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.2	0.0	0.0	19.5	0.0	0.0	0.0	0.0	29.0	0.0	35.9
LOS by Move:	A	C	A	A	B	A	A	A	A	C	A	D
DesignQueue:	0	25	0	0	16	0	0	0	0	10	0	24

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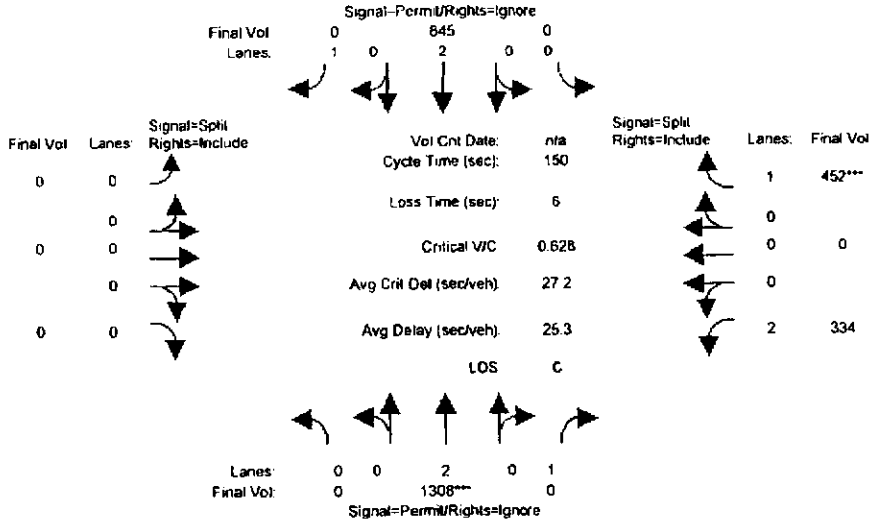
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future AM

Intersection #3046: I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module:												
Base Vol:	0	1308	317	0	845	255	0	0	0	334	0	452
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1308	317	0	845	255	0	0	0	334	0	452
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1308	317	0	845	255	0	0	0	334	0	452
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1308	0	0	845	0	0	0	0	334	0	452
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1308	0	0	845	0	0	0	0	334	0	452
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1308	0	0	845	0	0	0	0	334	0	452
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.34	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.11	0.00	0.26
Crit Moves:		****										****
Green Time:	0.0	82.3	0.0	0.0	82.3	0.0	0.0	0.0	0.0	61.7	0.0	61.7
Volume/Cap:	0.00	0.63	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.26	0.00	0.63
Delay/Veh:	0.0	23.9	0.0	0.0	19.8	0.0	0.0	0.0	0.0	29.2	0.0	36.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.9	0.0	0.0	19.8	0.0	0.0	0.0	0.0	29.2	0.0	36.8
LOS by Move:	A	C	A	A	B	A	A	A	A	C	A	D
DesignQueue:	0	27	0	0	17	0	0	0	0	10	0	25

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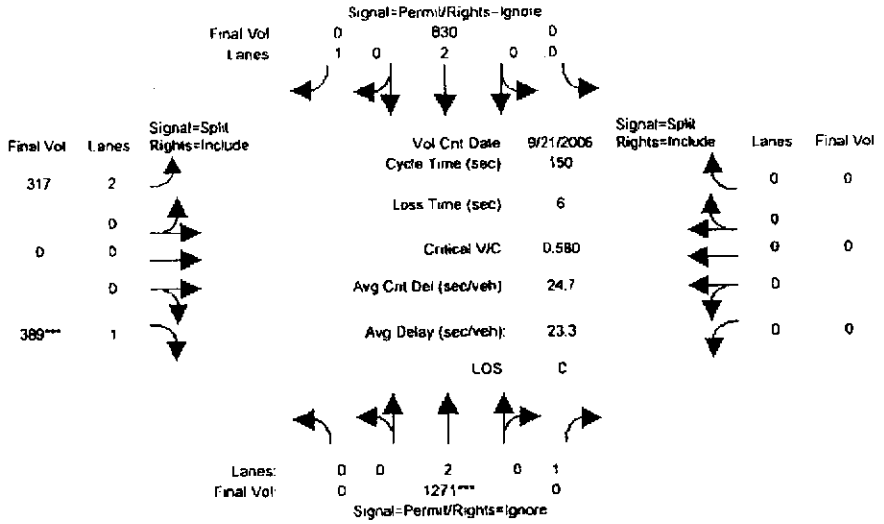
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

ntersection #3047. I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	0	0	10	10	10	0	10	0	0	0
Volume Module: >> Count Date: 21 Sep 2006 << 7:45-8:45AM												
Base Vol:	0	1271	453	0	830	247	317	0	389	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1271	453	0	830	247	317	0	389	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1271	453	0	830	247	317	0	389	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1271	0	0	830	0	317	0	389	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1271	0	0	830	0	317	0	389	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1271	0	0	830	0	317	0	389	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.00	0.00	0.22	0.00	0.10	0.00	0.22	0.00	0.00	0.00
Crit Moves:		****							****			
Green Time:	0.0	86.5	0.0	0.0	86.5	0.0	57.5	0.0	57.5	0.0	0.0	0.0
Volume/Cap:	0.00	0.58	0.00	0.00	0.38	0.00	0.26	0.00	0.58	0.00	0.00	0.00
Delay/Veh:	0.0	20.6	0.0	0.0	17.3	0.0	31.8	0.0	38.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	20.6	0.0	0.0	17.3	0.0	31.8	0.0	38.0	0.0	0.0	0.0
LOS by Move:	A	C	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	24	0	0	15	0	10	0	23	0	0	0

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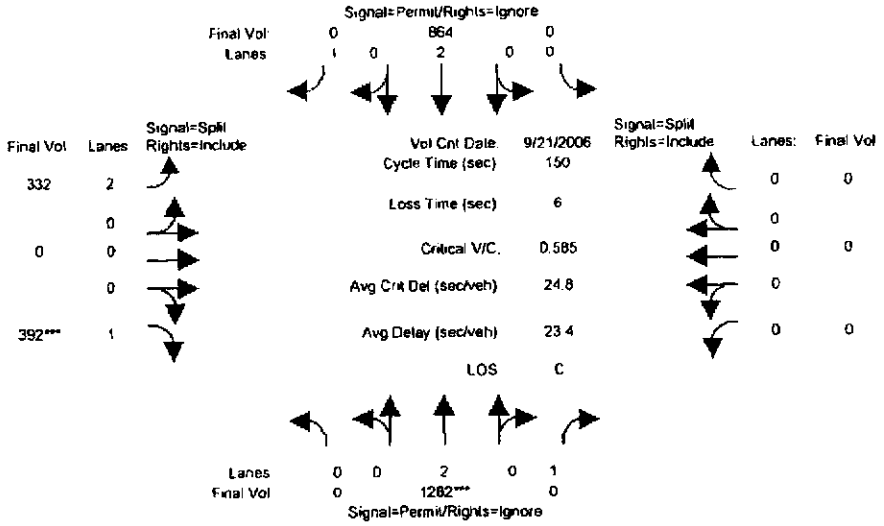
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

ntersection #3047: I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	0	0	10	10	10	0	10	0	0	0
Volume Module:	>> Count Date: 21 Sep 2006 << 7:45-8:45AM											
Base Vol:	0	1271	453	0	830	247	317	0	389	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1271	453	0	830	247	317	0	389	0	0	0
Added Vol:	0	13	0	0	3	6	25	0	0	0	0	0
ATI+SC+Robs:	0	-2	0	0	31	45	-10	0	3	0	0	0
Initial Fut:	0	1282	453	0	864	298	332	0	392	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1282	0	0	864	0	332	0	392	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1282	0	0	864	0	332	0	392	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1282	0	0	864	0	332	0	392	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.34	0.00	0.00	0.23	0.00	0.11	0.00	0.22	0.00	0.00	0.00
Crit Moves:		****							****			
Green Time:	0.0	86.5	0.0	0.0	86.5	0.0	57.5	0.0	57.5	0.0	0.0	0.0
Volume/Cap:	0.00	0.58	0.00	0.00	0.39	0.00	0.28	0.00	0.58	0.00	0.00	0.00
Delay/Veh:	0.0	20.7	0.0	0.0	17.5	0.0	32.0	0.0	38.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	20.7	0.0	0.0	17.5	0.0	32.0	0.0	38.1	0.0	0.0	0.0
LOS by Move:	A	C	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	24	0	0	16	0	11	0	23	0	0	0

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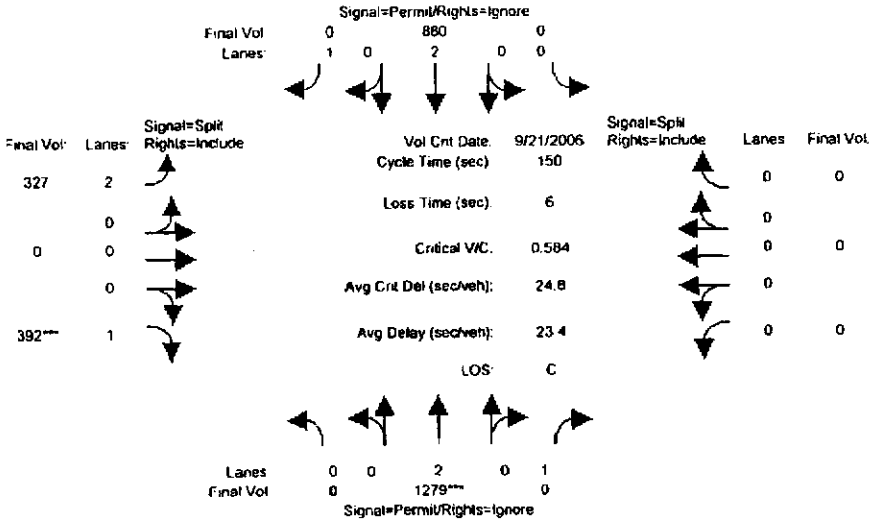
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #3047: I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	0	0	10	10	10	0	10	0	0	0
Volume Module: >> Count Date: 21 Sep 2006 << 7:45-8:45AM												
Base Vol:	0	1271	453	0	830	247	317	0	389	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1271	453	0	830	247	317	0	389	0	0	0
Added Vol:	0	10	0	0	19	38	20	0	0	0	0	0
ATI+SC+Robs:	0	-2	0	0	31	45	-10	0	3	0	0	0
Initial Fut:	0	1279	453	0	880	330	327	0	392	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1279	0	0	880	0	327	0	392	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1279	0	0	880	0	327	0	392	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1279	0	0	880	0	327	0	392	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.34	0.00	0.00	0.23	0.00	0.10	0.00	0.22	0.00	0.00	0.00
Crit Moves:		****							****			
Green Time:	0.0	86.5	0.0	0.0	86.5	0.0	57.5	0.0	57.5	0.0	0.0	0.0
Volume/Cap:	0.00	0.58	0.00	0.00	0.40	0.00	0.27	0.00	0.58	0.00	0.00	0.00
Delay/Veh:	0.0	20.7	0.0	0.0	17.6	0.0	31.9	0.0	38.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	20.7	0.0	0.0	17.6	0.0	31.9	0.0	38.0	0.0	0.0	0.0
LOS by Move:	A	C	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	24	0	0	16	0	10	0	23	0	0	0

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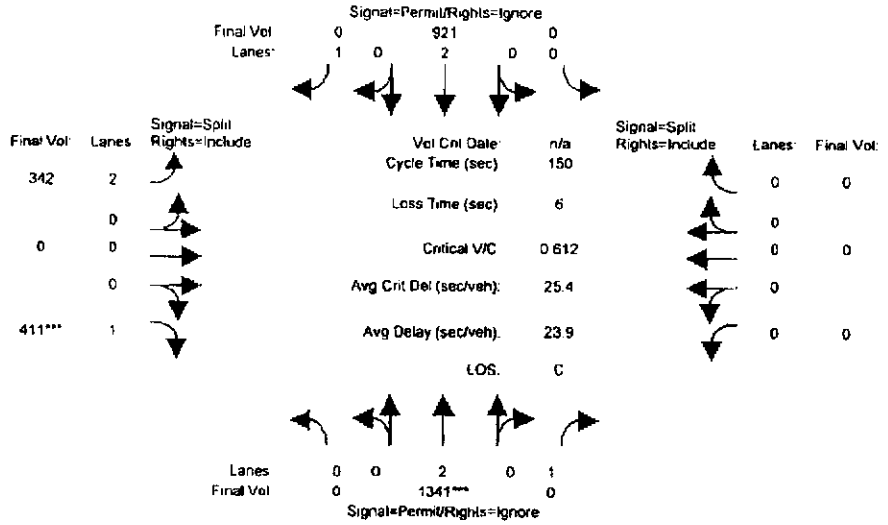
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future AM

Intersection #3047. I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	0	0	10	10	10	0	10	0	0	0
Volume Module:												
Base Vol:	0	1341	475	0	921	342	342	0	411	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1341	475	0	921	342	342	0	411	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1341	475	0	921	342	342	0	411	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1341	0	0	921	0	342	0	411	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1341	0	0	921	0	342	0	411	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1341	0	0	921	0	342	0	411	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.35	0.00	0.00	0.24	0.00	0.11	0.00	0.23	0.00	0.00	0.00
Crit Moves:		****							****			
Green Time:	0.0	86.5	0.0	0.0	86.5	0.0	57.5	0.0	57.5	0.0	0.0	0.0
Volume/Cap:	0.00	0.61	0.00	0.00	0.42	0.00	0.28	0.00	0.61	0.00	0.00	0.00
Delay/Veh:	0.0	21.3	0.0	0.0	17.9	0.0	32.1	0.0	38.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	21.3	0.0	0.0	17.9	0.0	32.1	0.0	38.9	0.0	0.0	0.0
LOS by Move:	A	C	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	26	0	0	17	0	11	0	24	0	0	0

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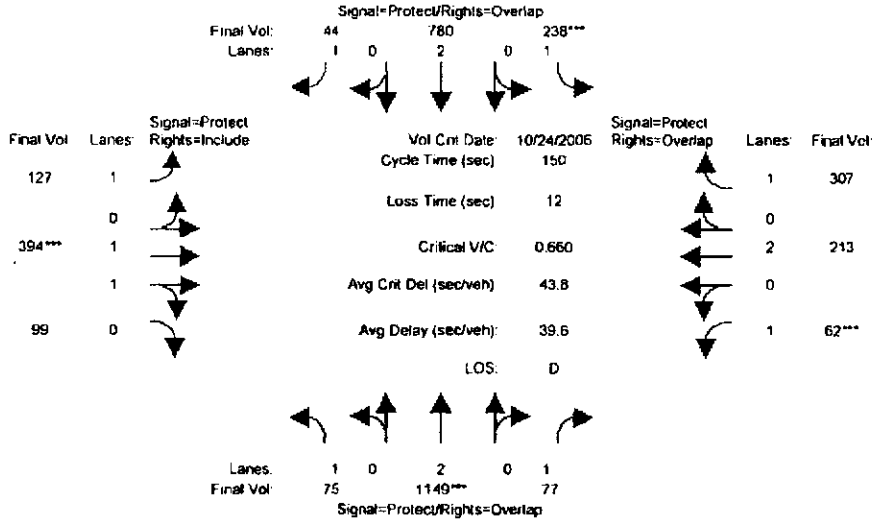
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3057: The Alameda / Hedding St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Oct 2006 << 7:30-8:30AM												
Base Vol:	75	1149	77	238	780	44	127	394	99	62	213	307
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	1149	77	238	780	44	127	394	99	62	213	307
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	75	1149	77	238	780	44	127	394	99	62	213	307
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	75	1149	77	238	780	44	127	394	99	62	213	307
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	1149	77	238	780	44	127	394	99	62	213	307
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	1149	77	238	780	44	127	394	99	62	213	307
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.59	0.41	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2956	743	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.30	0.04	0.14	0.21	0.03	0.07	0.13	0.13	0.04	0.06	0.18
Crit Moves:		****		****				****		****		
Green Time:	18.5	68.7	76.8	30.9	81.2	101.2	20.0	30.3	30.3	8.1	18.4	49.3
Volume/Cap:	0.35	0.66	0.09	0.66	0.38	0.04	0.54	0.66	0.66	0.66	0.46	0.53
Delay/Veh:	61.2	32.5	18.7	59.2	20.0	8.2	63.4	57.3	57.3	85.6	61.9	42.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.2	32.5	18.7	59.2	20.0	8.2	63.4	57.3	57.3	85.6	61.9	42.0
LOS by Move:	E	C	B	E	B	A	E	E	E	F	E	D
DesignQueue:	6	28	3	18	16	1	10	17	17	5	8	19

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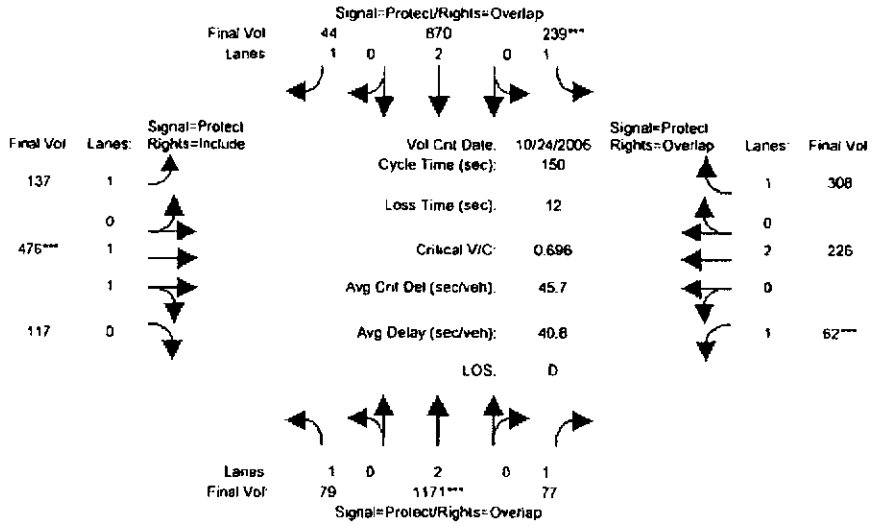
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #3057: The Alameda / Hedding St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Oct 2006 << 7:30-8:30AM												
Base Vol:	75	1149	77	238	780	44	127	394	99	62	213	307
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	1149	77	238	780	44	127	394	99	62	213	307
Added Vol:	0	13	0	0	3	0	0	0	0	0	0	0
PTI+SC+Robs:	4	9	0	1	87	0	10	82	18	0	13	1
Initial Fut:	79	1171	77	239	870	44	137	476	117	62	226	308
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	1171	77	239	870	44	137	476	117	62	226	308
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	1171	77	239	870	44	137	476	117	62	226	308
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	1171	77	239	870	44	137	476	117	62	226	308
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.59	0.41	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2969	730	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.31	0.04	0.14	0.23	0.03	0.08	0.16	0.16	0.04	0.06	0.18
Crit Moves:		****		****				****		****		
Green Time:	16.2	66.4	74.0	29.4	79.6	102.4	22.8	34.5	34.5	7.6	19.4	48.8
Volume/Cap:	0.42	0.70	0.09	0.70	0.43	0.04	0.52	0.70	0.70	0.70	0.46	0.54
Delay/Veh:	64.0	35.0	20.2	62.3	21.6	7.8	60.3	55.5	55.5	91.4	61.1	42.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.0	35.0	20.2	62.3	21.6	7.8	60.3	55.5	55.5	91.4	61.1	42.5
LOS by Move:	E	C	C	E	C	A	E	E	E	F	E	D
DesignQueue:	6	29	4	18	18	1	11	20	20	5	8	20

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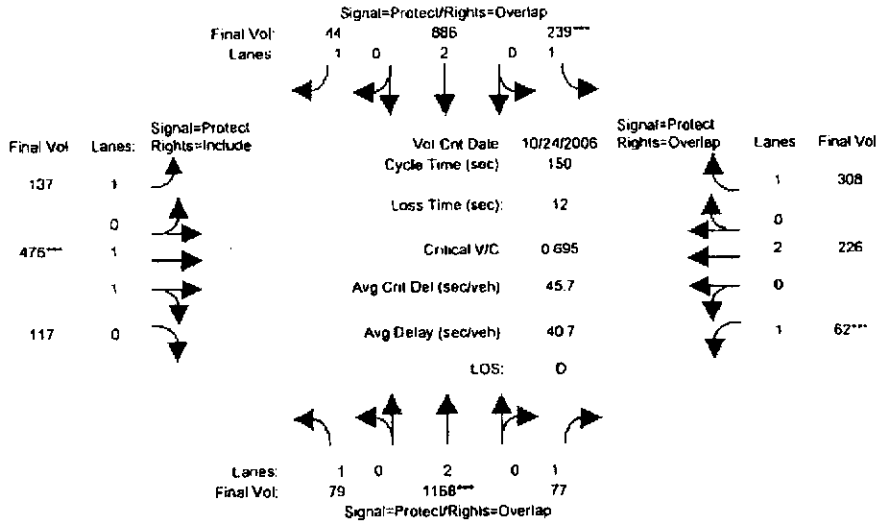
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

ntersection #3057: The Alameda / Hedding St

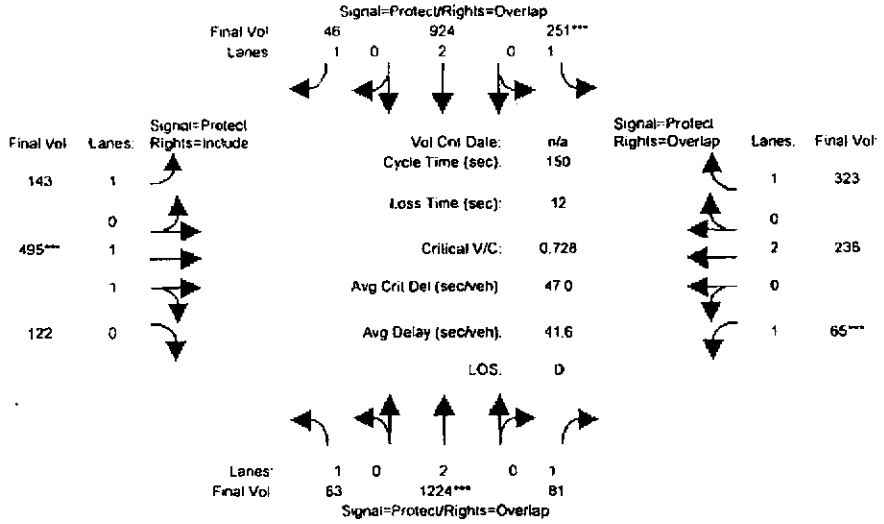


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Oct 2006 << 7:30-8:30AM												
Base Vol:	75	1149	77	238	780	44	127	394	99	62	213	307
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	1149	77	238	780	44	127	394	99	62	213	307
Added Vol:	0	10	0	0	19	0	0	0	0	0	0	0
ATI+SC+Robs:	4	9	0	1	87	0	10	82	18	0	13	1
Initial Fut:	79	1168	77	239	886	44	137	476	117	62	226	308
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	1168	77	239	886	44	137	476	117	62	226	308
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	1168	77	239	886	44	137	476	117	62	226	308
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	1168	77	239	886	44	137	476	117	62	226	308
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.59	0.41	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2969	730	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.31	0.04	0.14	0.23	0.03	0.08	0.16	0.16	0.04	0.06	0.18
Crit Moves:		****		****				****		****		
Green Time:	16.0	66.3	74.0	29.5	79.8	102.6	22.8	34.6	34.6	7.6	19.4	48.9
Volume/Cap:	0.42	0.70	0.09	0.70	0.44	0.04	0.51	0.70	0.70	0.70	0.46	0.54
Delay/Veh:	64.3	35.0	20.2	62.2	21.6	7.7	60.2	55.4	55.4	91.3	61.1	42.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.3	35.0	20.2	62.2	21.6	7.7	60.2	55.4	55.4	91.3	61.1	42.4
LOS by Move:	E	C	C	E	C	A	E	E	E	F	E	D
DesignQueue:	6	29	4	18	18	1	11	20	20	5	8	20

Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future AM

Intersection #3057: The Alameda / Hedding St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	83	1224	81	251	924	46	143	495	122	65	236	323
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	1224	81	251	924	46	143	495	122	65	236	323
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	83	1224	81	251	924	46	143	495	122	65	236	323
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	83	1224	81	251	924	46	143	495	122	65	236	323
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	1224	81	251	924	46	143	495	122	65	236	323
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	83	1224	81	251	924	46	143	495	122	65	236	323
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.59	0.41	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2968	731	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.32	0.05	0.14	0.24	0.03	0.08	0.17	0.17	0.04	0.06	0.18
Crit Moves:		****		****				****		****		
Green Time:	15.7	66.4	74.1	29.6	80.3	103.5	23.2	34.4	34.4	7.7	18.9	48.5
Volume/Cap:	0.45	0.73	0.09	0.73	0.45	0.04	0.53	0.73	0.73	0.73	0.49	0.57
Delay/Veh:	64.9	36.0	20.2	64.0	21.6	7.4	60.4	56.7	56.7	95.9	61.9	43.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.9	36.0	20.2	64.0	21.6	7.4	60.4	56.7	56.7	95.9	61.9	43.6
LOS by Move:	E	D	C	E	C	A	E	E	E	F	E	D
DesignQueue:	7	30	4	19	19	1	11	21	21	6	9	21

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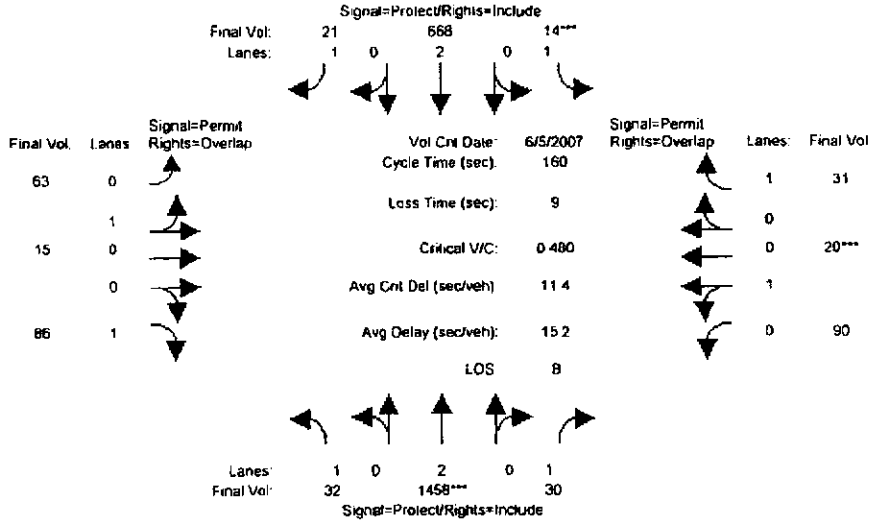
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3229: The Alameda / Newhall St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 5 Jun 2007 << 7:45-8:45AM												
Base Vol:	32	1458	30	14	668	21	63	15	86	90	20	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1458	30	14	668	21	63	15	86	90	20	31
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	1458	30	14	668	21	63	15	86	90	20	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1458	30	14	668	21	63	15	86	90	20	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1458	30	14	668	21	63	15	86	90	20	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1458	30	14	668	21	63	15	86	90	20	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.81	0.19	1.00	0.82	0.18	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1454	346	1750	1473	327	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.38	0.02	0.01	0.18	0.01	0.04	0.04	0.05	0.06	0.06	0.02
Crit Moves:		****		****							****	
Green Time:	26.1	124	124.2	7.0	105	105.1	19.8	19.8	45.9	19.8	19.8	26.8
Volume/Cap:	0.11	0.49	0.02	0.18	0.27	0.02	0.35	0.35	0.17	0.49	0.49	0.11
Delay/Veh:	57.2	6.6	4.1	74.9	11.5	9.6	65.2	65.2	42.9	67.2	67.2	56.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.2	6.6	4.1	74.9	11.5	9.6	65.2	65.2	42.9	67.2	67.2	56.6
LOS by Move:	E	A	A	E	B	A	E	E	D	E	E	E
DesignQueue:	3	16	1	1	11	1	6	6	6	9	9	3

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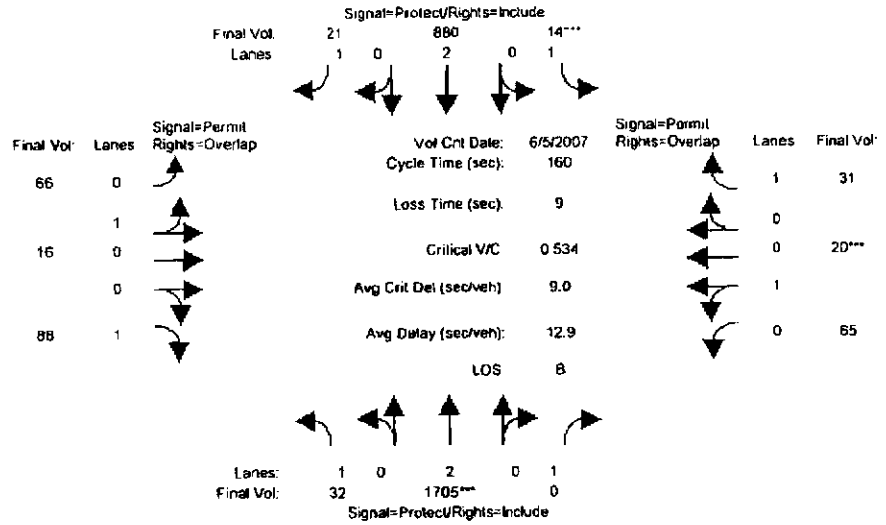
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #3229. The Alameda / Newhall St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 5 Jun 2007 << 7:45-8:45AM												
Base Vol:	32	1458	30	14	668	21	63	15	86	90	20	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1458	30	14	668	21	63	15	86	90	20	31
Added Vol:	0	63	0	0	16	0	0	0	0	0	0	0
ATI+SC+Robs:	0	184	-57	0	196	0	3	1	2	-25	0	0
Initial Fut:	32	1705	-27	14	880	21	66	16	88	65	20	31
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1705	0	14	880	21	66	16	88	65	20	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1705	0	14	880	21	66	16	88	65	20	31
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1705	0	14	880	21	66	16	88	65	20	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.80	0.20	1.00	0.76	0.24	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1449	351	1750	1376	424	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.45	0.00	0.01	0.23	0.01	0.05	0.05	0.05	0.05	0.05	0.02
Crit Moves:		****		****							****	
Green Time:	21.8	130	0.0	7.0	115	115.5	13.7	13.7	35.5	13.7	13.7	20.7
Volume/Cap:	0.13	0.55	0.00	0.18	0.32	0.02	0.53	0.53	0.23	0.55	0.55	0.14
Delay/Veh:	61.0	5.2	0.0	74.9	8.1	6.3	73.6	73.6	51.3	74.4	74.4	62.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.0	5.2	0.0	74.9	8.1	6.3	73.6	73.6	51.3	74.4	74.4	62.0
LOS by Move:	E	A	A	E	A	A	E	E	D	E	E	E
DesignQueue:	3	16	0	1	11	1	7	7	7	7	7	3

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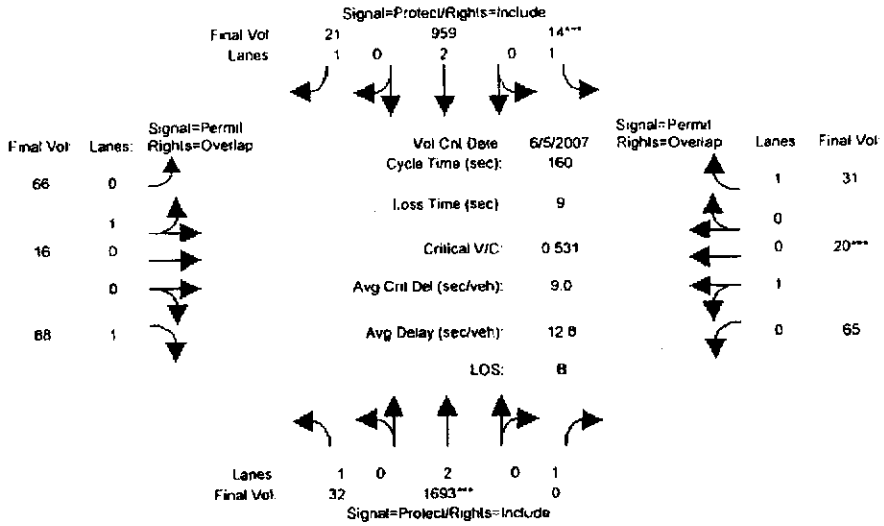
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project AM

Intersection #3229: The Alameda / Newhall St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 5 Jun 2007 << 7:45-8:45AM												
Base Vol:	32	1458	30	14	668	21	63	15	86	90	20	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	1458	30	14	668	21	63	15	86	90	20	31
Added Vol:	0	51	0	0	95	0	0	0	0	0	0	0
ATI+SC+Robs:	0	184	-57	0	196	0	3	1	2	-25	0	0
Initial Fut:	32	1693	-27	14	959	21	66	16	88	65	20	31
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	1693	0	14	959	21	66	16	88	65	20	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	1693	0	14	959	21	66	16	88	65	20	31
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	1693	0	14	959	21	66	16	88	65	20	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.80	0.20	1.00	0.76	0.24	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1449	351	1750	1376	424	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.45	0.00	0.01	0.25	0.01	0.05	0.05	0.05	0.05	0.05	0.02
Crit Moves:		****		****							****	
Green Time:	20.3	130	0.0	7.0	117	116.9	13.8	13.8	34.1	13.8	13.8	20.8
Volume/Cap:	0.14	0.55	0.00	0.18	0.35	0.02	0.53	0.53	0.24	0.55	0.55	0.14
Delay/Veh:	62.5	5.2	0.0	74.9	7.8	5.9	73.4	73.4	52.5	74.2	74.2	61.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.5	5.2	0.0	74.9	7.8	5.9	73.4	73.4	52.5	74.2	74.2	61.9
LOS by Move:	E	A	A	E	A	A	E	E	D	E	E	E
DesignQueue:	3	15	0	1	12	1	7	7	7	7	7	3

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Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Summary Scenario Comparison Report (With Average Critical Delay)
Future Volume Alternative

Intersection		Existing PM				Background PM				Project PM						Future PM			
		LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)	LOS	Avg Del (sec)	Crit V/C	Crit V/C Change	Avg Crit Del (sec)	Avg Crit Del Change	LOS	Avg Del (sec)	Crit V/C	Avg Crit Del (sec)
#303	El Camino Real / Benton St	C	20.6	0.413	20.4	C	22.7	0.546	24.1	C	22.7	0.552	+ 0.006	24.0	- 0.1	C	22.8	0.572	24.2
#604	El Camino Real / Campbell Av	C	24.6	0.380	23.3	C	24.9	0.468	24.3	C	24.5	0.462	- 0.007	23.7	- 0.5	C	24.7	0.480	24.1
#1202	ECR/Lafayette St 1202	D	44.4	0.751	44.6	D	48.8	0.827	51.9	D	48.8	0.828	- 0.001	51.9	- 0.1	D	50.4	0.863	54.7
#1213	El Camino Real / The Alameda	C	22.6	0.602	26.3	C	24.8	0.702	30.4	C	24.4	0.698	- 0.003	30.1	- 0.2	C	26.0	0.728	32.9
#3046	I-880 / The Alameda (N)	B	14.3	0.526	14.0	B	15.8	0.556	16.3	B	17.1	0.576	+ 0.019	18.1	+ 1.8	B	17.4	0.601	18.5
#3047	I-880 / The Alameda (S)	B	18.8	0.520	19.3	B	19.1	0.526	19.3	B	19.4	0.525	- 0.001	19.3	+ 0.0	B	19.7	0.551	19.8
#3057	The Alameda / Hedding St	C	33.7	0.588	31.9	D	35.6	0.648	40.5	D	35.6	0.653	+ 0.005	40.4	- 0.0	D	36.3	0.682	41.4
#3229	The Alameda / Newhall St	B	13.2	0.516	12.7	B	10.4	0.572	9.3	B	10.3	0.569	- 0.003	9.3	- 0.0	B	10.5	0.594	9.7

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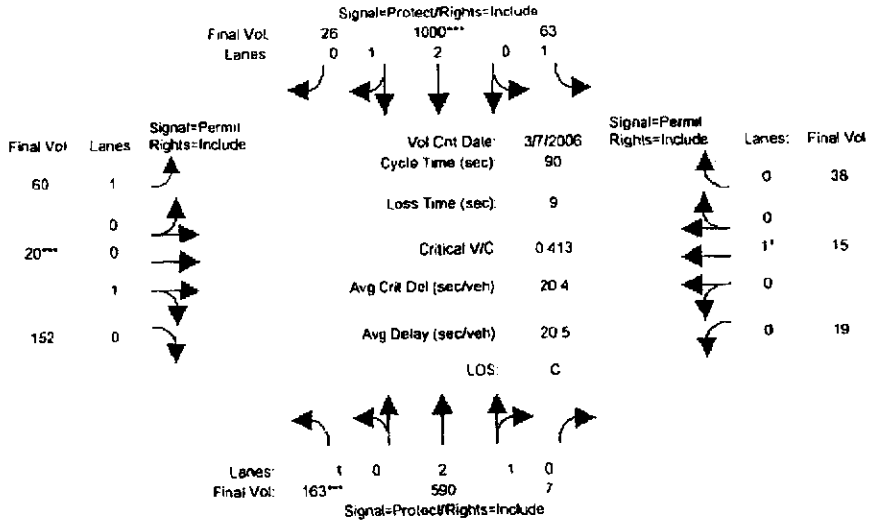
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #303: El Camino Real / Benton St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 7 Mar 2006 << 5:00-6:00PM												
Base Vol:	163	590	7	63	1000	26	60	20	152	19	15	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	163	590	7	63	1000	26	60	20	152	19	15	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	163	590	7	63	1000	26	60	20	152	19	15	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	163	590	7	63	1000	26	60	20	152	19	15	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	590	7	63	1000	26	60	20	152	19	15	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	163	590	7	63	1000	26	60	20	152	19	15	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.92	0.92
Lanes:	1.00	2.96	0.04	1.00	2.92	0.08	1.00	0.12	0.88	0.26	0.21	0.53
Final Sat.:	1750	5534	66	1750	5458	142	1750	209	1591	462	365	924
Capacity Analysis Module:												
Vol/Sat:	0.09	0.11	0.11	0.04	0.18	0.18	0.03	0.10	0.10	0.04	0.04	0.04
Crit Moves:	****				****			****				
Green Time:	20.3	35.4	35.4	24.8	39.9	39.9	20.8	20.8	20.8	20.8	20.8	20.8
Volume/Cap:	0.41	0.27	0.27	0.13	0.41	0.41	0.15	0.41	0.41	0.18	0.18	0.18
Delay/Veh:	30.5	18.6	18.6	24.6	17.2	17.2	27.7	30.1	30.1	27.9	27.9	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.5	18.6	18.6	24.6	17.2	17.2	27.7	30.1	30.1	27.9	27.9	27.9
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
DesignQueue:	7	6	6	2	10	10	3	7	7	3	3	3

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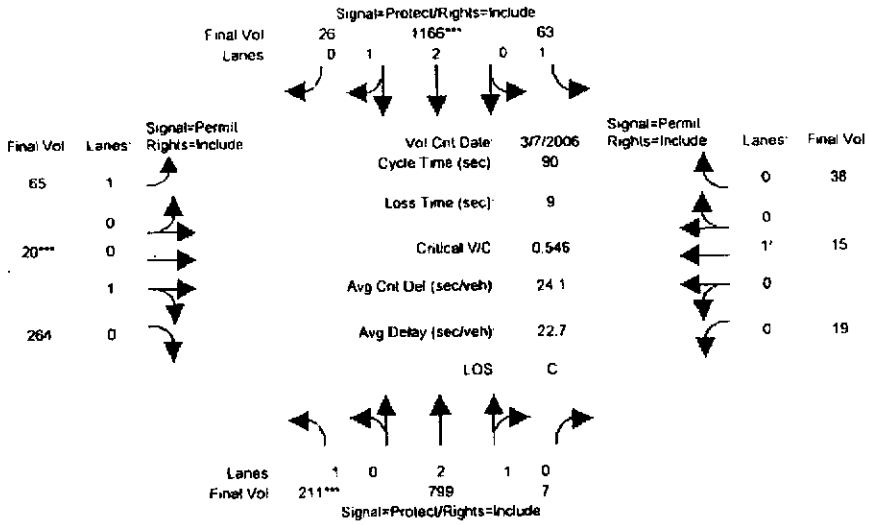
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #303: El Camino Real / Benton St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 7 Mar 2006 << 5:00-6:00PM												
Base Vol:	163	590	7	63	1000	26	60	20	152	19	15	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	163	590	7	63	1000	26	60	20	152	19	15	38
Added Vol:	0	21	0	0	2	0	0	0	0	0	0	0
ATI+SC+Robs:	48	188	0	0	164	0	5	0	112	0	0	0
Initial Fut:	211	799	7	63	1166	26	65	20	264	19	15	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	211	799	7	63	1166	26	65	20	264	19	15	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	799	7	63	1166	26	65	20	264	19	15	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	211	799	7	63	1166	26	65	20	264	19	15	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.92	0.92
Lanes:	1.00	2.97	0.03	1.00	2.93	0.07	1.00	0.07	0.93	0.26	0.21	0.53
Final Sat.:	1750	5551	49	1750	5478	122	1750	127	1673	462	365	924
Capacity Analysis Module:												
Vol/Sat:	0.12	0.14	0.14	0.04	0.21	0.21	0.04	0.16	0.16	0.04	0.04	0.04
Crit Moves:	****				****			****				
Green Time:	19.9	35.7	35.7	19.3	35.1	35.1	26.0	26.0	26.0	26.0	26.0	26.0
Volume/Cap:	0.55	0.36	0.36	0.17	0.55	0.55	0.13	0.55	0.55	0.14	0.14	0.14
Delay/Veh:	32.7	19.2	19.2	29.0	21.6	21.6	23.7	28.2	28.2	23.8	23.8	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	19.2	19.2	29.0	21.6	21.6	23.7	28.2	28.2	23.8	23.8	23.8
LOS by Move:	C	B	B	C	C	C	C	C	C	C	C	C
DesignQueue:	9	9	9	3	13	13	3	11	11	3	3	3

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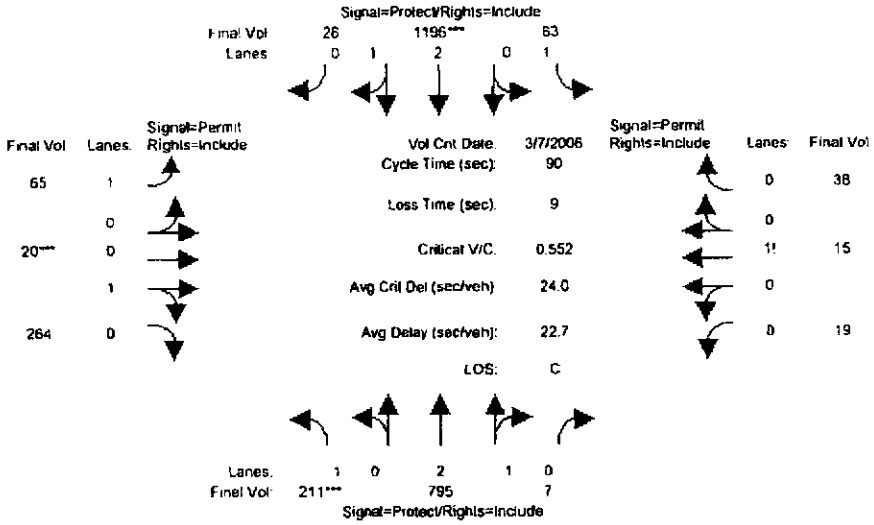
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #303: El Camino Real / Benton St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 7 Mar 2006 << 5:00-6:00PM												
Base Vol:	163	590	7	63	1000	26	60	20	152	19	15	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	163	590	7	63	1000	26	60	20	152	19	15	38
Added Vol:	0	17	0	0	32	0	0	0	0	0	0	0
ATI+SC+Robs:	48	188	0	0	164	0	5	0	112	0	0	0
Initial Fut:	211	795	7	63	1196	26	65	20	264	19	15	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	211	795	7	63	1196	26	65	20	264	19	15	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	795	7	63	1196	26	65	20	264	19	15	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	211	795	7	63	1196	26	65	20	264	19	15	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.92	0.95	0.95	0.92	0.92	0.92
Lanes:	1.00	2.97	0.03	1.00	2.93	0.07	1.00	0.07	0.93	0.26	0.21	0.53
Final Sat.:	1750	5551	49	1750	5481	119	1750	127	1673	462	365	924
Capacity Analysis Module:												
Vol/Sat:	0.12	0.14	0.14	0.04	0.22	0.22	0.04	0.16	0.16	0.04	0.04	0.04
Crit Moves:	****				****			****				
Green Time:	19.7	35.8	35.8	19.4	35.6	35.6	25.7	25.7	25.7	25.7	25.7	25.7
Volume/Cap:	0.55	0.36	0.36	0.17	0.55	0.55	0.13	0.55	0.55	0.14	0.14	0.14
Delay/Veh:	33.0	19.1	19.1	28.9	21.3	21.3	23.9	28.5	28.5	24.1	24.1	24.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.0	19.1	19.1	28.9	21.3	21.3	23.9	28.5	28.5	24.1	24.1	24.1
LOS by Move:	C	B	B	C	C	C	C	C	C	C	C	C
DesignQueue:	9	8	8	3	13	13	3	11	11	3	3	3

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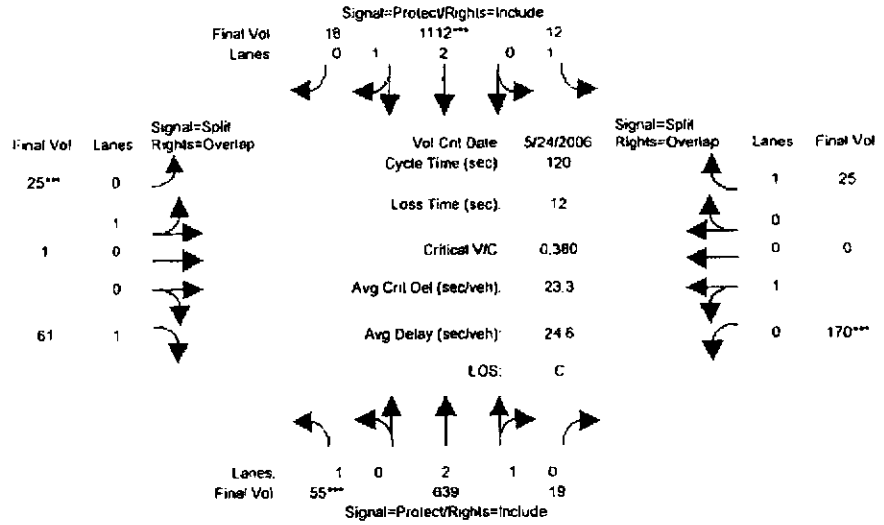
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #604: El Camino Real / Campbell Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 24 May 2006 << 4:45-5:45PM												
Base Vol:	55	639	19	12	1112	18	25	1	61	170	0	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	639	19	12	1112	18	25	1	61	170	0	25
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	639	19	12	1112	18	25	1	61	170	0	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	639	19	12	1112	18	25	1	61	170	0	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	639	19	12	1112	18	25	1	61	170	0	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	639	19	12	1112	18	25	1	61	170	0	25
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.91	0.09	1.00	2.95	0.05	0.96	0.04	1.00	1.00	0.00	1.00
Final Sat.:	1750	5438	162	1750	5511	89	1731	69	1750	1800	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.12	0.12	0.01	0.20	0.20	0.01	0.01	0.03	0.09	0.00	0.01
Crit Moves:	****				****		****			****		
Green Time:	9.4	46.6	46.6	23.1	60.4	60.4	10.0	10.0	19.4	28.2	0.0	51.4
Volume/Cap:	0.40	0.30	0.30	0.04	0.40	0.40	0.17	0.17	0.22	0.40	0.00	0.03
Delay/Veh:	54.5	25.5	25.5	39.4	18.7	18.7	51.7	51.7	44.1	39.4	0.0	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.5	25.5	25.5	39.4	18.7	18.7	51.7	51.7	44.1	39.4	0.0	19.9
LOS by Move:	D	C	C	D	B	B	D	D	D	D	A	B
DesignQueue:	4	9	9	1	13	13	2	2	4	9	0	1

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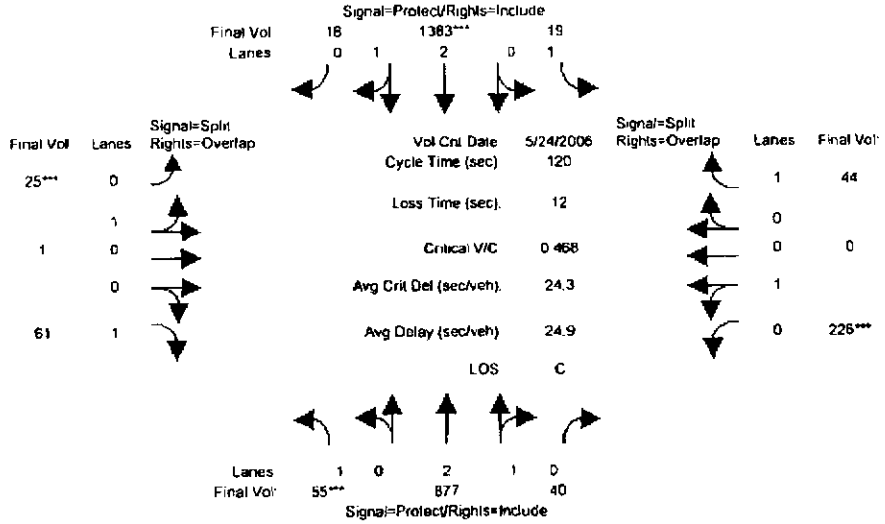
Sobrato Campbell Avenue Residential Development
Campbell Avenue San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

ntersection #604 El Camino Real / Campbell Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 24 May 2006 << 4:45-5:45PM												
Base Vol:	55	639	19	12	1112	18	25	1	61	170	0	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	639	19	12	1112	18	25	1	61	170	0	25
Added Vol:	0	0	7	2	0	0	0	0	0	62	0	21
ATI+SC+Robs:	0	238	14	5	271	0	0	0	0	-6	0	-2
Initial Fut:	55	877	40	19	1383	18	25	1	61	226	0	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	877	40	19	1383	18	25	1	61	226	0	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	877	40	19	1383	18	25	1	61	226	0	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	877	40	19	1383	18	25	1	61	226	0	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.86	0.14	1.00	2.96	0.04	0.96	0.04	1.00	1.00	0.00	1.00
Final Sat.:	1750	5355	244	1750	5528	72	1731	69	1750	1800	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.16	0.01	0.25	0.25	0.01	0.01	0.03	0.13	0.00	0.03
Crit Moves:	****				****		****			****		
Green Time:	7.6	50.0	50.0	17.8	60.2	60.2	10.0	10.0	17.6	30.2	0.0	48.0
Volume/Cap:	0.50	0.39	0.39	0.07	0.50	0.50	0.17	0.17	0.24	0.50	0.00	0.06
Delay/Veh:	57.9	24.5	24.5	44.1	20.0	20.0	51.7	51.7	45.8	39.3	0.0	22.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.9	24.5	24.5	44.1	20.0	20.0	51.7	51.7	45.8	39.3	0.0	22.2
LOS by Move:	E	C	C	D	C	C	D	D	D	D	A	C
DesignQueue:	4	13	13	1	17	17	2	2	4	12	0	2

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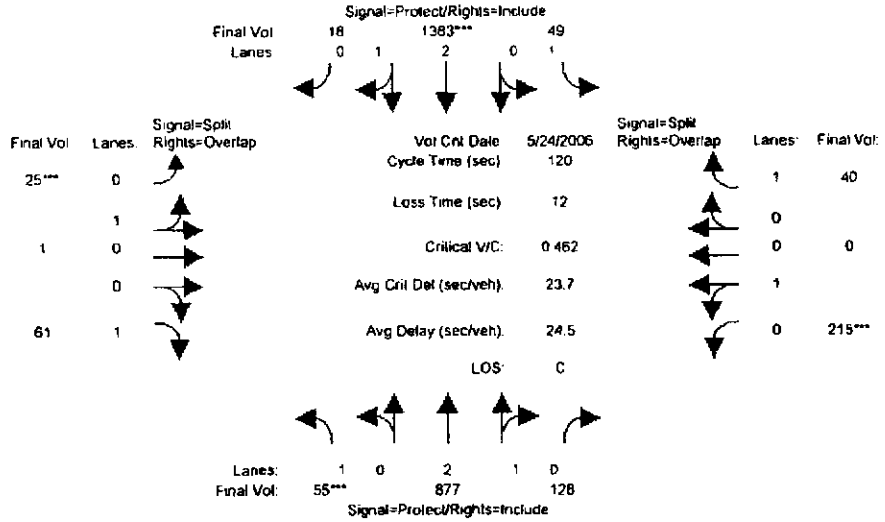
Sobrato Campbell Avenue Residential Development
Campbell Avenue San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #604: El Camino Real / Campbell Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 24 May 2006 << 4:45-5:45PM												
Base Vol:	55	639	19	12	1112	18	25	1	61	170	0	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	639	19	12	1112	18	25	1	61	170	0	25
Added Vol:	0	0	95	32	0	0	0	0	0	51	0	17
ATI+SC+Robs:	0	238	14	5	271	0	0	0	0	-6	0	-2
Initial Fut:	55	877	128	49	1383	18	25	1	61	215	0	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	877	128	49	1383	18	25	1	61	215	0	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	877	128	49	1383	18	25	1	61	215	0	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	877	128	49	1383	18	25	1	61	215	0	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.95	0.92	0.98	0.95	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.60	0.40	1.00	2.96	0.04	0.96	0.04	1.00	1.00	0.00	1.00
Final Sat.:	1750	4886	713	1750	5528	72	1731	69	1750	1800	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.18	0.18	0.03	0.25	0.25	0.01	0.01	0.03	0.12	0.00	0.02
Crit Moves:	****				****		****			****		
Green Time:	7.7	51.9	51.9	16.9	61.1	61.1	10.0	10.0	17.7	29.2	0.0	46.1
Volume/Cap:	0.49	0.41	0.41	0.20	0.49	0.49	0.17	0.17	0.24	0.49	0.00	0.06
Delay/Veh:	57.6	23.6	23.6	46.0	19.4	19.4	51.7	51.7	45.7	39.9	0.0	23.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.6	23.6	23.6	46.0	19.4	19.4	51.7	51.7	45.7	39.9	0.0	23.3
LOS by Move:	E	C	C	D	B	B	D	D	D	D	A	C
DesignQueue:	4	13	13	3	16	16	2	2	4	12	0	2

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Campbell Avenue, San Jose, CA
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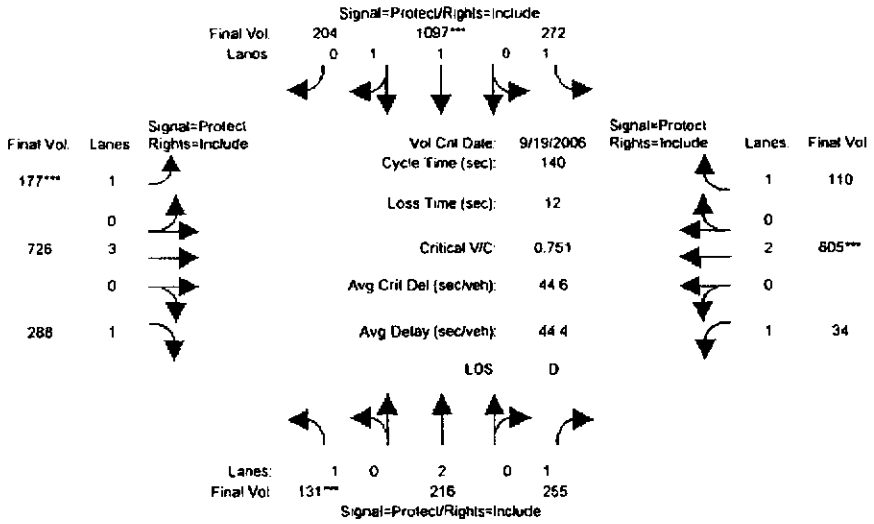
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1202: ECR/Lafayette St 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 19 Sep 2006 << PM												
Base Vol:	131	216	255	272	1097	204	177	726	288	34	605	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	131	216	255	272	1097	204	177	726	288	34	605	110
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	131	216	255	272	1097	204	177	726	288	34	605	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	131	216	255	272	1097	204	177	726	288	34	605	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	216	255	272	1097	204	177	726	288	34	605	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	131	216	255	272	1097	204	177	726	288	34	605	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.68	0.32	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3119	580	1750	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.06	0.15	0.16	0.35	0.35	0.10	0.13	0.16	0.02	0.16	0.06
Crit Moves:	****				****		****				****	
Green Time:	13.9	38.5	38.5	41.0	65.5	65.5	18.8	37.2	37.2	11.3	29.7	29.7
Volume/Cap:	0.75	0.21	0.53	0.53	0.75	0.75	0.75	0.48	0.62	0.24	0.75	0.30
Delay/Veh:	77.9	39.1	44.2	42.5	32.4	32.4	71.0	43.5	47.7	61.2	55.7	46.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.9	39.1	44.2	42.5	32.4	32.4	71.0	43.5	47.7	61.2	55.7	46.8
LOS by Move:	E	D	D	D	C	C	E	D	D	E	E	D
DesignQueue:	10	6	16	17	30	30	13	14	18	3	19	7

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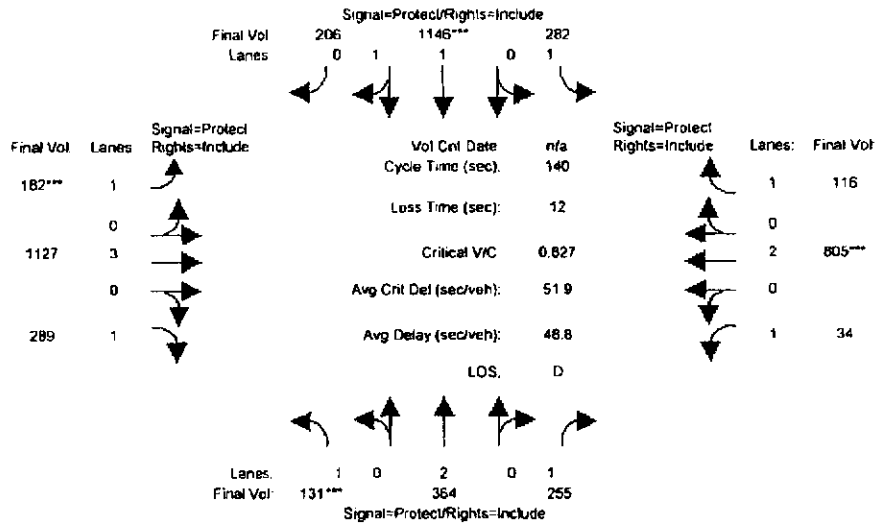
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1202: ECR/Lafayette St. 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: PM												
Base Vol:	131	216	255	272	1097	204	177	726	288	34	605	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	131	216	255	272	1097	204	177	726	288	34	605	110
Added Vol:	0	0	0	0	0	0	0	2	0	0	17	4
ATI+SC+Robs:	0	148	0	10	49	2	5	399	1	0	183	2
Initial Fut:	131	364	255	282	1146	206	182	1127	289	34	805	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	131	364	255	282	1146	206	182	1127	289	34	805	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	364	255	282	1146	206	182	1127	289	34	805	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	131	364	255	282	1146	206	182	1127	289	34	805	116
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.69	0.31	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3136	564	1750	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.10	0.15	0.16	0.37	0.37	0.10	0.20	0.17	0.02	0.21	0.07
Crit Moves:	****				****		****				****	
Green Time:	12.7	35.4	35.4	39.1	61.9	61.9	17.6	42.7	42.7	10.8	35.9	35.9
Volume/Cap:	0.83	0.38	0.58	0.58	0.83	0.83	0.83	0.65	0.54	0.25	0.83	0.26
Delay/Veh:	99.5	44.4	51.1	48.2	39.3	39.3	88.3	44.1	44.4	65.2	57.2	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	99.5	44.4	51.1	48.2	39.3	39.3	88.3	44.1	44.4	65.2	57.2	42.9
LOS by Move:	F	D	D	D	D	D	F	D	D	E	E	D
DesignQueue:	10	11	17	18	33	33	14	21	18	3	24	7

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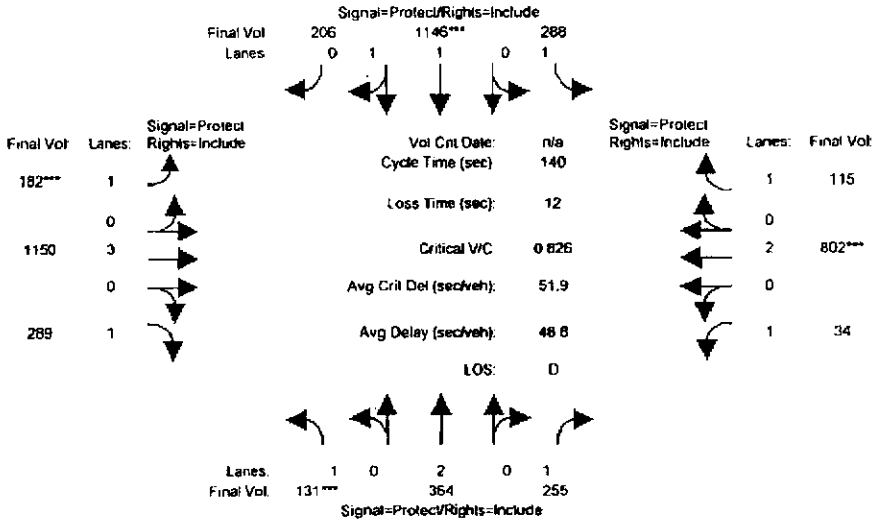
Project PM

Intersection #1202: ECR/Lafayette St. 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: PM												
Base Vol:	131	216	255	272	1097	204	177	726	288	34	605	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	131	216	255	272	1097	204	177	726	288	34	605	110
Added Vol:	0	0	0	6	0	0	0	25	0	0	14	3
ATI+SC+Robs:	0	148	0	10	49	2	5	399	1	0	183	2
Initial Fut:	131	364	255	288	1146	206	182	1150	289	34	802	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	131	364	255	288	1146	206	182	1150	289	34	802	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	364	255	288	1146	206	182	1150	289	34	802	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	131	364	255	288	1146	206	182	1150	289	34	802	115
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.69	0.31	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3136	564	1750	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.10	0.15	0.16	0.37	0.37	0.10	0.20	0.17	0.02	0.21	0.07
Crit Moves:	****				****		****				****	
Green Time:	12.7	35.0	35.0	39.6	61.9	61.9	17.6	42.8	42.8	10.6	35.8	35.8
Volume/Cap:	0.83	0.38	0.58	0.58	0.83	0.83	0.83	0.66	0.54	0.26	0.83	0.26
Delay/Veh:	99.3	44.7	51.6	48.1	39.2	39.2	88.2	44.3	44.3	65.6	57.2	42.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	99.3	44.7	51.6	48.1	39.2	39.2	88.2	44.3	44.3	65.6	57.2	42.9
LOS by Move:	F	D	D	D	D	D	F	D	D	E	E	D
DesignQueue:	10	11	17	18	33	33	14	22	18	3	24	7

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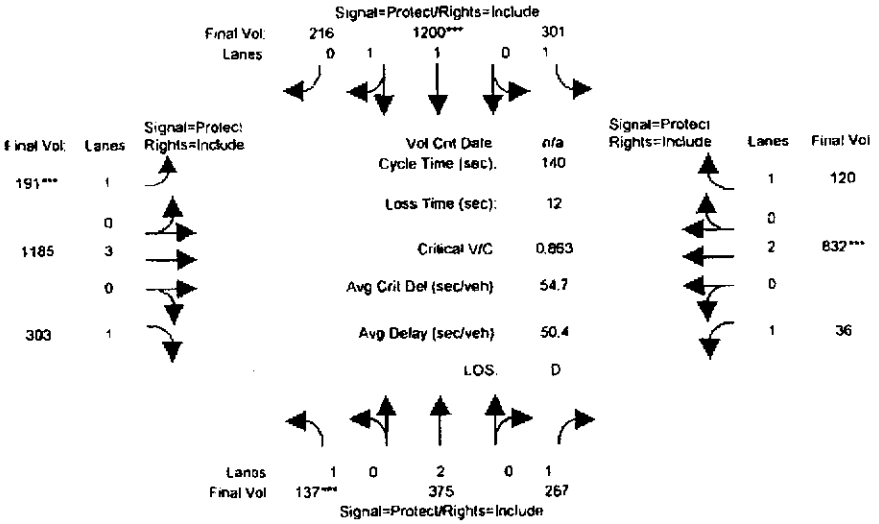
Future PM

Intersection #1202 ECR/Lafayette St. 1202



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	137	375	267	301	1200	216	191	1185	303	36	832	120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	137	375	267	301	1200	216	191	1185	303	36	832	120
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	137	375	267	301	1200	216	191	1185	303	36	832	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	137	375	267	301	1200	216	191	1185	303	36	832	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	137	375	267	301	1200	216	191	1185	303	36	832	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	137	375	267	301	1200	216	191	1185	303	36	832	120
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	1.69	0.31	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3135	564	1750	5700	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.10	0.15	0.17	0.38	0.38	0.11	0.21	0.17	0.02	0.22	0.07
Crit Moves:	****				****		****				****	
Green Time:	12.7	35.2	35.2	39.6	62.1	62.1	17.7	42.9	42.9	10.3	35.5	35.5
Volume/Cap:	0.86	0.39	0.61	0.61	0.86	0.86	0.86	0.68	0.57	0.28	0.86	0.27
Delay/Veh:	105.2	44.8	52.5	48.9	41.4	41.4	93.3	44.7	45.0	66.6	60.0	43.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	105.2	44.8	52.5	48.9	41.4	41.4	93.3	44.7	45.0	66.6	60.0	43.4
LOS by Move:	F	D	D	D	D	D	F	D	D	E	E	D
DesignQueue:	11	11	17	19	34	34	14	22	18	3	25	8

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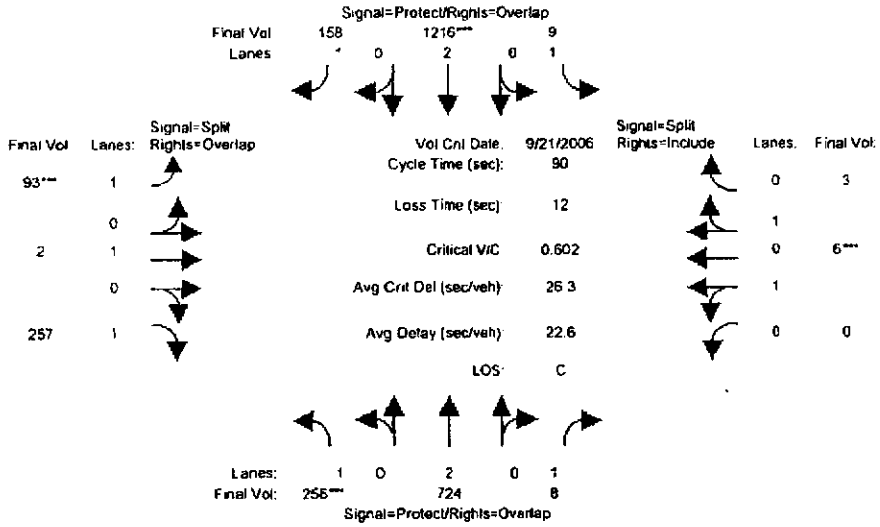
Existing PM

Intersection #1213: El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 21 Sep 2006 << 5:00 - 6:00PM												
Base Vol:	256	724	8	9	1216	158	93	2	257	0	6	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	256	724	8	9	1216	158	93	2	257	0	6	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	256	724	8	9	1216	158	93	2	257	0	6	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	256	724	8	9	1216	158	93	2	257	0	6	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	256	724	8	9	1216	158	93	2	257	0	6	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	256	724	8	9	1216	158	93	2	257	0	6	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.33	0.67
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2400	1200
Capacity Analysis Module:												
Vol/Sat:	0.15	0.19	0.00	0.01	0.32	0.09	0.05	0.00	0.15	0.00	0.00	0.00
Crit Moves:	****				****		****				****	
Green Time:	18.2	41.2	51.2	16.8	39.8	49.8	10.0	10.0	28.2	0.0	10.0	10.0
Volume/Cap:	0.72	0.42	0.01	0.03	0.72	0.16	0.48	0.01	0.47	0.00	0.02	0.02
Delay/Veh:	40.8	16.5	8.4	29.9	22.2	9.9	39.4	35.6	25.5	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.8	16.5	8.4	29.9	22.2	9.9	39.4	35.6	25.5	0.0	35.7	35.7
LOS by Move:	D	B	A	C	C	A	D	D	C	A	D	D
DesignQueue:	11	10	0	0	18	4	5	0	10	0	0	0

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Campbell Avenue San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
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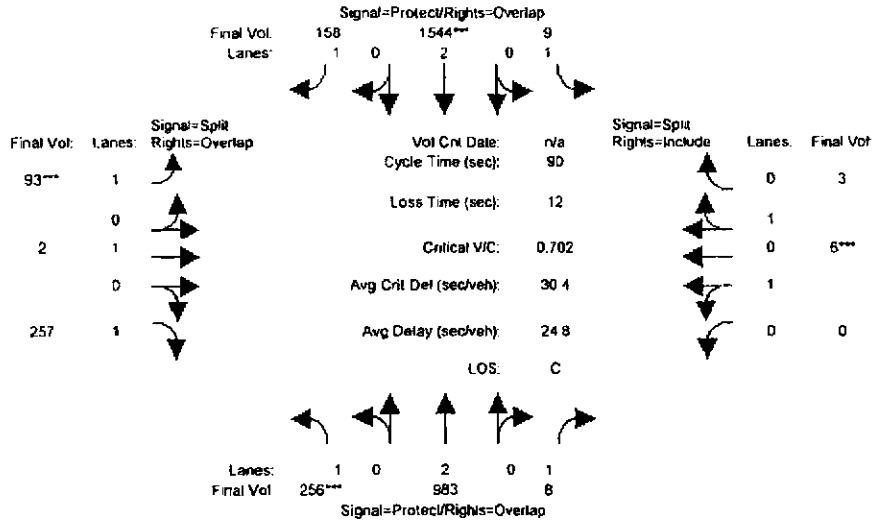
Background PM

Intersection #1213 El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: 5:00 - 6:00PM												
Base Vol:	256	724	8	9	1216	158	93	2	257	0	6	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	256	724	8	9	1216	158	93	2	257	0	6	3
Added Vol:	0	7	0	0	62	0	0	0	0	0	0	0
ATI+SC+Robs:	0	252	0	0	266	0	0	0	0	0	0	0
Initial Fut:	256	983	8	9	1544	158	93	2	257	0	6	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	256	983	8	9	1544	158	93	2	257	0	6	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	256	983	8	9	1544	158	93	2	257	0	6	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	256	983	8	9	1544	158	93	2	257	0	6	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.33	0.67
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2400	1200
Capacity Analysis Module:												
Vol/Sat:	0.15	0.26	0.00	0.01	0.41	0.09	0.05	0.00	0.15	0.00	0.00	0.00
Crit Moves:	****				****		****				****	
Green Time:	15.4	44.6	54.6	13.4	42.6	52.6	10.0	10.0	25.4	0.0	10.0	10.0
Volume/Cap:	0.86	0.52	0.01	0.03	0.86	0.15	0.48	0.01	0.52	0.00	0.02	0.02
Delay/Veh:	57.3	15.7	7.0	32.8	25.3	8.6	39.4	35.6	28.2	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.3	15.7	7.0	32.8	25.3	8.6	39.4	35.6	28.2	0.0	35.7	35.7
LOS by Move:	E	B	A	C	C	A	D	D	C	A	D	D
DesignQueue:	12	13	0	0	22	4	5	0	10	0	0	0

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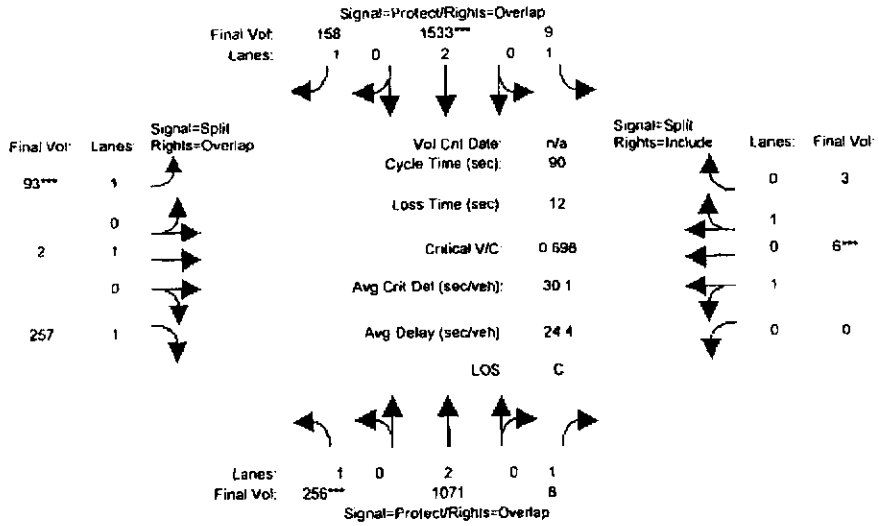
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #1213: El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: 5:00 - 6:00PM												
Base Vol:	256	724	8	9	1216	158	93	2	257	0	6	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	256	724	8	9	1216	158	93	2	257	0	6	3
Added Vol:	0	95	0	0	51	0	0	0	0	0	0	0
ATI+SC+Robs:	0	252	0	0	266	0	0	0	0	0	0	0
Initial Fut:	256	1071	8	9	1533	158	93	2	257	0	6	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	256	1071	8	9	1533	158	93	2	257	0	6	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	256	1071	8	9	1533	158	93	2	257	0	6	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	256	1071	8	9	1533	158	93	2	257	0	6	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.33	0.67
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2400	1200
Capacity Analysis Module:												
Vol/Sat:	0.15	0.28	0.00	0.01	0.40	0.09	0.05	0.00	0.15	0.00	0.00	0.00
Crit Moves:	****				****		****				****	
Green Time:	15.4	45.5	55.5	12.5	42.6	52.6	10.0	10.0	25.4	0.0	10.0	10.0
Volume/Cap:	0.85	0.56	0.01	0.04	0.85	0.15	0.48	0.01	0.52	0.00	0.02	0.02
Delay/Veh:	56.5	15.7	6.7	33.6	25.1	8.6	39.4	35.6	28.1	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.5	15.7	6.7	33.6	25.1	8.6	39.4	35.6	28.1	0.0	35.7	35.7
LOS by Move:	E	B	A	C	C	A	D	D	C	A	D	D
DesignQueue:	12	14	0	0	22	4	5	0	10	0	0	0

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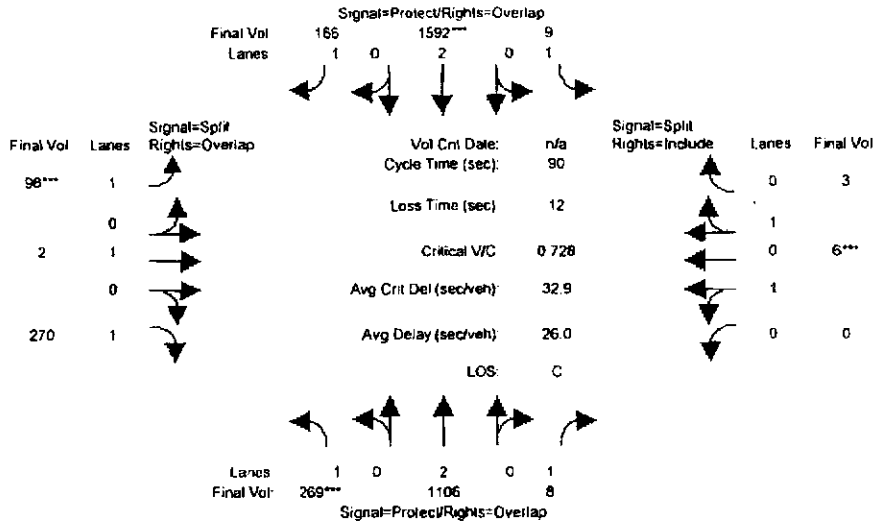
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future PM

ntersection #1213: El Camino Real / The Alameda



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module:												
Base Vol:	269	1106	8	9	1592	166	98	2	270	0	6	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	269	1106	8	9	1592	166	98	2	270	0	6	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	269	1106	8	9	1592	166	98	2	270	0	6	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	269	1106	8	9	1592	166	98	2	270	0	6	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	269	1106	8	9	1592	166	98	2	270	0	6	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	269	1106	8	9	1592	166	98	2	270	0	6	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.00	1.33	0.67
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	1750	0	2400	1200
Capacity Analysis Module:												
Vol/Sat:	0.15	0.29	0.00	0.01	0.42	0.09	0.06	0.00	0.15	0.00	0.00	0.00
Crit Moves:	****				****		****				****	
Green Time:	15.6	45.8	55.8	12.2	42.4	52.4	10.0	10.0	25.6	0.0	10.0	10.0
Volume/Cap:	0.89	0.57	0.01	0.04	0.89	0.16	0.50	0.01	0.54	0.00	0.02	0.02
Delay/Veh:	62.1	15.7	6.5	33.8	27.5	8.7	39.8	35.6	28.5	0.0	35.7	35.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.1	15.7	6.5	33.8	27.5	8.7	39.8	35.6	28.5	0.0	35.7	35.7
LOS by Move:	E	B	A	C	C	A	D	D	C	A	D	D
DesignQueue:	12	14	0	0	23	4	5	0	11	0	0	0

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Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
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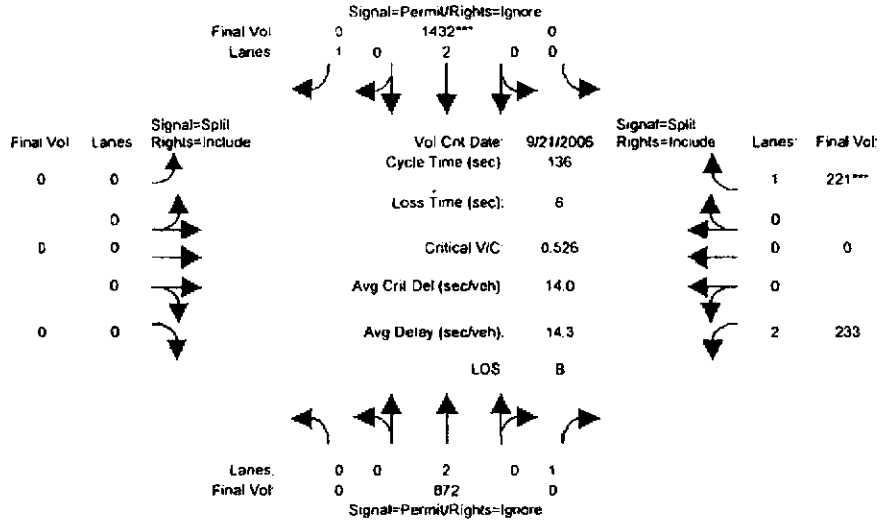
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

ntersection #3046. I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module: >> Count Date: 21 Sep 2006 << 5:30-6:30PM												
Base Vol:	0	872	349	0	1432	296	0	0	0	233	0	221
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	872	349	0	1432	296	0	0	0	233	0	221
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	872	349	0	1432	296	0	0	0	233	0	221
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	872	0	0	1432	0	0	0	0	233	0	221
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	872	0	0	1432	0	0	0	0	233	0	221
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	872	0	0	1432	0	0	0	0	233	0	221
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.07	0.00	0.13
Crit Moves:					****							****
Green Time:	0.0	97.4	0.0	0.0	97.4	0.0	0.0	0.0	0.0	32.6	0.0	32.6
Volume/Cap:	0.00	0.32	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.31	0.00	0.53
Delay/Veh:	0.0	7.2	0.0	0.0	9.0	0.0	0.0	0.0	0.0	42.7	0.0	46.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	7.2	0.0	0.0	9.0	0.0	0.0	0.0	0.0	42.7	0.0	46.2
LOS by Move:	A	A	A	A	A	A	A	A	A	D	A	D
DesignQueue:	0	10	0	0	17	0	0	0	0	8	0	14

Sobrato Campbell Avenue Residential Development
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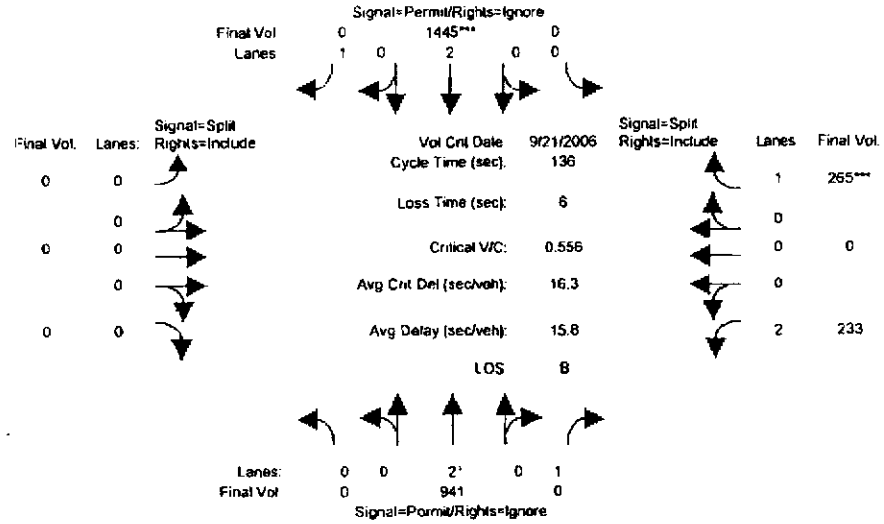
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #3046: I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module: >> Count Date: 21 Sep 2006 << 5:30-6:30PM												
Base Vol:	0	872	349	0	1432	296	0	0	0	233	0	221
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	872	349	0	1432	296	0	0	0	233	0	221
Added Vol:	0	4	0	0	37	25	0	0	0	0	0	3
ATI+SC+Robs:	0	65	0	0	-24	-17	0	0	0	0	0	41
Initial Fut:	0	941	349	0	1445	304	0	0	0	233	0	265
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	941	0	0	1445	0	0	0	0	233	0	265
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	941	0	0	1445	0	0	0	0	233	0	265
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	941	0	0	1445	0	0	0	0	233	0	265
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.07	0.00	0.15
Crit Moves:					****							****
Green Time:	0.0	93.0	0.0	0.0	93.0	0.0	0.0	0.0	0.0	37.0	0.0	37.0
Volume/Cap:	0.00	0.36	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.27	0.00	0.56
Delay/Veh:	0.0	9.1	0.0	0.0	11.3	0.0	0.0	0.0	0.0	39.1	0.0	43.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.1	0.0	0.0	11.3	0.0	0.0	0.0	0.0	39.1	0.0	43.9
LOS by Move:	A	A	A	A	B	A	A	A	A	D	A	D
DesignQueue:	0	12	0	0	19	0	0	0	0	8	0	16

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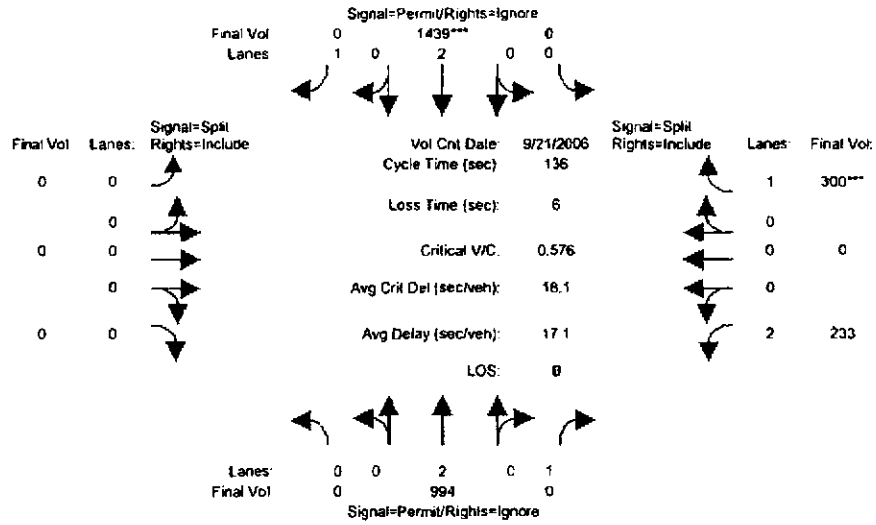
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #3046: I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module: >> Count Date: 21 Sep 2006 << 5:30-6:30PM												
Base Vol:	0	872	349	0	1432	296	0	0	0	233	0	221
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	872	349	0	1432	296	0	0	0	233	0	221
Added Vol:	0	57	0	0	31	20	0	0	0	0	0	38
ATI+SC+Robs:	0	65	0	0	-24	-17	0	0	0	0	0	41
Initial Fut:	0	994	349	0	1439	299	0	0	0	233	0	300
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	994	0	0	1439	0	0	0	0	233	0	300
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	994	0	0	1439	0	0	0	0	233	0	300
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	994	0	0	1439	0	0	0	0	233	0	300
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.07	0.00	0.17
Crit Moves:					****							****
Green Time:	0.0	89.5	0.0	0.0	89.5	0.0	0.0	0.0	0.0	40.5	0.0	40.5
Volume/Cap:	0.00	0.40	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.25	0.00	0.58
Delay/Veh:	0.0	10.9	0.0	0.0	13.1	0.0	0.0	0.0	0.0	36.3	0.0	42.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.9	0.0	0.0	13.1	0.0	0.0	0.0	0.0	36.3	0.0	42.0
LOS by Move:	A	B	A	A	B	A	A	A	A	D	A	D
DesignQueue:	0	14	0	0	20	0	0	0	0	8	0	18

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Sobrato Campbell Avenue Residential Development
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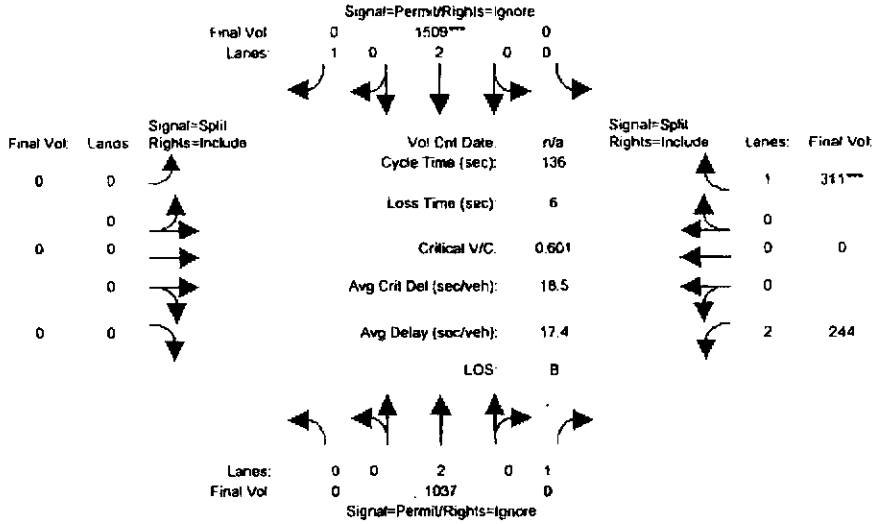
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future PM

Intersection #3046: I-880 / The Alameda (N)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Volume Module:												
Base Vol:	0	1037	366	0	1509	313	0	0	0	244	0	311
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1037	366	0	1509	313	0	0	0	244	0	311
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1037	366	0	1509	313	0	0	0	244	0	311
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1037	0	0	1509	0	0	0	0	244	0	311
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1037	0	0	1509	0	0	0	0	244	0	311
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1037	0	0	1509	0	0	0	0	244	0	311
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3800	1750	0	3800	1750	0	0	0	3150	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.08	0.00	0.18
Crit Moves:					****							****
Green Time:	0.0	89.8	0.0	0.0	89.8	0.0	0.0	0.0	0.0	40.2	0.0	40.2
Volume/Cap:	0.00	0.41	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.26	0.00	0.60
Delay/Veh:	0.0	10.9	0.0	0.0	13.4	0.0	0.0	0.0	0.0	36.7	0.0	43.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.9	0.0	0.0	13.4	0.0	0.0	0.0	0.0	36.7	0.0	43.0
LOS by Move:	A	B	A	A	B	A	A	A	A	D	A	D
DesignQueue:	0	14	0	0	21	0	0	0	0	8	0	19

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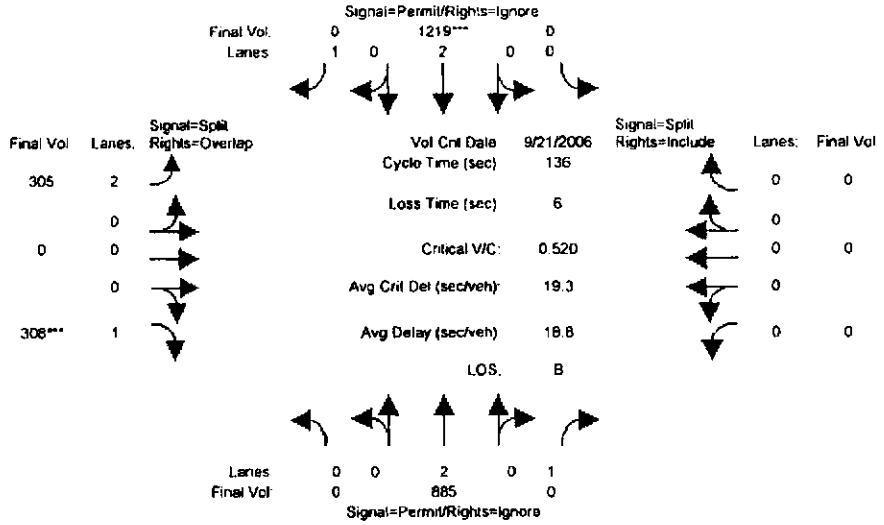
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3047. I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	10	0	10	0	0	0
Volume Module: >> Count Date: 21 Sep 2006 << 5:00-6:00PM												
Base Vol:	0	885	311	0	1219	494	305	0	308	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	885	311	0	1219	494	305	0	308	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	885	311	0	1219	494	305	0	308	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	885	0	0	1219	0	305	0	308	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	885	0	0	1219	0	305	0	308	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	885	0	0	1219	0	305	0	308	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.00	0.00	0.32	0.00	0.10	0.00	0.18	0.00	0.00	0.00
Crit Moves:					****				****			
Green Time:	0.0	83.9	0.0	0.0	83.9	0.0	46.1	0.0	46.1	0.0	0.0	0.0
Volume/Cap:	0.00	0.38	0.00	0.00	0.52	0.00	0.29	0.00	0.52	0.00	0.00	0.00
Delay/Veh:	0.0	13.1	0.0	0.0	14.9	0.0	33.1	0.0	36.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.1	0.0	0.0	14.9	0.0	33.1	0.0	36.9	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	13	0	0	19	0	9	0	17	0	0	0

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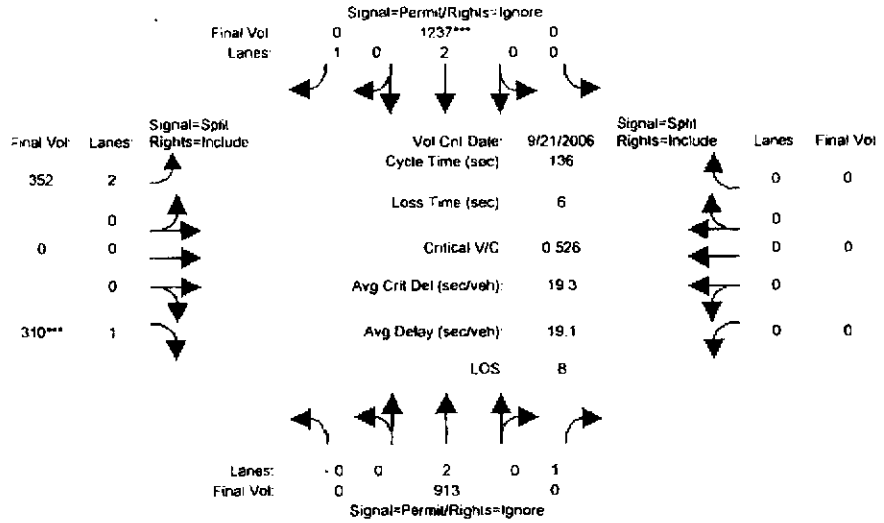
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #3047: I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	0	10	10	10	0	10	0	0	0
Volume Module: >> Count Date: 21 Sep 2006 << 5:00-6:00PM												
Base Vol:	0	885	311	0	1219	494	305	0	308	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	885	311	0	1219	494	305	0	308	0	0	0
Added Vol:	0	1	0	0	12	25	3	0	0	0	0	0
ATI+SC+Robs:	0	27	1	0	6	-14	44	0	2	0	0	0
Initial Fut:	0	913	312	0	1237	505	352	0	310	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	913	0	0	1237	0	352	0	310	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	913	0	0	1237	0	352	0	310	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	913	0	0	1237	0	352	0	310	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.00	0.00	0.33	0.00	0.11	0.00	0.18	0.00	0.00	0.00
Crit Moves:					****				****			
Green Time:	0.0	84.2	0.0	0.0	84.2	0.0	45.8	0.0	45.8	0.0	0.0	0.0
Volume/Cap:	0.00	0.39	0.00	0.00	0.53	0.00	0.33	0.00	0.53	0.00	0.00	0.00
Delay/Veh:	0.0	13.1	0.0	0.0	14.9	0.0	33.9	0.0	37.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.1	0.0	0.0	14.9	0.0	33.9	0.0	37.2	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	14	0	0	19	0	11	0	18	0	0	0

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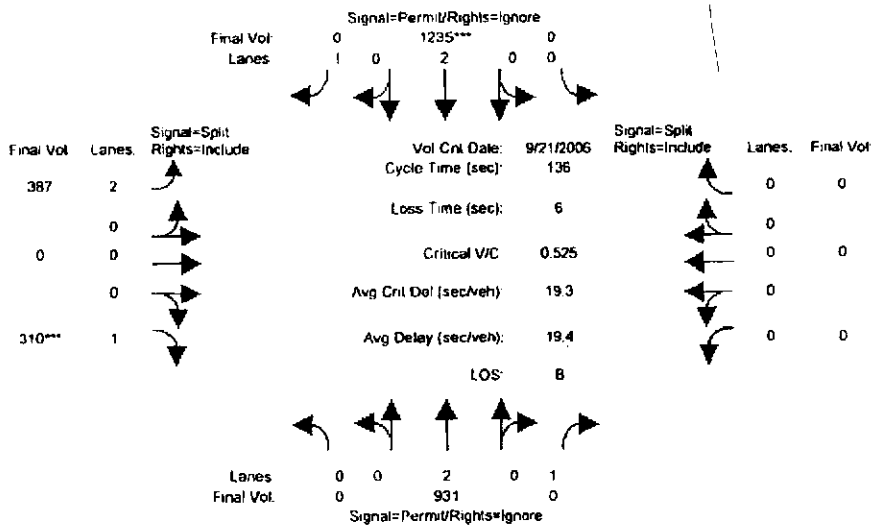
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #3047: I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	10	10	0	10	10	10	0	10	0	0	0
Volume Module: >> Count Date: 21 Sep 2006 << 5:00-6:00PM												
Base Vol:	0	885	311	0	1219	494	305	0	308	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	885	311	0	1219	494	305	0	308	0	0	0
Added Vol:	0	19	0	0	10	20	38	0	0	0	0	0
ATI+SC+Robs:	0	27	1	0	6	-14	44	0	2	0	0	0
Initial Fut:	0	931	312	0	1235	500	387	0	310	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	931	0	0	1235	0	387	0	310	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	931	0	0	1235	0	387	0	310	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	931	0	0	1235	0	387	0	310	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.00	0.00	0.33	0.00	0.12	0.00	0.18	0.00	0.00	0.00
Crit Moves:					****				****			
Green Time:	0.0	84.1	0.0	0.0	84.1	0.0	45.9	0.0	45.9	0.0	0.0	0.0
Volume/Cap:	0.00	0.40	0.00	0.00	0.53	0.00	0.36	0.00	0.53	0.00	0.00	0.00
Delay/Veh:	0.0	13.2	0.0	0.0	14.9	0.0	34.3	0.0	37.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.2	0.0	0.0	14.9	0.0	34.3	0.0	37.2	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	14	0	0	19	0	12	0	18	0	0	0

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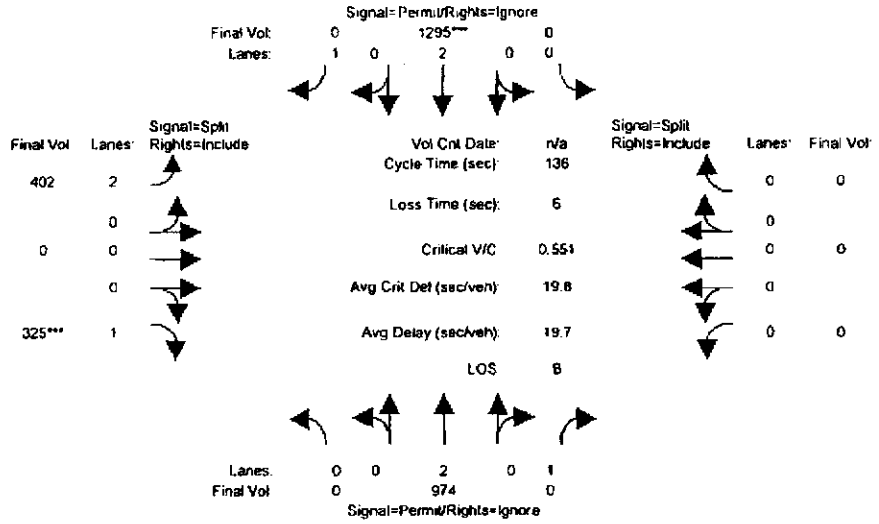
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future PM

Intersection #3047. I-880 / The Alameda (S)



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	10	10	0	10	10	10	0	10	0	0	0
Volume Module:												
Base Vol:	0	974	327	0	1295	524	402	0	325	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	974	327	0	1295	524	402	0	325	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	974	327	0	1295	524	402	0	325	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	974	0	0	1295	0	402	0	325	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	974	0	0	1295	0	402	0	325	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	974	0	0	1295	0	402	0	325	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.92	1.00	0.92
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3800	1750	0	3800	1750	3150	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.26	0.00	0.00	0.34	0.00	0.13	0.00	0.19	0.00	0.00	0.00
Crit Moves:					****				****			
Green Time:	0.0	84.1	0.0	0.0	84.1	0.0	45.9	0.0	45.9	0.0	0.0	0.0
Volume/Cap:	0.00	0.41	0.00	0.00	0.55	0.00	0.38	0.00	0.55	0.00	0.00	0.00
Delay/Veh:	0.0	13.4	0.0	0.0	15.3	0.0	34.5	0.0	37.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.4	0.0	0.0	15.3	0.0	34.5	0.0	37.8	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	C	A	D	A	A	A
DesignQueue:	0	15	0	0	20	0	12	0	18	0	0	0

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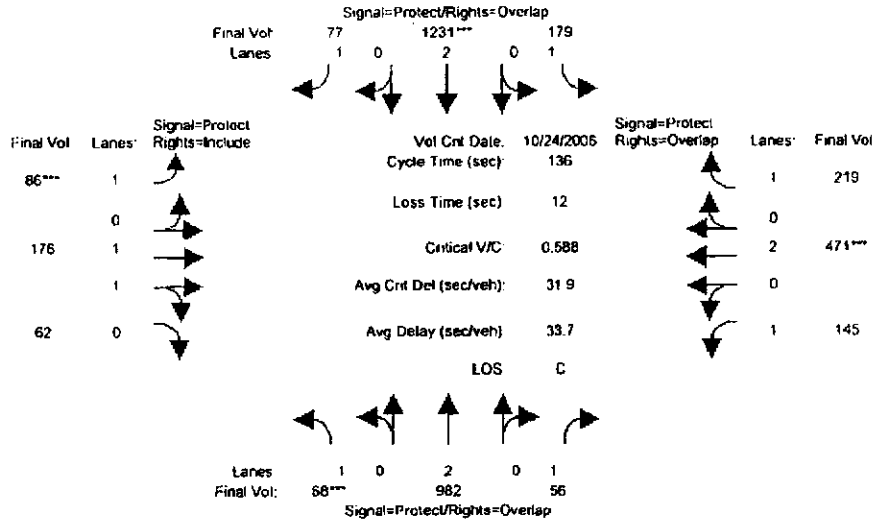
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3057: The Alameda / Hedding St

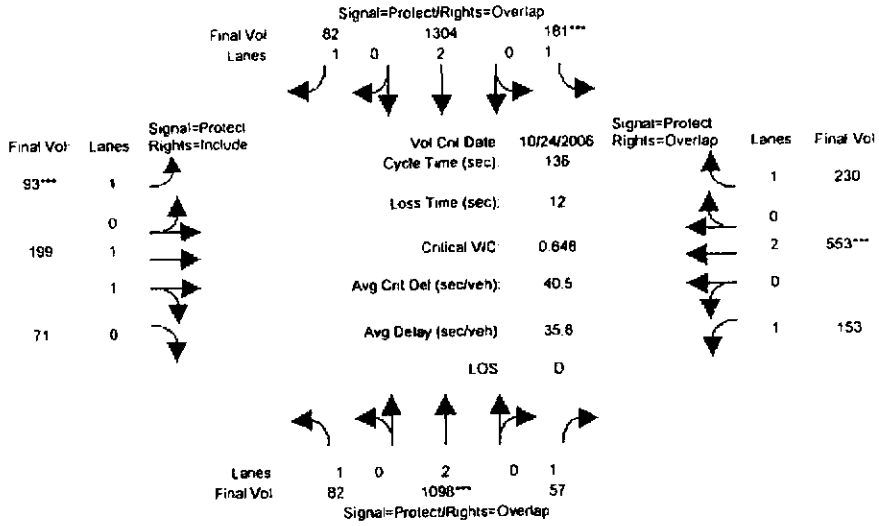


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Oct 2006 << 4:45-5:45PM												
Base Vol:	68	982	56	179	1231	77	86	176	62	145	471	219
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	982	56	179	1231	77	86	176	62	145	471	219
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	68	982	56	179	1231	77	86	176	62	145	471	219
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	982	56	179	1231	77	86	176	62	145	471	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	982	56	179	1231	77	86	176	62	145	471	219
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	982	56	179	1231	77	86	176	62	145	471	219
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.46	0.54	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2735	964	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.26	0.03	0.10	0.32	0.04	0.05	0.06	0.06	0.08	0.12	0.13
Crit Moves:	****				****		****				****	
Green Time:	9.0	60.1	81.4	23.8	75.0	86.3	11.4	18.8	18.8	21.2	28.7	52.5
Volume/Cap:	0.59	0.58	0.05	0.58	0.59	0.07	0.59	0.46	0.46	0.53	0.59	0.32
Delay/Veh:	69.4	29.1	11.4	54.4	20.7	9.5	66.2	54.6	54.6	54.8	49.5	29.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.4	29.1	11.4	54.4	20.7	9.5	66.2	54.6	54.6	54.8	49.5	29.6
LOS by Move:	E	C	B	D	C	A	E	D	D	D	D	C
DesignQueue:	5	22	2	12	22	2	7	8	8	10	14	11

Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #3057. The Alameda / Hedding St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Oct 2006 << 4:45-5:45PM												
Base Vol:	68	982	56	179	1231	77	86	176	62	145	471	219
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	982	56	179	1231	77	86	176	62	145	471	219
Added Vol:	0	1	0	0	12	0	0	0	0	0	0	0
ATI+SC+Robs:	14	115	1	2	61	5	7	23	9	8	82	11
Initial Fut:	82	1098	57	181	1304	82	93	199	71	153	553	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	82	1098	57	181	1304	82	93	199	71	153	553	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	1098	57	181	1304	82	93	199	71	153	553	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	82	1098	57	181	1304	82	93	199	71	153	553	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.46	0.54	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2726	973	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.03	0.10	0.34	0.05	0.05	0.07	0.07	0.09	0.15	0.13
Crit Moves:		****		****			****				****	
Green Time:	10.7	60.6	83.3	21.7	71.6	82.7	11.1	19.0	19.0	22.6	30.5	52.2
Volume/Cap:	0.59	0.65	0.05	0.65	0.65	0.08	0.65	0.52	0.52	0.53	0.65	0.34
Delay/Veh:	67.3	30.3	10.6	58.8	24.0	11.0	70.5	55.2	55.2	53.5	49.6	30.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.3	30.3	10.6	58.8	24.0	11.0	70.5	55.2	55.2	53.5	49.6	30.0
LOS by Move:	E	C	B	E	C	B	E	E	E	D	D	C
DesignQueue:	6	24	2	13	25	3	7	9	9	11	17	12

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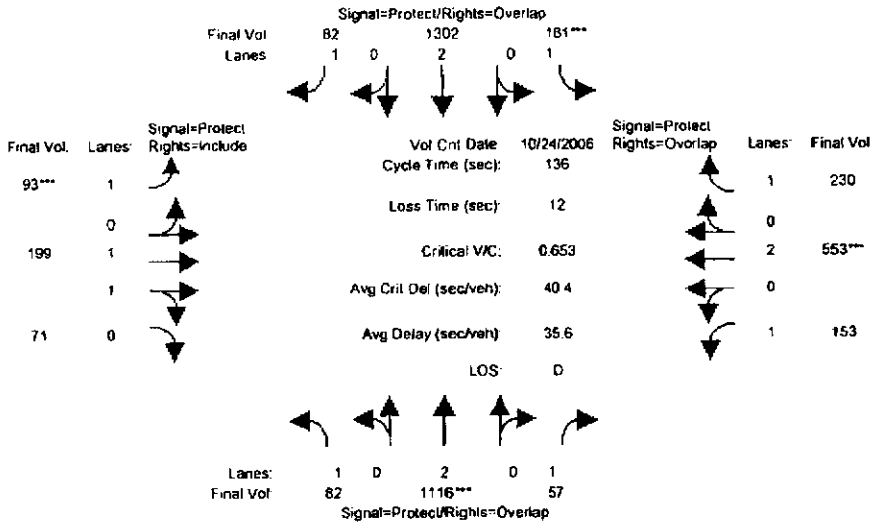
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #3057. The Alameda / Hedding St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Oct 2006 << 4:45-5:45PM												
Base Vol:	68	982	56	179	1231	77	86	176	62	145	471	219
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	982	56	179	1231	77	86	176	62	145	471	219
Added Vol:	0	19	0	0	10	0	0	0	0	0	0	0
ATI+SC+Robs:	14	115	1	2	61	5	7	23	9	8	82	11
Initial Fut:	82	1116	57	181	1302	82	93	199	71	153	553	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	82	1116	57	181	1302	82	93	199	71	153	553	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	1116	57	181	1302	82	93	199	71	153	553	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	82	1116	57	181	1302	82	93	199	71	153	553	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.46	0.54	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2726	973	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.03	0.10	0.34	0.05	0.05	0.07	0.07	0.09	0.15	0.13
Crit Moves:		****		****			****				****	
Green Time:	10.8	61.1	83.6	21.5	71.9	82.9	11.1	18.9	18.9	22.5	30.3	51.8
Volume/Cap:	0.59	0.65	0.05	0.65	0.65	0.08	0.65	0.53	0.53	0.53	0.65	0.34
Delay/Veh:	67.0	30.1	10.5	59.2	23.8	10.9	71.0	55.4	55.4	53.8	49.9	30.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.0	30.1	10.5	59.2	23.8	10.9	71.0	55.4	55.4	53.8	49.9	30.3
LOS by Move:	E	C	B	E	C	B	E	E	E	D	D	C
DesignQueue:	6	25	2	13	25	3	7	9	9	11	17	12

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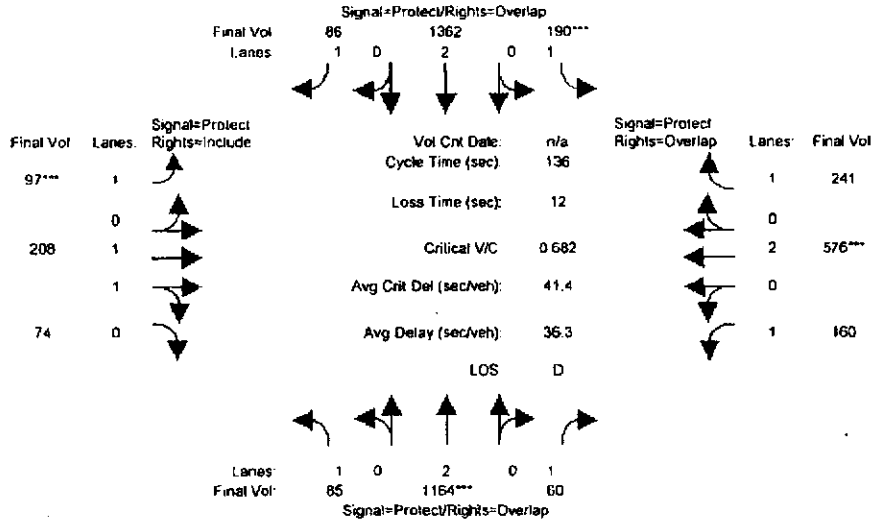
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Future PM

Intersection #3057: The Alameda / Hedding St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module:												
Base Vol:	85	1164	60	190	1362	86	97	208	74	160	576	241
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	85	1164	60	190	1362	86	97	208	74	160	576	241
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	85	1164	60	190	1362	86	97	208	74	160	576	241
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	1164	60	190	1362	86	97	208	74	160	576	241
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	1164	60	190	1362	86	97	208	74	160	576	241
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	1164	60	190	1362	86	97	208	74	160	576	241
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.46	0.54	1.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	2728	971	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.05	0.31	0.03	0.11	0.36	0.05	0.06	0.08	0.08	0.09	0.15	0.14
Crit Moves:		****		****			****				****	
Green Time:	10.4	61.1	83.6	21.6	72.3	83.4	11.1	18.8	18.8	22.5	30.2	51.9
Volume/Cap:	0.64	0.68	0.06	0.68	0.67	0.08	0.68	0.55	0.55	0.55	0.68	0.36
Delay/Veh:	70.7	30.9	10.5	60.7	24.1	10.7	73.5	56.0	56.0	54.4	50.8	30.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.7	30.9	10.5	60.7	24.1	10.7	73.5	56.0	56.0	54.4	50.8	30.5
LOS by Move:	E	C	B	E	C	B	E	E	E	D	D	C
DesignQueue:	7	26	2	13	26	3	7	10	10	11	17	13

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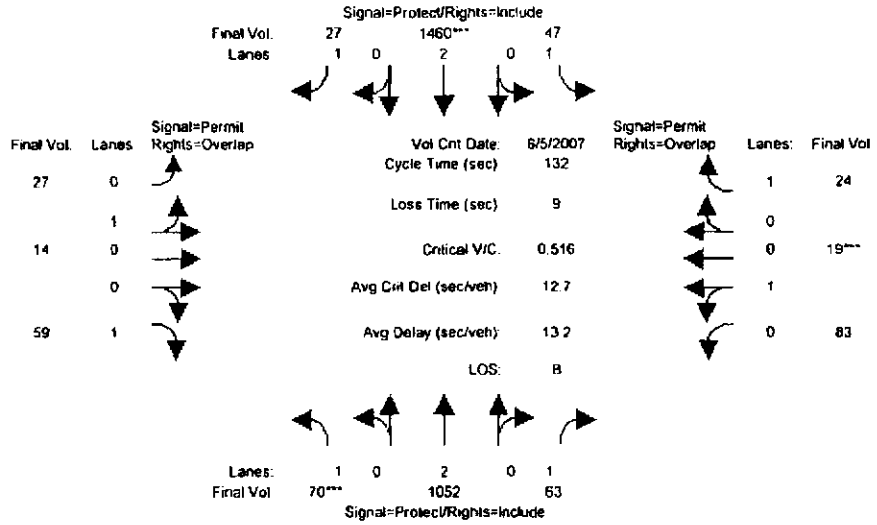
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3229: The Alameda / Newhall St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 5 Jun 2007 << 4:45-5:45PM												
Base Vol:	70	1052	63	47	1460	27	27	14	59	83	19	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	1052	63	47	1460	27	27	14	59	83	19	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	1052	63	47	1460	27	27	14	59	83	19	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	1052	63	47	1460	27	27	14	59	83	19	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	1052	63	47	1460	27	27	14	59	83	19	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	1052	63	47	1460	27	27	14	59	83	19	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.66	0.34	1.00	0.81	0.19	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1185	615	1750	1465	335	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.28	0.04	0.03	0.38	0.02	0.02	0.02	0.03	0.06	0.06	0.01
Crit Moves:	****				****						****	
Green Time:	10.2	91.1	91.1	17.4	98.3	98.3	14.5	14.5	24.7	14.5	14.5	31.9
Volume/Cap:	0.52	0.40	0.05	0.20	0.52	0.02	0.21	0.21	0.18	0.52	0.52	0.06
Delay/Veh:	61.9	8.9	6.6	51.5	7.2	4.4	54.0	54.0	45.4	57.8	57.8	38.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.9	8.9	6.6	51.5	7.2	4.4	54.0	54.0	45.4	57.8	57.8	38.5
LOS by Move:	E	A	A	D	A	A	D	D	D	E	E	D
DesignQueue:	5	13	2	3	15	1	3	3	4	7	7	1

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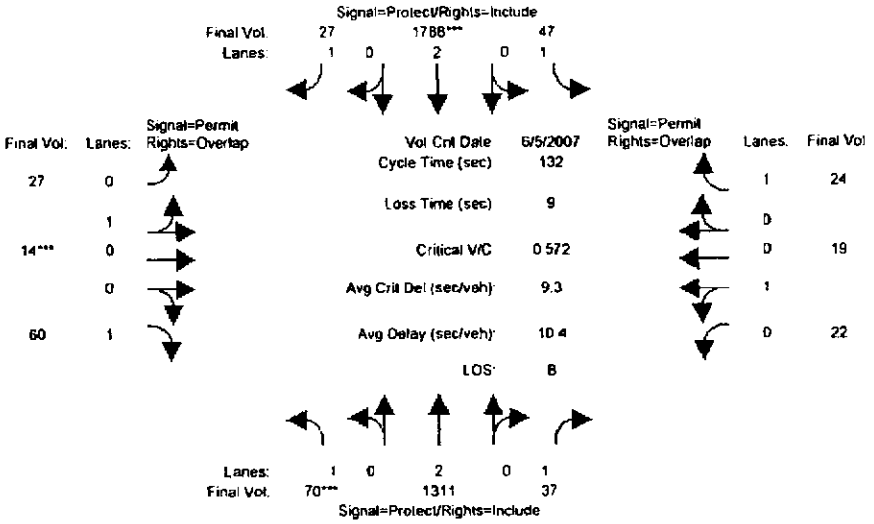
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #3229: The Alameda / Newhall St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module: >> Count Date: 5 Jun 2007 << 4:45-5:45PM												
Base Vol:	70	1052	63	47	1460	27	27	14	59	83	19	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	1052	63	47	1460	27	27	14	59	83	19	24
Added Vol:	0	7	0	0	62	0	0	0	0	0	0	0
ATI+SC+Robs:	0	252	-26	0	266	0	0	0	1	-61	0	0
Initial Fut:	70	1311	37	47	1788	27	27	14	60	22	19	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	1311	37	47	1788	27	27	14	60	22	19	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	1311	37	47	1788	27	27	14	60	22	19	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	1311	37	47	1788	27	27	14	60	22	19	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.66	0.34	1.00	0.54	0.46	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1185	615	1750	966	834	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.34	0.02	0.03	0.47	0.02	0.02	0.02	0.03	0.02	0.02	0.01
Crit Moves:	****				****			****				
Green Time:	8.9	97.9	97.9	15.1	104	104.1	10.0	10.0	18.9	10.0	10.0	25.1
Volume/Cap:	0.60	0.46	0.03	0.24	0.60	0.02	0.30	0.30	0.24	0.30	0.30	0.07
Delay/Veh:	68.0	6.8	4.5	53.8	5.9	3.0	58.9	58.9	50.7	58.9	58.9	44.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.0	6.8	4.5	53.8	5.9	3.0	58.9	58.9	50.7	58.9	58.9	44.0
LOS by Move:	E	A	A	D	A	A	E	E	D	E	E	D
DesignQueue:	5	13	1	3	15	0	3	3	4	3	3	2

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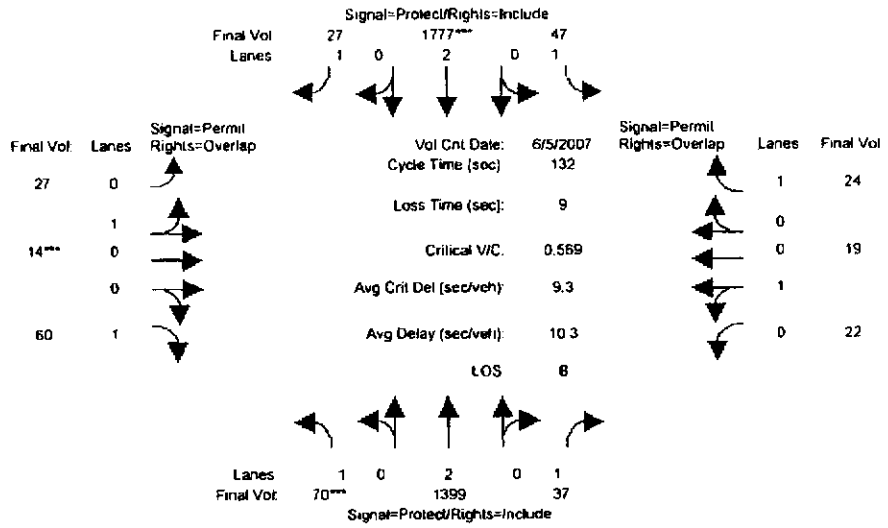
Sobrato Campbell Avenue Residential Development
Campbell Avenue, San Jose, CA
Hexagon Transportation Consultants, Inc.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Project PM

Intersection #3229: The Alameda / Newhall St



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Volume Module:	>> Count Date: 5 Jun 2007 << 4:45-5:45PM											
Base Vol:	70	1052	63	47	1460	27	27	14	59	83	19	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	1052	63	47	1460	27	27	14	59	83	19	24
Added Vol:	0	95	0	0	51	0	0	0	0	0	0	0
ATI+SC+Robs:	0	252	-26	0	266	0	0	0	1	-61	0	0
Initial Fut:	70	1399	37	47	1777	27	27	14	60	22	19	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	1399	37	47	1777	27	27	14	60	22	19	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	1399	37	47	1777	27	27	14	60	22	19	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	1399	37	47	1777	27	27	14	60	22	19	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.95	0.95	0.92	0.95	0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	0.66	0.34	1.00	0.54	0.46	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1185	615	1750	966	834	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.37	0.02	0.03	0.47	0.02	0.02	0.02	0.03	0.02	0.02	0.01
Crit Moves:	****				****			****				
Green Time:	8.9	98.8	98.8	14.2	104	104.1	10.0	10.0	18.9	10.0	10.0	24.2
Volume/Cap:	0.59	0.49	0.03	0.25	0.59	0.02	0.30	0.30	0.24	0.30	0.30	0.07
Delay/Veh:	67.6	6.8	4.3	54.7	5.9	3.0	58.9	58.9	50.7	58.9	58.9	44.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.6	6.8	4.3	54.7	5.9	3.0	58.9	58.9	50.7	58.9	58.9	44.7
LOS by Move:	E	A	A	D	A	A	E	E	D	E	E	D
DesignQueue:	5	14	1	3	15	0	3	3	4	3	3	2

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APPENDIX G-2
CAMPBELL AVENUE
RESIDENTIAL CONVERSION
TRAFFIC MEMORANUM

HEXAGON TRANSPORTATION CONSULTANTS, INC.

MEMORANDUM

TO: Mr. Tim Steele, Sobrato Development Companies

FROM: Brian Jackson

DATE: May 23, 2008

SUBJECT: ***Potential Future Conversion of all Remaining R&D and Light Industrial Land on Campbell Avenue to Residential Development***

Hexagon Transportation Consultants, Inc. has completed an intersection level of service and traffic operational analysis for Sobrato Development Companies based on the anticipated conversion of all remaining R&D and light industrial land on Campbell Avenue to residential development. New manual turning-movement counts were conducted at the intersection of El Camino Real and Campbell Avenue in December of 2007 in order to get the most recent count data for use in the analysis.

The purpose of this traffic analysis is to determine the future level of service and vehicle queuing at the Campbell Avenue and El Camino Real intersection, as well as operations along Campbell Avenue in general. Specifically, the operation of Campbell Avenue adjacent to the proposed Sobrato residential project was evaluated for future conditions. The design diagram for the planned improvements to the Campbell Avenue and El Camino Real intersection and its impact on the proposed Sobrato residential project were analyzed. The analysis shows the amount of traffic growth on Campbell Avenue associated with the land use conversion.

Approved and Proposed Projects

Several residential conversion projects have been approved along Campbell Avenue. The approved projects include the 340-unit El Camino Real Apartments project (fully occupied), the 220-unit Pulte Homes project (90% occupied), the 113-unit Santa Clara Development project (75% occupied), and the 43-unit Robson Homes project (not yet built). In addition, Sobrato is proposing to replace an 82,000 square-foot R&D building on a 5.13-acre site on the north side of Campbell Avenue with 260 residential units, and a General Plan Amendment was recently completed for a 7.08-acre site (Campbell Park Homes) on the south side of Campbell Avenue to allow up to 354 residential units on existing light industrial land. In addition to approved and proposed residential projects on Campbell Avenue, there are 6.98 acres of remaining light industrial land on Campbell Avenue that could be redeveloped as residential. Based on a residential development density of 16 dwelling units per acre (DU/AC), which is the upper end of Medium Density Residential (8-16 DU/AC) and is more or less what would be expected based on the size and shape of the remaining light industrial parcels, this equates to another 112 potential residential units. The attached aerial map (Figure 1) shows the sizes of all the properties located along Campbell Avenue.

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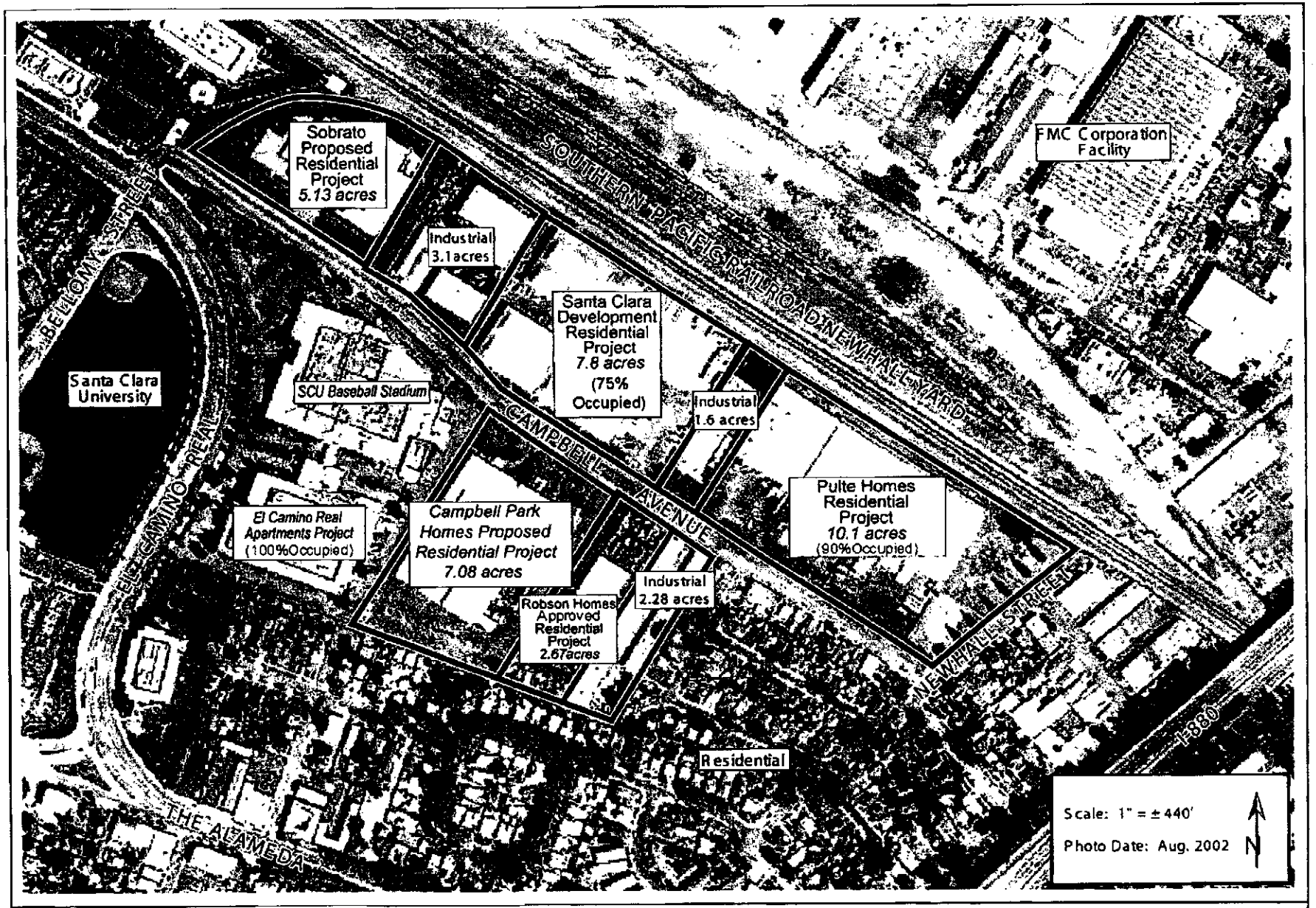
phone 408.971.6100 • fax 408.971.6102 • www.hextrans.com



AERIAL PHOTOGRAPH

FIGURE 1

Trip Generation Estimates

Trip credits were applied for the existing remaining R&D and light industrial uses that could potentially be replaced based on estimated building densities of 16,000 square feet per acre (SF/AC) for R&D and 15,000 SF/AC for industrial. Based on the residential trip generation rates recommended by the City of San Jose and the estimated existing trip credits, the conversion of R&D and light industrial land to residential development on a total of 19.19 acres would generate 4,007 net new daily trips, with 309 net new trips occurring during the AM peak hour and 311 trips occurring during the PM peak hour of traffic. Using the inbound/outbound splits recommended by the City of San Jose, converting the land to residential would produce 5 additional inbound and 304 additional outbound trips during the AM peak hour, and 312 additional inbound and 1 less outbound trip during the PM peak hour than what the existing uses currently generate. The net project trips were added to background traffic volumes based on existing travel patterns, with 30% traveling north and 70% traveling south on El Camino Real.

Trip generation estimates for residential projects on Campbell Avenue that have been approved but are not yet fully occupied are shown in Table 1. Trip generation estimates for potential future non-approved residential projects are shown in Table 2.

Table 1
Trip Generation for Approved but Not Yet Fully Occupied Residential Development

				AM Peak Hour				PM Peak Hour			
Project Sites	Units	Daily Rate	Daily Trips	Pk-Hr Rate	In	Out	Total	Pk-Hr Rate	In	Out	Total
Pulte Homes (220 units) - 90% Occupancy	22	7.5	165	0.10	6	11	17	0.10	11	6	17
Robson Homes (43 units) - Not Yet Built	43	9.9	426	0.10	15	28	43	0.10	28	15	43
Santa Clara Development (113 units) - 75% Occupancy	28	9.9	280	0.10	10	18	28	0.10	18	10	28
Total Residential Trips:			870		31	57	88		57	31	88

Source: City of San Jose Interim Guidelines for Traffic Impact Analysis for Land Developments, "Common Vehicular Trip Generation Rates for the San Jose Area," March 1994.

Table 2
Trip Generation for Future Residential Development (Non-Approved Projects)

				AM Peak Hour				PM Peak Hour			
Project Sites	Size /a/	Daily Rate	Daily Trips	Pk-Hr Rate	In	Out	Total	Pk-Hr Rate	In	Out	Total
Sobrato Property (5.13 Acres)	260	7.5	1,950	0.10	68	127	195	0.10	127	68	195
Campbell Park Homes Property (7.08 Acres)	354	7.5	2,655	0.10	93	173	266	0.10	173	93	266
Remaining Potentially Developable Land (6.98 Acres) /b/	112	9.9	1,113	0.10	39	72	111	0.10	72	39	111
Total Residential Trips:			5,718		200	372	572		372	200	572
Remaining R&D Replaced (5.13 Acre Sobrato Site) /c/	82	8.0	-656	0.16	-84	-21	-105	0.14	-9	-83	-92
Remaining Light Industrial Replaced (14.06 Acres) /c/	211	5.0	-1,055	0.15	-111	-47	-158	0.16	-51	-118	-169
Total Existing Trip Credits:			-1,711		-195	-68	-263		-60	-201	-261
Net Potential Future Project Trips:			**4,007**		**5**	**304**	**309**		**312**	**-1**	**311**

/a/ Residential size expressed in number of units; R&D and Light Industrial size expressed in 1,000 square feet.
/b/ Residential density for remaining developable industrial land based on Medium Density Residential maximum of 16 DU/AC.
/c/ Trip credits were applied to account for the remaining existing R&D and light industrial land that could potentially be converted to residential based on a density of 16,000 SF/AC for R&D space and 15,000 SF/AC for light industrial space.
Source: City of San Jose Interim Guidelines for Traffic Impact Analysis for Land Developments, "Common Vehicular Trip Generation Rates for the San Jose Area," March 1994.

Intersection Level of Service Analysis

The results of the intersection level of service analysis show that the Campbell Avenue and El Camino Real intersection currently operates at LOS B during the AM peak hour and LOS C during the PM peak hour. Under future traffic conditions with the planned intersection improvements (described below), the Campbell Avenue and El Camino Real intersection would operate at LOS C during both the AM and PM peak hours. Even without the planned improvements, the Campbell Avenue and El Camino Real intersection would operate at an acceptable LOS D during the AM peak hour and LOS C during the PM peak hour under future traffic conditions. Thus, converting the remaining R&D and light industrial land on Campbell Avenue to residential development could be accommodated while maintaining an acceptable level of service at the El Camino Real and Campbell Avenue intersection, with or without the planned improvements. The intersection improvements would be necessary operationally, however, in order to provide adequate turn pocket storage to serve the estimated vehicle queues that would occur under future traffic conditions. The intersection level of service calculations are attached.

Proposed Intersection Improvements

Figure 2 shows the proposed improvements to the Campbell Avenue and El Camino Real intersection. Two left-turn lanes and a separate right-turn lane are being proposed on Campbell Avenue (east leg) to handle the anticipated outbound vehicle queues during the AM peak hour. Due to the tight turning radius on Campbell Avenue, two receiving lanes are being proposed on the east leg of the intersection to assist with inbound truck access from northbound El Camino Real. Based on the proposed design, the Sobrato project would be required to dedicate some right-of-way, although the design also would vacate some land along the project frontage across from the existing baseball stadium. The proposed design would provide increased storage for outbound vehicles and provide adequate access for inbound trucks.

Campbell Avenue Future Operations

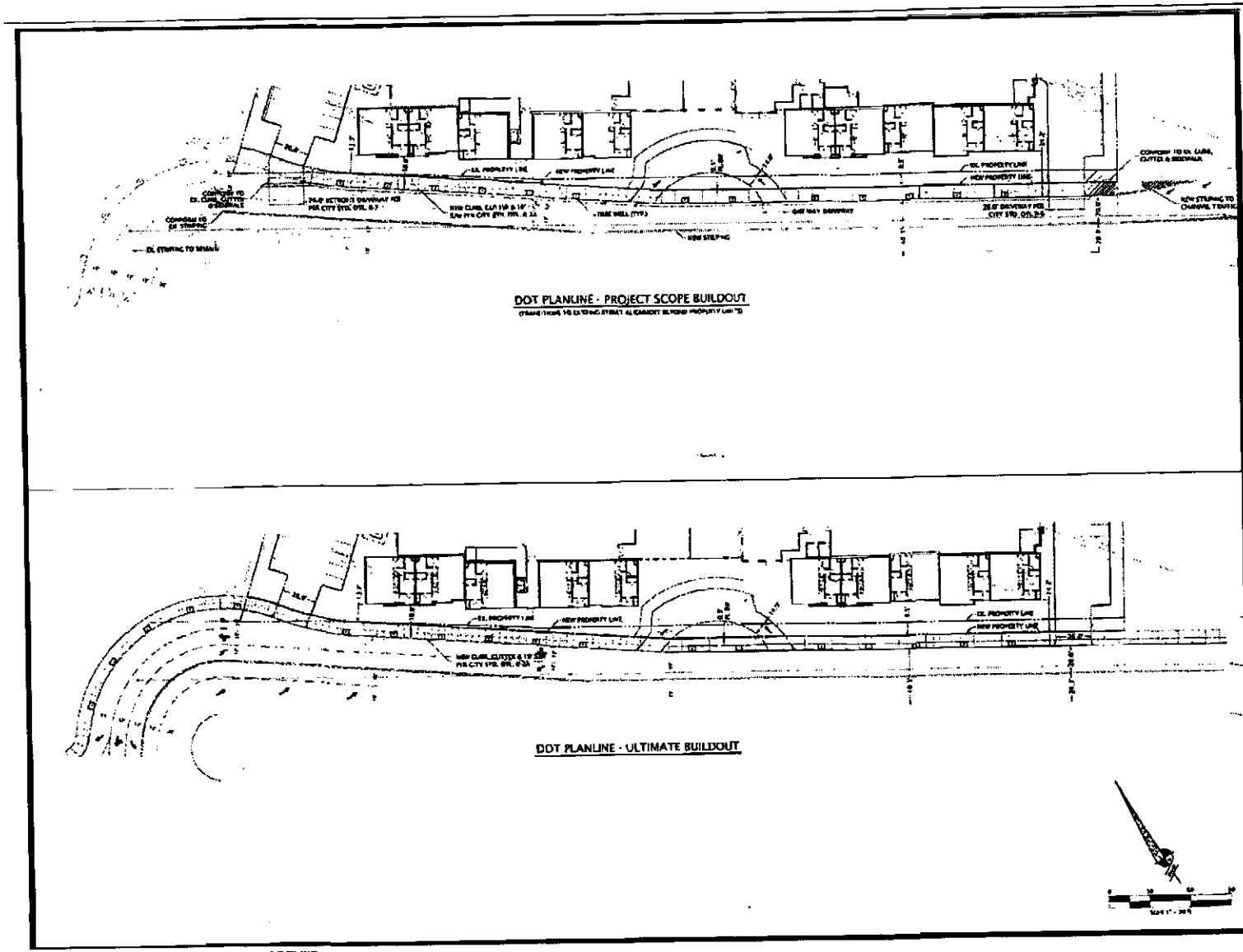
The future operations analysis is based on vehicle queuing for high-demand turning-movements at the Campbell Avenue and El Camino Real intersection. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x=n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

$P(x=n)$ = probability of "n" vehicles in queue per lane
n = number of vehicles in the queue per lane
λ = Avg. number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future storage requirements at intersections. The queue estimates and a summary of the findings are provided in Table 3.



1270 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

SOBRATO DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE
PD ZONING RE-SUBMITTAL	05-11-06

SHEET TITLE

SITE PLAN
CAMPBELL AVE
PLANLINES

SHEET NUMBER

3-1

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.

Hexagon
Transportation Consultants, Inc.

Figure 2

Table 3
Vehicle Queuing and Storage Capacity

Scenario:	Existing		Future (with improvements)	
Turn Movement:	Westbound Left Turn		Westbound Left Turn	
Peak Period:	AM	PM	AM	PM
Cycle/Delay[1] (sec)	120	120	120	120
Volume (vphpl)	104	191	179	106
Avg. Queue (veh/ln.)	3.5	6.4	6.0	3.5
Avg. Queue[2] (ft./ln)	87	159	149	88
95th %. Queue (veh/ln.)	7	11	10	7
95th %. Queue (ft./ln)	175	275	250	175
Storage (ft./ ln.)	100	100	350	350
Adequate (Y/N)	N	N	Y	Y

[1] Vehicle queue calculations based on signal cycle length.
[2] Assumes 25 Feet Per Vehicle Queued.

The maximum vehicle queues for the westbound left-turn movement currently exceed the existing vehicle storage capacity of 100 feet during both the AM and PM peak hours of traffic. An additional 175 feet of vehicle storage currently is needed for this left-turn movement during the PM peak hour, which is when the vehicle queues currently are longest.

The planned left-turn vehicle storage capacity of approximately 350 feet per lane, as illustrated in Figure 2, would be adequate to serve the estimated maximum vehicle queues for the westbound left-turn movement under future traffic conditions. As shown in the figure, a separate right-turn lane is being proposed in the design. A separate right-turn lane would be warranted based on the estimated peak hour volumes and associated vehicle queuing on Campbell Avenue during the AM peak hour under future conditions.

Estimated Future Traffic Volumes on Campbell Avenue

The estimated future traffic volumes on Campbell Avenue that would result from the complete conversion of the remaining R&D and light industrial land to residential development are shown in Table 4. As shown in the table, converting all of the remaining land to residential development would approximately double the existing peak hour traffic volumes. The maximum traffic volumes that would be expected to occur on Campbell Avenue in the future due to the complete conversion would be 761 AM peak hour vehicles and 777 PM peak hour vehicles. After applying a 9% intermodal transit reduction because of the future BART station, which is planned to be located adjacent to the existing Santa Clara Transit Center, the maximum traffic volumes would be reduced to 693 AM peak hour vehicles and 707 PM peak hour vehicles.

Sobrato Residential Project's Contribution to Traffic Volumes

Table 4 shows the traffic growth on Campbell Avenue attributable to the proposed 260-unit Sobrato residential project. As shown in the table, it was estimated that up to 15% of the total future traffic volumes on Campbell Avenue would be generated by the Sobrato project. The Sobrato project's contribution toward the increase in traffic volumes on Campbell Avenue due to the complete conversion to residential would equate to a maximum of approximately 26%. This percentage includes traffic generated by projects that have been approved but are not yet fully occupied, such as the 43-unit Robson Homes project on the south side of Campbell Avenue. Based on the estimated future traffic volumes from potential non-approved residential projects only, up to about 33% of the increase in peak hour traffic volumes would be attributable to Sobrato's residential project. Table 4 also shows how the Sobrato residential project's contribution of traffic compares to other residential developments along Campbell Avenue, both approved and non-approved. The comparison is based on gross vehicle trips generated by each development.

Table 4
Future Volumes on Campbell Avenue – AM Peak Hour

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
November 18, 2001 Count /a/	21	559	55	58	1	53	156	2121	39	3	0	12
May 24, 2006 Count	13	392	29	19	0	53	126	1182	36	6	2	11
December 12, 2007 Count /b/	2	349	32	109	0	104	118	1321	38	4	1	11
Trips from approved but not yet fully occupied developments /c/	0	0	9	17	0	40	22	0	0	0	0	0
New Residential Trips due to Remaining Potential Land Use Conversion /d/	0	0	60	112	0	260	140	0	0	0	0	0
Trip Credits due to Remaining Potential Conversion of Remaining L.I./R&D Uses	0	0	-59	-21	0	-47	-136	0	0	0	0	0
2007 Vols + Approved Trips + Added Trips Attributable to Remaining Potential Land Use Conversion:	2	349	42	217	0	357	144	1321	38	4	1	11

Traffic Volumes on Campbell Avenue:

2001 Volumes on Campbell Avenue	=	323	AM peak hour vehicles
2006 Volumes on Campbell Avenue	=	229	AM peak hour vehicles
2007 Volumes on Campbell Avenue	=	354	AM peak hour vehicles
Increase in Trips on Campbell Avenue due to Approved but Not Yet Fully Occupied Projects	=	88	AM peak hour vehicles
Increase in Trips on Campbell Avenue due to Remaining Potential Conversion	=	309	AM peak hour vehicles
Total Future Volumes on Campbell Avenue due to Complete Conversion	=	761	AM peak hour vehicles
Total Future Volumes on Campbell Av due to Complete Conversion with 9% Intermodal Reduction Applied	=	693	AM peak hour vehicles
Change in Volumes on Campbell Avenue due to Complete Conversion (Future Vols - 2001 Count)	=	438	AM peak hour vehicles

Sobrato's Contribution to Traffic Volumes on Campbell Avenue:

Sobrato Residential Project Net Trips	=	90	AM peak hour vehicles
Sobrato's Share of Total Future Traffic Vols on Campbell Av	=	13%	
Sobrato's Contribution to Increase in Vols on Campbell Av Attributable to Complete Conversion	=	23%	
Sobrato's Contribution to Increase in Vols on Campbell Av Attributable to Non-Approved Projects Only	=	29%	

Each Development's Contribution to the Total Future Volumes on Campbell Avenue /e/:

		%
El Camino Apartments (306 units) /f/	=	9%
Pulte Homes Project (220 units)	=	17%
Santa Clara Development Project (113 units)	=	11%
Robson Homes Project (43 units)	=	4%
Sobrato Project (260 units)	=	20%
Campbell Park Homes Property (354 units)	=	27%
Remaining Light Industrial Land (112 units)	=	11%
Totals:		100%

Notes:
/a/ November 18, 2001 count was conducted subsequent to the closure of Campbell Avenue at Newhall Street but prior to any conversion of L.I./R&D land to residential development.
/b/ December 12, 2007 counts include trips generated by Baseball Stadium, El Camino Apartments, Pulte Homes site (90% occupied), and Santa Clara Development site (75% occupied).
/c/ Approved but not yet fully occupied projects include the Robson Homes project, remaining 10% of Pulte Homes site, and remaining 25% of Santa Clara Development site.
/d/ New residential trips include potential trips from Campbell Park Homes site, Sobrato project, and remaining 6.98 acres of developable light industrial land.
/e/ Development contribution percentages based on gross trips.
/f/ The majority of residents of the El Camino Apartments use El Camino Real to access the site, not Campbell Avenue.

Table 4 (Continued)
Future Volumes on Campbell Avenue – PM Peak Hour

	Movements											
	North Approach			East Approach			South Approach			West Approach		
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
November 18, 2001 Count /a/	39	1614	28	38	5	174	28	875	66	9	0	13
May 24, 2006 Count	18	1112	12	25	0	170	19	838	55	61	1	25
December 12, 2007 Count /b/	5	975	70	52	0	191	65	569	47	34	0	17
Trips from approved but not yet fully occupied developments /c/	0	0	17	9	0	22	40	0	0	0	0	0
New Residential Trips due to Remaining Potential Land Use Conversion /d/	0	0	112	60	0	140	260	0	0	0	0	0
Trip Credits due to Remaining Potential Conversion of Remaining L.I./R&D Uses	0	0	-18	-60	0	-141	-42	0	0	0	0	0
2007 Vols + Approved Trips + Added Trips Attributable to Remaining Potential Land Use Conversion:	5	975	181	61	0	212	323	569	47	34	0	17

Traffic Volumes on Campbell Avenue:

2001 Volumes on Campbell Avenue	=	273	PM peak hour vehicles
2006 Volumes on Campbell Avenue	=	227	PM peak hour vehicles
2007 Volumes on Campbell Avenue	=	378	PM peak hour vehicles
Increase in Trips on Campbell Avenue due to Approved but Not Yet Fully Occupied Projects	=	88	PM peak hour vehicles
Increase in Trips on Campbell Avenue due to Remaining Potential Conversion	=	311	PM peak hour vehicles
Total Future Volumes on Campbell Avenue due to Complete Conversion	=	777	PM peak hour vehicles
Total Future Volumes on Campbell Av due to Complete Conversion with 9% Intermodal Reduction Applied	=	707	PM peak hour vehicles
Change in Volumes on Campbell Avenue due to Complete Conversion (Future Vols - 2001 Count)	=	504	PM peak hour vehicles

Sobrato's Contribution to Traffic Volumes on Campbell Avenue:

Sobrato Residential Project Net Trips	=	103	PM peak hour vehicles
Sobrato's Share of Total Future Traffic Vols on Campbell Av	=	15%	
Sobrato's Contribution to Increase in Vols on Campbell Av Attributable to Complete Conversion	=	26%	
Sobrato's Contribution to Increase in Vols on Campbell Av Attributable to Non-Approved Projects Only	=	33%	

Each Development's Contribution to the Total Future Volumes on Campbell Avenue /e/:

		%
El Camino Apartments (306 units) /f/	=	9%
Pulte Homes Project (220 units)	=	17%
Santa Clara Development Project (113 units)	=	11%
Robson Homes Project (43 units)	=	4%
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Campbell Park Homes Property (354 units)	=	27%
Remaining Light Industrial Land (112 units)	=	11%
Totals:		100%

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/d/ New residential trips include potential trips from Campbell Park Homes site, Sobrato project, and remaining 6.98 acres of developable light industrial land.
/e/ Development contribution percentages based on gross trips.
/f/ The majority of residents of the El Camino Apartments use El Camino Real to access the site, not Campbell Avenue.

RESOLUTION NO. 08-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA CLARA, CALIFORNIA, ADOPTING A MITIGATED NEGATIVE DECLARATION; REZONING LAND USE DESIGNATION FROM LIGHT INDUSTRIAL (ML) TO PLANNED DEVELOPMENT (PD); APPROVING A DEVELOPMENT PLAN AND CONDITIONS OF APPROVAL; AND ADOPTING A MITIGATION MONITORING PLAN FOR PROPERTY LOCATED AT 1270 CAMPBELL AVENUE, SANTA CLARA, CA 95050

APN: 230-14-026
PLN2008-07068 (Rezoning Application)
PDC07-081 (Rezoning and Mitigated Negative Declaration – City of San Jose)

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SANTA CLARA, CALIFORNIA, AS FOLLOWS:

WHEREAS, Sobrato Development Companies is the owner of a 5.18 acre site located at 1270 Campbell Avenue [APN: 230-14-026], which is located within the municipal jurisdictions of Santa Clara and San Jose, of which .58 acres is located in the City of Santa Clara and 4.6 acres is located in San Jose; ("Project Site") and,

WHEREAS, the General Plan of the City of Santa Clara ("General Plan") designates the .58 acre portion of the property at 1270 Campbell Avenue located in the City of Santa Clara ("Santa Clara Project Site") as Gateway Thoroughfare; and

WHEREAS, the Santa Clara Project Site is currently zoned Light Industrial (ML), and currently contains a vacant office/research and development building, parking lot and landscaping; and

WHEREAS, on May 14, 2008, Sobrato Development Companies ("Applicant"), submitted an application to rezone the Santa Clara Project Site from Light Industrial (ML) to Planned Development (PD) to allow construction of 27 dwelling units, as part of a new 259 multifamily residential infill development ("Project") located within the jurisdictions of Santa Clara and San Jose; and approval of the Development Plan attached hereto as Exhibit A; and

WHEREAS, in order to effectuate the development, the land use zoning designation of the Santa Clara Project Site needs to be changed to Planned Development (PD); and

WHEREAS, in accordance with California's Environmental Quality Act ("CEQA"), City staff, as a Responsible Agency, reviewed and commented on the Mitigated Negative Declaration for the Project prepared by the City of San Jose ("Lead Agency"); and

WHEREAS, the Code of the City of Santa Clara ("SCCC"), Section 18.112.040 provides for the City's Planning Commission to make a recommendation to the City Council for all rezoning requests; and

WHEREAS, SCCC Section 18.112.030 requires that the City Council consider the rezoning of a property only after holding a public hearing; and

WHEREAS, SCCC Section 18.112.060 requires that notice of the public hearing be given by posting the property in at least three (3) conspicuous places at least ten (10) days prior to the hearing date; and

WHEREAS, SCCC Section 18.112.060 further requires that notice of the public hearing be given by mailing notices to property owners, as of the last assessor's roll, within three hundred (300) feet of the boundary of the property; and

WHEREAS, notices for the City Council meeting of November 25, 2008 describing the proposed rezoning were sent to neighboring property owners on November 14, 2008; and

WHEREAS, notices describing the proposed rezoning for the City Council meeting of November 25, 2008 were posted at the Project Site on November 14, 2008; and

WHEREAS, following a properly noticed public hearing on November 12, 2008, the Planning Commission reviewed the Mitigated Negative Declaration and Rezone application for the Project Site, and recommended that the City Council of the City of Santa Clara: (1) adopt the Mitigated Negative Declaration; (2) approve a Rezone of the Project Site to a Planned Development (PD) Zone; and (3) approve the Development Plan attached hereto as Exhibit A; (4) approve the

Mitigation Monitoring Plan adopted by the Lead Agency attached hereto as Exhibit B; and (5) approve the Conditions of Approval attached hereto as Exhibit C; and

WHEREAS, pursuant to SCC Section 18.112.050, the City Council duly considered the recommendations of the Planning Commission on November 25, 2008; and

WHEREAS, before considering Rezoning of the Project Site, the City Council independently reviewed and considered the information contained in the Mitigated Negative Declaration for the Project; and

WHEREAS, the City Council has reviewed the requested rezoning of the Project Site and conducted a public hearing thereon.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY COUNCIL OF THE CITY OF SANTA CLARA, CALIFORNIA, AS FOLLOWS:

1. Exhibits. All exhibits attached to this Resolution are incorporated as if fully set forth herein by reference;

2. Adoption of Mitigated Negative Declaration / Approval of Mitigation Monitoring Plan. The City Council finds that through the Mitigation Monitoring Plan the mitigation measures identified in the Mitigated Negative Declaration have been incorporated and imposed on the Project, sufficient to mitigate or avoid the significant environmental effects and that there are specific economic, social and other considerations which make infeasible the project alternatives that would avoid or mitigate the environmental impacts; and adopts the Mitigated Negative Declaration and approves the Mitigation Monitoring and Reporting Program.

3. Approval of Rezoning. 1270 Campbell Avenue, a 5.18 acre parcel located within the municipal jurisdictions of Santa Clara and San Jose for which .58 acres is located in the City of Santa Clara and 4.6 acres is located in San Jose, shown in the Development Plan attached here to as Exhibit A and for which the .58 acre Project Site located in the City of Santa Clara shall be

rezoned from Light Industrial (ML) to Planned Development (PD) for residential development, based on the findings set forth in this Resolution;

4. Rezoning Findings. Pursuant to SCCC Section 18.12.110, the City Council finds: (1) that the existing zoning is inappropriate or inequitable, in that Light Industrial (ML) zoning does not allow residential development an area that has and will continue to transition from industrial to residential land uses; (2) the proposed zone change will preserve property values, protect or improve the existing character and stability of the area, will promote the orderly and beneficial development of the area, in that industrial sites along Campbell Avenue are redeveloping with planned residential projects as properties become available. Existing nonconforming industrial uses will be replaced with infill residential development at densities consistent with the San Jose General Plan, with the inclusion of appropriate mitigation measures; (3) the proposed zone change is required by public necessity, convenience or general welfare, in that the zone change is supportive of the goals in the proposed Santa Clara Station Area Plan, and the City's General Plan to promote a variety of housing types, higher densities and uses around major transit stations, and provide in-lieu affordable housing fees equivalent to three units; and ; (4) the proposed zone change will utilize imaginative planning and design concepts that would be restricted in other zoning districts, in that the Planned Development (PD) zone allows greater flexibility in development standards to create a pedestrian-oriented development that maximizes density and conserves open space.

5. That, based on the findings set forth in this Resolution, the evidence in the City Staff Report, the City Council hereby rezones the Project Site as set forth herein, and approves the Development Plan for a infill residential Project to construct 27 dwelling units as part of a new 259 multifamily residential infill project located within the jurisdictions of Santa Clara and San Jose, subject to Conditions of Approval set forth in Exhibit C.

6. Constitutionality, Severability. If any section, subsection, sentence, clause, phrase, or word of this Resolution is for any reason held by a court of competent jurisdiction to be unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of the Resolution. The City Council of the City of Santa Clara hereby declares that it would have passed this Resolution and each section, subsection, sentence, clause, phrase, and word thereof, irrespective of the fact that any one or more section(s), subsection(s), sentence(s), clause(s), phrase(s), or word(s) be declared invalid.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE _____th DAY OF NOVEMBER, 2008, BY THE FOLLOWING VOTE:

AYES: COUNCILORS:

NOES: COUNCILORS:

ABSENT: COUNCILORS:

ABSTAINED: COUNCILORS:

ATTEST: _____

ROD DIRIDON, JR.
CITY CLERK
CITY OF SANTA CLARA

Attachments Incorporated by Reference:
1. Exhibit A: Development Plan
2. Exhibit B: Mitigation Monitoring and Reporting Program
3. Exhibit C: Conditions of Approval

MITIGATED NEGATIVE DECLARATION, REZONE, DEVELOPMENT PLAN AND MITIGATION MONITORING PLAN RESOLUTION

EXHIBIT A
1270 CAMPBELL AVENUE DEVELOPMENT PLAN

1270 CAMPBELL PLANNED DEVELOPMENT ZONING

Campbell Avenue
San Jose, California

SOBRATO DEVELOPMENT COMPANIES

10600 NORTH DeANZA BOULEVARD, SUITE 200
CUPERTINO, CALIFORNIA 95014

PD: STATEMENTS & TABLES

	SF	ACRES
A. Total acres of subject property		
gross	225,895	5.18
net	225,895	5.18

B. Total number of dwelling units
Apartment Flats/Flts up to 259 @50du/ac

C. Total floor space for each non residential use
n/a

D. Off-street parking & loading

Garage parking	187,659
Open parking	19,574
Percentage of site area	54%

E. Off street parking & loading

Spaces required	per code	#DU	Req'd stalls
1A (1BR Unit)	1.5/du	131	200 stalls
1A (2OR Unit)	1.0/du	18	141 stalls
2B (2BR Unit)	1.0/du	24	43 stalls
2C (2BR Unit)	1.0/du	9	18 stalls
3D (3BR Unit)	1.0/du	1	2 stalls
Total Required		245	402 stalls
Spaces provided			
Total provided		245	431 stalls
Parking provided over required			29 stalls

Bicycle & motorcycle parking	per code	Req'd	Provided
Spaces required			
Bicycle	1/4du	87	82
Motorcycle	1/4du	62	Lh.d.

F. Footprint area of buildings (at street level)

	SF	% Site
Residential	124,510	55%

G. Landscaped areas

	SF	% Site
Total	28,370	13% Site
Planting bed on grade	21,370	11% Site
Planting bed on structure	4,550	2% Site

H. Density

Maximum DU/gross acre	259	@50du/ac
Proposed DU/gross acre	244	@47du/ac

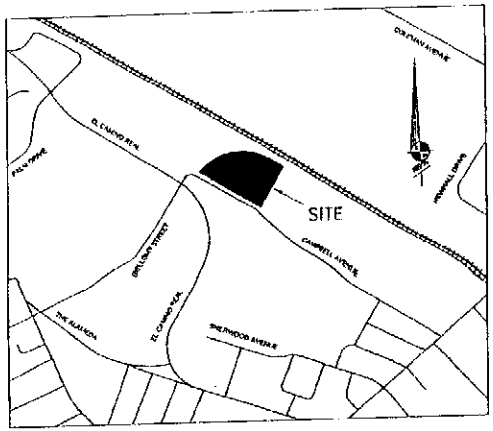
I. Open Space Provided

	SF Total	SF per Unit
Common Open Space	31,939	154
Private Open Space	11,451	47
Total Open Space	43,390	201

NOTE: ALL NUMBERS SHOWN ARE PRELIMINARY AND SUBJECT TO CHANGE

TABLE OF CONTENTS

SHEET #	DESCRIPTION
1-0	TITLE SHEET
2-0	LAND USE PLAN
2-1	TOPOGRAPHIC AND BOUNDARY SURVEY
2-2	TREE SURVEY
2-3	TREE DATA AND PROPOSED DISPOSITION
3-0	CONCEPTUAL SITE PLAN - LEVEL 1 (PODIUM)
3-1	CONCEPTUAL SITE PLAN - CAMPBELL AVENUE PLANTINES
4-1	CONCEPTUAL GRADING & DRAINAGE PLAN
4-2	CONCEPTUAL SITE UTILITY PLAN
4-3	CONCEPTUAL STORMWATER CONTROL PLANS & CALCULATIONS
5-0	CONCEPTUAL BUILDING PLAN - LEVEL A (STREET)
5-1	CONCEPTUAL CAMPBELL AVENUE ELEVATION
5-2	CONCEPTUAL EAST ELEVATION
5-3	CONCEPTUAL NORTH ELEVATION
5-4	CONCEPTUAL WEST ELEVATION
5-5	CONCEPTUAL BUILDING SECTIONS
6-0	CONCEPTUAL LANDSCAPE ARCHITECTURAL PLAN
6-1	CONCEPTUAL LANDSCAPE ARCHITECTURAL PLANT PALETTE



VICINITY MAP
1" = 500'

Location Map
1:1

NOTES

1. OFF-SITE WORK T.B.D.
2. WATER POLLUTION CONTROL T.B.D.
3. PRIVATE INFRASTRUCTURE STANDARDS T.B.D.
4. LOCATION AND HEIGHT OF SOUND WALLS T.B.D. PER SOUND REPORT.

DEVELOPMENT SCHEDULE

Construction Commence	T.B.D.
Project Completion	June 2010

PROJECT DIRECTORY

Owner
SOBRATO DEVELOPMENT COMPANIES
10600 North De Anza Blvd., Suite 200
Cupertino, CA 95014
Phone: (408) 446-0700
Bus Fax: (408) 446-0583
Contact: Tim Steele, VP
Phone: (408) 446-0700

Architect
McLarand Vasquez Emsiek & Partners, Inc.
1900 Main Street, Suite 800
Irvine, CA 92614
Phone: (949) 809-3300
Bus Fax: (949) 809-3399
Contact: Darin Schoenneesiar, Principal

Civil Engineer
Kier & Wright Civil Engineers & Surveyors Inc.
3350 Scott Blvd. Building 22
Santa Clara, CA 95054
Phone: (408) 727-6665
Bus Fax: (408) 727-5441
Contact: Eugene Gobble, Principal

Landscape Architect
The Guzzardo Partnership, Inc.
805 Montgomery Street
San Francisco, California 94133
Phone: (415) 433-4872
Bus Fax: (415) 433-6003
Contact: Paul Lettieri, Principal

1270 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-081
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		

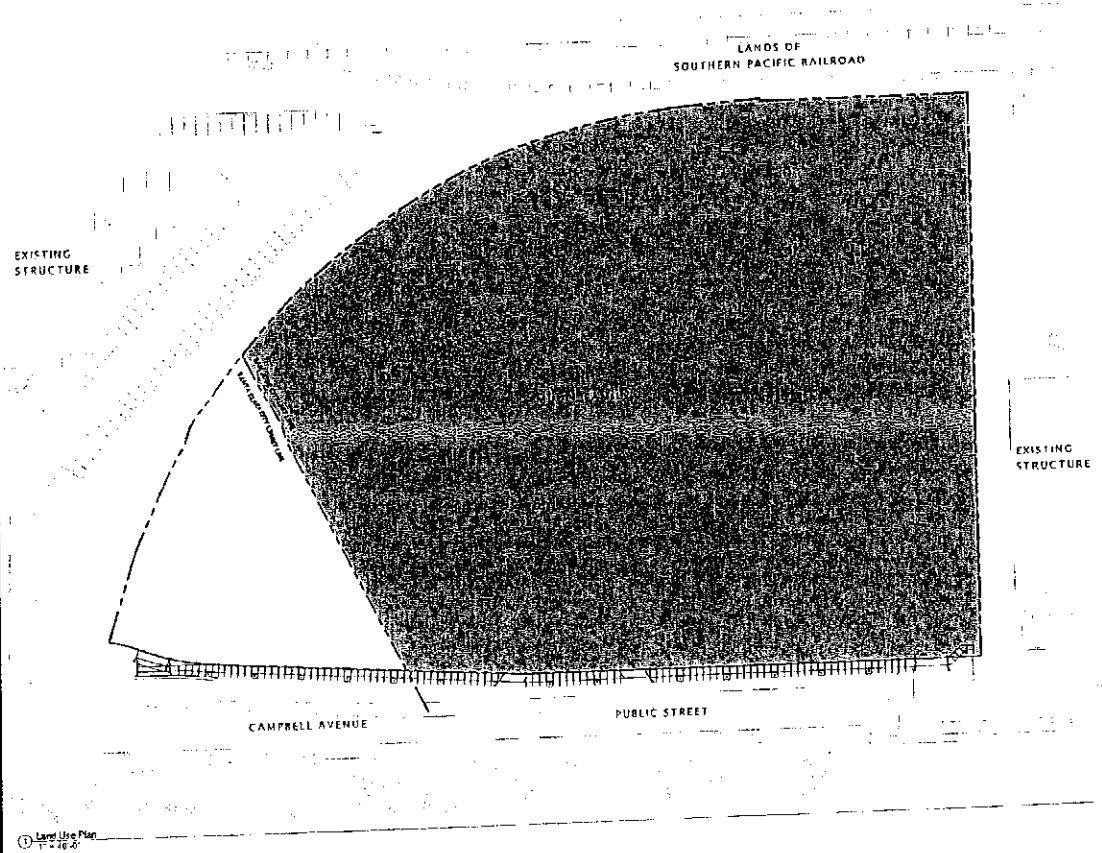
SHEET TITLE
TITLE SHEET

SHEET NUMBER
1-0

MVE & PARTNERS

Architecture Planning Interiors

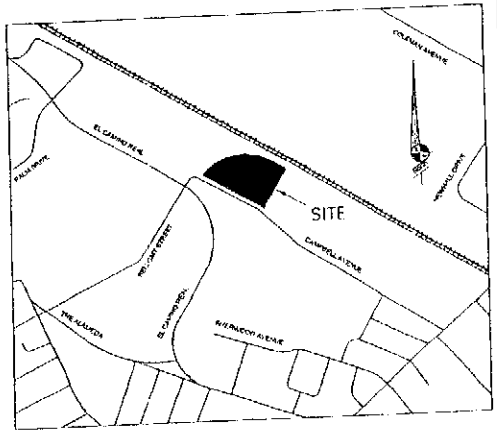
— EXHIBIT A —



1 Land Use Plan
1" = 40'-0"

		AREA S.F.	AREA AC
	GROSS SITE AREA	775,895	5.78
	AREA DEDICATED	0	0
	NET SITE AREA	225,895	5.18

MULTI-FAMILY



VICINITY MAP
1" = 300'

1270 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-001
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		

SHEET TITLE
LAND USE PLAN

NORTH

SHEET NUMBER
2-0

MVL & PARTNERS

Architecture Planning Interiors

NOTES

1. This survey was prepared from information furnished in a Preliminary Title Report, prepared by First American Title Insurance Company, dated March 09, 2007, number NCS-281251-SC. No liability is assumed for matters of record not stated in said preliminary title report that may affect the title lines, or conditions, or easements of the property.
2. The type, locations, that and/or depths of existing underground utilities as shown on this topographic and boundary survey were obtained from drawings of varying reliability. The contractor is cautioned that only actual excavation will reveal the types, sizes, sizes, locations and depths of such underground utilities. A reasonable effort has to be made to locate and delineate all know underground utilities. However, the engineer can assume no responsibility for the correctness or accuracy of its delineation of such underground utilities which may be encountered, but which are not shown on these drawings.
3. Benchmark: E-5:
   Brass disk set top of curb at catch basin at southerly side of Central at entrance to Buck Shaw Stadium
   Elevation: 83.14 (2005)
4. City of Santa Clara Flood Zone:
   This site is in Flood Zone "AH":
   Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined as 83.

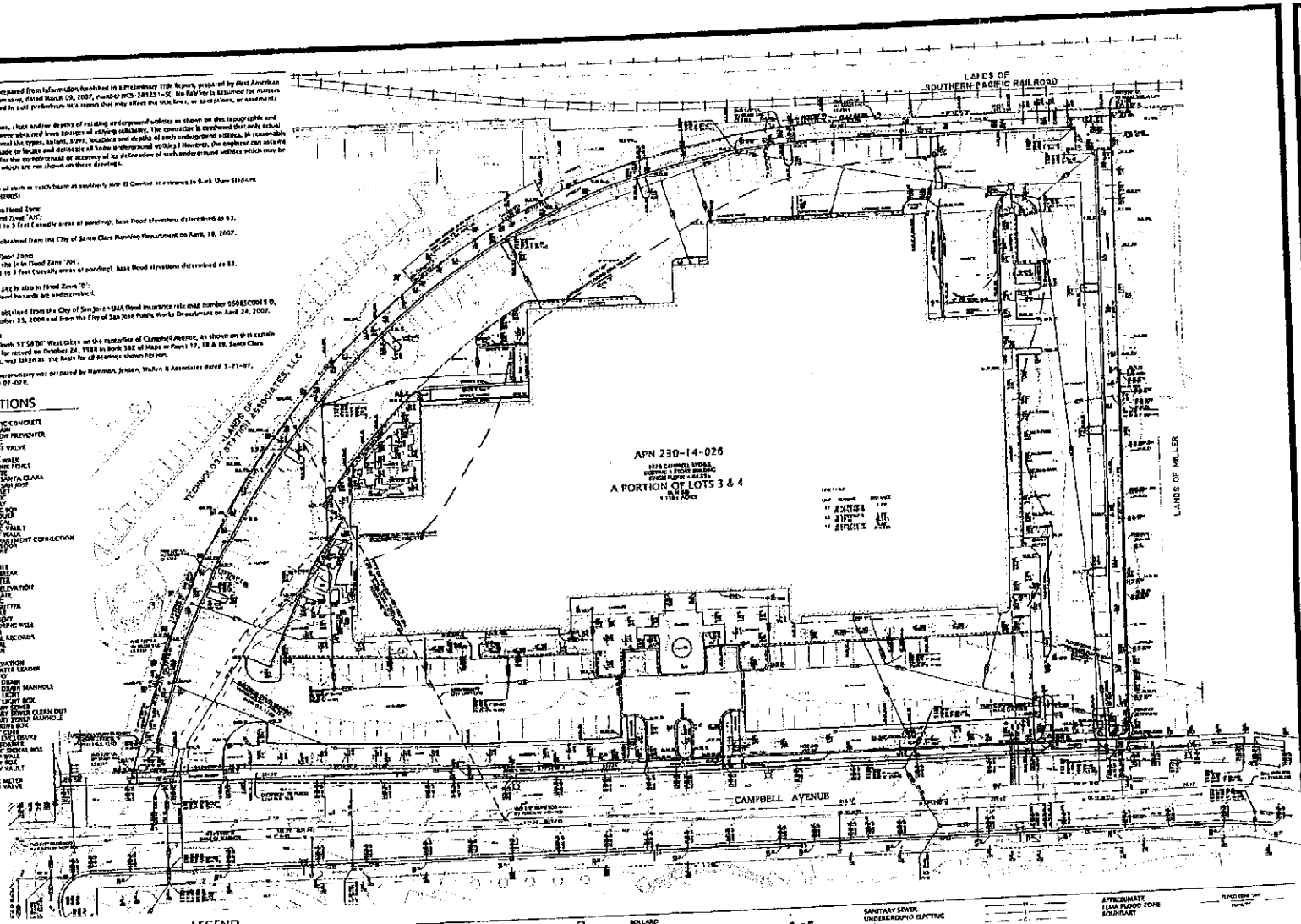
   Information was obtained from the City of Santa Clara Planning Department on April 18, 2007.
5. City of San Jose Flood Zone
   A portion of this site is in Flood Zone "AH":
   Flood depths of 1 to 3 feet (usually areas of ponding). Base flood elevations determined as 83.

   A portion of this site is in Flood Zone "B":
   Areas in which flood hazards are undetermined.

   Information was obtained from the City of San Jose FEMA flood insurance rate map number 06085C0018 D, revision date October 35, 2000 and from the City of San Jose Public Works Department on April 24, 2007.
6. Basis of Bearings
   The bearing of North 37°58'00" West taken on the centerline of Campbell Avenue, as shown on that certain Parcel Map filed for record on October 24, 1988 in Book 582 of Maps at Pages 17, 18 & 19, Santa Clara County Records, was taken as the basis for all bearings shown hereon.
7. The aerial photogrammetry was prepared by Harmsen, Jensen, Wulfen & Associates dated 3-21-07, HJW Job number 07-079.

ABBREVIATIONS

AC	ASPHALTIC CONCRETE
ADD	AREA DRAIN
BFP	BACK FLOW PREVENTER
BLDG	BUILDING
BOV	BLOW OFF VALVE
BTM	BOTTOM
BW	BACK OF WALK
CLF	CHAIN LINK FENCE
CONC	CONCRETE
COSC	CITY OF SANTA CLARA
CSJ	CITY OF SAN JOSE
DI	DROP INLET
DOM	DOMESTIC
DWY	DRIVEWAY
EB	ELECTRIC BOX
EL	ELECTROLIER
ELEC	ELECTRICAL
EV	ELECTRIC VAULT
FW	EDGE OF WALK
FHC	FIRE DEPARTMENT CONNECTION
FL	FINISH FLOOR
FL	FLOW LINE
FNC	FENCE
FPS	FIRE POLE
FP	FLAG POLE
GB	GRADE BREAK
GM	GAS METER
INV	INVERT ELEVATION
LS	LANDSCAPE
LTG	LIGHTING
LIP	LIP OF GUTTER
MH	MANHOLE
MON	MONUMENT
MW	MONITORING WELL
RS	RS/NOS
RS	SPECIAL RECORDS
PED	PEDESTAL
PED	PEDESTRIAN
PV	PAD VAULT
RIM	RIM ELEVATION
RWL	RAIN WATER LEADER
SAN	SANITARY
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
SLB	STREET LIGHT BOX
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
TB	TELEPHONE BOX
TC	TOP OF CURB
TE	TRASH ENCLOSURE
TFB	TRANSFORMER
TSB	TRAFFIC SIGNAL BOX
TW	TOP OF WALL
UB	UTILITY BOX
UV	UTILITY VAULT
WM	WATER
WM	WATER METER
WV	WATER VALVE



LEGEND

PROPERTY LINE	UTILITY BOX (SIZE VARIES)	BOLLARD	SANITARY SEWER
ADJACENT PROPERTY LINE	UTILITY POLE	TRAFFIC LIGHT	UNDERGROUND ELECTRIC
CENTERLINE	SPOT ELEVATION	TRFF N/SIZE, ELEVATION & TAG NUMBER	GAS
EASEMENT	GAS METER	CURB	STORM DRAIN
CITY LIMIT LINE	FIRE HYDRANT	CURB & GUTTER	STORM DRAIN (SUB DRAIN)
STANDARD CITY MONUMENT	WATER VALVE	CONCRETE	TELEPHONE
IRON PIPE	POST INDICATOR VALVE	FENCE	WATER
STORM DRAIN MANHOLE	FIRE DEPARTMENT CONNECTION	BUILDING OUTLINE	FIRE SERVICE
CATCH BASIN	BACK FLOW PREVENTER	BUILDING OVERHANG	LIGHTING CONDUIT
MANHOLE	MONITORING WELL	WALL	INDEX CONTOUR
ELECTROLIER	SIGN	RAILROAD TRACKS	CONTOUR
CLEAN OUT	MONITORING WELL		SINGLE TREE
			TREE OR BRUSH OVERLAPS

APPROXIMATE FEMA FLOOD ZONE BOUNDARY

Scale 1" = 30 ft

1271 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

PD2007-001
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS	DESCRIPTION	DATE
1	PD ZONING RE-SUBMITTAL	03-11-08
2	PD ZONING RE-SUBMITTAL	09-30-08
3		
4		
5		
6		

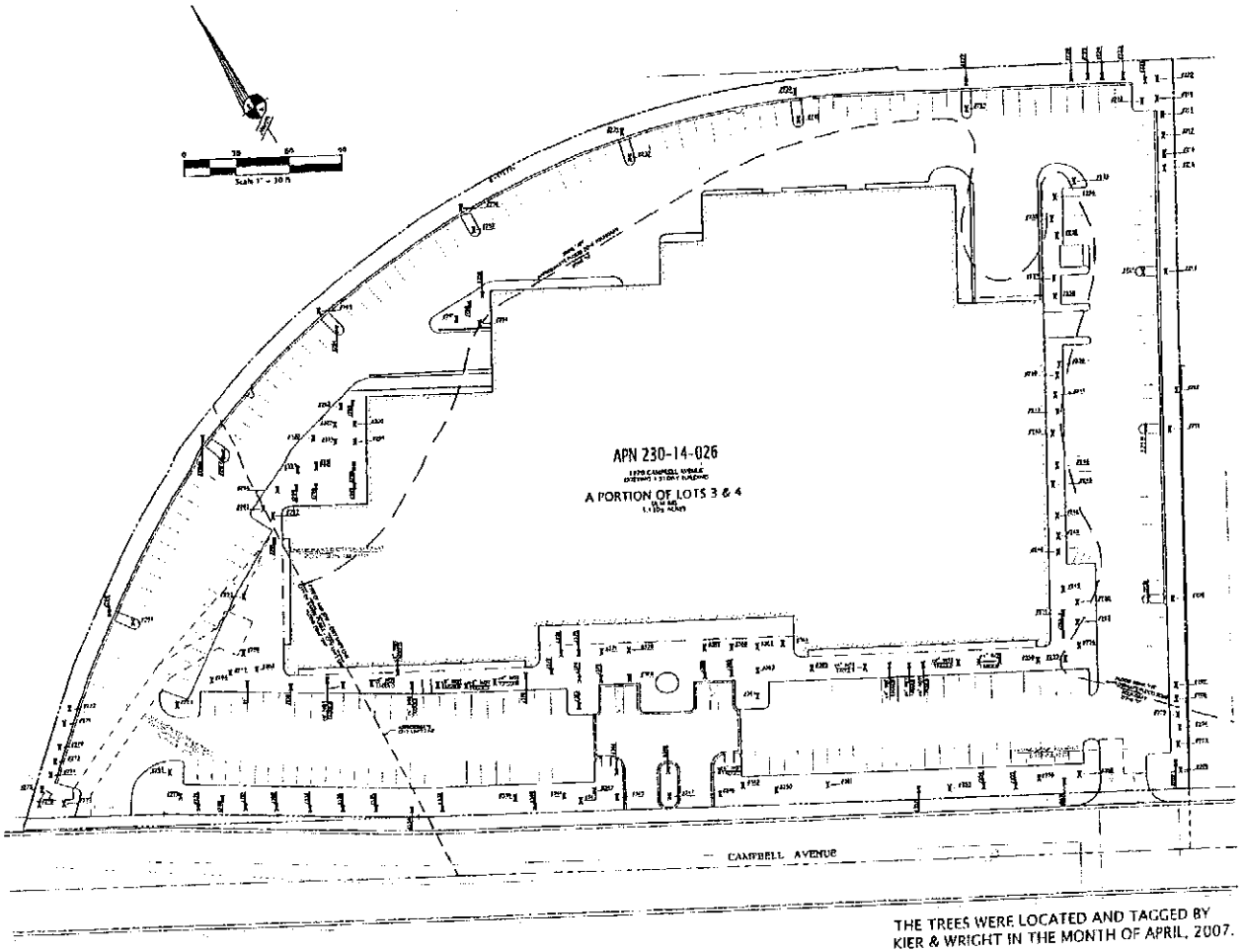
SHEET TITLE

TOPOGRAPHIC & BOUNDARY SURVEY

SHEET NUMBER

2-1

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
3150 Scott Boulevard, Building 12
Santa Clara, California 95054
(408) 727 6466
Fax (408) 727 1641



THE TREES WERE LOCATED AND TAGGED BY KIER & WRIGHT IN THE MONTH OF APRIL, 2007.

LEGEND

PROPERTY LINE
ADJACENT PROPERTY LINE
CENTERLINE
EASEMENT
BUILDING LINE
TREE TO BE REMOVED
CURB
CURB & GUTTER

1270 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-001
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE
PD ZONING RE-SUBMITTAL	03-11-08
PD ZONING RE-SUBMITTAL	08-30-08

SHEET TITLE

TREE SURVEY

SHEET NUMBER

2-2

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.

Tree Number	Name	Diameter	Ordinance Size	Condition	Proposed Disposition
201	Coast redwood	8.5		Good	Remove
202	Coast redwood	10.3		Good	Remove
203	Coast redwood	9.9		Fair to Good	Remove
204	Coast redwood	8.4		Fair to Good	Remove
205	Coast redwood	9.2		Fair to Good	Remove
206	Coast redwood	11.6		Fair to Good	Remove
207	Coast redwood	11.8		Fair to Good	Remove
208	Evergreen ash	9		Fair to Good	Remove
209	Evergreen ash	12.5		Fair to Good	Remove
210	Evergreen ash	6.5		Fair	Remove
211	Evergreen ash	13.5		Fair	Remove
212	Blackwood acacia	11.2		Fair	Remove
213	Evergreen ash	15.1		Fair	Remove
214	Evergreen ash	4.7		Fair	Remove
215	Coast redwood	10.6		Fair to Good	Remove
216	Coast redwood	8.8		Fair to Good	Remove
217	Coast redwood	11.5		Fair to Good	Remove
218	Coast redwood	4.7		Poor to Fair	Remove
219	Coast redwood	5.4		Fair to Good	Remove
220	Coast redwood	3.6		Fair	Remove
221	Coast redwood	5.2		Fair to Good	Remove
222	Evergreen ash	20.3	Yes	Fair	Remove
223	Coast redwood	9.4		Fair to Good	Remove
224	Coast redwood	9.5		Fair to Good	Remove
225	Coast redwood	10.7		Fair to Good	Remove
226	Coast redwood	11.5		Fair to Good	Remove
227	Evergreen ash	14.5		Fair	Remove
228	Evergreen ash	9.7		Fair	Remove
229	Evergreen ash	11.5		Fair	Remove
230	Evergreen ash	14		Fair	Remove
231	Evergreen ash	14.1		Fair	Remove
232	Evergreen ash	5.3		Fair	Remove
233	Italian stone pine	15.4		Fair to Good	Remove
234	Italian stone pine	13.7		Fair to Good	Remove
235	Italian stone pine	11.5		Fair to Good	Remove
236	Italian stone pine	13.5		Fair to Good	Remove
237	Italian stone pine	13.7		Fair to Good	Remove
238	Italian stone pine	14.5		Fair to Good	Remove
239	Italian stone pine	10.4		Fair to Good	Remove
240	Italian stone pine	11		Fair to Good	Remove
241	Italian stone pine	10.9		Fair to Good	Remove
242	Melaleuca	12.3		Fair	Remove
243	Melaleuca	13.3		Fair	Remove
244	Melaleuca	16.4		Fair	Remove
245	Melaleuca	17.3		Fair	Remove
246	Melaleuca	21.5	Yes	Fair	Remove
247	Melaleuca	16.6		Fair	Remove
248	Melaleuca	24	Yes	Fair	Remove
249	Italian stone pine	16		Fair	Remove
250	Italian stone pine	12.2		Poor to Fair	Remove
251	Italian stone pine	9.7		Poor	Remove
252	Italian stone pine	9.9		Poor to Fair	Remove
253	Italian stone pine	18.4	Yes	Poor to Fair	Remove
254	Italian stone pine	11.1		Poor to Fair	Remove
255	Italian stone pine	17		Poor to Fair	Remove
256	Evergreen ash	14.9		Fair	Remove
257	Evergreen ash	6		Fair	Remove
258	Italian stone pine	10.7		Fair	Remove
259	Italian stone pine	10.7		Fair	Remove
260	Italian stone pine	9.9		Fair	Remove
261	Italian stone pine	11		Fair	Remove
262	Italian stone pine	11.6		Fair	Remove
263	Italian stone pine	15.2		Fair to Good	Remove

Tree Number	Name	Diameter	Ordinance Size	Condition	Proposed Disposition
264	Evergreen ash	8.8		Fair	Remove
265	Evergreen ash	15.6		Fair	Remove
266	Evergreen ash	13.9		Fair	Remove
267	Evergreen ash	5		Fair	Remove
268	Evergreen ash	8.7		Fair	Remove
269	Evergreen ash	13.5		Poor	Remove
270	Coast redwood	12		Fair to Good	Remove
271	Coast redwood	11.7		Fair to Good	Remove
272	Coast redwood	10		Fair to Good	Remove
273	Coast redwood	10.1		Fair to Good	Remove
274	Coast redwood	12.8		Fair to Good	Remove
275	Coast redwood	11.5		Fair to Good	Remove
276	Coast redwood	12.7		Fair to Good	Remove
277	Coast redwood	12.5		Fair to Good	Remove
278	Coast redwood	12.2		Fair to Good	Remove
279	Coast redwood	14.8		Fair to Good	Remove
280	Coast redwood	13.4		Poor	Remove
281	Chinese pistache	5.4		Fair	Remove
282	Chinese pistache	6.1		Fair to Good	Remove
283	Coast redwood	10.4		Fair to Good	Remove
284	Italian stone pine	13		Poor	Remove
285	Italian stone pine	11.8		Poor to Fair	Remove
286	Italian stone pine	14.4		Poor to Fair	Remove
287	Italian stone pine	14.2		Fair	Remove
288	Italian stone pine	15.6		Fair to Good	Remove
289	Italian stone pine	12.9		Fair	Remove
290	Melaleuca	19.6	Yes	Fair	Remove
291	Italian stone pine	14.3		Poor to Fair	Remove
292	Italian stone pine	12		Fair	Remove
293	Italian stone pine	11.9		Poor to Fair	Remove
294	Italian stone pine	15.3		Poor to Fair	Remove
295	Aristocrat pear	8.4		Poor to Fair	Remove
296	Aristocrat pear	7.4		Poor to Fair	Remove
297	Aristocrat pear	9.4		Poor to Fair	Remove
298	Aristocrat pear	5.3		Poor to Fair	Remove
299	Aristocrat pear	4.6		Poor to Fair	Remove
300	Aristocrat pear	8.1		Poor to Fair	Remove
328	Aristocrat pear	7.1		Fair	Remove
329	Aristocrat pear	4.1		Fair	Remove
330	Aristocrat pear	6.2		Fair	Remove
331	Aristocrat pear	5		Poor to Fair	Remove
332	Aristocrat pear	6.6		Very poor	Remove
333	Chinese pistache	5.3		Poor	Remove
334	Chinese pistache	6.2		Poor	Remove
335	Chinese pistache	6.1		Poor	Remove
336	Chinese pistache	5.3		Poor	Remove
337	Chinese pistache	6.2		Fair	Remove
338	Italian stone pine	17.1		Fair to Good	Remove
339	Coast redwood	18.2	Yes	Fair to Good	Remove
340	Coast redwood	10.8		Fair to Good	Remove
341	Coast redwood	15.8		Fair to Good	Remove
342	Coast redwood	16.7		Fair to Good	Remove
343	Coast redwood	13.7		Fair to Good	Remove
344	Holly oak	5.1		Fair	Remove
345	Holly oak	4.3		Good	Remove
346	Holly oak	3.7		Fair to Good	Remove
347	Holly oak	4.2		Fair to Good	Remove
348	Holly oak	3.9		Good	Remove
349	Coast redwood	15.9		Fair to Good	Remove
350	Coast redwood	12.1		Good	Remove
351	Coast redwood	10.2		Fair	Remove
352	Chinese pistache	10		Poor	Remove
353	Chinese pistache	3.8			

Tree Number	Name	Diameter	Ordinance Size	Condition	Proposed Disposition
354	Chinese pistache	4.6		Fair to Good	Remove
355	Chinese pistache	6.1		Fair to Good	Remove
356	Coast redwood	13.8		Good	Remove
357	Coast redwood	10.4		Good	Remove
358	Coast redwood	10.6		Good	Remove
359	Italian stone pine	13.2		Poor to Fair	Remove
360	Coast redwood	7.9		Fair to Good	Remove
361	Coast redwood	9.4		Fair to Good	Remove
362	Aristocrat pear	5.5		Fair	Remove
363	Aristocrat pear	6.7		Fair	Remove
364	Aristocrat pear	7.7		Fair	Remove
365	Aristocrat pear	7.9		Fair	Remove
366	Aristocrat pear	8		Fair	Remove
367	Aristocrat pear	8.9		Poor	Remove
368	Aristocrat pear	7.5		Fair	Remove
369	Aristocrat pear	9.3		Poor to Fair	Remove
370	Aristocrat pear	6		Poor to Fair	Remove
371	Aristocrat pear	7		Poor to Fair	Remove
372	Aristocrat pear	6.3		Fair	Remove
373	Aristocrat pear	7.9		Poor to Fair	Remove
374	Aristocrat pear	11.5		Poor	Remove
375	Aristocrat pear	6.3		Fair to Good	Remove
376	Coast redwood	21.8		Fair	Remove
377	Coast redwood	8		Fair	Remove
378	Coast redwood	10			

A Tree Report Dated April 28, 2007
has been prepared for this site by:
McCLENAHAN CONSULTING, LLC
John H. McClenahan
Certified Arborist, WE-1476A, member
American Society of Consulting Arborists
The reviewer is encouraged to review
the report for further particulars.

1270 + Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

POCKET AGE
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

	DESCRIPTION	DATE
1	PD ZONING RE-SUBMITTAL	03-11-08
2	PD ZONING RE-SUBMITTAL	09-30-08

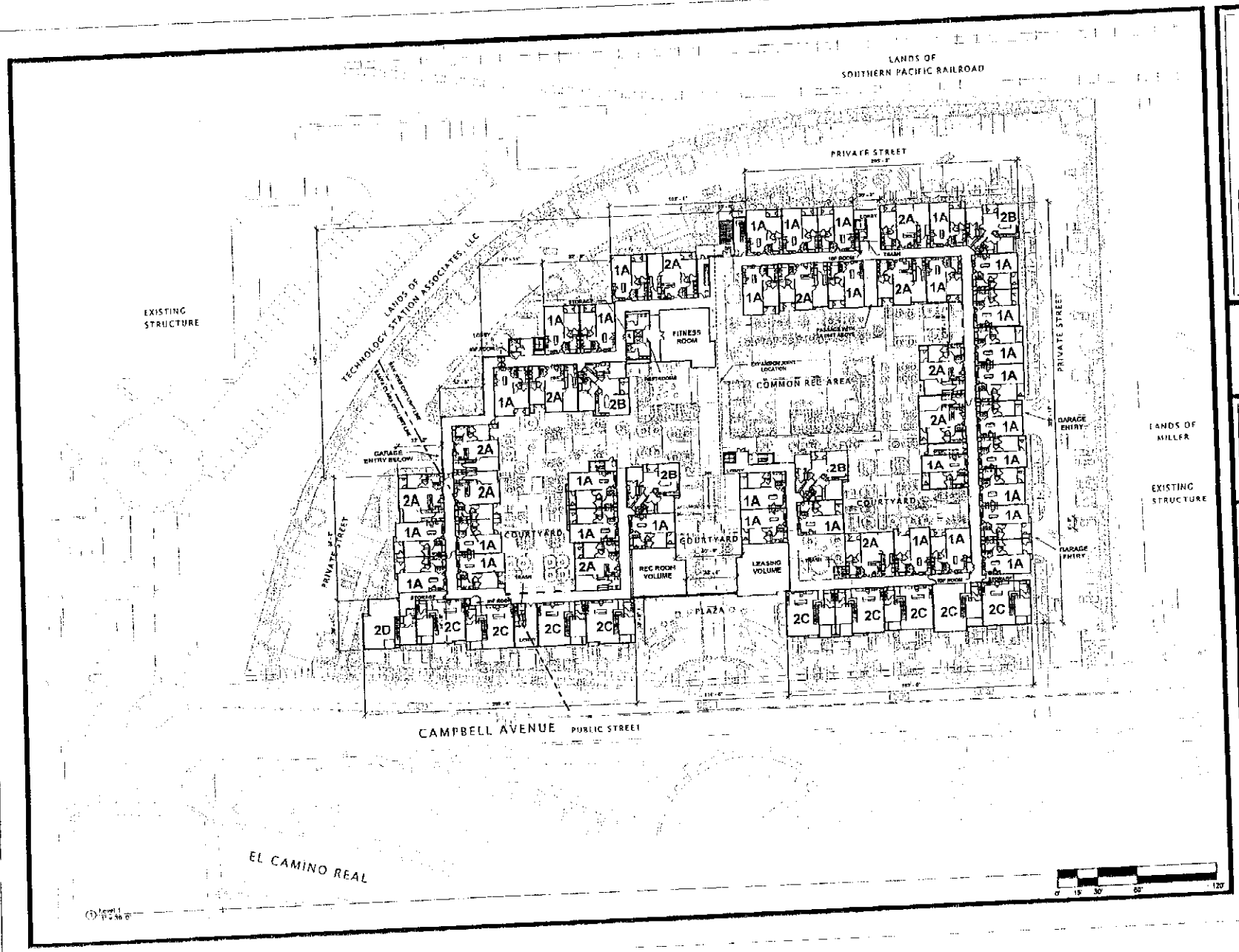
SHEET TITLE

TREE DATA & PROPOSED DISPOSITION

SHEET NUMBER

2-3

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
3140 Gold Boulevard, Building 23
Santa Clara, California 95054
(408) 727-6848
Fax (408) 727-1821



1270 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-051
Submitted Planning Commission
Sunnyvale, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

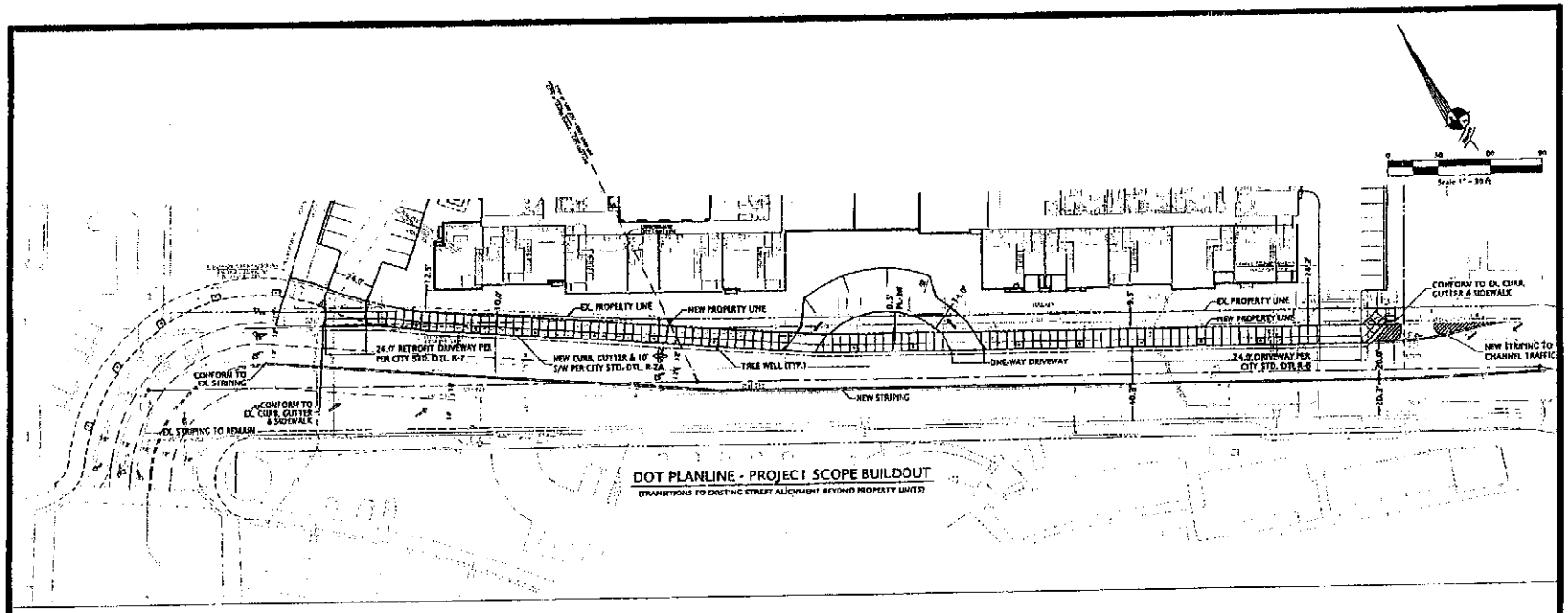
DESCRIPTION	DATE

SHEET TITLE
CONCEPTUAL SITE PLAN - LEVEL 1 (PODIUM)

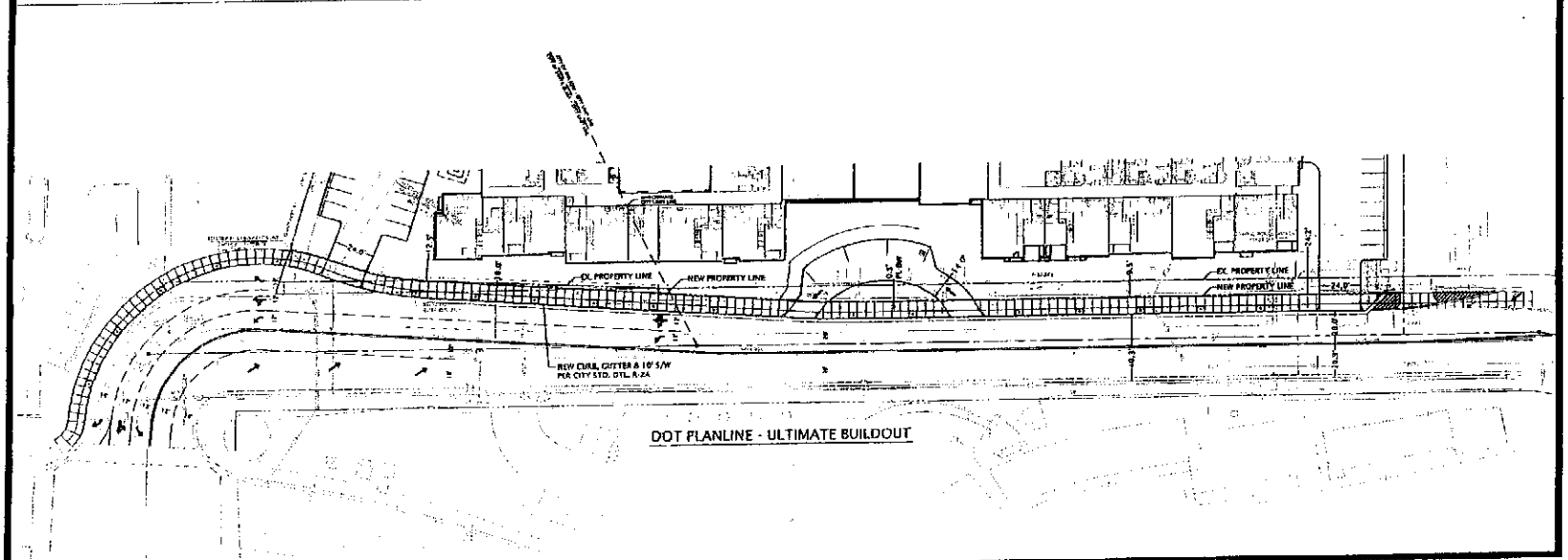
NORTH

SHEET NUMBER
3-0

MVE & PARTNERS



DOT PLANLINE - PROJECT SCOPE BUILDOUT
(TRANSITIONS TO EXISTING STREET ALIGNMENT BEYOND PROPERTY LIMITS)



DOT PLANLINE - ULTIMATE BUILDOUT

1970 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C
PDC07-061
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

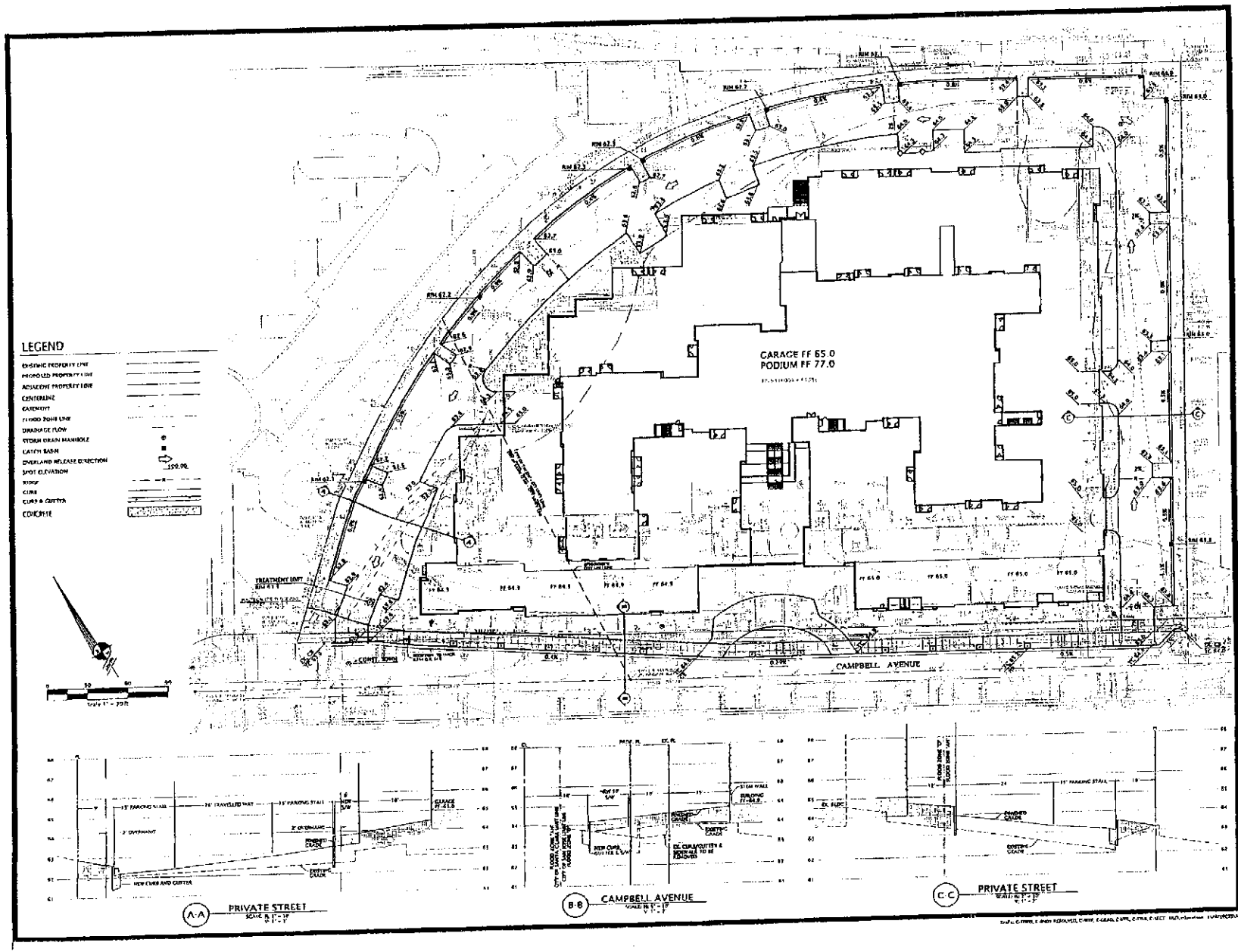
REVISIONS

	DESCRIPTION	DATE
△	PD ZONING RE-SUBMITTAL	03-11-08
△	PD ZONING RE-SUBMITTAL	09-30-08
△		
△		
△		
△		
△		

SHEET TITLE
CONCEPTUAL SITE PLAN - CAMPBELL AVENUE PLANLINES

SHEET NUMBER
3-1

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.



1270 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE
PD ZONING RE-SUBMITTAL	03-11-08
PD ZONING RE-SUBMITTAL	08-30-08

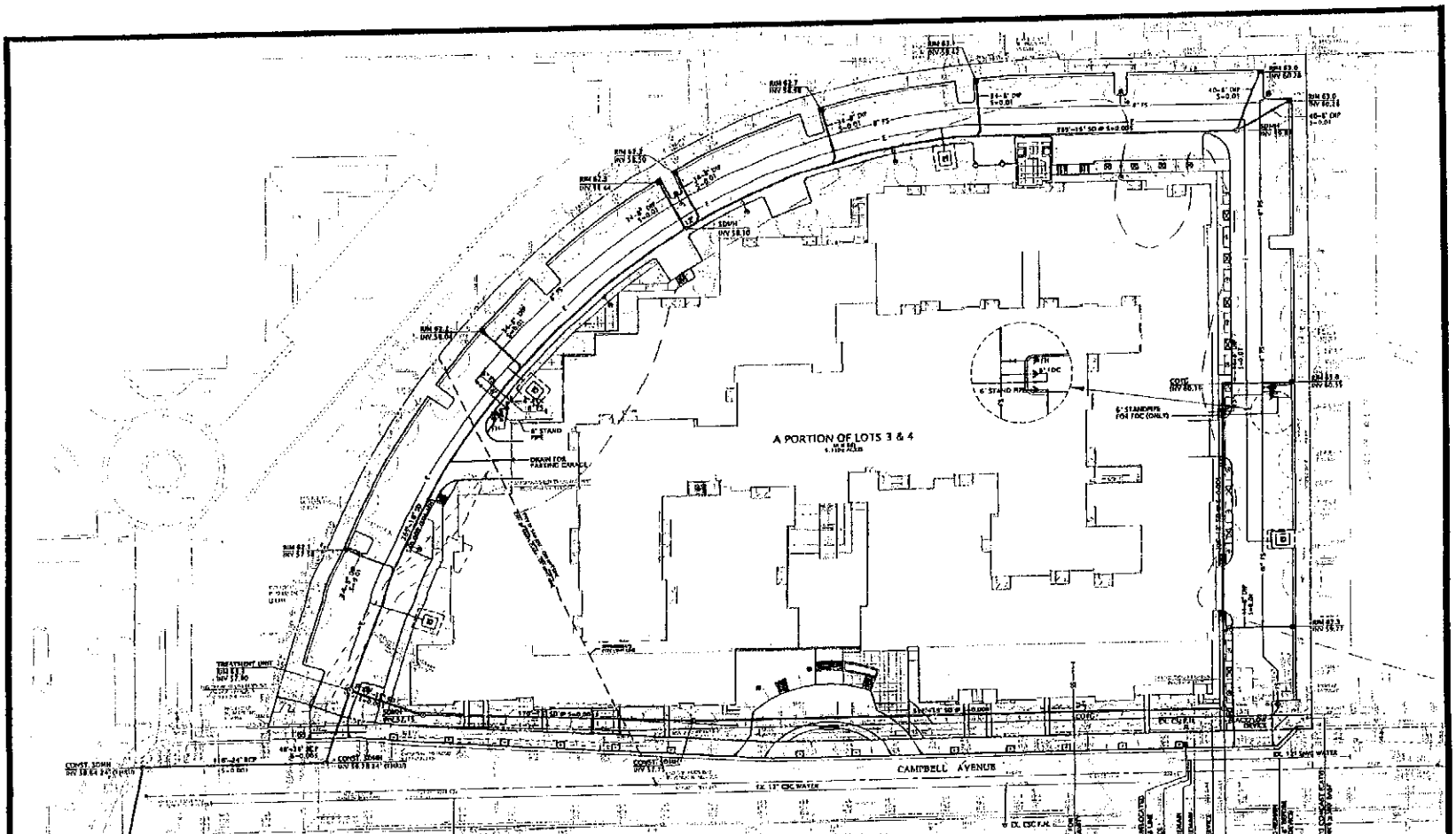
SHEET TITLE

CONCEPTUAL GRADING & DRAINAGE PLAN

SHEET NUMBER

4-1

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.



Q_{10} EVENT RUNOFF

UNIT	VALUE	DESCRIPTION
C	0.81	RUNOFF COEFFICIENT (COMPOSITE)
I	1.00	INTENSITY (INCHES/HOUR)
A	5.20	AREA (ACRES)

10-YEAR EVENT Q = 7.56 CFS (CUBIC FEET/SECOND)

DISCHARGE CALCULATION

PIPE ID	Q (CFS)	d	S (ft/ft)	n	V (ft/s)	d/D
OUTLET 1	7.56	24"	0.001	0.013	2.57	0.59

STORM DRAIN NOTES

1. ALL PIPE DESIGNATED AS "SD" TO BE PVC SDR-26.
2. DUE TO DEPTH CONSTRAINTS AND STREET LAYOUT, RCP WILL NOT BE USED ON-SITE EXCEPT AT PUBLIC STREET CONNECTION.

ABBREVIATIONS

CB	CATCH BASIN
CONST.	CONSTRUCT
CDTG	CLEAN OUT TO GRADE
CSC	CITY OF SANTA CLARA
CSJ	CITY OF SAN JOSE
DIP	DUCTILE IRON PIPE
DWS	DOMESTIC WATER SERVICE
EX	EXISTING
EX.	EXISTING
F.H.	FIRE HYDRANT
FS	FIRE SERVICE
INV	INVERT ELEVATION
IRR	IRRIGATION
LAT	LATERAL
RCP	REINFORCED CONCRETE PIPE
RIM	RIM ELEVATION
SAN	SANITARY SEWER
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SJWC	SAN JOSE WATER COMPANY
SS	SANITARY SEWER

LEGEND

EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
ADJACENT PROPERTY LINE
CENTERLINE
EASEMENT
TRANSFORMER
FIRE HYDRANT
FIRE DEPARTMENT CONNECTION
STORM DRAIN MANHOLE
CATCH BASIN
CLEAN OUT
CURB
CURB & GUTTER
SANITARY SEWER
STORM DRAIN
FIRE SERVICE
UNDERGROUND ELECTRIC

2710 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

90067-001
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

	DESCRIPTION	DATE
△	PD ZONING RE-SUBMITTAL	03-11-08
△	PD ZONING RE-SUBMITTAL	09-30-08

SHEET TITLE

CONCEPTUAL SITE UTILITY PLAN

SHEET NUMBER
4-2

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
1250 Scott Boulevard, Building 22
Santa Clara, California 95054
(408) 727 6665
Fax (408) 727 5541

PRE & POST DEVELOPMENT AREA CALCULATIONS

SITE (ACRES): 5.20	SITE (SQ FT): 226,512						
	EXISTING CONDITIONS (SQFT)	%	PROPOSED CONDITIONS (SQFT)	%	DIFFERENCE (SQFT)	%	LEGEND
BUILDING FOOTPRINTS	88,427	39%	88,791	39%	364	0%	
PARKING FACILITIES	0	0%	0	0%	0	0%	N/A
SIDEWALKS, PATIOS, PATHS, ETC.	5,107	2%	49,648	22%	44,543	20%	
STREETS (PUBLIC/PRIVATE)	89,328	40%	57,685	25%	-31,643	-15%	
LANDSCAPING	43,459	19%	34,397	15%	-9,063	-4%	
TOTALS	226,317	100%	226,513	100%	0	0%	

FILTRATION UNIT SIZING CALCULATIONS

TREATMENT FLOWRATE OF WATER-QUALITY STORM EVENT (WQSE)

IN ACCORDANCE WITH THE CALIFORNIA STORMWATER QUALITY ASSOCIATION'S (CASQA) "STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK FOR NEW DEVELOPMENT AND REDEVELOPMENT," THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD FOR THE SAN FRANCISCO BAY REGION (C.3 EO-PERMIT PROVISIONS), AND THE SAN FRANCISCO BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION (NASMAA), A MINIMUM WATER QUALITY RAINFALL INTENSITY OF 0.2 INCHES/HOUR MAY BE UTILIZED TO DETERMINE THE APPROPRIATE FLOW-BASED STORMWATER BMP STRUCTURE.

CALCULATION/ESTIMATION OF RUNOFF FLOW FROM THE WQSE

RATIONAL METHOD: $Q_{WQ} = C \times I_{WQ} \times A$

Q_{WQ} = FLOW (DISCHARGE FLOW, CUBIC FEET PER SECOND)
C = RC (RUNOFF COEFFICIENT, NON-DIMENSIONAL)
I_{WQ} = 0.2 (RAINFALL INTENSITY, INCHES/HOUR)
A = XA (CATCHMENT AREA, ACRES)

WATER QUALITY STORM EVENT FLOW ESTIMATE

VARIABLE	VALUE	UNIT	DEFINITION
C=	0.81	N / A	WEIGHTED AVERAGE RUNOFF COEFFICIENT
I_{WQ}=	0.2	IN/HR	MIN. RAINFALL INTENSITY OF WATER QUALITY STORM EVENT
A_{WQ}=	226,512 5.20	SQFT ACRES	ESTIMATED DRAINAGE AREA SIZE (PER TREATMENT UNIT)
Q_{WQ}=	0.84 377	CFS GPM	MINIMUM FLOWRATE OF WATER QUALITY STORM EVENT
SELECTION OF STRUCTURAL STORM WATER TREATMENT DEVICE:			
FLOGARD DUAL-VORTEX HYDRODYNAMIC SEPARATOR MODEL DVS-48C			

STORMWATER CONTROL PLAN NOTES

1. THE SITE IS SLOPING FROM THE EAST ALONG CAMPBELL AVENUE WEST TOWARDS EL CAMINO REAL WITH APPROXIMATELY 1 FOOT OF ELEVATION DIFFERENCE RANGING FROM ELEVATION 63 TO 62, RESPECTIVELY. DUE TO SITE CONSTRAINTS A MECHANICAL TREATMENT UNIT IS NECESSARY TO TREAT THE SITE IN ORDER ACHIEVE 100% TOTAL SITE TREATMENT.
2. A PORTION OF THIS SITE IS IN FLOOD ZONE "AH": FLOOD DEPTHS OF 1 TO 3 FEET USUALLY AREAS OF PONDING; BASE FLOOD ELEVATION DETERMINED AS 63.

   A PORTION OF THIS SITE IS ALSO IN FLOOD ZONE "D": AREAS IN WHICH FLOOD HAZARDS ARE UNDETERMINED.

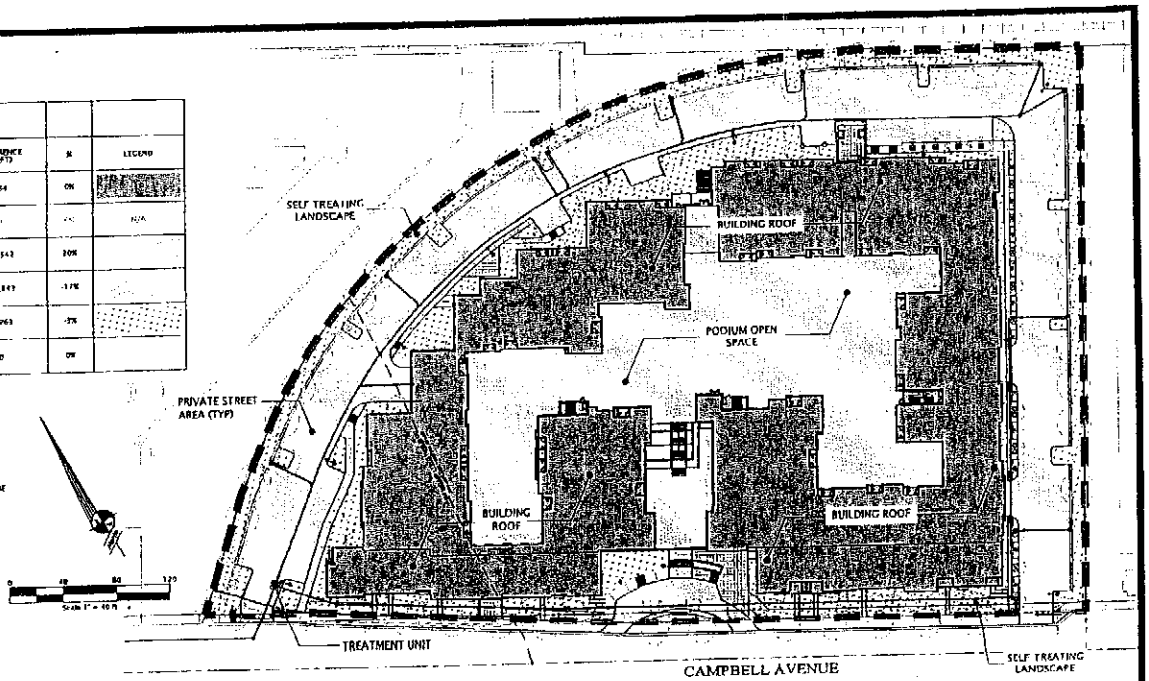
   INFORMATION WAS OBTAINED FROM THE CITY OF SAN JOSE FEMA FLOOD INSURANCE RATE MAP NUMBER 06085C0018 D, REVISION DATE OCTOBER 25, 2000 AND FROM THE CITY OF SAN JOSE PUBLIC WORKS DEPARTMENT ON APRIL 24, 2007.
3. POTENTIAL POLLUTANTS INCLUDE MOTOR VEHICLE LUBRICANTS, COOLANTS, ROOF DEBRIS, LITTER AND DEBRIS. POLLUTANT SOURCE AREAS INCLUDE THE DRIVE AISLES, THE ROOFS OF THE BUILDING, AND THE SITE STORM DRAIN INLETS. ALL INLETS WILL BE MARKED "NO DUMPING - DRAINS TO BAY". THE DRIVE AISLE SHALL BE SWEPT REGULARLY TO PREVENT THE ACCUMULATION OF LITTER AND DEBRIS.
4. THE TREATMENT UNIT SHALL BE MAINTAINED TWICE A YEAR AND BEFORE THE RAINY SEASON BEGINS IN OCTOBER. THE MAINTENANCE OF THIS UNIT CONSISTS OF CLEANING AND REMOVAL OF ACCUMULATED DEBRIS AND REPLACEMENT OF DIFFUSERS AS NEEDED PER INSPECTIONS.
5. THE COSTS OF ALL MAINTENANCE WILL BE BORNE BY THE PROPERTY OWNER OR ASSOCIATION.
6. SOIL TYPES BENEATH THE PAVEMENT SECTION, BORINGS ENCOUNTERED APPROXIMATELY 1 TO 2 FEET OF UNDOCUMENTED FILL CONSISTING OF STIFF TO VERY STIFF SILTY CLAY, SILTY CLAY WITH GRAVEL AND GRAVELLY CLAY

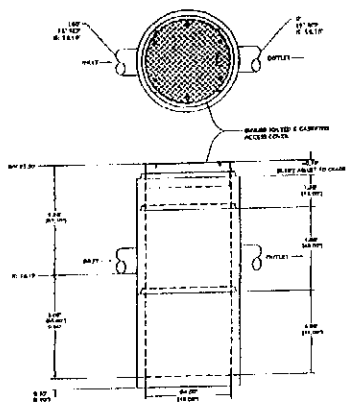
   BENEATH THE SURFACE PAVEMENTS AND EXISTING FILL, THE SITE IS GENERALLY UNDERLAIN BY HIGHLY VARIABLE INTERBEDDED ALLUVIAL SOILS. NEAR SURFACE NATIVE SOILS GENERALLY CONSISTS OF MEDIUM STIFF TO STIFF, MODERATELY TO HIGHLY PLASTIC CLAYS TO APPROXIMATELY 18 TO 22 FEET IN DEPTH, EXCEPT WHERE STIFF SILTY AND SANDY CLAYS EXTEND TO APPROXIMATELY 37 FEET BELOW EXISTING GRADE IN CERTAIN AREAS.

   THE UPPER CLAYS ARE INTERBLAIN BY INTERBEDDED LAYERS OF LOOSE TO DENSE CLAYEY/SILTY SANDS, GRAVELLY SANDS, AND POORLY GRADED SANDS. THESE SAND LAYERS VARY FROM APPROXIMATELY 1 TO 15 FEET THICK. THE SANDY WERE INTERBEDDED WITH STIFF SILTY AND SANDY CLAYS TO THE MAXIMUM DEPTH EXPLORED AT 50 FEET.
7. FREE GROUND WATER: EXPLORATORY BORINGS PERFORMED DURING THIS INVESTIGATION ENCOUNTERED FREE GROUND WATER AT DEPTHS RANGING FROM 17 1/2 TO 19 FEET BELOW EXISTING SITE GRADES. MEASUREMENTS TAKEN AT THE TIME OF DRILLING MAY NOT REPRESENT THE STABILIZED LEVELS THAT CAN BE HIGHER THAN THAT ENCOUNTERED. BASED ON AVAILABLE PUBLISHED DATA, SEASONAL AND/OR HISTORICAL HIGH GROUNDWATER ON THE ORDER OF 10 FEET BELOW GROUND SURFACE COULD BE EXPECTED FOR THE SITE VICINITY.

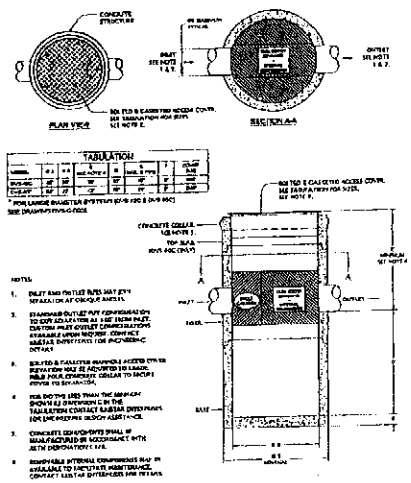
   A PORE PRESSURE DISSIPATION TEST WAS ALSO PERFORMED AT A DEPTH OF APPROXIMATELY 24 FEET. BASED ON THE MAXIMUM RECORDED PORE PRESSURE OF 8.26 POUNDS PER SQUARE INCH (PSI) RECORDED DURING THE TEST, THE ESTIMATED DEPTH TO GROUND WATER IS 8 FEET. THIS ESTIMATED WATER LEVEL MAY REPRESENT A CONFINED CONDITION ON THE SHALLOW WATER BEARING ZONE BENEATH THE SITE.

   FLUCTUATIONS IN GROUND WATER LEVELS OCCUR DUE TO MANY FACTORS INCLUDING SEASONAL VARIATIONS, PERCHED GROUND WATER IN PERMEABLE LAYERS, AND REGIONAL CHANGES IN GROUND WATER LEVELS.
8. ALL ON-SITE STORM DRAINAGE DISCHARGES AS A SINGLE WATERSHED TO THE FILTRATION UNIT.





KRISTAR DUAL VORTEX HYDRODYNAMIC SEPARATOR (DVS-48C)



KRISTAR DUAL VORTEX HYDRODYNAMIC SEPARATOR CIRCULAR STRUCTURES (DVS-48C)

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GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-081
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

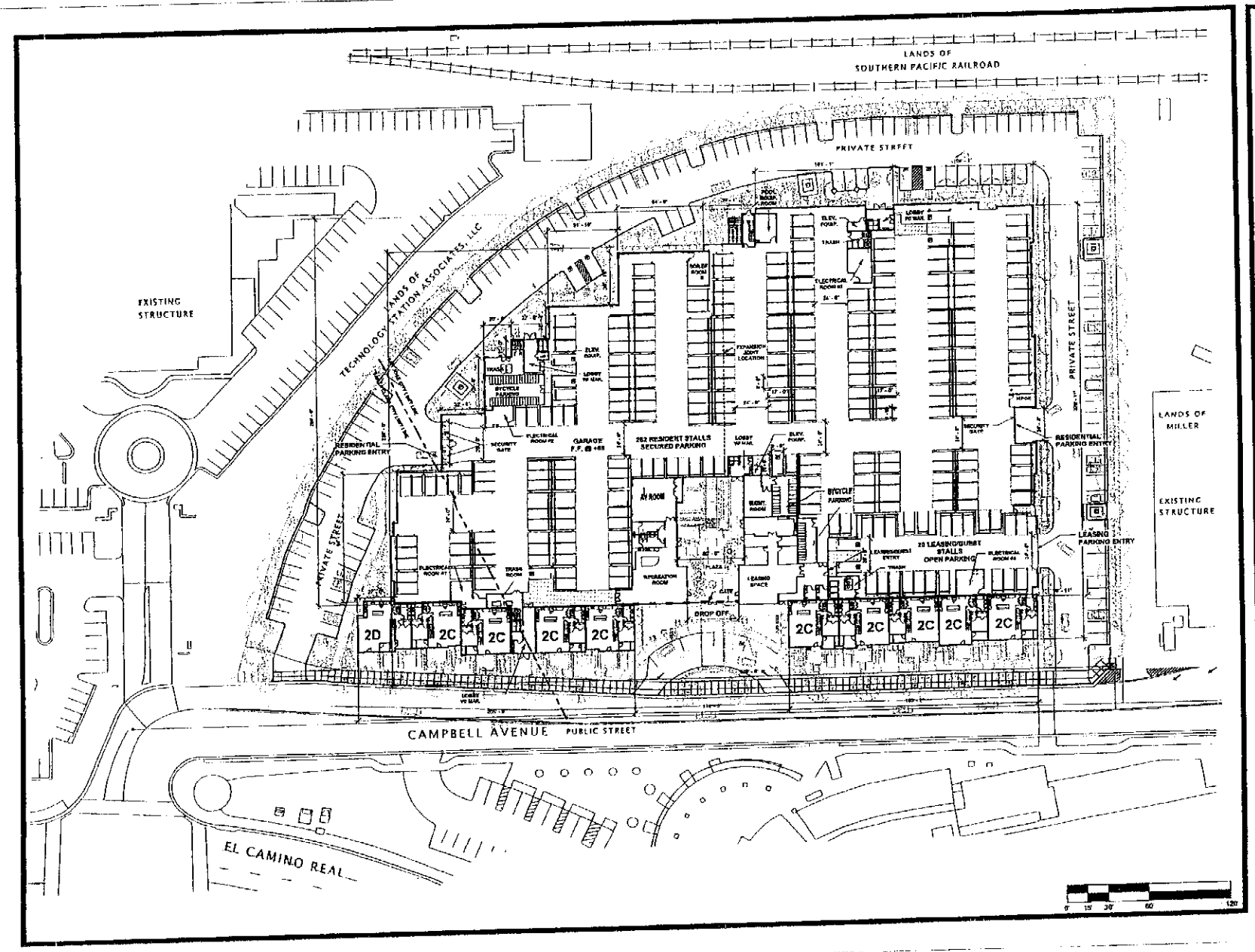
	DESCRIPTION	DATE
1	PD ZONING RE-SUBMITTAL	03-11-08
2	PD ZONING RE-SUBMITTAL	09-30-08

SHEET TITLE
CONCEPTUAL STORMWATER CONTROL PLAN & CALCULATIONS

SHEET NUMBER
4-3

JOB NO. 40104
DATE 9/30/2008
SCALE AS SHOWN

KIER & WRIGHT
CIVIL ENGINEERS & SURVEYORS, INC.
3168 Red Hill Avenue, Building 27
Santa Clara, California 92705
(949) 752-8580
Fax (949) 752-5541



GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-481
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

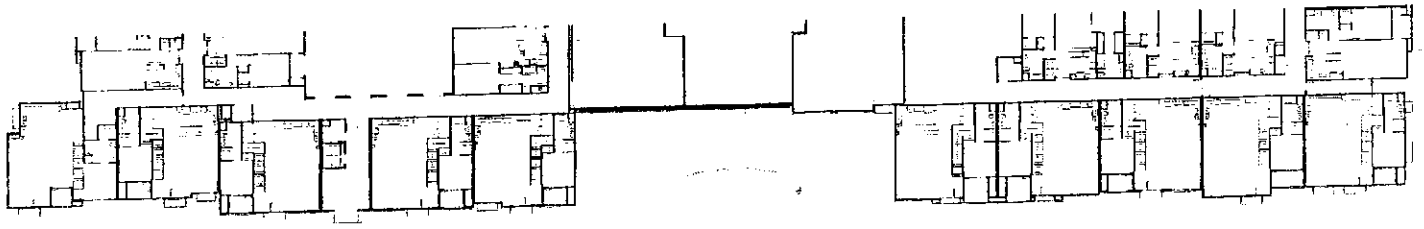
	DESCRIPTION	DATE

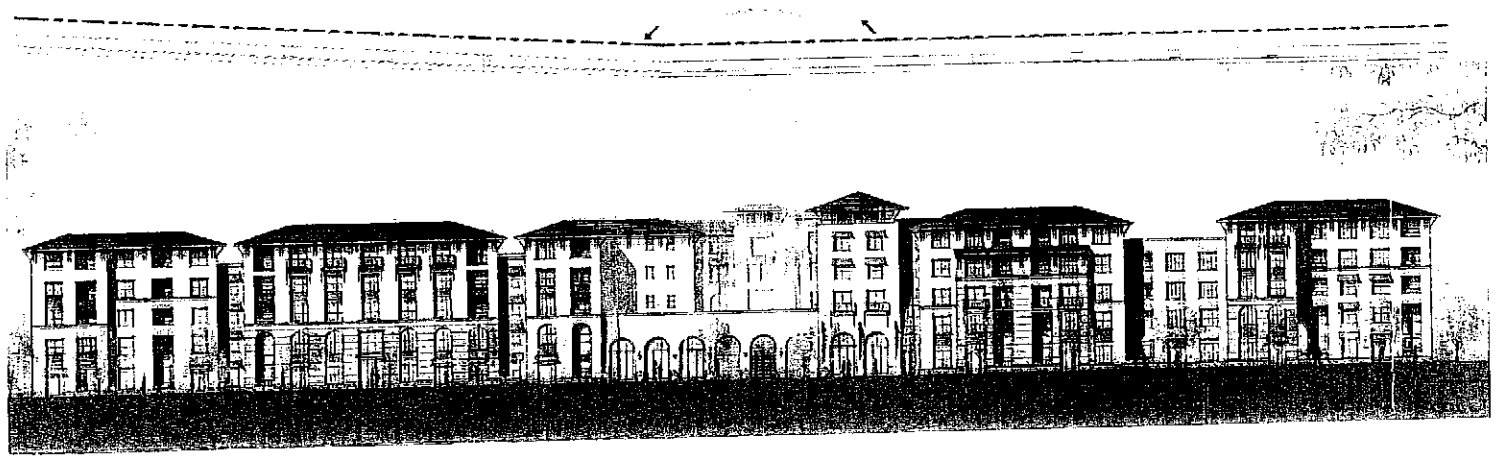
SHEET TITLE
CONCEPTUAL
BUILDING PLAN
LEVEL A (STREET)

NORTH

SHEET NUMBER
5-0

M&L PARTNERS





KEY PLAN

0' 10' 20' 40' 80'

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RESIDENTIAL DEVELOPMENT

PLANNED DEVELOPMENT PERMIT
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE

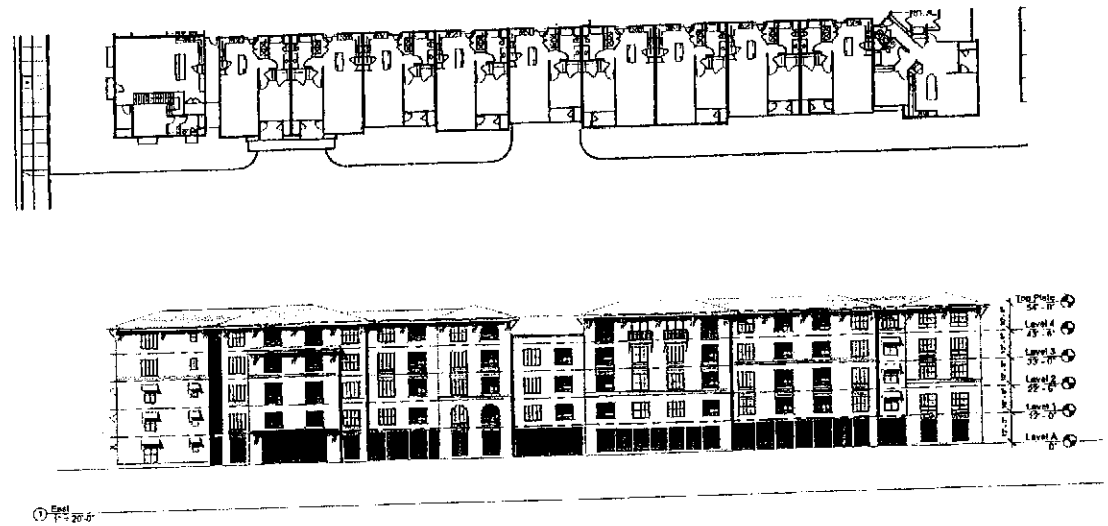
SHEET TITLE

CONCEPTUAL CAMPBELL AVENUE ELEVATION

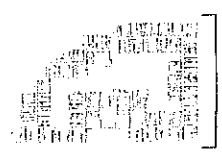
SHEET NUMBER

5-1

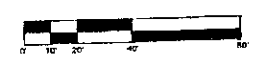
MVL & PARTNERS



① East
1" = 20'-0"



KEY PLAN



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GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC97-001
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE

SHEET TITLE

CONCEPTUAL EAST ELEVATION

SHEET NUMBER

5-2

MVL & PARTNERS

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GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-001
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE

SHEET TITLE

CONCEPTUAL NORTH ELEVATION

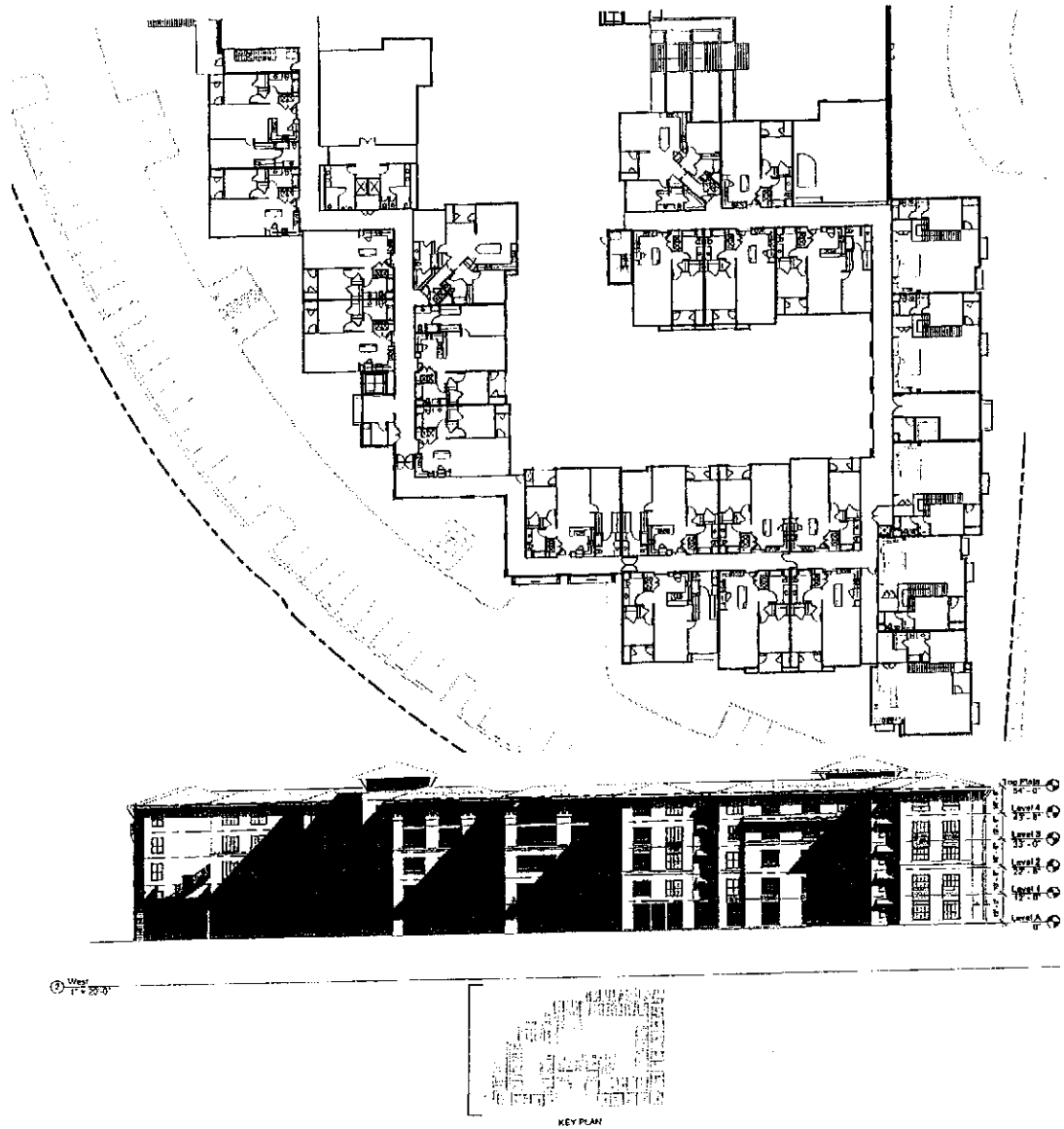
SHEET NUMBER

5-3

1" = 20'-0"

M&L PARTNERS

Architecture Planning Interiors



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GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-091
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

	DESCRIPTION	DATE

SHEET TITLE

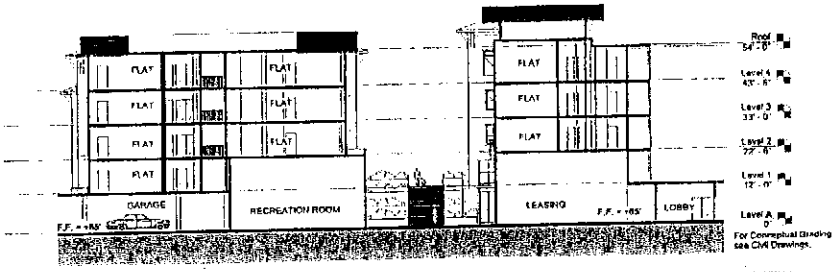
CONCEPTUAL WEST ELEVATION

SHEET NUMBER

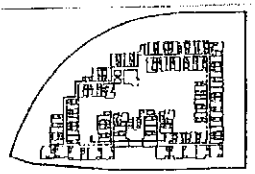
5-4

MVL & PARTNERS

Architecture Planning Interiors



(3) Section 3
1/16" = 1'-0"



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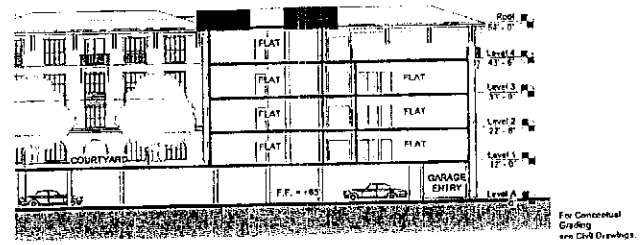
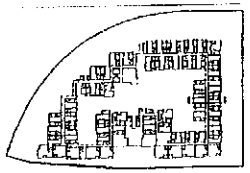


(2) Section 2
1/16" = 1'-0"



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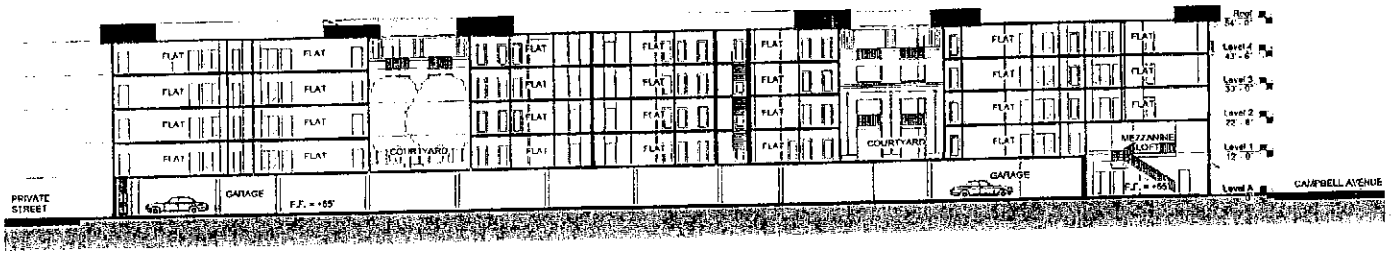

(1) Section 1
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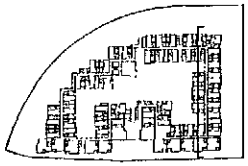

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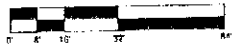

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GENERAL DEVELOPMENT PLAN EXHIBIT C

PDC07-089
Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

DESCRIPTION	DATE

SHEET TITLE

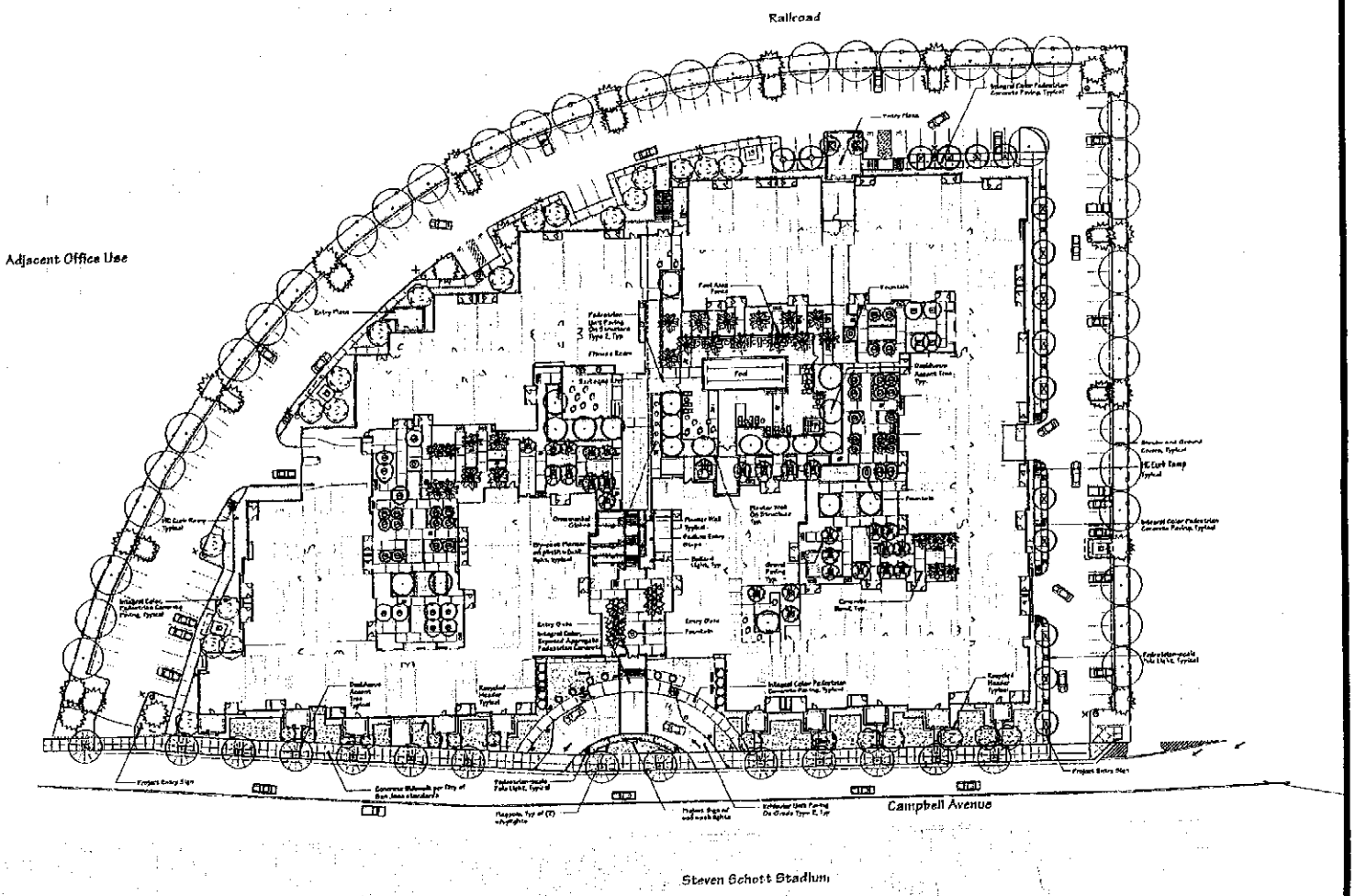
CONCEPTUAL BUILDING SECTIONS

SHEET NUMBER

5-5

MVL & PARTNERS

Architecture Planning Interiors



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GENERAL DEVELOPMENT PLAN EXHIBIT C

Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

	DESCRIPTION	DATE
△	PD Zoning Re-submittal	01.23.08
△	PD Zoning Re-submittal	01.30.08
△		
△		
△		
△		
△		

SHEET TITLE

Conceptual Landscape Architectural Plan

North

Scale: 1" = 30'

SHEET NUMBER

6.0

THE GUZZARDO PARTNERSHIP INC.
Landscape Architects · Land Planners
838 Montgomery Street
San Francisco, CA 94133
T 415 433 4672
F 415 433 5003

CONCEPTUAL PLANT PALETTE

TREES KEY	SIZE	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING
BAM OLD	24" box	Bambusa oldhamii	Timber Bamboo	Multi-trunk
BET JAQ	24" box	Betula jacquemontii	Birch	
CEL SIN	24" box	Celtis sinensis	Chinese Hackberry	
CER OCC	24" box	Cercis occidentalis	Western Redbud	Standard
CHA HUM	36" box	Chamaerops humilis	Mediterranean Fan Palm	Multi-trunk
CIT LIM	24" box	Citrus limon 'Meyer Improved	Meyer Improved Lemon	Standard
GIN BIL	24" box	Ginko biloba 'Princeton Sentry'	Princeton Sentry Ginko	
DIC ANT	15 gal.	Dicksonia antarctica	Tasmanian Tree Fern	
LIR TUL	24" box	Liriodendron tulipfera 'Fastigiantum'	Columnar Tulip Tree	
LAG PAT	24" box	Lagunaria patersonii	Primrose Tree	
MAG COL	24" box	Magnolia x veitchii 'Columbus'	Columbus Magnolia	multi-trunk
OLE EUR	24" box	Olea europaea 'Swan Hill'	Olive 'Swan Hill'	multi-trunk
PHO CAN	20' bth	Phoenix canariensis	Canary Island Date Palm	skin trunks
PHY NIG	24" box	Phyllostachys nigra	Black Bamboo	
PLA YAR	24" box	Platanus x 'Yarwood'	Yarwood Sycamore	
POD GRA	24" box	Podocarpus gracilior	Fern Pine	standard
PYR KAW	24" box	Pyrus kawakamii	Evergreen Pear	
QUE ILE	24" box	Quercus ilex	Holly Oak	
TIL COR	36" box	Tilia cordata 'Corzom	Corinthian Linden	
ULM PAR	24" box	Ulmus parvifolia 'True Green'	Evergreen Elm 'True Green'	
WAS ROB	18' bth	Washingtonia robusta	Mexican Fan Palm	skin trunks

SHRUBS KEY	SIZE (5 gallon unless noted otherwise)	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING
AGA ATT		Agave attenuata	Agave	60" o.c.
ANI TAR		Anisodontea x 'Tara's Wonder'	Tara's Wonder Cape Mallow	60" o.c.
ARC CVS		Arctostaphylos 'Sunset'	Sunset Manzanita	48" o.c.
BER ATT		Berberis thunbergii 'Autropurpurea'	Red Leaf Barberry	42" o.c.
BER CRI		Berberis thunbergii 'Crimson Pygmy'	Crimson Pygmy Dwarf Barberry	18" o.c.
BER MON		Berberis thunbergii 'Monlers'	Golden Nugget Dwarf Barberry	18" o.c.
CEA JUL		Ceanothus 'Julia Phelps'	Julia Phelps Ceanothus	72" o.c.
CHO TER		Choisya ternata 'Aztec Pearl'	Mexican Orange	48" o.c.
CIS CVS		Cistus x 'Peggy Sammons'	Peggy Sammons Rockrose	48" o.c.
CYR FAL		Cyrtomium falcatum	Holly Leaf Fern	36" o.c.
DAP BUR		Daphne burkwoodii 'Carol Mackie'	Carol Mackie Daphne	48" o.c.
DIE BIC		Dietes bicolor 'Lemon Drops'	Lemon Drops Fortnight Lily	30" o.c.
DOD VIS		Dodonaea viscosa 'Purpurea'	Purple Hopseed Bush	72" o.c.
EUO FOR		Euonymus fortunei 'Ivory Jade'	Ivory Jade Euonymus	48" o.c.
GAR AUG		Gardenia augusta 'Veitchii'	Gardenia 'Veitchii'	30" o.c.
HES PAR		Hesperaloe parviflora	Red Yucca	30" o.c.
HEM CVS	1 gal	Hemerocallis cvs	Daylily	evergreen- red
ILE VOM		Ilex vomitoria 'Stokes Dwarf'	Youpon Holly 'Stokes Dwarf'	36" o.c.
KNI UVA	1 gal	Kniphofia uvaria 'Flamenco'	Flamenco Red-hot Poker	36" o.c.
LAV MAR		Lavatera maritima	Bush Mallow	48" o.c.
LON NIT		Lonicera nitida 'Silver Beauty'	Boxwood Honeysuckle	48" o.c.
LOR CHI		Loropetalum chinense 'Suzanne'	Chinese Fringe Flower	36" o.c.
MAG STE	15 gal	Magnolia stellata	Royal Star Magnolia	96" o.c.
MYR AFR		Myrsine africana	African Boxwood	35" o.c.
MYR COM		Myrtus communis 'Compacta'	Compact Myrtle	48" o.c.
NEP COR	1 gal	Nephrolepis cordifolia	Southern Sword Fern	36" o.c.
PHO CVS		Phormium CVS	New Zealand Flax CVS	24" o.c.
				30" o.c.
				42" o.c.
				30" o.c.
				72" o.c.
PIT TEN		Pittosporum tenuifolium	Pittosporum	24" o.c.
PIT WHE		Pittosporum tobira 'Wheeler's Dwarf'	Pittosporum 'Wheeler's Dwarf'	42" o.c.
PIT VAR		Pittosporum tobira 'Variegata'	Variegated Pittosporum	72" o.c.
PHY AUR	15 gal	Phyllostachys aureosulcata	Yellow Groove Bamboo	48" o.c.
PRU LAU		Prunus laurocerasus 'Otto Luyken'	Otto Luyken English Laurel	72" o.c.
RHA CAL		Rhamnus californica 'Mound San Bruno'	Mound San Bruno Coffee Berry	48" o.c.
ROS OFF		Rosmarinus officinalis 'Tuscan Blue'	Upright rosemary	36" o.c.
ROS CAL		Rosa californica	California Rose	42" o.c.
ROS RUG		Rosa rugosa 'Frau Dagmar Hastrup'	Frau Dagmar Hastrup Rose	42" o.c.
ROS ICE		Rosa 'Iceberg'	Iceberg Rose	72" o.c.
ROS SAL		Rosa 'Sally Holmes'	Sally Holmes Rose	72" o.c.
STR NIC	15 gal	Strelitzia nicolai	Giant Bird of Paradise	36" o.c.
STR REG	5 gal	Strelitzia reginae	Bird of Paradise	30" o.c.
TEU FRU		Teucrium fruticans 'Compactum'	Dwarf Germander	30" o.c.
VIB PLI		Viburnum p. tomentosum 'Summer Snowflake'	Summer Snowflake Viburnum	60" o.c.
WOO FIM		Woodwardia fimbriata	Giant Chain Fern	60" o.c.

PERENNIALS KEY	SIZE* (1 gallon unless noted otherwise)	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING
ACH MIL		Achillea millefolium 'Fireland'	Yarrow 'Fireland'	18" o.c.
AGA MID		Agapanthus 'Midknight Blue'	Midknight Blue Agapanthus	30" o.c.
HEU MAX		Heuchera maxima	Island Alum Root	24" o.c.
HEU MIR		Heuchera miracantha 'Palace Purple'	Heuchera 'Palace Purple'	24" o.c.
IRS SIB		Iris siberica	Siberian Iris	24" o.c.
LAV DEN		Lavandula equistifolia 'Munstead'	Dwarf Spanish lavendar	24" o.c.
LAV INT		Lavandula x intermedia 'White Spikes'	White Lavender	30" o.c.
LIR MUS		Liriope muscari	Lily Turf	18" o.c.
PEN CVS		Penstemon x 'Apple Blossom'	Apple Blossom Penstemon	18" o.c.
SAL CLE		Salvia clevelandii 'Winifred Gilman'	Cleveland Sage 'Winifred Gilman'	36" o.c.
SAL MEX		Salvia mexicana 'Limelight'	Limelight Mexican Sage	36" o.c.

GRASSES KEY	SIZE*	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING
CAL STR		Calamagrostis x acutiflora 'Stricta'	Feather Reed Grass	36" o.c.
CAR TUM	4" pot	Carex tumulicola	Berkeley Sedge	18" o.c.
CHO TEC		Chondropetalum tectorum	Cape Rush	36" o.c.
HEL SEM		Helicotrichon sempervirens	Blue Oat Grass	24" o.c.
MIS TRA		Miscanthus transmorrisonensis	Evergreen Maiden Hair Grass	36" o.c.
MUH RIG		Muhlenbergia rigens	Deer Grass	48" o.c.
MUH CAP		Muhlenbergia capillaris 'Regal Mist'	Pink Muhly Grass	36" o.c.
PEN ORI		Pennisetum orientale	Oriental Fountain Grass	30" o.c.
PEN SET		Pennisetum setaceum 'Rubrum'	Fountain Grass 'Rubrum'	36" o.c.

** gallon unless noted otherwise

VINES KEY	SIZE	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING
BIG CAP	15 gal	Bignonia capreolata 'Tangerine Beauty'	Cross Vine 'Tangerine Beauty'	
BOU BAR	15 gal	Bougainvillea 'Barbara Karst'	Barbara Karst Bougainvillea	
CLE MON	15 gal	Clematis montana rubens	Pink Anemone Clematis	20' o.c.
DIS BUC	15 gal	Distictis buccinatoria	Blood Red Trumpet Vine	20' o.c.
FIC PUM	5 gal	Ficus pumila	Creeping Fig	

GROUND COVERS KEY	SIZE	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING
ARC UVA	1 gal	Arctostaphylos uva-ursi 'Wood's Compacta'	Wood's Compact Kinnikinnick	48" o.c.
BER CRA	1 gal	Bergenia crassifolia	Winter-Blooming Bergenia	18" o.c.
CIS SAL	1 gal	Cistus salvifolius 'Prostratus'	Sageleaf Rockrose	60" o.c.
COT DAM	1 gal	Cotoneaster dammeri 'Lowfast'	Lowfast Cotoneaster	24" o.c.
FRA CHI	flats	Fragaria chiloensis	Beach Strawberry	18" o.c.
GER SAN	1 gal	Geranium sanguineum 'Album'	White Cranesbill	36" o.c.
HEL APR	1 gal	Helianthemum 'Apricot'	Apricot Sunrose	24" o.c.
LAN MON	1 gal	Lantana montevidensis 'Radiation'	Lantana 'Radiation'	36" o.c.
LIR SPI	1 gal	Liriope spicata	Lily Turf	18" o.c.
LYS NUM	flats	Lysimachia nummularia	Creeping Jenny	24" o.c.
MYO PAR	1 gal	Myoporum parvifolium 'Putah Creek'	Creeping Myoporum	36" o.c.
OEN SPE	1 gal	Oenothera speciosa 'Siskiyou'	Mexican Evening Primrose 'Siskiyou'	35" o.c.
ROS OFF	flats	Rosmarinus officinalis 'Huntington Carpet'	Prostrate Rosemary 'Huntington Carpet'	6" o.c.
RUB PEN	1 gal	Rubus pentalobus 'Emerald Carpet'	Emerald Carpet Bramble	24" o.c.
SAG SUB	flats	Sagina subulata	Scotch Moss	6" o.c.
SED SPU	flats	Sedum spurium 'John Creech'	Stonecrop	9" o.c.
TRA JAS	1 gal	Trachelospermum jasminoides	Star Jasmine	18" o.c.
VIN MIN	1 gal	Vinca minor 'Autropurpurea'	Vine Periwinkle	30" o.c.

1270 Campbell

GENERAL DEVELOPMENT PLAN EXHIBIT C

Sobrato Development Companies
San Jose, CA

SOBRATO
DEVELOPMENT COMPANIES

REVISIONS

	DESCRIPTION	DATE
1	PD Zoning Resubmittal	01 13 06
2	PD Zoning Resubmittal	09 30 06
3		
4		
5		
6		

SHEET TITLE
Conceptual Landscape Architectural Plant Palette

SHEET NUMBER
6.1

THE GUZZARDO PARTNERSHIP INC.
Landscape Architects · Land Planners
836 Montgomery Street
San Francisco, CA 94133
T 415 433 4672
F 415 433 5003

MITIGATED NEGATIVE DECLARATION, REZONE, DEVELOPMENT PLAN AND MITIGATION MONITORING PLAN RESOLUTION

EXHIBIT B
MITIGATION MONITORING PLAN

MITIGATION MONITORING AND
REPORTING PROGRAM

1270 CAMPBELL AVENUE
PLANNED DEVELOPMENT REZONING

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

OCTOBER 2008

EXHIBIT B

PREFACE

Section 21081.6 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Program whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring and reporting program is to ensure compliance with the mitigation measures during project implementation.

On October XX, 2008, the Mitigated Negative Declaration was adopted for the 1270 Campbell Avenue Planned Development Rezoning (PDC07-081). The Initial Study/Mitigated Negative Declaration prepared for the project concluded that the rezoning could result in significant impacts on the environment; therefore, the project will incorporate mitigation measures to avoid or reduce impacts to a less than significant level. This Mitigation Monitoring and Reporting Program addresses those measures in terms of how and when they will be implemented.

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	Air Quality			
Impact AQ-1: Construction activities such as demolition, clearing, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would result in fugitive particulate matter emissions that could temporarily affect local air quality.	The project proposes to implement the following mitigation measures to reduce the impacts of demolition and construction activities to a less than significant level: **MM AQ-1:** Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site. **MM AQ-2:** Active areas adjacent to existing land uses shall be kept damp at all times or shall be treated with non-toxic stabilizers or dust palliatives. **MM AQ-3:** Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. **MM AQ-4:** Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. **MM AQ-5:** Sweep daily, or more often if necessary (preferably with water sweepers) to prevent visible dust from leaving the site all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality.	The project applicant shall ensure these measures are implemented during all phases of development.	All measures shall be printed on all construction documents, contracts, and project plans.	Director of Planning, Building and Code Enforcement

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	MM AQ-6: Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets. **MM AQ-7:** Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). **MM AQ-8:** Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.). **MM AQ-9:** Install sandbags or other erosion control measures to prevent silt runoff to public roadways. **MM AQ-10:** Replant vegetation in disturbed areas as quickly as possible. **MM AQ-11:** Limit traffic speed on unpaved roads to 15 mph.			
	Biological Resources			
Impact BIO-1: The project would result in the removal of 166 trees, including seven ordinance-size trees on the site.	The project proposes to implement the following mitigation measures: **MM BIO-1.1:** The proposed project shall replace trees removed at the following ratios:	The project applicant shall obtain a tree removal permit from the City of	Conditions of the approved tree removal permit shall be printed on all	Director of Planning, Building and Code Enforcement

<table>
<tr><th>Impact</th><th>Mitigation or Avoidance Measure(s)</th><th>Timeframe and Responsibility for Implementation</th><th>Method of Compliance</th><th>Oversight of Implementation</th></tr>
<tr><td></td><td>

Table 4.4-2
Standard Tree Replacement Requirements

Diameter of Tree to be Removed	Non-Native	Minimum Size of Each Replacement Tree
18 inches or greater	4:1	24-inch box
12 – 18 inches	2:1	24-inch box
Less than 12 inches	1:1	15-gallon container

Notes:
X:X = Tree replacement to tree loss ratio
Trees greater than 18-inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

The species and exact number of trees to be planted on the site will be determined at the development permit stage, in consultation with the City Arborist and the Department of Planning, Building, and Code Enforcement. Trees for purposes of mitigation shall be planted at the above standard ratio to be determined at the permit stage.

MM BIO-1.2: If the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures shall be implemented, to the satisfaction of the Director of Planning, Building, and Code Enforcement, at the development permit stage:

- The size of a 15-gallon replacement tree can be increased to 24-inch box and count as two replacement trees.

</td><td>San Jose prior to the removal of any ordinance size trees.</td><td>construction documents, contracts, and project plans.</td><td></td></tr>
</table>

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	• An alternative site(s) shall be identified for additional tree planting. Alternative sites may include local parks or schools or installation of trees on adjacent properties for screening purposes to the satisfaction of the Director of the Department of Planning, Building, and Code Enforcement. • A donation of $300 per mitigation tree to Our City Forest for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting will be provided to the Planning Project Manager prior to issuance of a building permit.			
Cultural Resources				
Impact CULT-1: The proposed project could result in impacts to buried prehistoric or historic archaeological resources on the site.	The project proposes to implement the following mitigation measures to reduce impacts to archaeological resources: **MM CULT-1.1:** A systematic inspection or survey of the present ground surface will provide archaeological data regarding post-depositional disturbance levels and shall be conducted by a qualified archaeologist. An archaeological survey of the entire parcel shall be completed after the present built environment (pavement, landscaping) is removed and preparation of the ground surface for new development begins. Depending on the results of the survey, it is recommended that a monitoring program be established in order that periodic inspections of subsurface	The project applicant will retain a qualified archaeologist to inspect the development areas after the removal of existing buildings, parking lots, and landscaping areas to search	In the event that evaluation demonstrates the presence of historically intact and significant resource deposits, work will remain halted in the area designated by	Environmental Principal Planner

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	levels be coordinated to allow careful examination of vertical and horizontal soil relationships between two and eight feet (below the present surface). The monitor must be pre-approved by the Director of Planning (or his designee). After written approval, the Planning Division must be notified at least 48 hours prior to any grading or other subsurface work on the site and the applicant must provide a written protocol which stipulates the manner in which the applicant shall comply with the monitoring requirements. **MM CULT-1.2:** If no resources are discovered through the ground survey, the archaeologist shall submit a report to the City's Environmental Principal Planner verifying that the required monitoring occurred and that no further mitigation is necessary. **MM CULT-1.3:** If evidence of any archaeological, cultural, and/or historical deposits is found, all work within proximity of the find shall temporarily halt so that the archaeologist can examine the find and document its provenience and nature (drawings, photographs, written description). The archaeological monitor will then direct the work to either proceed if the find is deemed to be insignificant, or instruct the work to continue elsewhere or cease until adequate mitigation measures are adopted. The archaeologist shall submit reports, to the satisfaction of the City's Environmental Principal Planner, describing the testing program and subsequent results. These reports shall	for archaeological deposits.	the project archaeologist until a mitigation plan is submitted to the Environment-al Principal Planner for review and approval.	

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	identify any program mitigation that the Developer shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources). The key elements of the treatment plan shall include the following: • Identify scope of work and range of subsurface effects (include location map and development plan). • Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found). • Develop research questions goals to be addressed by the investigation (what is significant vs. what is redundant information). • Detail field strategy used to record, recover, or avoid the finds (photos, drawings, written records, provenance data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals. • Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifact studies [list categories and methods for artifacts], etc.). • Report structure, outline of document contents (draft for review, final). • Disposition of artifacts. • Appendices: Site records, updated site records, correspondence, consultation with Native Americans,			

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	etc. The need for burial agreement plan for Native American burials can be incorporated into the treatment plan, but must be done in consultation with Most Likely Descendents. Plan should detail goals, methods, and disposition of remains and associated artifacts. **MM CULT-1.4:** In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius in order to proceed with the testing and mitigation measures required. Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California: • In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human			

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. • A final report shall be submitted to the City's Environmental Principal Planner prior to release of a Certificate of Occupancy. This report shall contain a description of the mitigation programs and its results including a description of the monitoring and testing program, a list of the resources found, a summary of the resources analysis methodology and conclusions, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the City's Environmental Principal Planner.			
Hazards and Hazardous Materials				
Impact HM-1: The project site may contain residual herbicides and other railroad-related chemicals, as well as two closed in place USTs. Workers on site could be exposed to residual chemicals during grading, construction, or excavation on site. These issues, if not properly addressed, would	The project proposes the following mitigation and avoidance measures to reduce impacts from hazardous materials to a less than significant level: **MM HM-1.1:** The two closed in-place USTs, located under the planned perimeter parking area, shall be removed and properly disposed of off-site as part of the proposed redevelopment. The tank shells will be segregated from the concrete and, depending on the condition of the shells, will either be recycled or disposed of as hazardous waste if there are signs of residual contamination that cause the shells to be non-recyclable. The concrete within the tanks	The project applicant shall retain a qualified engineer or geologist to observe the removal of the USTs and soils following demolition on the site.	All measures shall be printed on construction documents, contracts, and project plans.	Director of Planning, Building, and Code Enforcement and Environmental Compliance Officer

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
result in impacts to the proposed residential development.	will likely be disposed as non-hazardous waste; however the final determination for disposition will be made by qualified personnel during removal. If required to determine either recycling and/or disposal options for these materials, sampling and analysis may be completed. Any materials determined to be hazardous waste will be managed in accordance with all applicable state and federal requirements for manifesting, transportation, and disposal. Soil sampling of the excavation pits will be completed, in the event visual or olfactory evidence (i.e. discoloration of soils or odors) is present when the USTs are removed. **MM HM-1.2:** Contractors working on the redevelopment project during site grading, utility installation, and removal of the closed in-place USTs, shall incorporate routine safe work practices and dust control measures and shall adhere to standard worker health and safety procedures as required under the California Department of Occupational Safety and Health Administration (Cal-OSHA) regulations. **MM HM-1.3:** In the event that evidence of unanticipated hazardous materials conditions is encountered, the contractor shall halt work and contact the applicant to arrange for oversight by a qualified engineer or geologist. The applicant shall submit a report to the appropriate regulatory agency and the City's Environmental Compliance Officer, for review and approval, detailing the assessment of the encountered materials and the need for			

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	additional mitigation. **AM HM-1:** As part of the proposed redevelopment, the grade across the site would be raised by approximately one to one and one-half feet. The existing asphalt on the site would be removed including the asphalt that is in closest proximity to the railroad tracks. The existing baserock in this area would remain in place and the grade would be raised with imported soil and a new asphalt covered perimeter roadway and parking areas for the new development would be constructed. The redevelopment plans in the proximity of the railroad, therefore, would avoid disturbance of, or exposure to, subsurface soils that may have previously been exposed at the former surface of the pre-developed site to herbicides and pesticides.			
	Hydrology and Water Quality			
Impact HYD-3: The proposed project would develop structures within a 100-year flood zone.	The project proposes to implement the following mitigation measures: **MM HYD-3.1:** Comply with the City of San José *Special Flood Hazard Area Regulations* and City's Floodplain Management Ordinance, including providing certification of the lowest floor elevation on N.G.V.D datum by a registered professional engineer or surveyor to the Director of Public Works, as set forth in Section 17.08.310. **MM HYD-3.2:** Obtain an Elevation Certificate (FEMA	The project applicant shall provide certification of the lowest floor elevation and an Elevation Certificate prior to the issuance of an occupancy permit.	All measures shall be printed on construction documents, contracts, and project plans.	Director of Planning, Building, and Code Enforcement and Director of Public Works

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
	Form 81-31) based on construction drawings prior to issuance of a building permit. An Elevation Certificate based on finished construction is also required prior to issuance of an occupancy permit. **MM HYD-3.3:** Elevate building support utility systems such as HVAC, electrical, plumbing, air conditioning equipment, including ductwork, and other service facilities above the base flood elevation or otherwise protected from flood damage.			
Land Use				
Impact LU-1: The proposed project would not provide any affordable units on the project site which is inconsistent with City of Santa Clara requirements.	The project proposes the following mitigation measure to reduce the project's land use impacts to a less than significant level: **MM LU-1.1:** The project proposes to pay in-lieu housing fees to the City of Santa Clara to provide for affordable housing in the city.	The project applicant shall pay in-lieu fees prior to the issuance of a building permit.	Payment of in-lieu fees.	City of Santa Clara Director of Planning and Inspection
Noise and Vibration				
Impact NV-1: Future residential uses that would be developed at the project site would be exposed to exterior noise levels greater than 60 dBA DNL which exceeds the noise and land	The project shall incorporate the following measures to reduce the interior noise impacts of the project to a less than significant level: **MM NV-1.1:** Project-specific acoustical analyses are required by the City of San José to insure that interior noise levels will be reduced to 45 dBA DNL or lower. It is also	The project applicant shall complete an acoustical analysis prior to the issuance of a building permit.	Prior to issuance of building permits, a project-specific acoustical	Director of Planning, Building and Code Enforcement

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
use compatibility standards presented in the City of San José's and Santa Clara's General Plan. Interior noise levels would be expected to exceed 45 dBA DNL without the incorporation of noise insulation features in the project design.	recommended that maximum interior noise levels be limited to 50 dBA L_{max} within bedrooms and 55 dBA L_{max} within other habitable rooms to avoid sleep disturbance and activity interference indoors. Building sound insulation requirements would need to include the provision of forced-air mechanical ventilation for all new units, so that windows could be kept closed at the occupant's discretion to control noise. Special building construction techniques (e.g., sound-rated windows and building facade treatments) may be required for new residential uses adjacent to the railroad. These treatments include, but are not limited to, sound rated windows and doors, sound rated wall constructions, acoustical caulking, etc. The specific determination of what treatments are necessary will be conducted on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these would adequately reduce average interior noise levels to 45 dBA DNL or lower and maximum interior noise levels to 50 dBA L_{max} in bedrooms and 55 dBA L_{max} in other habitable rooms.		analysis prepared by a licensed professional shall be submitted to the Director of Planning, Building and Code Enforcement for review and approval.	
Impact NV-2: Noise generated by the portable rock crusher could exceed a Leq of 60 dBA at the	The project shall implement the following mitigation measure to reduce construction noise impacts to nearby sensitive receptors:	The project applicant shall ensure the measures are	All measures shall be printed on all construction	Director of Planning, Building and Code

Mitigation Monitoring and Reporting Program 1270 Campbell Avenue Planned Development Rezoning				
Impact	**Mitigation or Avoidance Measure(s)**	**Timeframe and Responsibility for Implementation**	**Method of Compliance**	**Oversight of Implementation**
nearest sensitive receptors.	**MM NV-2.1:** At the final design phase, a qualified acoustical consultant shall review the construction plans to ensure that the placement of a portable rock crusher on the site will reduce construction noise levels to 60 dBA L_{eq} at the nearest sensitive receivers to the east. In the event rock crusher noise levels would not be reduced to 60 dBA L_{eq} at noise sensitive receivers based on the location of intervening structures, the acoustical consultant shall identify the appropriate height and location of recycled material stockpiles to be maintained during crushing activities in order to attenuate noise to the maximum amount feasible. The required construction noise reduction measures shall be printed on all construction documents, contracts, and project plans; and be reviewed by the City's Environmental Principal Planner prior to issuance of building permits.	implemented during all phases of development.	documents, contracts, and project plans.	Enforcement

Source: City of San José. Initial Study for the 1270 Campbell Avenue Planned Development Zoning (PDC07-081). September 2008.

MITIGATED NEGATIVE DECLARATION, REZONE, DEVELOPMENT PLAN AND MITIGATION MONITORING PLAN RESOLUTION

EXHIBIT C
CONDITIONS OF APPROVAL

EXHIBIT C

PLN2008-07068, 1270 CAMPBELL AVENUE
PROJECT CONDITIONS OF APPROVAL

1. The project will comply with the Memorandum of Understanding prepared and adopted by the cities of San Jose and Santa Clara (see Exhibit 2).

2. The project shall implement and comply with the mitigation measures identified in the Mitigated Negative Declaration for this project.

3. Property owner shall submit an application for a Boundary Adjustment to the respective cities prior to application for subdivision of the property into a single lot subdivision for any future condominium conversion.

Attachment 3:

Planning Commission Staff Report November 12, 2008

Agenda Item # 9

File:	**PLN2008-07068**
Location:	1270 Campbell Avenue, a .58 acre portion of a 5.18 acre site that straddles the Santa Clara and San Jose city limit lines and is located at the southeast corner of Campbell Avenue and El Camino Real (APN: 230-14-026).
Applicants/Owners:	Sobrato Development Companies
Request:	**Consideration** of a Mitigated Negative Declaration **Rezone** a .58 acre parcel from ML (Light Industrial) to PD (Planned Development) to allow construction of 27 units as part of a new 259 multi-family residential unit infill project located within the jurisdictions of Santa Clara and San Jose
Project Planner:	Debby Fernandez, Associate Planner

Staff Recommendation: Approve, subject to conditions

PROJECT DESCRIPTION

Sobrato Development Companies, property owner, has submitted applications to the cities of Santa Clara and San Jose to rezone an existing industrial property for infill residential development of up to 259 multi-family dwellings, associated onsite parking, circulation, landscaping, and on and off-site public and private improvements. The project site is located within the jurisdictions of San Jose and Santa Clara, with the majority of the site (4.6 acres) within the City of San Jose. The project involves the demolition of an existing single-story, 82,000 square foot industrial building that straddles both jurisdictions to construct a five-story residential development that wraps around a podium parking structure and common open space. The structure is oriented toward Campbell Avenue and is separated from the public right-of-way by surface parking, driveway, and landscape setbacks. The current proposal includes the construction of 248 dwelling units, of which 27 maximum are located in Santa Clara, 12 cross both jurisdictions and 209 are located in San Jose. Residential density of the project is 50 dwelling units per acre (du/ac) with maximum build out of 259 dwelling units, and 48 du/ac with 248 units is proposed by the applicant.

As the project site is located within the jurisdictions of both Santa Clara and San Jose, separate actions are required to entitle development of the project within each city's boundaries. The property owner has filed separate applications to rezone the property from ML (Light Industrial) to PD (Planned Development) for the .58 acres located within Santa Clara and HI (Heavy Industrial) to A/PD (Planned Development) for the remaining portion located in San Jose. Concurrent review and processing of the applications has been ongoing between the two cities. In addition to coordination of development and environmental review, staff in both cities have worked to prepare a joint Memorandum of Understanding (MOU) that assigns responsibilities for planning, building and inspection activities, as well as related public works improvements for the proposed residential development. Longer-term issues such as subdivision of the property to create a single lot subdivision will be addressed through subsequent actions involving the developer and the respective cities.

On September 23, 2008, following 20-day public review, the Director of Planning, Inspection and Code Enforcement for the City of San Jose adopted the Mitigated Negative Declaration for the proposed project. The project was subsequently noticed and reviewed by the San Jose Planning Commission at a public hearing on October 8, 2008. The San Jose Planning

Commission recommended project approval at that meeting and the item was agendized for San Jose City Council review. The project received San Jose City Council approval of the rezoning application and MOU on October 28, 2008 at a publicly noticed meeting, subject to conditions. The full administrative record of these actions is available in the Planning Department of each city.

Attached to this staff report are Exhibits 1 and 2. Exhibit 1 includes the San Jose Planning Commission staff report, Land Use Plan and Development Standards, Draft Mitigated Negative Declaration, Public Works Project Conditions, and the 1270 Campbell Planned Development Zoning plan package. Exhibit 2 is the Memorandum of Understanding between the City of San Jose and Santa Clara Regarding Responsibilities for Planning, Building and Inspection Activities for the Proposed Residential Development along Campbell Avenue by Sobrato Development Company.

PRIOR ACTIONS (Prior San Jose Planning Commission and City Council staff reports and actions follow the current report)

5/14/08: Application received by Santa Clara.

5/27/08: Application deemed complete by Project Clearance Committee, subject to completion of environmental determination process.

10/14/08: Application deemed complete by Project Clearance Committee.

CURRENT USE / ZONING / GENERAL PLAN

Current Use: Vacant industrial building

Current Zoning: ML

General Plan Designation: Gateway Thoroughfare

The land use designation for the .58 acre portion of the project site located in Santa Clara is Gateway Thoroughfare which allows 19 to 25 du/ac, designed to be neighborhood and pedestrian friendly. The remaining 4.6 acre portion of the site has a San Jose General Plan land use designation of High Density Residential that allows 25 to 50 du/ac. Proposed maximum density is 50 du/ac for the entire project site with build out of 259 units, with the specific project plans proposed, and 48 du/ac with 248 units. Residential density of the Santa Clara portion is 47 du/ac. The project is consistent with the City of San Jose's General Plan (see discussion in San Jose Planning Commission staff report), but inconsistent with the City of Santa Clara's allowed density.

While the number of units located in Santa Clara exceeds the maximum density permitted by the Gateway Thoroughfare designation, the project is consistent with the proposed Santa Clara Station Area Plan, currently underway, for transit-oriented development within one-half mile of a rail station. The proposed project is located adjacent to existing ACE and Capitol Corridor rail service, VTA bus service, and is within a 10-minute walk of the Santa Clara CalTrain station and future BART facility. The project is consistent with site planning principles for transit-oriented development, and pedestrian accessibility and with Santa Clara General Plan Housing and Transportation Policies to promote a variety of housing types, higher densities and supportive uses around major transit stations. Because Santa Clara is a Charter city, it is possible to approve a rezoning application that is inconsistent with the adopted General Plan. Consistency between the zoning and General Plan is, however, the required for any further subdivision of the property.

NEARBY PROPERTIES Land Use and Zoning

North: Office/research and development, Zoned PD/MU (Planned Development/Mixed Use)

East: CalTrain rail corridor, Zoned MI (Heavy Industrial)

South: Light industrial (City of San Jose), Zoned: MI

West: Campbell Avenue and Santa Clara University Baseball Stadium, Zoned: B (Public)

ENVIRONMENTAL DETERMINATION

The City of San Jose is the Lead Agency for the project and the City of Santa Clara is a Responsible Agency. An Initial Study and Mitigated Negative Declaration were prepared by environmental consultants David J. Powers and Associates, Incorporated. The Initial Study and Mitigated Negative Declaration were circulated and noticed on September 4, 2008 by the City of San Jose for a 20-day public review period. The Mitigated Negative Declaration was adopted by the Director of Planning, Inspection and Code Enforcement for the City of San Jose on September 23, 2008. Copies of the Initial Study and Mitigated Negative Declaration were provided for San Jose's Planning Commission on November 7, 2008.

The Mitigated Negative Declaration found that the proposed project could potentially result in significant impacts related to air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, land use and planning, and noise. Implementation of the related mitigation measures would reduce potential impacts to less than significant levels. Therefore, no significant impacts would occur as a result of the project, subject to the implementation of the mitigation measures. A detailed discussion of the potential impacts and mitigation measures to be applied to the project are specified in the environmental document.

CONSISTENCY WITH DESIGN GUIDELINES

The project is in keeping with the Santa Clara Station Area principles for station area design, currently underway. The proposed project is also consistent with recent project approvals for residential density and design along Campbell Avenue in the City of San Jose.

The proposed project is designed to maximize density of the site by building residential units on top of a podium structure. This design allows the building to be centrally oriented on the site to minimize impacts of adjacent railway and industrial uses and maximize onsite parking without occupying additional surface area devoted to parking. A landscape setback, private street, and surface parking areas circle the project site to separate and buffer the building from adjacent land uses. The building is oriented toward Campbell Avenue for pedestrian access to the streetscape in line with new residential development to the south. The building itself is designed to wrap residential units around the podium to screen covered parking from the street and provide an interior landscaped common area for use by the project residents. A detailed discussion of the project design is provided in the San Jose Planning Commission staff report (see Exhibit 1).

As the majority of the project is located within the City of San Jose, architectural review of project site planning, building architecture, lighting, landscaping and street tree planting will be evaluated in accordance with San Jose design guidelines and PD permit requirements; and in accordance with the MOU for this project, detailed design will be reviewed and approved by San Jose as part of the permitting process

STAFF REPORT – November 12, 2008

Public Input: *The notice of public hearing for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet. The following comments have been received as of the preparation of this report:*

- On July 30, 2008, San Jose staff held a noticed community meeting in The United Way Building at 1922 The Alameda. A discussion of community comments is provided in the Community Interest section of the San Jose Planning Commission staff report. In addition, 1,000 foot public notice for the San Jose Planning Commission meeting of October 8, 2008 and City Council hearing of October 28, 2008 was provided that included tenants and property owners.
- Public notice of 300 feet has additionally been provided for the City of Santa Clara hearing of this item.

Considerations: *The following general factors may be considered in evaluating this request. Some of these factors may represent evidence or facts that may directly support or refute the findings necessary to support this request:*

- The proposed project is the conversion of an underutilized industrial property to high density residential development at 49 du/ac. The project would contribute additional housing units to each city's housing stock. Of the 248 dwelling units currently proposed, 27 units would be in Santa Clara, 12 units would cross both jurisdictions, and 209 units would be in San Jose.
- The affordable housing obligation for the portion of the project located in Santa Clara is three units. San Jose does not have an inclusionary housing policy outside the San Jose downtown area. The MOU for this development has guaranteed the provision of in-lieu affordable housing fees, by the developer/property owner, to Santa Clara for the 10 percent requirement.
- The proposed project is an infill residential development within a 10 minute walk of the existing Santa Clara Transit Center for CalTrain, ACE and Capitol Corridor rail service; VTA bus service; and future BART operations for local and regional transit. The project site is also located within walking distance of commercial, cultural, educational, and recreational activities.
- The City of San Jose parking standard of 1.7 parking spaces per dwelling unit is applied to this project, as the majority of the site is located within San Jose. At this calculation, 410 parking spaces are required where 438 are provided. The project has a surplus of 28 parking spaces employing City of San Jose parking standards.
- The project is designed to maximize density within the footprint of a podium parking structure; thereby reducing land area devoted to surface parking. The wrap around design of the units above the podium creates an inner courtyard for common use by the project residents that is buffered from adjacent land uses. The project is also designed with the building close to the street for pedestrian accessibility and setback from adjacent nonresidential land uses.

Alternatives to the Proposal: *The following alternative measures or possible changes to the project may achieve the project goals to some degree and/or result in a lesser impact than the project proposal, and may be but are not necessarily recommended by staff.*

- None proposed or recommended.

FINDINGS REQUIRED TO SUPPORT THE REQUEST

Findings provide a means to link the available evidence with the decision to approve or deny the application. If this request is favorably considered, the preponderance of evidence should support the following or similar findings to approve the ***rezoning*** *request. The following evidence and facts provide a basis for the recommendation/action on this request:*

a) The existing zoning is inappropriate or inequitable, in that:

   Said zoning does not allow residential development in an area that has transitioned from industrial to residential land uses at moderate to high residential densities.

b) The proposed zone change will conserve property values; protect or improve the existing character and stability of the area in question; and will promote the orderly and beneficial development of such area, in that:

   Industrial sites along Campbell Avenue are redeveloping with planned residential projects as properties become available. Existing nonconforming industrial activities will be replaced with infill residential development at densities consistent with the San Jose General Plan with the inclusion of appropriate environmental mitigation measures to reduce potential adverse impacts to less-than significant.

c) The proposed zone change is required by public necessity, public convenience, or the general welfare of the City, in that:

   The proposed zone change is supportive of the land use goals in the Santa Clara Station Area Plan, currently underway, as well as the city's Housing and Transportation General Plan policies to promote a variety of housing types, and higher densities and supportive

uses around major transit stations.

d) The proposed zone change would allow imaginative planning and design concepts to be utilized for that would otherwise be restricted in other zoning districts, in that:

The PD zone allows flexibility in development standards for height and setbacks to create a pedestrian-oriented development that maximizes density and conserves open space by constructing the podium structure with residential units that wrap around the building to form interior open space for project tenants.

Evidence/Facts Related to the Required Findings: *The following evidence and facts provide a basis for the recommendation/action on this request:*

- Eleven percent (.58 acres) of the project site is located in the City of Santa Clara.
- The project site is located in a transitional area of Santa Clara and San Jose. The portion of the property located within San Jose is planned for high density residential development and has been identified as an opportunity site for high density residential development in the Santa Clara Station Area Plan currently underway.
- The project is consistent with Santa Clara's Housing and Transportation General Plan policies to promote a variety of housing types, and higher densities and supportive uses around major transit stations.
- An MOU has been prepared by the cities for building permitting, plan check, inspections, and code enforcement responsibilities, as well as public works improvements. The MOU has been adopted by the San Jose City Council and is included as part of the project conditions of approval for development in the City of Santa Clara (see Exhibit 2).
- The project and related environmental documentation was reviewed and approved by the San Jose City Council on October 28, 2008.

STAFF RECOMMENDATION – November 12, 2008

Recommend that the Planning Commission **Consider the Mitigated Negative Declaration** for the 1270 Campbell Avenue Planned Development Zoning Project; and

Recommend that the City Council **Approve the Rezone from Light Industrial (ML) to Planned Development (PD)** for the property located at 1270 El Camino Real, subject to conditions.

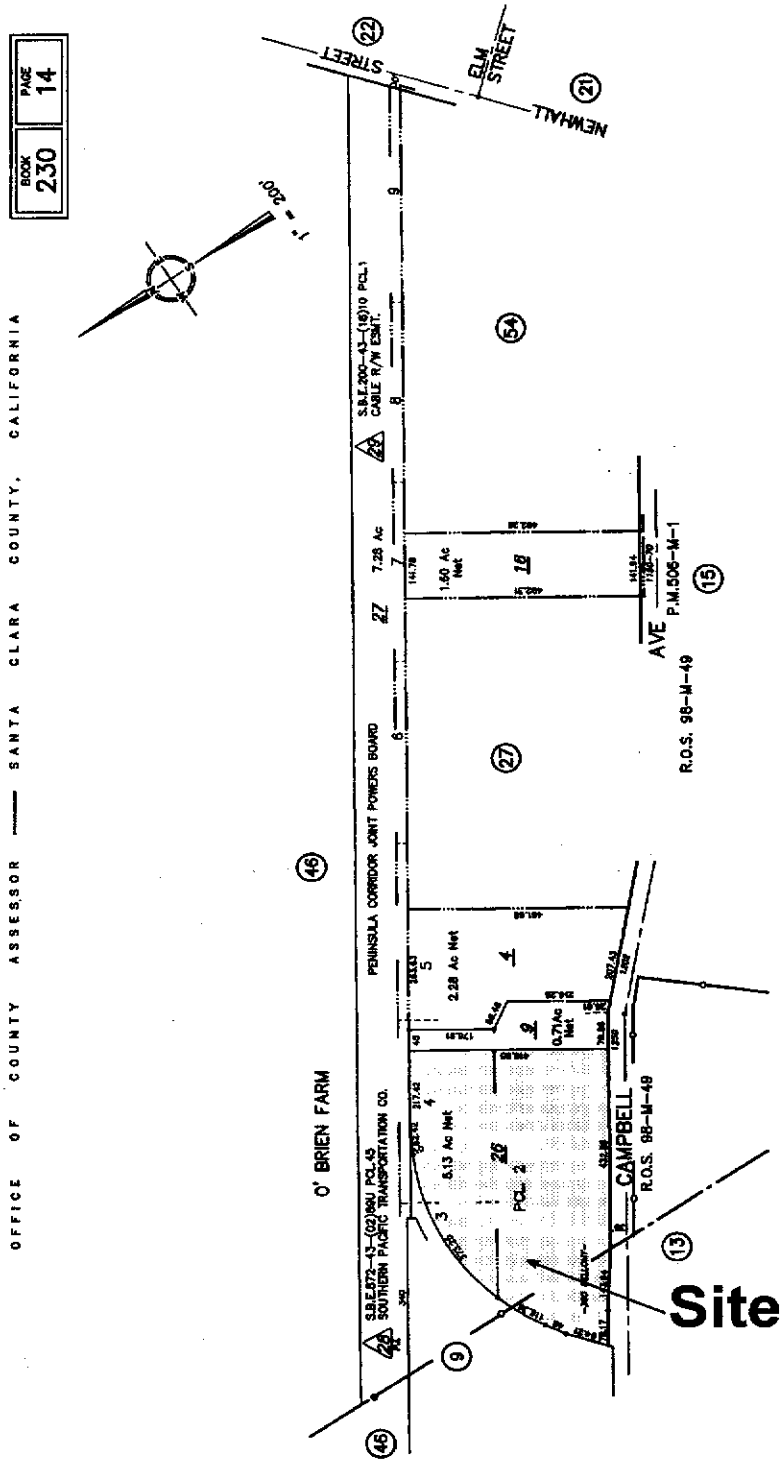
RECOMMENDED CONDITIONS OF APPROVAL

In the event that this request is favorably considered, it is recommended that the Planning Commission apply the following recommended conditions of approval. In addition to complying with all applicable codes, regulations, ordinances and resolutions, the following conditions of approval are recommended:

1. The project will comply with the Memorandum of Understanding prepared and adopted by the cities of San Jose and Santa Clara (see Exhibit 2).

2. The project shall implement and comply with the mitigation measures identified in the Mitigated Negative Declaration for this project.

3. Property owner shall submit an application for a Boundary Adjustment to the respective cities prior to application for subdivision of the property into a single lot subdivision for any future condominium conversion.



PLN2008-07068

PLANNING COMMISSION STAFF REPORT FOR NOVEMBER 12, 2008

EXHIBT 1
SAN JOSE PLANNING COMMISSION STAFF REPORT OCTOBER 8, 2008

EXHIBIT 1

P.C. Agenda: 10/08/08
Item No. 3.d.

STAFF REPORT
PLANNING COMMISSION

FILE NO.: PDC07-081

Submitted: 10/09/07

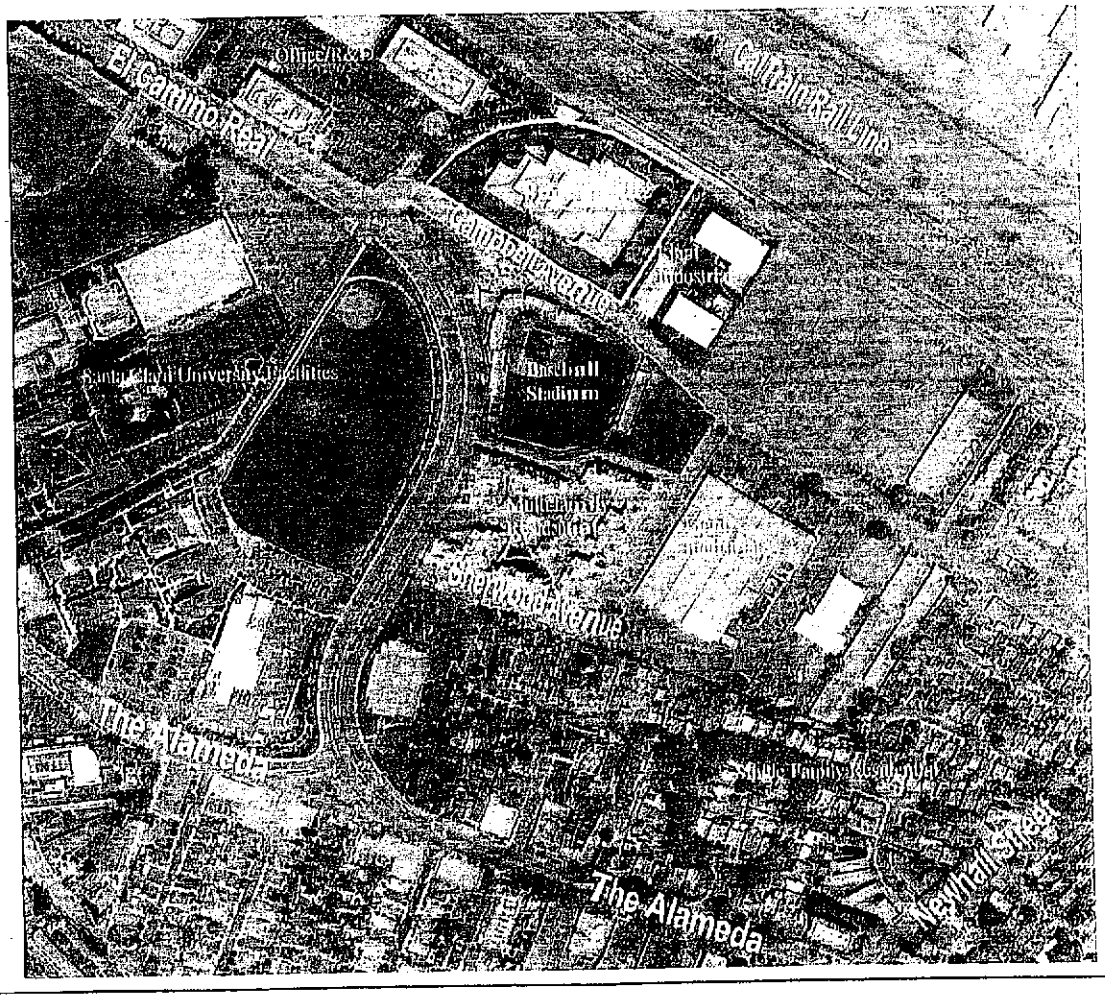
PROJECT DESCRIPTION: Planned Development Rezoning from HI Heavy Industrial to A(PD) Planned Development to allow up to 259 multi-family residential units on a 5.11 gross acre site.

LOCATION: East side of Campbell Ave. approx. 400 feet southeasterly of El Camino Real.

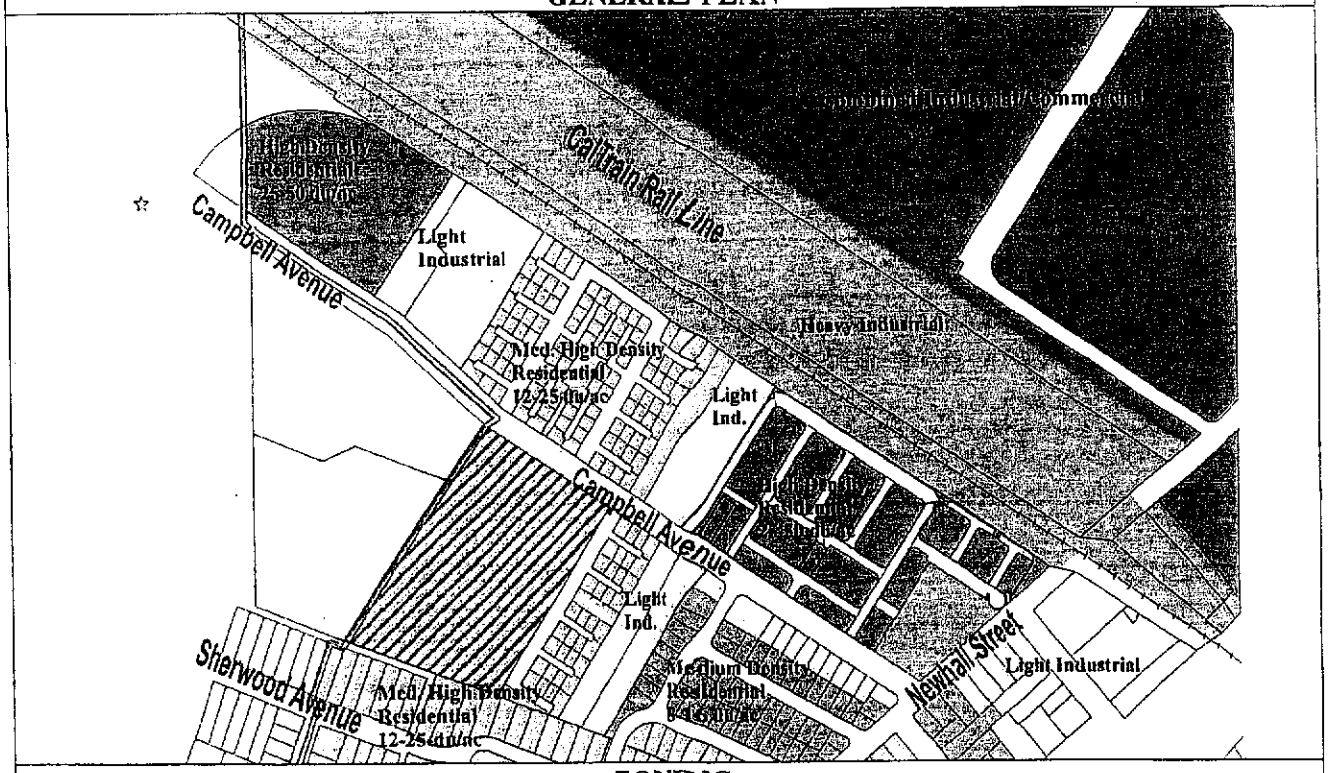
Existing Zoning	HI Heavy Industrial
Proposed Zoning	A(PD) Planned Development
General Plan	High Density Residential (25-50 du/ac)
Council District	3
Annexation Date	12/1925
SNI	N/A
Historic Resource	No
Redevelopment Area	N/A
Specific Plan	N/A

Aerial Map

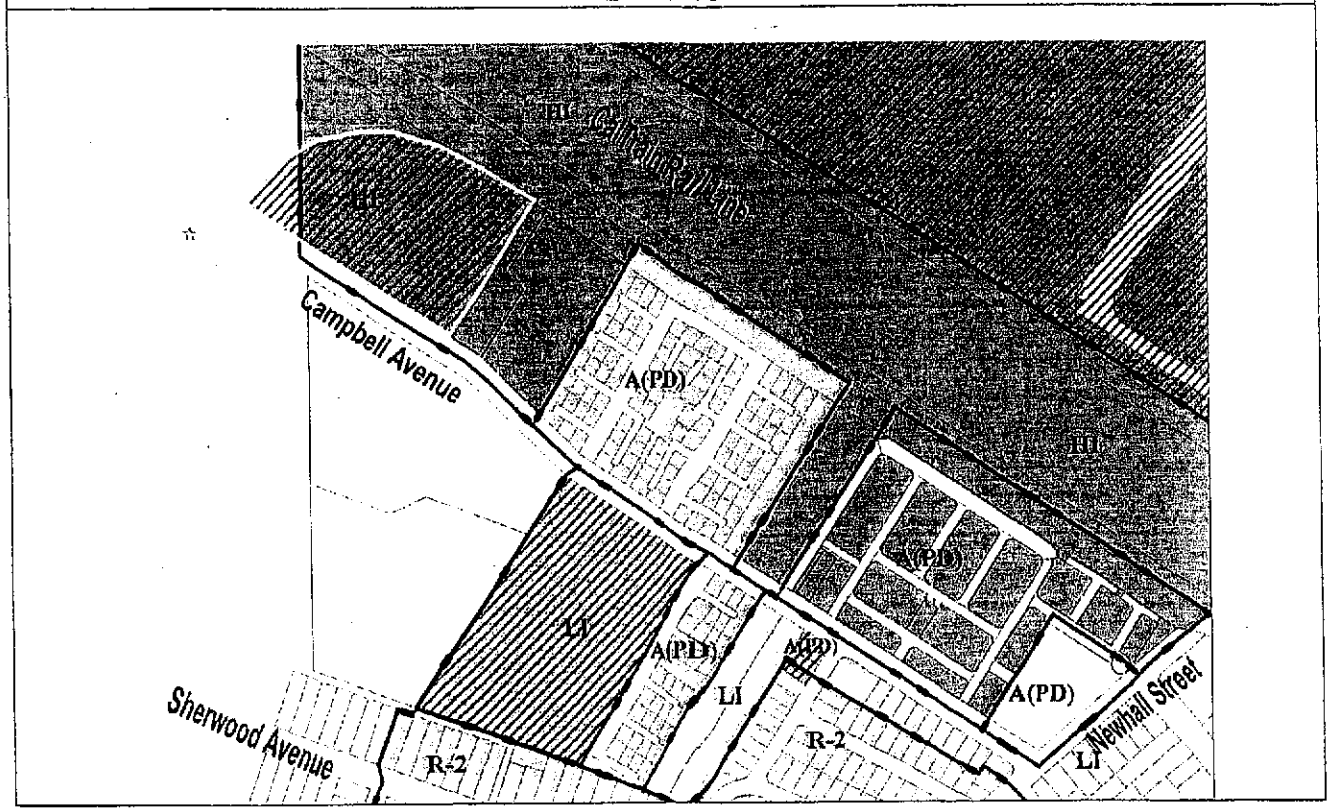
N



GENERAL PLAN



ZONING



RECOMMENDATION

Planning staff recommends the Planning Commission forward a recommendation to the City Council to approve the proposed Planned Development Rezoning for the following reasons:

1. The proposed rezoning furthers the Housing and Growth Management Major Strategies of the San Jose 2020 General Plan.
2. The proposed rezoning aligns with the Residential Land Use Goals and Policies of the San Jose 2020 General Plan.
3. The proposed rezoning conforms to the High Density Residential (25-50 du/ac) land use designation on the San José 2020 General Plan Land Use/Transportation Diagram.
4. The proposed rezoning is supportive of the land use goals in the pending Santa Clara Station Area Plan currently being developed.

BACKGROUND

On October 7, 2007, Sobrato Development applied with the City of San José to rezone the subject site of approximately 5.11 gross acres in size from HI Heavy Industrial to A(PD) Planned Development to allow up to 259 multi-family residential dwelling units. The site is currently developed with an industrial building constructed circa 1992. The site is located on the east side of Campbell Avenue approximately 400 feet southeasterly of El Camino Real. Land uses surrounding the site include the CalTrain rail corridor along the eastern edge of the site, light industrial uses along the southern edge of the site, office/R&D uses along the northern edge, and a baseball stadium for the University of Santa Clara Broncos across the street to the west. A majority of the site is within the City of San Jose with a small corner at the northwesterly portion of the site within the City of Santa Clara.

South along Campbell Avenue from the project there has been a transition underway from industrial to residential with three more recently approved and constructed projects on both the east and west sides of the street. Another site in the City of San Jose on the west side of Campbell Ave. was subject of a recent General Plan amendment from industrial to residential land use. This area of Campbell Avenue is also within proximity to the Santa Clara CalTrain Depot and a future BART Station hence is included within the Santa Clara Station Area Plan currently being developed jointly by the Cities of San Jose and Santa Clara through a grant from the Metropolitan Transit Commission.

Project Description

The proposed project allows for the development of up to 259 multi-family units on a podium with units wrapping the podium and fronting along Campbell Avenue (unit count at this point is 248). Parking is provided within a secure parking garage and along the edge of the site in a predominately single loaded parking aisle/drive. The unit mix is approximately half one-bedroom units and half two-bedroom units. The design of the building includes an interior common open space that includes resident amenities such as a pool, sitting areas, and barbeque areas.

The building itself is approximately 60-65 feet in height and includes four stories of living area above the podium parking garage. Minor architectural projections could extent up to 70' in height. The exception to this is along Campbell Avenue where there are townhouse units at ground level that have front entryways along street thus creating the look of a five story building along Campbell Ave.

Community Interest

On July 30, 2008, a noticed community meeting was held for the proposed rezoning and associated development permit. There were approximately 12 area residents in attendance in addition to the Developer and project Architect, and City staff from Planning, Public Works, and Transportation. There was a lot of discussion related to the traffic and future transportation improvements to the street and the intersection at El Camino Real. City staff indicated that San Jose will be taking the lead in working with CalTrans on the intersection improvements and the subject project will be contributing their fair share to the project. Additionally there were expressed concerns related to the density, understanding that the project meets the land use plan, there were some that still feel the density is too high. There were dual comments related to parking with some in attendance worried that there still is not enough while some were questioning why there was not a required reduction given the close proximity of the project to an exiting and expanding transit hub. Planning staff acknowledged that there is the opportunity to reduce parking however, given the ability to provide standard ratios without taking away density and not impacting project/neighborhood design, staff is fine with the parking as proposed.

Cross-jurisdiction Issues

As identified above, the project site falls within the jurisdictions of the Cities of San Jose and Santa Clara, with a majority of the development within the City of San Jose. Coordination of the proposal has been ongoing between the two cities, and the developer has a rezoning on file with the City of Santa Clara for that portion of the project that is within that jurisdiction. In addition to coordinating the environmental review, and the project design, staff in both cities has been working on a Memorandum of Agreement relating to the building permitting and plan check responsibilities. This agreement however has no bearing on the merits of the project and is scheduled to be forwarded to the City Council at the hearing with the rezoning. Longer-term issues related to the cross-jurisdiction situation will be addressed through subsequent actions involving the developer and the respective cities.

ANALYSIS

Analysis of this project includes a discussion of the proposal and its conformance with various aspects of the San Jose 2020 General Plan, a review of the environmental impacts of the proposal, as well as a discussion of the proposals conformance conceptually with the City's Residential Design Guidelines.

General Plan Conformance

The proposed rezoning furthers the San Jose 2020 General Plan Housing Major Strategy, which seeks to provide a variety of housing opportunities and maximize said opportunities on infill parcels already served by the City. The project proposes market rate rental housing in an already developed area served by public utilities and services. The project also furthers the San Jose 2020 General Plan Growth Management Major Strategy, which along with the Housing Major Strategy, encourages infill development within urbanized areas to achieve the most efficient use of urban facilities and services. The subject site as previously mentioned is an infill site that is located within walking distance from a multi-modal transit hub, the Santa Clara CalTrain station. Existing transit includes heavy rail and bus, with a future BART station planned for the near future.

The proposed rezoning also supports the General Plan's Residential Land Use Goals of 1) providing a high quality living environment in residential neighborhoods, and 2) ensuring that lands planned for residential use are fully and efficiently utilized to maximize the City's housing supply. The proposed residential project has been designed to maximize the density on the site, 49 du/ac, by building on a

parking podium and minimizing area devoted to surface parking. Additionally, the design of the project respects the changing nature of the street to residential and places units at street level along Campbell Avenue to enhance the growing residential and pedestrian character of the area.

The subject site is designated High Density Residential (25-50 du/ac) on the San Jose 2020 General Plan Land Use/Transportation Diagram. The site was the subject of a General Plan Land use amendment approved by the City Council in June 2006 changing the land use designation from Heavy Industrial to High Density Residential, supportive of the infill location in close proximity to the multi-modal transit hub at the Santa Clara Train Depot. Appropriately, the proposed project is at a density at the high end of the density range of 25-50 du/ac.

Environmental Review

An Initial Study was prepared for the project and a Mitigated Negative Declaration was circulated for public review by the Director of Planning on September 4, 2008. The Director of Planning, Building and Code Enforcement intends to adopt said Negative Declaration on September 23, 2008. The primary issues that were addressed in the environmental review included the project's potential impacts on air quality; biological resources, cultural/historic resources, hazards and hazardous materials, hydrology and water quality, land use and noise. The project includes mitigation measures that will reduce any potentially significant project impacts to a less-than-significant level.

A more comprehensive accounting of the environmental mitigation measures required as part of this project can be found in the project's Mitigated Negative Declaration (attached to this report). The full text of the Initial Study is available online at: www.sanjoséca.gov/planning/eir/MND.asp.

Project Design

The proposed Planned Development Rezoning would facilitate redevelopment of an exiting single-story obsolete industrial site and replace it with a high density residential development supportive of the location near a transit hub and respectful of the changing character of the area from industrial to residential.

Conceptual Site/Building Design

The conceptual site design works to maximize building coverage on the site while allowing for adequate setbacks buffering the residential use from the potential impacts of the adjacent rail corridor and the remnant industrial uses to the south of the site. The building is set close to street edge along Campbell Avenue to create a presence along the street, continuing the pattern set by the newly constructed residential projects to the south. A drive aisle rings the site serving as circulation for residents and emergency vehicles as well as a buffer between the adjacent non-residential uses.

To minimize the presence of a podium in the building design, townhouse units have been wrapped around the podium along Campbell Avenue and the northern corner of the building. By doing this, the view of the building from Campbell Avenue hides the fact that there is an at-grade parking garage. The interface of the project with the rail corridor and adjacent office/industrial uses, does not present the same need. Landscaping and other treatments will be used to soften the impact of the podium within the remainder of the project.

The site design has been developed to place access to the podium garage along the sides of the project which serves to minimize conflict with pedestrians along Campbell Ave. and reduces the visibility of the

garage from the street. There is a drop-off/loading area at the front of the building for convenience and short term needs. This also adds activity and interest to the front of the building and creates a central entrance to the project.

Setbacks

The proposed site design sets the building back on average 40+ feet from the adjacent uses of industrial/office and rail corridor through the use of the parking aisle/drive. This setback more than meets the recommended setbacks of 15 to 20 feet from adjacent uses of this type found in the Residential Design Guidelines. Similarly, the parking aisle/drive is setback a minimum 10 feet from the adjacent uses which again exceeds the recommended setback of 5 feet and also allows for sufficient area for perimeter landscaping to be installed.

The proposed front setback of the project is reflective of the more urban pattern established with the new residential projects along the street coupled with the need to balance dedication and vacation of frontage required to complete right-of-way improvements to Campbell Avenue. The Guidelines recommends matching the average setbacks of existing residential in the area and may be reduced in more urban locations. The proposed front setback averages approximately 15 feet and reflects a more urban character promoted in the area. The front setback varies along the street as a result of the curvilinear aspect of Campbell Avenue and is maximized at the southern edge of the frontage at over 20 feet.

Parking

The proposed development includes parking ratios typical of multi-family residential projects citywide. Although the project is within walking distance to a transit hub, the applicant is not requesting a reduction in the standard parking requirements. The developer's experience with a similar project in the area suggests that the standard ratios are appropriate. The proposed development standards do include the ability of the Director to consider a reduction of up to 10% should the developer request it. The proposed conceptual project design has minimized the impact of the parking by including it in a podium structure and minimizing the surface parking through designing a predominantly single-loaded parking aisle and reducing the drive aisle width down to that which is absolutely necessary.

Open Space

The location of the site adjacent to the heavy rail corridor subjects the area to noise levels that would impact the use/enjoyment of any private open space areas for a majority of the units. Recognizing the inability to design private open spaces in this situation where the noise level can be reduced to an acceptable level, the focus is then placed on the treatment and the quality of the common open space areas. The conceptual building design includes private balconies for most of the units averaging 50 square feet. The building is also designed around a common interior courtyard which includes access to units as well as garden areas, sitting areas, a pool area and barbeque areas. The overall common open space provided is approximately 150 square feet per unit, in excess of the recommended 100 square feet per unit.

To encourage the investment in open areas that are pleasant and meet the livability standards relative to noise, the proposed development standard for open space requires a combination of private and common open space of 160 square feet per unit and does not include a minimum per unit. This approach recognizes what is typically suggested for this type of development, 60 square feet of private and 100 square feet of common open space per unit, yet respects the environmental context and the challenges

related to noise from the rail corridor and roadways and offers flexibility in project design to meet open space requirements.

PUBLIC OUTREACH

Community outreach followed City Council Policy 6-30: Public Outreach Policy. A sign was posted on the site to notify neighbors of the development proposal. In addition to the noticed community meeting discussed earlier, a notice of this Planning Commission public hearing and subsequent City Council hearing was mailed to the owners and tenants of all properties located within 1,000 feet of the project site and posted on the City website. The same notice was also published in a local newspaper. This staff report is also posted on the City's Website and staff has been available to respond to questions from the public.

Project Manager: Jeannie Hamilton **Approved by:** Andrew Crabtree **Date:** 9-30-08

Owner/Applicant:	Attachments:
Sobrato Development Co. 10500 N. De Anza Blvd., Suite 200 Cupertino, CA 95014 Attn: Mr. Tim Steele, VP Development	Draft Development Standards Mitigated Negative Declaration Final Public Works Memo Plan Set

DRAFT

PDC07-081

LAND USE PLAN DEVELOPMENT STANDARDS

DEVELOPMENT STANDARDS

Permitted Uses:
Up to 259 multi-family residential units.

Building Height:

- Height- 65 feet maximum, with minor architectural projections, building elements related to elevators, etc. not to exceed 70 feet.

Perimeter Building Setbacks:

Minimum Front Setbacks (Campbell Avenue)

- Minimum 10 feet

Minimum Rear Setbacks (curved property line along rail line)

- Minimum 35 feet

Minimum Side Setbacks (adjacent to southern property line)

- Minimum 30 feel

Private/Common Open Space Combined

A combination of common and private open space at a ratio of at least 160 square feet per unit.

Parking
Parking ratios for vehicles and bicycles as below:

Automobile/motorcycle:

Table 20-210
Multiple Dwelling

Living Unit Size	Type of Parking Facility		
	All Open Parking	One-Car Garage	Two-Car Garage
0 Bedroom (Studio)	1.5	1.6	2.2
1 Bedroom	1.5	1.7	2.3
2 Bedroom	1.8	2.0	2.5
3 Bedroom	2.0	2.2	2.6
Each Additional Bedroom	0.15	0.15	0.15

Bicycle: 1 space per 4 dwelling units.

A reduction in the required off-street parking spaces of up to ten percent (10%) may be authorized with a Planned Development Permit.

Alternative Parking designs can be considered through a Planned Development Permit

GENERAL NOTES

Park Impact Fees & Parkland Dedication Ordinance

The applicant shall comply with the requirements of the Park Impact Ordinance (PIO), pursuant to Ordinance 24172 (Chapter 14.25 of Title 14 of the San Jose, Municipal Code, as amended) and the project shall comply with the Parkland Dedication Ordinance (PDO).

Public Off-site Improvements

All public off-site improvements shall be implemented to the satisfaction of the Director of Public Works. Prior to the issuance of building permit(s), the applicant shall be required to obtain a Public Works clearance. Said clearance will require the execution of a Construction Agreement that guarantees the completion of the public improvements.

Water Pollution Control Plant Notice

Pursuant to part 2.75 of chapter 15.12 of the San José Municipal Code, no vested right to a building permit shall accrue as the result of the granting of any land development approvals and applications when and if the City Manager makes a determination that the cumulative sewage treatment demand on the San José – Santa Clara water plant will cause the total sewage treatment demand to meet or exceed the capacity of the San José – Santa Clara water pollution control plant to treat such sewage adequately and within the discharge standards imposed on the city by the State of California Regional Water Quality Control Board for the San Francisco Bay region. Substantive conditions designed to decrease sanitary sewage associated with any land use approval may be imposed by the approving authority.

STANDARD AND AVOIDANCE MEASURES REQUIRED

The following standard, avoidance, and mitigation measures, or their equivalent, shall be implemented as part of the project, subject to the discretion of the Director of Department of Planning, Building and Code Enforcement.

Aesthetics

SM AES-1: The project shall conform to the City's *Residential Design Guidelines.*

SM AES-2: Compliance with the City's *Outdoor Lighting Policy* (Policy 4-3), which includes the use of low-pressure sodium outdoor security lighting on-site along walkways, entrance areas, common outdoor use areas, and parking areas.

Biology

SM BIO-1: If possible, construction should be scheduled between September and December (inclusive) to avoid the raptor nesting season. If this is not possible, pre-construction surveys for nesting raptors shall be conducted by a qualified

ornithologist to identify active raptor nests that may be disturbed during project implementation. Between January and April (inclusive) pre-construction surveys shall be completed no more than 14 days prior to the initiation of construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys no more than thirty (30) days prior to the initiation of these activities. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area for raptor nests. If an active raptor nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist, shall, in consultation with the State of California, Department of Fish & Game (CDFG), designate a construction-free buffer zone (typically 250 feet) around the nest. The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the City's Environmental Principal Planner prior to the issuance of any grading or building permit.

SM BIO-2: Pre-construction treatments:

- The applicant shall retain a consulting arborist. The construction superintendent shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection.
- Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by consulting arborist. Fences are to remain until all grading and construction is completed.
- Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed or supervised by a Certified Arborist and adhere to the Best Management Practices for Pruning of the International Society of Arboriculture.

SM BIO-3: During construction:

- No grading, construction, demolition or other work shall occur within the TREE PROTECTION ZONE. Any modifications must be approved and monitored by the consulting arborist.
- Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the consulting arborist.
- Supplemental irrigation shall be applied as determined by the consulting arborist.
- If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
- No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the TREE PROTECTION ZONE.
- Any additional tree pruning needed for clearance during construction must be performed or supervised by the consulting arborist, not by construction personnel.
- As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees shall be designed to withstand differential displacement.

Geology and Soils

SM GEO-1: A design level soils engineering investigation shall be prepared for the project site, which identifies the specific design features that will be required for the project, including site preparation, compaction, trench excavations, foundation and subgrade design, drainage, and pavement design. The geotechnical investigation shall be reviewed and approved by the City Geologist prior to issuance of a grading permit or Public Works Clearance for the project.

SM GEO-2: Best management practices will be used to prevent substantial erosion and siltation during development of the site.

SM GEO-3: Impacts will be reduced through design and construction in conformance with standard engineering practices for liquefaction, and for impacts related to seismic shaking.

SM GEO-4: Seismic shaking hazards would be mitigated by implementation of construction practices in accordance with Seismic Zone 4 building criteria as described in the Uniform Building Code.

Hazardous Materials

AM HM-1: As part of the proposed redevelopment, the grade across the site would be raised by approximately one to one and one-half feet. The existing asphalt on the site would be removed including the asphalt that is in closest proximity to the railroad tracks. The existing baserock in this area would remain in place and the grade would be raised with imported soil and a new asphalt covered perimeter roadway and parking areas for the new development would be constructed. The redevelopment plans in the proximity of the railroad, therefore, would avoid disturbance of, or exposure to, subsurface soils that may have previously been exposed at the former surface of the pre-developed site to herbicides and pesticides.

AM HM-2: In accordance with the 2007 California Fire Code, the project proposes to maintain a minimum 10-foot setback from the eastern property line of the site to avoid impacts from a 500-gallon aboveground propane tank located on the Alliance Roofing property.

Hydrology

SM HYD-1: Prior to the issuance of a Planned Development Permit, the applicant must provide details of specific Best Management Practices (BMPs), including, but not limited to, bioswales, disconnected downspouts, landscaping to reduce impervious surface area, mechanical treatment devices, and inlets stenciled "No Dumping – Flows to Bay" to the satisfaction of the Director of Planning, Building and Code Enforcement.

SM HYD-2: The project shall comply with Provision C.3 of NPDES permit Number CAS0299718, which provides enhanced performance standards for the management of stormwater of new development.

SM HYD-3: The project shall comply with applicable provisions of the following City Policies – 1) Post-Construction Urban Runoff Management Policy (6-29) which establishes guidelines and minimum BMPs for all projects and 2) Post-Construction Hydromodification Management Policy (8-14) which provides for numerically sized (or hydraulically sized) TCMs.

SM HYD-4: Prior to the commencement of any clearing, grading or excavation, the project shall comply with the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Construction Activities Permit, to the satisfaction of the Director of Public Works, as follows:

- The applicant shall develop, implement and maintain a Storm Water Pollution Prevention Plan (SWPPP) to control the discharge of stormwater pollutants including sediments associated with construction activities;
- The applicant shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB).

SM HYD-5: The project shall incorporate Best Management Practices (BMPs) into the project to control the discharge of stormwater pollutants including sediments associated with construction activities. Examples of BMPs are contained in the publication Blueprint for a Clean Bay. Prior to the issuance of a grading permit, the applicant may be required to submit an Erosion Control Plan to the City Project Engineer, Department of Public Works, 200 E. Santa Clara Street, San Jose, California 95113. The Erosion Control Plan may include BMPs as specified in the Association of Bay Area Governments' (ABAG) Manual of Standards Erosion & Sediment Control Measures for reducing impacts on the City's storm drainage system from construction activities. For additional information about the Erosion Control Plan, the NPDES Permit requirements or the documents mentioned above, please call the Department of Public Works at (408) 535-8300.

SM HYD-6: The project applicant shall comply with the City of San Jose Grading Ordinance, including erosion and dust control during site preparation and with the City of San Jose Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction. The following specific BMPs will be implemented to prevent stormwater pollution and minimize potential sedimentation during construction:

- Restriction of grading to the dry season (April 15 through October 15);
- Utilize on-site sediment control BMPs to retain sediment on the project site;
- Utilize stabilized construction entrances and/or wash racks;

- Implement damp street sweeping;
- Provide temporary cover of disturbed surfaces to help control erosion during construction;
- Provide permanent cover to stabilize the disturbed surfaces after construction has been completed.

Noise

SM NV-1: Construction will be limited to the hours of 7:00 AM to 7:00 PM Monday through Friday for any on-site or off-site work within 500 feet of any residential unit. Construction outside of these hours may be approved through a development permit based on a site-specific construction noise mitigation plan and a finding by the Director of Planning, Building and Code Enforcement that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.

SM NV-2: The contractor shall use "new technology" power construction equipment with state-of-the-art noise shielding and muffling devices. All internal combustion engines used on the project site shall be equipped with adequate mufflers and shall be in good mechanical condition to minimize noise created by faulty or poor maintained engines or other components.

SM NV-3: Locate stationary noise generating equipment as far as possible from sensitive receptors. Staging areas shall be located a minimum of 200 feet from noise sensitive receptors, such as residential uses.

AM NOI-1: Proposed common open space areas on the project site must be acoustically protected to maintain noise levels in these spaces below 65 dBA DNL.

Recreation

SM PS-2: The project shall conform to the City's *Park Impact Ordinance* (PIO) and *Parkland Dedication Ordinance* (PDO) (Municipal Code Chapter 19.38).

ENVIRONMENTAL MITIGATION REQUIREMENTS

I. **AIR QUALITY** – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures to reduce the impacts of demolition and construction activities to a less than significant level:

MM AQ-1: Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site.

MM AQ-2: Active areas adjacent to existing land uses shall be kept damp at all times or shall be treated with non-toxic stabilizers or dust palliatives.

MM AQ-3:	Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
MM AQ-4:	Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
MM AQ-5:	Sweep daily, or more often if necessary (preferably with water sweepers) to prevent visible dust from leaving the site all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality.
MM AQ-6:	Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.
MM AQ-7:	Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
MM AQ-8:	Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
MM AQ-9:	Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
MM AQ-10:	Replant vegetation in disturbed areas as quickly as possible.
MM AQ-11:	Limit traffic speed on unpaved roads to 15 mph.

II. **BIOLOGICAL RESOURCES** – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures to a less than significant level:

MM BIO-1.1: The proposed project shall replace trees removed at the following ratios:

Table 4.4-2 Standard Tree Replacement Requirements		
Diameter of Tree to be Removed	**Non-Native**	**Minimum Size of Each Replacement Tree**
18 inches or greater	4:1	24-inch box
12 – 18 inches	2:1	24-inch box
Less than 12 inches	1:1	15-gallon container
Notes: Trees greater than 18-inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.		

The species and exact number of trees to be planted on the site will be determined at the development permit stage, in consultation with the City Arborist and the Department of Planning, Building, and Code Enforcement. Trees for purposes of mitigation shall be planted at the above standard ratio to be determined at the permit stage.

MM BIO-1.2: If the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures shall be implemented, to the satisfaction of the Director of Planning, Building, and Code Enforcement, at the development permit stage:

- The size of a 15-gallon replacement tree can be increased to 24-inch box and count as two replacement trees.
- An alternative site(s) shall be identified for additional tree planting. Alternative sites may include local parks or schools or installation of trees on adjacent properties for screening purposes to the satisfaction of the Director of the Department of Planning, Building, and Code Enforcement.
- A donation of $300 per mitigation tree to Our City Forest for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting will be provided to the Planning Project Manager prior to issuance of a development permit.

III. **CULTURAL RESOURCES** – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures to reduce impacts to archaeological resources to a less than significant level:

MM CULT-1.1: A systematic inspection or survey of the present ground surface will provide archaeological data regarding post-depositional disturbance levels and shall be conducted by a qualified archaeologist. An archaeological survey of the entire parcel shall be completed after the present built environment (pavement, landscaping) is removed and preparation of the ground surface for new development begins. Depending on the results of the survey, it is recommended that a monitoring program be established in order that periodic inspections of subsurface levels be coordinated to allow careful examination of vertical and horizontal soil relationships between two and eight feet (below the present surface). The monitor must be pre-approved by the Director of Planning (or his designee). After written approval, the Planning Division must be notified at least 48 hours prior to any grading or other subsurface work on the site and the applicant must provide a written protocol which stipulates the manner in which the applicant shall comply with the monitoring requirements.

MM CULT-1.2: If no resources are discovered through the ground survey, the archaeologist shall submit a report to the City's Environmental Principal Planner verifying that the required monitoring occurred and that no further mitigation is necessary.

MM CULT-1.3: If evidence of any archaeological, cultural, and/or historical deposits is found, all work within proximity of the find shall temporarily halt so that the archaeologist can examine the find and document its provenience and nature (drawings, photographs, written description). The archaeological monitor will then direct the work to either proceed if the find is deemed to be insignificant, or instruct the work to continue elsewhere or cease until adequate mitigation measures are adopted. The archaeologist shall submit reports, to the satisfaction of the City's Environmental Principal Planner, describing the testing program and subsequent results. These reports shall identify any program mitigation that the Developer shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources). The key elements of the treatment plan shall include the following:

- Identify scope of work and range of subsurface effects (include location map and development plan).

- Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found).
- Develop research questions goals to be addressed by the investigation (what is significant vs. what is redundant information).
- Detail field strategy used to record, recover, or avoid the finds (photos, drawings, written records, provenance data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.
- Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifact studies [list categories and methods for artifacts], etc.).
- Report structure, outline of document contents (draft for review, final).
- Disposition of artifacts.
- Appendices: Site records, updated site records, correspondence, consultation with Native Americans, etc. The need for burial agreement plan for Native American burials can be incorporated into the treatment plan, but must be done in consultation with Most Likely Descendents. Plan should detail goals, methods, and disposition of remains and associated artifacts.

MM CULT-1.4: In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius in order to proceed with the testing and mitigation measures required. Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California:

- In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

- A final report shall be submitted to the City's Environmental Principal Planner prior to release of a Certificate of Occupancy. This report shall contain a description of the mitigation programs and its results including a description of the monitoring and testing

program, a list of the resources found, a summary of the resources analysis methodology and conclusions, and a description of the disposition/curation of the resources.

IV. **HAZARDS AND HAZARDOUS MATERIALS** – The project will have a significant impact on this resource, therefore the project proposes the following mitigation measures to reduce impacts from hazardous materials to a less than significant level:

MM HM-1.1: The two closed in-place USTs, located under the planned perimeter parking area, shall be removed and properly disposed of off-site as part of the proposed redevelopment. The tank shells will be segregated from the concrete and, depending on the condition of the shells, will either be recycled or disposed of as hazardous waste if there are signs of residual contamination that cause the shells to be non-recyclable. The concrete within the tanks will likely be disposed as non-hazardous waste; however the final determination for disposition will be made by qualified personnel during removal. If required to determine either recycling and/or disposal options for these materials, sampling and analysis may be completed. Any materials determined to be hazardous waste will be managed in accordance with all applicable state and federal requirements for manifesting, transportation, and disposal. Soil sampling of the excavation pits will be completed, in the event visual or olfactory evidence (i.e. discoloration of soils or odors) is present when the USTs are removed.

MM HM-1.2: Contractors working on the redevelopment project during site grading, utility installation, and removal of the closed in-place USTs, shall incorporate routine safe work practices and dust control measures and shall adhere to standard worker health and safety procedures as required under the California Department of Occupational Safety and Health Administration (Cal-OSHA) regulations.

MM HM-1.3: In the event that evidence of unanticipated hazardous materials conditions is encountered, the contractor shall halt work and contact the applicant to arrange for oversight by a qualified engineer or geologist. The applicant shall submit a report to the appropriate regulatory agency and the City's Environmental Compliance Officer, for review and approval, detailing the assessment of the encountered materials and the need for additional mitigation.

V. **HYDROLOGY AND WATER QUALITY** – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures to reduce the impact to a less than significant level:

MM HYD-3.1: Comply with the City of San José *Special Flood Hazard Area Regulations* and City's Floodplain Management Ordinance, including providing certification of the lowest floor elevation on N.G.V.D datum by a registered professional engineer or surveyor to the Director of Public Works, as set forth in Section 17.08.310.

MM HYD-3.2: Obtain an Elevation Certificate (FEMA Form 81-31) based on construction drawings prior to issuance of a building permit. An Elevation Certificate based on finished construction is also required prior to issuance of an occupancy permit.

MM HYD-3.3: Elevate building support utility systems such as HVAC, electrical, plumbing, air conditioning equipment, including ductwork, and other service facilities above the base flood elevation or otherwise protected from flood damage.

VI. **NOISE** – The project shall incorporate building sound insulation to meet the requirements of the California Building Code top reduce interior noise levels to 45 dBA or lower, using standard construction techniques. Prior to issuance of occupancy permits, building plans for all units will be checked by a qualified acoustical consultant to ensure that noise levels are attenuated sufficiently. All units shall have forced air ventilation systems to allow the windows to remain closed so that an interior noise level of 45 dBA can be achieved.

Mitigation Measures: The project shall incorporate the following measures to reduce the interior noise impacts of the project to a less than significant level:

MM NV-1.1: Project-specific acoustical analyses are required by the City of San José to insure that interior noise levels will be reduced to 45 dBA DNL or lower. It is also recommended that maximum interior noise levels be limited to 50 dBA L_{max} within bedrooms and 55 dBA L_{max} within other habitable rooms to avoid sleep disturbance and activity interference indoors. Building sound insulation requirements would need to include the provision of forced-air mechanical ventilation for all new units, so that windows could be kept closed at the occupant's discretion to control noise. Special building construction techniques (e.g., sound-rated windows and building facade treatments) may be required for new residential uses adjacent to the railroad. These treatments include, but are not limited to, sound rated windows and doors, sound rated wall constructions, acoustical caulking, etc. The specific determination of what treatments are necessary will be conducted on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these

would adequately reduce average interior noise levels to 45 dBA DNL or lower and maximum interior noise levels to 50 dBA L_{max} in bedrooms and 55 dBA L_{max} in other habitable rooms.

Mitigation Measure: The project shall implement the following mitigation measure to reduce construction noise impacts to nearby sensitive receptors:

MM NV-2.1: At the final design phase, a qualified acoustical consultant shall review the construction plans to ensure that the placement of a portable rock crusher on the site will reduce construction noise levels to 60 dBA L_{eq} at the nearest sensitive receivers to the east. In the event rock crusher noise levels would not be reduced to 60 dBA L_{eq} at noise sensitive receivers based on the location of intervening structures, the acoustical consultant shall identify the appropriate height and location of recycled material stockpiles to be maintained during crushing activities in order to attenuate noise to the maximum amount feasible. The required construction noise reduction measures shall be printed on all construction documents, contracts, and project plans; and be reviewed by the City's Environmental Principal Planner prior to issuance of building permits.

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement
JOSEPH HORWEDEL, DIRECTOR

DRAFT
MITIGATED NEGATIVE DECLARATION

The Director of Planning, Building and Code Enforcement has reviewed the proposed project described below to determine whether it could have a significant effect on the environment as a result of project completion. "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

NAME OF PROJECT: PDC07-081 – 1270 CAMPBELL AVENUE

PROJECT FILE NUMBER: PDC07-081

PROJECT DESCRIPTION: Planned Development Rezoning from HI Heavy Industrial Zoning District to A(PD) Planned Development Zoning District, and subsequent development permits and subdivision maps, to allow up to 259 multi-family residential units over a podium garage on a 5.11 gross acre site.

PROJECT LOCATION & ASSESSORS PARCEL NO.: east side of Campbell Avenue, approximately 2,000 feet northwesterly of Newhall Street (1270 Campbell Avenue); APN 230-14-026

COUNCIL DISTRICT: 3

APPLICANT CONTACT INFORMATION: SOBRATO DEVELOPMENT, Attn: TIM STEELE 10600 N DEANZA BLVD, CUPERTINO CA 95014, (408)446-0700

FINDING

The Director of Planning, Building & Code Enforcement finds the project described above will not have a significant effect on the environment in that the attached initial study identifies one or more potentially significant effects on the environment for which the project applicant, before public release of this draft Mitigated Negative Declaration, has made or agrees to make project revisions that clearly mitigate the effects to a less than significant level.

MITIGATION MEASURES INCLUDED IN THE PROJECT TO REDUCE POTENTIALLY SIGNIFICANT EFFECTS TO A LESS THAN SIGNIFICANT LEVEL

I. AESTHETICS – The project will not have a significant impact on this resource, therefore no mitigation is required.

II. **AGRICULTURE RESOURCES** – The project will not have a significant impact on this resource, therefore no mitigation is required.

III. **AIR QUALITY** – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures to reduce the impacts of demolition and construction activities to a less than significant level:

MM AQ-1: Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site.

MM AQ-2: Active areas adjacent to existing land uses shall be kept damp at all times or shall be treated with non-toxic stabilizers or dust palliatives.

MM AQ-3: Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

MM AQ-4: Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.

MM AQ-5: Sweep daily, or more often if necessary (preferably with water sweepers) to prevent visible dust from leaving the site all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality.

MM AQ-6: Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.

MM AQ-7: Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).

MM AQ-8: Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

MM AQ-9: Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

MM AQ-10: Replant vegetation in disturbed areas as quickly as possible.

MM AQ-11: Limit traffic speed on unpaved roads to 15 mph.

IV. **BIOLOGICAL RESOURCES** – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures:

MM BIO-1.1: The proposed project shall replace trees removed at the following ratios:

Table 4.4-2
Standard Tree Replacement Requirements

Diameter of Tree to be Removed	Non-Native	Minimum Size of Each Replacement Tree
18 inches or greater	4:1	24-inch box
12 – 18 inches	2:1	24-inch box
Less than 12 inches	1:1	15-gallon container

Notes:
X:X = Tree replacement to tree loss ratio
Trees greater than 18-inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

The species and exact number of trees to be planted on the site will be determined at the development permit stage, in consultation with the City Arborist and the Department of Planning, Building, and Code Enforcement. Trees for purposes of mitigation shall be planted at the above standard ratio to be determined at the permit stage.

MM BIO-1.2: If the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures shall be implemented, to the satisfaction of the Director of Planning, Building, and Code Enforcement, at the development permit stage:

- The size of a 15-gallon replacement tree can be increased to 24-inch box and count as two replacement trees.
- An alternative site(s) shall be identified for additional tree planting. Alternative sites may include local parks or schools or installation of trees on adjacent properties for screening purposes to the satisfaction of the Director of the Department of Planning, Building, and Code Enforcement.
- A donation of $300 per mitigation tree to Our City Forest for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting will be provided to the Planning Project Manager prior to issuance of a development permit.

V. **CULTURAL RESOURCES** – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures to reduce impacts to archaeological resources:

MM CULT-1.1: A systematic inspection or survey of the present ground surface will provide archaeological data regarding post-depositional disturbance levels and shall be conducted by a qualified archaeologist. An archaeological survey of the entire parcel shall be completed after the present built environment (pavement, landscaping) is removed and preparation of the ground surface for new development begins. Depending on the results of the survey, it is recommended that a monitoring program be established in order that periodic inspections of subsurface levels be coordinated to allow careful examination of vertical and horizontal soil relationships between two and eight feet (below the present surface). The monitor must be pre-approved by the Director of Planning (or his designee). After written approval, the Planning Division must be notified at least 48 hours prior to any grading or other subsurface work on the site and the applicant must provide a written protocol which stipulates the manner in which the applicant shall comply with the monitoring requirements.

MM CULT-1.2: If no resources are discovered through the ground survey, the archaeologist shall submit a report to the City's Environmental Principal

Planner verifying that the required monitoring occurred and that no further mitigation is necessary.

MM CULT-1.3: If evidence of any archaeological, cultural, and/or historical deposits is found, all work within proximity of the find shall temporarily halt so that the archaeologist can examine the find and document its provenience and nature (drawings, photographs, written description). The archaeological monitor will then direct the work to either proceed if the find is deemed to be insignificant, or instruct the work to continue elsewhere or cease until adequate mitigation measures are adopted. The archaeologist shall submit reports, to the satisfaction of the City's Environmental Principal Planner, describing the testing program and subsequent results. These reports shall identify any program mitigation that the Developer shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources). The key elements of the treatment plan shall include the following:

- Identify scope of work and range of subsurface effects (include location map and development plan).
- Describe the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found).
- Develop research questions goals to be addressed by the investigation (what is significant vs. what is redundant information).
- Detail field strategy used to record, recover, or avoid the finds (photos, drawings, written records, provenance data maps, soil profiles, excavation techniques, standard archaeological methods) and address research goals.
- Analytical methods (radiocarbon dating, obsidian studies, bone studies, historic artifact studies [list categories and methods for artifacts], etc.).
- Report structure, outline of document contents (draft for review, final).
- Disposition of artifacts.
- Appendices: Site records, updated site records, correspondence, consultation with Native Americans, etc. The need for burial agreement plan for Native American burials can be incorporated into the treatment plan, but must be done in consultation with Most Likely Descendents. Plan should detail goals, methods, and disposition of remains and associated artifacts.

MM CULT-1.4: In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius in order to proceed with the testing and mitigation measures required. Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California:

- In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any

nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

- A final report shall be submitted to the City's Environmental Principal Planner prior to release of a Certificate of Occupancy. This report shall contain a description of the mitigation programs and its results including a description of the monitoring and testing program, a list of the resources found, a summary of the resources analysis methodology and conclusions, and a description of the disposition/curation of the resources.

VI. **GEOLOGY AND SOILS** – The project will not have a significant impact on this resource, therefore no mitigation is required.

VII. **HAZARDS AND HAZARDOUS MATERIALS** – The project will have a significant impact on this resource, therefore the project proposes the following mitigation and avoidance measures to reduce impacts from hazardous materials to a less than significant level:

MM HM-1.1: The two closed in-place USTs, located under the planned perimeter parking area, shall be removed and properly disposed of off-site as part of the proposed redevelopment. The tank shells will be segregated from the concrete and, depending on the condition of the shells, will either be recycled or disposed of as hazardous waste if there are signs of residual contamination that cause the shells to be non-recyclable. The concrete within the tanks will likely be disposed as non-hazardous waste; however the final determination for disposition will be made by qualified personnel during removal. If required to determine either recycling and/or disposal options for these materials, sampling and analysis may be completed. Any materials determined to be hazardous waste will be managed in accordance with all applicable state and federal requirements for manifesting, transportation, and disposal. Soil sampling of the excavation pits will be completed, in the event visual or olfactory evidence (i.e. discoloration of soils or odors) is present when the USTs are removed.

MM HM-1.2: Contractors working on the redevelopment project during site grading, utility installation, and removal of the closed in-place USTs, shall incorporate routine safe work practices and dust control measures and shall adhere to standard worker health and safety procedures as required

under the California Department of Occupational Safety and Health Administration (Cal-OSHA) regulations.

MM HM-1.3: In the event that evidence of unanticipated hazardous materials conditions is encountered, the contractor shall halt work and contact the applicant to arrange for oversight by a qualified engineer or geologist. The applicant shall submit a report to the appropriate regulatory agency and the City's Environmental Compliance Officer, for review and approval, detailing the assessment of the encountered materials and the need for additional mitigation.

VIII. HYDROLOGY AND WATER QUALITY – The project will have a significant impact on this resource, therefore the project proposes to implement the following mitigation measures:

MM HYD-3.1: Comply with the City of San José *Special Flood Hazard Area Regulations* and City's Floodplain Management Ordinance, including providing certification of the lowest floor elevation on N.G.V.D datum by a registered professional engineer or surveyor to the Director of Public Works, as set forth in Section 17.08.310.

MM HYD-3.2: Obtain an Elevation Certificate (FEMA Form 81-31) based on construction drawings prior to issuance of a building permit. An Elevation Certificate based on finished construction is also required prior to issuance of an occupancy permit.

MM HYD-3.3: Elevate building support utility systems such as HVAC, electrical, plumbing, air conditioning equipment, including ductwork, and other service facilities above the base flood elevation or otherwise protected from flood damage.

IX. LAND USE AND PLANNING – The project will not have a significant impact on this resource, therefore no mitigation is required.

The project proposes the following mitigation measure to reduce the project's land use impacts to a less than significant level:

MM LU-1.1: The project proposes to pay in-lieu housing fees to the City of Santa Clara to provide for affordable housing in the city.

X. MINERAL RESOURCES – The project will not have a significant impact on this resource, therefore no mitigation is required.

XI. NOISE – The project shall incorporate building sound insulation to meet the requirements of the California Building Code top reduce interior noise levels to 45 dBA or lower, using standard construction techniques. Prior to issuance of occupancy permits, building plans for all units will be checked by a qualified acoustical consultant to ensure that noise levels are

attenuated sufficiently. All units shall have forced air ventilation systems to allow the windows to remain closed so that an interior noise level of 45 dBA can be achieved.

The project shall incorporate the following measures to reduce the interior noise impacts of the project to a less than significant level:

MM NV-1.1: Project-specific acoustical analyses are required by the City of San José to insure that interior noise levels will be reduced to 45 dBA DNL or lower. It is also recommended that maximum interior noise levels be limited to 50 dBA L_{max} within bedrooms and 55 dBA L_{max} within other habitable rooms to avoid sleep disturbance and activity interference indoors. Building sound insulation requirements would need to include the provision of forced-air mechanical ventilation for all new units, so that windows could be kept closed at the occupant's discretion to control noise. Special building construction techniques (e.g., sound-rated windows and building facade treatments) may be required for new residential uses adjacent to the railroad. These treatments include, but are not limited to, sound rated windows and doors, sound rated wall constructions, acoustical caulking, etc. The specific determination of what treatments are necessary will be conducted on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these would adequately reduce average interior noise levels to 45 dBA DNL or lower and maximum interior noise levels to 50 dBA L_{max} in bedrooms and 55 dBA L_{max} in other habitable rooms.

The project shall implement the following mitigation measure to reduce construction noise impacts to nearby sensitive receptors:

MM NV-2.1: At the final design phase, a qualified acoustical consultant shall review the construction plans to ensure that the placement of a portable rock crusher on the site will reduce construction noise levels to 60 dBA L_{eq} at the nearest sensitive receivers to the east. In the event rock crusher noise levels would not be reduced to 60 dBA L_{eq} at noise sensitive receivers based on the location of intervening structures, the acoustical consultant shall identify the appropriate height and location of recycled material stockpiles to be maintained during crushing activities in order to attenuate noise to the maximum amount feasible. The required construction noise reduction measures shall be printed on all construction documents, contracts, and project plans; and be reviewed by the City's Environmental Principal Planner prior to issuance of building permits.

XII. POPULATION AND HOUSING – The project will not have a significant impact on this resource, therefore no mitigation is required.

XIII. PUBLIC SERVICES – The project will not have a significant impact on this resource, therefore no mitigation is required.

XIV. RECREATION – The project will not have a significant impact on this resource, therefore no mitigation is required.

XV. TRANSPORTATION / TRAFFIC – The project will not have a significant impact on this resource, therefore no mitigation is required

XVI. UTILITIES AND SERVICE SYSTEMS – The project will not have a significant impact on this resource, therefore no mitigation is required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE – The project will not substantially reduce the habitat of a fish or wildlife species, be cumulatively considerable, or have a substantial adverse effect on human beings, therefore no additional mitigation is required.

PUBLIC REVIEW PERIOD

Before 5:00 p.m. on **September 23, 2008**, any person may:

Review the Draft Mitigated Negative Declaration (MND) as an informational document only; or

Submit written comments regarding the information, analysis, and mitigation measures in the Draft MND. Before the MND is adopted, Planning staff will prepare written responses to any comments, and revise the Draft MND, if necessary, to reflect any concerns raised during the public review period. All written comments will be included as part of the Final MND.

Joseph Horwedel, Director
Planning, Building and Code Enforcement

Circulated on: September 4, 2008 Akemi Ohnishi
Deputy

Adopted on: _____ _____
Deputy

MND/JAC 8/26/05

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: Jeannie Hamilton
Planning and Building

FROM: Michael Liw
Public Works

SUBJECT: **FINAL RESPONSE TO DEVELOPMENT APPLICATION**

DATE: 04/22/08

PLANNING NO.:	PDC07-081
DESCRIPTION:	Planned Development Rezoning from HI Heavy Industrial Zoning District to A(PD) Planned Development Zoning District to allow up to 248 single-family and multi-family attached residences over a podium garage on a 5.11 gross acre site
LOCATION:	east side of Campbell Avenue, approximately 2,000 feet northwesterly of Newhall Street (1270 Campbell Avenue)
P.W. NUMBER:	3-08138

Public Works received the subject project on 03/19/08 and submits the following comments and requirements.

Project Conditions:

Public Works Clearance for Building Permit(s) or Map Approval: Prior to the approval of the Tract or Parcel Map (if applicable) by the Director of Public Works, or the issuance of Building permits, whichever occurs first, the applicant will be required to have satisfied all of the following Public Works conditions. The applicant is strongly advised to apply for any necessary Public Works permits prior to applying for Building permits.

1. **Construction Agreement:** The public improvements conditioned as part of this permit require the execution of a Construction Agreement that guarantees the completion of the public improvements to the satisfaction of the Director of Public Works. This agreement includes privately engineered plans, bonds, insurance, a completion deposit, and engineering and inspection fees.

2. **Transportation:**
   a) This project is required to make a fair share contribution towards the transportation improvements at the intersection of Campbell Avenue and the El Camino Real. The fair share contribution amount will be determined at the PD permit stage.
   b) The City has agreed to allow full access to and from the westernmost project driveway under the condition that the inbound left-turn movement at this driveway is monitored regularly. Should significant operational problems or substantial safety issues occur as a result of the inbound left-turn movement, the City may restrict this project driveway to right turns only.

c) A traffic study was completed by Hexagon Transportation Consultants, Inc. and it was found that based on the City of San Jose level of service standards, none of the signalized study intersections would be significantly impacted by the project. Based on the County Congestion Management Plan (CMP) level of service standards, all of the CMP signalized study intersections would operate at an acceptable level of service during both the AM and PM peak hours of traffic under project conditions.

3. **Street Vacation**: A street vacation is required in order to accomplish the land use plan as shown. The street vacation process requires further discretionary approval by the City Council and the project will be subject to this process prior to Public Works Clearance. The preliminary title report indicates the applicant owns the street in fee. Therefore, upon vacation no further action by the City is required.

4. **Grading/Geology:**
   a) A grading permit is required prior to the issuance of a Public Works Clearance.
   b) If the project proposes to haul more than 10,000 cubic yards of cut/fill to or from the project site, a haul route permit is required. Prior to issuance of a grading permit, contact the Department of Transportation at (408) 535-3850 for more information concerning the requirements for obtaining this permit.
   c) Because this project involves a land disturbance of one or more acres, the applicant is required to submit a Notice of Intent to the State Water Resources Control Board and to prepare a Storm Water Pollution Prevention Plan (SWPPP) for controlling storm water discharges associated with construction activity. Copies of these documents must be submitted to the City Project Engineer prior to issuance of a grading permit.
   d) The Project site is within the State of California Seismic Hazard Zone. A soil investigation report addressing the potential hazard of liquefaction must be submitted to, reviewed and approved by the City Geologist prior to issuance of a grading permit or Public Works Clearance. The investigation should be consistent with the guidelines published by the State of California (CDMG Special Publication 117) and the Southern California Earthquake Center ("SCEC" report). A recommended depth of 50 feet should be explored and evaluated in the investigation.

5. **Stormwater Runoff Pollution Control Measures**: This project must comply with the City's Post-Construction Urban Runoff Management Policy (Policy 6-29) which requires implementation of Best Management Practices (BMPs) that include site design measures, source controls, and stormwater treatment controls to minimize stormwater pollutant discharges. Post-construction treatment control measures, shown on the project's Stormwater Control Plan, shall meet the numeric sizing design criteria specified in City Policy 6-29 -or- the project shall provide an Alternative Measure, where installation of post-construction treatment control measures are impracticable, subject to the approval of the Director of Planning, Building & Code Enforcement.
   a) The project's preliminary Stormwater Control Plan and numeric sizing calculations have been reviewed. At PD stage, submit the final Stormwater Control Plan and numeric sizing calculations.

b) Final inspection and maintenance information on the post-construction treatment control measures must be submitted prior to issuance of a Public Works Clearance.

c) A post construction Final Report is required by the Director of Public Works from a Civil Engineer retained by the owner to observe the installation of the BMPs and stating the all post construction storm water pollution control BMPs have been installed as indicated in the approved plans and all significant changes have been reviewed and approved in advance by the Department of Public Works.

d) Revsions to be submitted at the PD permit stage include the following:
   i) Revise storm water control plan to utilize a media filtration based mechanical unit. Include details as well as calculations to justify number of filters.
   ii) Include maintenance information of mechanical unit on plan set.

6. **Flood: Portions in Zone AH, Elevation 63.00' National Geodetic Vertical Datum 1929 (NGVD 1929), and Zone D**

a) The project is proposing a residential podium building with an at-grade garage. A portion of the project site has been designated as Flood Zone AH, Elevation 63.00' NGVD 1929, effective October 25, 2006, by a Letter of Map Revision (LOMR) issued by the Federal Emergency Management Agency (FEMA). The Santa Clara Valley Water District (District) administered the LOMR submittal in conjunction with the Downtown and Lower Guadalupe River Flood Protection Projects. The net result is that a portion of the project site will continue to remain within the 100-year floodplain (area having a one-percent or greater chance of being flooded in any given year).

b) Elevate the lowest floor, including basement, above 63.00' NGVD 1929.

c) An Elevation Certificate (FEMA Form 81-31) based on construction drawings is required prior to issuance of a building permit. Consequently, an Elevation Certificate based on finished construction is required prior to issuance of an occupancy permit.

d) Building support utility systems such as HVAC, electrical, plumbing, air conditioning equipment, including ductwork, and other service facilities must be elevated above the base flood elevation or protected from flood damage.

e) Since a portion of the proposed building is within the 100-year floodplain and future property owners may be required to purchase flood insurance, the project may apply for a Letter of Map Revision (LOMR) to FEMA for removal of the building from the 100-year floodplain.

7. **Sewage Fees:** In accordance with City Ordinance all storm sewer area fees, sanitary sewer connection fees, and sewage treatment plant connection fees, less previous credits, are due and payable.

8. **Parks:** In accordance with the Parkland Dedication and Park Impact Ordinances (SJMC 19.38/14.25), the park impact fee will be due for any additional living units that are built.

9. **Street Improvements:**
   a) Applicant shall be responsible to remove and replace curb, gutter, and sidewalk damaged during construction of the proposed project.
   b) Construct curb, gutter, and 10' attached sidewalk with tree wells along Campbell Avenue frontage.
   c) Close any unused driveway cut(s).
   d) Remove traffic signal at eastern most driveway.
   e) Dedication and improvement of the public streets to the satisfaction of the Director of Public Works.
   f) Repair, overlay, or reconstruction of asphalt pavement may be required. The existing pavement will be evaluated with the street improvement plans and any necessary pavement restoration will be included as part of the final street improvement plans. (To assist the Applicant in better understanding the potential cost implications resulting from these requirements, existing pavement conditions can be evaluated during the Planning permit review stage. The Applicant will be required to submit a plan and the applicable fees to the PW Project Engineer for processing. The plan should show all project frontages and property lines. Evaluation will require approximately 20 working days.)

10. **Complexity Surcharge**: Based on established criteria, the public improvements associated with this project have been rated medium complexity. An additional surcharge of 25% will be added to the Engineering & Inspection (E&I) fee collected at the street improvement stage.

11. **Sanitary**: The project is required to submit plan and profile of the private sewer mains with lateral locations for final review and comment prior to construction.

12. **Private Storm Line**: The project shall utilize reinforced concrete pipe (RCP) for storm pipes located in the traveled way. The class of RCP will be determined based on pipe cover. Polyvinyl Chloride (PVC) SDR-26 pipe will be allowed in areas where there is no vehicular traffic (landscaped areas, sidewalks, etc.).

13. **Electrical:**
   a) Existing electroliers along the project frontage will be evaluated at the public improvement stage and any street lighting requirements will be included on the public improvement plans
   b) Locate and protect existing electrical conduit in driveway and/or sidewalk construction.
   c) Provide clearance for electrical equipment from driveways, and relocate driveway or electrolier. The minimum clearance from driveways is 5' in residential areas.
   d) Provide clearance for electroliers from overhead utilities and request clearance from utility companies. Clearance from electrolier(s) must provide a minimum of 10' from high voltage lines; 3' from secondary voltage lines; and 1' from communication lines.

14. **Street Trees:**
    a) The locations of the street trees will be determined at the street improvement stage. Street trees shown on this permit are conceptual only.
    b) Contact the City Arborist at (408) 277-2756 for the designated street tree.
    c) Install street trees within public right-of-way along entire project street frontage per City standards; refer to the current "Guidelines for Planning, Design, and Construction of City Streetscape Projects". Street trees shall be installed in cut-outs at the back of curb. Obtain a DOT street tree planting permit for any proposed street tree plantings.

15. **Private Streets:**
    a) Per Common Interest Development (CID) Ordinance, all common infrastructure improvements shall be designed and constructed in accordance with the current CID standards.
    b) The plan set includes details of private infrastructure improvements. The details are shown for information only; final design shall require the approval of the Director of Public Works.

16. **Referrals**: This project should be referred to the California Department of Transportation (CalTrans) and the City of Santa Clara.

Please contact the Project Engineer, Norman Mascarinas, at (408) 535- 6812 if you have any questions.

for

Michael Liw
Senior Civil Engineer
Transportation and Development Services Division

ML:nm
6000_12653895025.DOC

1270 CAMPBELL AVENUE DEVELOPMENT PLAN

SEE
MITIGATED NEGATIVE DECLARATION, REZONE, DEVELOPMENT PLAN AND MITIGATION PLAN RESOLUTION
EXHIBIT A

PLANNING COMMISSION STAFF REPORT FOR NOVEMBER 12, 2008

EXHIBT 2
MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF SAN JOSE AND THE CITY OF SANTA CLARA REGARDING RESPONSIBILITIES FOR PLANNING, BUILDING AND INSPECTION ACTIVITIES, AS WELL AS RELATED PUBLIC WORKS IMPROVEMENTS, FOR THE PROPOSED RESIDENTIAL DEVELOPMENT ALONG CAMPBELL AVENUE BY SOBRATO DEVELOPMENT COMPANY

PREAMBLE

This Memorandum of Understanding ("MOU") is made and entered into this 18th day of November, 2008 (the "Effective Date"), by and between the City of San Jose, a chartered municipal corporation of the State of California with its primary business address located at 200 E. Santa Clara Street, San Jose, California 95113 ("San Jose"), and the City of Santa Clara, a chartered municipal corporation of the State of California with its primary business address located at 1500 Warburton Avenue, Santa Clara, California 95050 ("Santa Clara"). San Jose and Santa Clara may be referred to collectively herein as the "Cities" and may be referred to individually as a "City."

RECITALS

WHEREAS, Sobrato Development Company ("Sobrato") proposes to develop a multi-family residential development of up to 259 dwelling units on 1270 Campbell Avenue an approximately 5.11 grossacre parcel (Assessor's Parcel No. 230-14-026) which site is partially located within the boundaries and jurisdiction of San José and partially located within the boundaries and jurisdiction of Santa Clara, all as more particularly shown upon that certain "Site Map" attached hereto as Exhibit A and incorporated herein by this reference (the "Project Site"); and

WHEREAS, Sobrato has submitted various development permit applications to San José (File No[s]. PDC07-081, PD08-039) and to Santa Clara (File No[s]. PLN2008-07068) seeking to allow for the proposed Project described herein to be developed on the Project Site, all as more fully described within that certain "Project Description" attached hereto as Exhibit B and incorporated herein by this reference (the "Project"); and

WHEREAS, both San José and Santa Clara will consider taking discretionary actions related to the Project, but mutually desire San Jose to act as the lead agency and Santa Clara to act as a responsible agency in analyzing the Project under and pursuant to the provisions of the California Environmental Quality Act of 1970, together with related guidelines and local regulations promulgated there under, all as amended from time to time; and

WHEREAS, for the sake of clarity and cooperation, San Jose and Santa Clara desire to outline their respective rights and responsibilities and mutual understandings with regard to reviewing, processing and planning for construction, inspection and related development activities for the Project, including but not limited to plan check, permit processing and issuance, public works inspections, fire safety inspections, and levy of

and collection of fees or taxes related to all such activities.

NOW, THEREFORE, the Cities understand and agree as follows:

AGREEMENT

1. Scope of Agreement.

A. This MOU applies exclusively to the activities of San José and Santa Clara in connection with those certain development approvals to be considered by each City in connection with the Project, including without limitation plan check, permit issuance, Building Division inspections, public works inspections, fire safety inspections, and levy of and collection of fees in connection with such activities. The plan check, permit issuance, Building Division inspections, fire safety inspections, and levy of and collection of fees in connection with such activities shall be performed by the City of San Jose in perpetuity for the life of the subject project. This MOU is not intended to govern the provision of emergency services by either City on the Project Site. Similarly, the City of San Jose will not provide their Code Enforcement services to City of Santa Clara.

B. The Cities expressly understand and agree that nothing contained in this MOU is intended to, nor shall, in any way bind either City to act in any particular manner upon any of the development approval applications submitted to that City for the Project and that this MOU in no way binds a City to approve, nor presupposes that a City shall approve, any particular development permit or approval application submitted to that City in connection with the Project.

C. The Cities expressly understand and agree that nothing contained in this MOU is intended to, nor shall, in any way delegate or grant any legislative or police power of a City to another City, including but not limited to any authority regarding land use matters.

2. Definitions.

A. "Certificate of Occupancy" means a final certificate issued by San Jose entitling occupation of any part of the Project on the Project Site.

B. "Cross-boundary Structure" means a structure within the Project that is built across the jurisdictional boundary line between San Jose and Santa Clara, specifically Structure(s) as shown upon Exhibit A, the Site Map.

C. "Cross-boundary Tenant Space," means tenant space within the Project that is built across the jurisdictional boundary line between San Jose and Santa Clara, located within Structure(s) as shown upon Exhibit A, the Site Map.

D. "Future Tenant Improvements" means any improvement to a portion of a

building within the Project for which a Certificate of Occupancy has already been obtained.

E. "San Jose Structure" means a structure within the Project that is located entirely within the jurisdictional boundaries of San Jose, as shown upon Exhibit A, the Site Map.

F. "San Jose Tenant Space" means tenant space within the Project that is located entirely within the jurisdictional boundaries of San Jose.

G. "Santa Clara Structure" means a structure within the Project located entirely within the jurisdictional boundaries of Santa Clara, as shown upon Exhibit A, the Site Map.

H. "Santa Clara Tenant Space" means tenant space within the Project that is located entirely within the jurisdictional boundaries of Santa Clara.

I. "Shell" means a structure of the Project that is built with the following elements completed: foundation, exterior walls, roof, and rough in sub-trade works, but without improvements necessary for obtaining a Certificate of Occupancy.

J. "Tenant Improvement" means improvements necessary to obtain the first Certificate of Occupancy for a building or portion of a building within the Project.

3. Planning Responsibilities and Processes; Applications and Fees.

A. Santa Clara.

1. For each Santa Clara Structure and Santa Clara Tenant Space and each Cross-Boundary Structure and Cross-Boundary Tenant Space within Structure(s), as identified on the Site Map, as well as for all Tenant Improvements within those structures, Santa Clara hereby authorizes San José to process any and all building permit applications for and on behalf of Santa Clara pursuant to the provisions of the California Building Code, as amended by San José, as of the date such permit is issued.

2. Santa Clara shall require the owners of property located in Santa Clara, either in whole or in part, within the Project Site to submit to San José any and all such building permit applications as are required under the Municipal Code of the City of Santa Clara.

3. Santa Clara hereby determines and agrees that the Building Official for San José shall be the administrative and approval authority for all building permits for the Project on the Project Site and for building design for the Santa Clara Structures and Tenant Spaces,

as well as for subsequent building permit amendments and adjustments as may be needed or required for future proposed architectural or other minor changes to these structures or tenant spaces.

4. San José shall be the entity responsible for the issuance of building permits for the Santa Clara Structures and Tenant Spaces and the Cross-Boundary Structures and Tenant Spaces located in Structure as shown on the Site Map, and for the Tenant Improvements in Structure as shown on the Site Map, and for the imposition, collection and retention of all permit and inspection fees related to such work.

5. Santa Clara hereby delegates to San José the authority to impose, collect, and retain any and all development and impact fees related to work performed by San Jose under this MOU.

6. Santa Clara shall assess and collect any taxes and assessments associated with such applications for the Project based upon the proportional amount of the Cross-Boundary Structure or Tenant Space or the proportional amount of the Tenant Improvements that are within the jurisdictional boundaries of Santa Clara, as appropriate under applicable taxing regulations.

7. For the portion of the Cross-Boundary Tenant Spaces and Tenant Improvements that are within the jurisdictional boundary of Santa Clara, San José shall not issue a building permit prior to receipt of written acknowledgment by Santa Clara of the payment of all applicable Santa Clara fees, taxes, and assessments.

8. Santa Clara hereby delegates to San Jose the authority to collect monies due to Santa Clara for traffic impacts associated with Project development on the Project Site, prior to issuance of building permits by San Jose. The method of appropriately expending those funds collected shall be addressed by and shall occur in accordance with the provisions of Section 7 of this MOU.

9. Santa Clara shall collect in-lieu affordable housing fees pursuant to Santa Clara's affordable housing rules and regulations for those units located within the jurisdiction of Santa Clara, prior to issuance of any building permits by San José.

B. <u>San Jose</u>.

1. For each San Jose Structure and San Jose Tenant Space, and for the Cross-Boundary Structures, San Jose shall require the owners of the property to submit to San Jose such applications as are required for the Project under the Municipal Code of the City of San Jose.

2. The Planning Official for the City of San Jose shall be the approval authority for all development and planning permits required for the site design and building design for the San Jose and Santa Clara Structures, San Jose and Santa Clara Tenant Spaces, and associated parking garages, and any subsequent permit amendments and adjustments for future proposed architectural or other minor changes to these structures upon receipt of written verification that the development and planning permit application complies with the zoning entitlement approval by Santa Clara prior to the issuance of such permit or approval by San Jose. The Building Official for the City of San Jose shall be the approval authority for all building permits for the Project Site and for building design for the San Jose and Santa Clara Structures and Tenant Spaces and Cross-Boundary Structures and Tenant Spaces.

3. In addition to the authorities delegated to San José elsewhere in this Agreement, San Jose shall be the entity responsible for the imposition, collection and retention of all fees associated with such development permit or approval applications for the Project and Project Site as to the San Jose structures and San Jose Tenant Spaces.

4. In addition to the authorities delegated to Santa Clara elsewhere in this Agreement, Santa Clara shall be the entity responsible for the imposition, collection and retention of all fees associated with rezoning and associated entitlements for the Project and project site as to the Santa Clara Structures and Santa Clara Tenant Spaces.

5. San Jose shall impose any and all applicable taxes and assessments based upon the proportional amount of the Cross-Boundary Structures and Tenant Spaces that is within the jurisdictional boundaries of the City of San Jose, subject to the provisions of Section 3A in connection with additional fees and charges due to San José for work performed on behalf of Santa Clara. For Cross-Boundary Structures and Tenant Spaces, San Jose shall not issue a permit prior to receipt of written acknowledgment from Santa Clara of the payment of applicable Santa Clara taxes and assessments.

6. Santa Clara shall collect from San Jose, and San Jose shall promptly remit, any fees and costs for work performed by Santa Clara related to the relocation of Santa Clara public facilities in the public right-of-way associated with Project development.

7. San Jose shall receive written verification from Santa Clara that the Building Permit application complies with the Planned Development

Zoning approved by Santa Clara prior to the issuance of said Building Permits.

8. Prior to any approval of a tentative subdivision or parcel map, San Jose shall secure written verification from Santa Clara that Santa Clara has approved a General Plan Amendment consistent with the approved development or that a boundary adjustment satisfactory to both municipalities has been completed.

C. Future Tenant Improvements. Future Tenant Improvements, including plan check and inspection services, will follow the division of responsibilities as outlined in this MOU, unless a municipal boundary adjustment is approved, in which case the City within which all of the Tenant Spaces are located will assume all responsibilities for services those Tenant Spaces.

4. Building and Fire Safety Inspection Responsibilities and Fees.

A. Santa Clara. For the Tenant Improvements in the Santa Clara Tenant Spaces and the Cross-Boundary Tenant Spaces , Santa Clara will provide fire safety services, subject to the provisions of this Section.

B. Santa Clara hereby determines and agrees that the Fire Chief for San José shall be the administrative and approval authority for all fire inspections for the construction of the Project on the Project Site, including the Santa Clara Structures and Tenant Spaces.C. Santa Clara hereby delegates to San José the authority to perform such fire inspection services for the Project on those portions of the Project Site located in Santa Clara, which services shall be performed in accordance with the California Fire Code as that Code is administered by San Jose; provided, however, that where Santa Clara's fire safety inspection standards are more stringent than San José's, Santa Clara shall notify San José in writing prior to the commencement of fire inspections for the Project of those more stringent standards and, upon receipt of that notice, San Jose agrees to apply those more stringent standards as to the Santa Clara Structures and Santa Clara Tenant Spaces.

D. Santa Clara hereby delegates to San José the authority to impose, collect, and retain any and all fees related to fire inspection work performed by San Jose in Santa Clara pursuant to this MOU.

E. San Jose. For all structures and spaces on the Project Site, San Jose will provide building permit services, including inspection services, and fire inspection services.

5. Record Retention.

All records shall be maintained by each City according to their retention

policies and procedures. Each City may impose record retention fees pursuant to applicable laws on the owner of the property for any records related to the Project located partially or wholly within that City's jurisdictional boundaries or for which work was performed generating records to be maintained.

6. Cooperation.

Both Cities will cooperate and/or provide reasonable access to their respective consultants, engineers and contractors during the course of development of the Project, as necessary for each City to complete their review, approval and/or inspection of the Project or components thereof.

7. Public Right-of-Way Work.

A. Santa Clara. Santa Clara shall require the owners of the property to obtain an Encroachment Permit from Santa Clara for all public street improvement work along Campbell Avenue that is within Santa Clara's jurisdiction, unless a separate MOU is signed pursuant to Section 7.C.2 of this MOU that provides otherwise.

B. San Jose. San Jose shall require the owners of the property to obtain an Encroachment Permit from San Jose for all public street improvement work within San Jose's jurisdiction, unless a separate MOU is signed pursuant to Section 7.C.2 of this MOU that provides otherwise.

C. Caltrans.

1. Santa Clara and San José desire and agree that San José shall be the primary contact and lead entity in negotiations and discussions with Caltrans in connection with those certain right-of-way improvements and traffic signal modifications anticipated to be installed adjacent to or near the Project Site along El Camino Real (State Route 82) and Campbell Avenue (the "Public Right Of Way Improvements"). Any agreement with Caltrans will require prior written approval of the City of Santa Clara and the City of San Jose. San José shall work with Caltrans on those Public Right Of Way Improvements on behalf of San José and Santa Clara. San Jose shall be entitled to any monies provided by other entities for those Public Right Of Way Improvements.

D. Supplemental MOU

1. San José and Santa Clara each hereby authorize their respective Directors of Public Works to negotiate and enter into a supplemental MOU in connection with the implementation of the Public Right Of Way Improvements in a manner consistent with the provisions of this MOU.

8. Mutual Indemnity.

In lieu of and notwithstanding the pro rata risk allocation which might otherwise be

imposed between the Cities pursuant to California Government Code section 895.6, the Cities agree that all losses or liabilities incurred by a City shall not be shared pro rata but instead Santa Clara and San Jose agree that pursuant to California Government Code section 895.4, each of the Cities hereto shall fully indemnify and hold the other City, their officers, council members, employees and agents, harmless from any claim, expense or cost, damage or liability imposed for injury (as defined by California Government Code section 810.8) occurring by reason of the negligent acts or omissions or willful misconduct of the indemnifying City, its officers, council members, employees or agents, under or in connection with or arising out of any work, authority or jurisdiction delegated to such City under this MOU. No City, nor any officer, councilmember, employee or agent thereof shall be responsible for any damage or liability occurring by reason of the negligent acts or omissions or willful misconduct of the other City hereto, their officers, council members, employees or agents, under or in connection with or arising out of any work, authority or jurisdiction delegated to such other City under this MOU.

9. <u>Notices</u>.

All notices to either City shall be in writing, unless otherwise requested, and shall be addressed as follows:

To San Jose:

For Public Works Matters:
Katy Allen, Director of Public Works
200 East Santa Clara Street
San Jose, CA 95113
Or by Facsimile at (408) 292-6296

For Planning and Building Matters:
Joe Horwedel, Director of Planning, Building, and Code Enforcement
Ed Tolentino, Chief Building Official
200 East Santa Clara Street
San Jose, CA 95113
Or by Facsimile at (408) 292-6055

For Fire Inspection Matters:
David Schoonover, Fire Marshall
200 East Santa Clara Street
San Jose, CA 95113
Or by Facsimile at (408) 292-6067

To Santa Clara:

For Public Works Matters:
Rajeev Batra, Director of Public Works/City Engineer
City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050
or by facsimile at (408) 985-7936

For Planning Matters:
Kevin Riley, Director of Planning and Inspection or
For Building Matters:
Sheila Lee, Building Official
City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050
or by facsimile at (408) 247-9857

For Fire Inspection Matters:
Martin Von Raesfeld, Fire Marshal
City of Santa Clara
1675 Lincoln Avenue
Santa Clara, CA 95050
or by facsimile at (408) 241-3006

Either City may change its notice contact person, address or facsimile number by providing written notice of the change to the other City in the manner provided for in this Section of this MOU.

10. Miscellaneous.

A. Term. This MOU shall become effective on the Effective Date set forth in the Preamble of this MOU and shall remain in effect until terminated by mutual written consent of the Cities hereto or by order of a court of competent jurisdiction.

B. Entire Understanding. This MOU contains all of the agreements, understandings and conditions entered into and made by and between San José and Santa Clara as to the matters covered herein and may not be modified orally, or in any manner, other than by an agreement in writing signed by each City or their successors in interest.

C. Successors in Interest. This MOU and all of its terms, covenants and conditions, shall apply to and bind the successors and assigns of each City to the fullest extent allowed by law.

D. Headings. The headings of the several sections and paragraphs of this MOU are inserted only as a matter of convenience and for reference and in no way define, limit or describe the scope or intent of any provisions of this MOU and shall not be construed to affect in any manner the terms and provisions or the interpretation or construction of this MOU.

E. Exhibits. All exhibits referred to in this MOU are by such reference incorporated into this MOU and shall be deemed a part of this MOU as if fully set forth in this MOU.

F. Severability. In case any one or more of the provisions contained herein

shall, for any reason, be held invalid, illegal, or unenforceable in any respect, it shall not affect the validity of the other provisions of this MOU which shall remain in full force and effect to the maximum possible extent.

G. Waiver. A waiver of any term, condition or covenant, or breach of any term, condition or covenant, of this MOU by either City shall not be construed as a waiver of any other term, condition or covenant, or breach of any other term, condition or covenant, of this MOU by that City.

H. Interpretation; Enforcement. This MOU and the agreements embodied herein shall be governed and construed in accordance with the statutes and laws of the State of California. Any action brought to enforce or construe the provisions of this MOU shall be brought in the Superior Court of the State of California, Santa Clara County.

The Cities acknowledge and accept the terms and conditions of this MOU as evidenced by the following signatures of their duly authorized representatives. It is the mutual intent of the Cities that, for the sake of clarity and convenience, this MOU shall become effective and operative as of the Effective Date first enumerated above, notwithstanding the date that this MOU is executed by each City.

CITY OF SANTA CLARA, CALIFORNIA,
a chartered California municipal corporation

APPROVED AS TO FORM:

_____
HELENE L. LEICHTER
City Attorney

ATTEST:

_____
ROD DIRIDON, JR.
City Clerk

By:_____
JENNIFER SPARACINO
City Manager

1500 Warburton Avenue
Santa Clara, California 95050
Telephone: (408) 615-2210
Facsimile: (408) 241-6771

CITY OF SAN JOSE, CALIFORNIA,
a chartered California municipal corporation

APPROVED AS TO FORM:

_____
RENEE GURZA
Senior Deputy City Attorney

By:_____
LEE PRICE, MMC
City Clerk

[EXHIBITS A, B AND C TO BE ATTACHED]

Attachment 4 - Planning Commission minutes excerpt

seconded by Commissioner Stattenfield, and the motion was approved unanimously.

Routine Items/Consent Calendar

8.A. Planning Commission Minutes of October 22, 2008 – Approved as submitted.

Public Hearing Items/Consent Calendar

None

**********End of Consent Calendar**********

ZONING

9.	File:	**PLN2008-07068**
	Location:	1270 Campbell Avenue, a .58 acre portion of a 5.18 acre site that straddles the Santa Clara and San Jose city limit lines and is located at the southeast corner of Campbell Avenue and El Camino Real (APN: 230-14-026).
	Applicant/Owner:	Sobrato Development Companies
	Request:	**Certify** a Mitigated Negative Declaration **Rezone** a .58 acre parcel from ML (Light Industrial) to PD (Planned Development) to allow construction of a new 259 multi-family residential unit infill project located on property within the jurisdictions of Santa Clara and San Jose
	Project Planner:	Debby Fernandez, Associate Planner
CEQA Determination:		Mitigated Negative Declaration (City of San Jose Lead Agency)

Summary of Discussion

Ms. Fernandez provided background information on the project. She said applications had been submitted to the cities of Santa Clara and San Jose, and San Jose's City Council had already approved the application. She noted the majority of the project site is located in Santa Clara (4.6 acres are in San Jose, and .58 acres in Santa Clara). Ms. Fernandez also said that staff in both cities had prepared a joint Memorandum of Understanding, for planning, building and inspection activities, public works improvements, and affordable housing.

Acting Chair O'Neill asked what would happen if Santa Clara did not approve the Mitigated Negative Declaration (MND), and Mr. Riley said the City would have to make findings as to why they could not certify it. He said the Commission should adopt the MND if they are comfortable with it, rather than just considering it. Discussion followed.

Ms. Fernandez said one letter of opposition to the project had been received.

Applicant Tim Steele, from Sobrato Development Companies, provided information on the project.

Resident Kevin Park said the buildings were about two stories higher than other buildings in the area, and the project should blend in with the others. Mr. Steele said the plan for the project is consistent with the Station Area Plan.

Action

The public hearing was closed. Commissioner Marine moved to approve the Mitigated Negative Declaration, seconded by Commissioner Stattenfield. Commissioner Marine moved to approve the rezone of the property, subject to conditions, seconded by Commissioner Stattenfield. Following some discussion regarding light and noise, density and traffic issues, a vote was taken, and the motion was approved unanimously. Acting Chair O'Neill read the findings for the rezoning, which had been distributed at the meeting.

Attachment 5 - San Jose City Council minutes excerpt and agenda report

11. PUBLIC HEARINGS

11.2 Ordinance amending Section 20.70.100 of Chapter 20.70.

Recommendation: Consideration of an ordinance of the City of San José amending Title 20 of the San José Municipal Code, the Zoning Code, to amend Section 20.70.100 of Chapter 20.70 to allow business support and business and administrative office uses as permitted uses with a special use permit in the DG Downtown Ground-Floor space overlay, modify parking requirements for live/work units, and allow animal grooming as a permitted use in downtown zoning districts; Amend Section 20.70.120 to modify the residential occupancy requirement for live/work units; and make other related clarifying changes and amendments. CEQA: Exempt, PP08-197. Director of Planning, Building and Code Enforcement and Planning Commission recommend approval (7-0-0). Citywide

Deferred to 11/18/08 per Orders of the Day.

11.3 Ordinance rezoning the real property located at/on the east side of Campbell Avenue, approximately 400 feet southeasterly of El Camino Real.

Recommendation: Consideration of an ordinance rezoning the real property located at/on the east side of Campbell Avenue, approximately 400 feet southeasterly of El Camino Real (1270 Campbell Avenue) from HI Heavy Industrial Zoning District to A(PD) Planned Development Zoning District to allow up to 259 multi-family residences over a podium garage on a 5.11 gross acre site (Sobrato Development Co, Owner; Sobrato Development Mr. Tim Steele, Developer). CEQA: Mitigated Negative Declaration. Director of Planning, Building and Code Enforcement and Planning Commission recommend approval to allow up to a maximum of 255 multi-family residences (7-0-0).
PDC07-081 – District 3

Ordinance No. 28437 passed for publication, with three conditions: (1) Require City Manager to negotiate immediately with the City of Santa Clara to obtain a formal staff agreement, in writing, whether memorialized in Memorandum of Understanding or other similar public document. The agreement should identify those steps that will mitigate traffic accident risk at the intersection of El Camino Real and Campbell Avenue, such as (for example) the closure or re-routing of the driveway to the office complex facing that intersection. (2) Require City Manager, in consultation with CalTrans and the City of Santa Clara, to obtain traffic accident data relating to the intersection of Campbell Avenue and El Camino Real for a period of 12 to 18 months before and after the issuance of the certificate of occupancy on the majority of approved units, and report to the appropriate Council committee with the findings upon their collection. (3) Require notification of the Newhall Neighborhood Association board members of the results of the City Manager's efforts as to conditions #1 and #2.

COUNCIL AGENDA: 10-28-08
ITEM: 11.3

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Planning Commission

SUBJECT: SEE BELOW

DATE: October 9, 2008

COUNCIL DISTRICT: 3
SNI AREA: N/A

SUBJECT: PDC07-081. PLANNED DEVELOPMENT REZONING FROM HI HEAVY INDUSTRIAL TO A(PD) PLANNED DEVELOPMENT ZONING DISTRICT FOR TO ALLOW UP TO 255 MULTI-FAMILY RESIDENTIAL UNITS ON A 5.18 GROSS ACRE SITE.

RECOMMENDATION

The Planning Commission voted 7-0-0 at their October 8, 2008 hearing to recommend that the City Council adopt an ordinance approving the subject Planned Development Rezoning to allow up to 255 multi-family residential units on a 5.18 gross acre site.

OUTCOME

Should the City Council approve the subject rezoning, the future construction of up to 255 multi-family residential units could occur. A separate Planned Development Permit approval from the Director of Planning, Building, and Code Enforcement would be required to implement the rezoning, should it be approved.

BACKGROUND

On October 7, 2007, Sobrato Development submitted an application to rezone the subject site, approximately 5.18 gross acres in size, from HI Heavy Industrial to A(PD) Planned Development to allow up to 259 multi-family residential dwelling units. The site is currently developed with an industrial building constructed circa 1992. The site is located on the east side of Campbell Avenue approximately 400 feet southeasterly of El Camino Real. Land uses surrounding the site include the CalTrain rail corridor along the eastern edge of the site, light industrial uses along the southern edge of the site, office/R&D uses along the northern edge, and a baseball stadium for the University of Santa Clara Broncos across the street to the west. A majority of the site is within the City of San Jose with a small corner at the northwesterly portion of the site within the City of Santa Clara.

South along Campbell Avenue from the project there has been a transition underway from industrial to residential uses, with three recently-approved and constructed projects on both the east and west sides of the street. Another site in the City of San Jose on the west side of Campbell Avenue was the subject of a recent General Plan amendment from industrial to residential land use. This area of Campbell Avenue is also within proximity to the Santa Clara CalTrain Depot and a future BART Station; hence, it is included within the Santa Clara Station Area Plan currently being developed jointly by the Cities of San Jose and Santa Clara through a grant from the Metropolitan Transportation Commission.

Project Description

The project was proposed to allow for the development of up to 259 multi-family units on a podium with units wrapping the podium and fronting along Campbell Avenue. Parking is provided within a secure parking garage, and along the edge of the site in a predominately single-loaded parking aisle/drive. The unit mix is approximately half one-bedroom units and half two-bedroom units. The design of the building includes an interior common open space that includes resident amenities such as a pool, sitting areas, and barbeque areas.

The building itself is proposed to be approximately 60-65 feet in height, including four stories of living area above the podium parking garage. Minor architectural projections could extent up to 70' in height. The exception to this height is along Campbell Avenue where there are townhouse units at ground level that have front entryways along street, thus creating the look of a five story building along Campbell Ave.

Cross-jurisdiction Issues

As identified above, the project site falls within the jurisdictions of the Cities of San Jose and Santa Clara, with a majority of the development within the City of San Jose. Coordination of the proposal has been ongoing between the two cities, and the developer has a rezoning on file with the City of Santa Clara for that portion of the project that is within that jurisdiction. In addition to coordinating the environmental review and the project design, staff in both cities have been working on a Memorandum of Agreement relating to the building permitting and plan check responsibilities. This Agreement, however, has no bearing on the merits of the project and is scheduled to be forwarded to the City Council at its November 18, 2008 hearing. Longer-term issues related to the cross-jurisdictional situation will be addressed through subsequent actions involving the developer and the respective cities.

ANALYSIS

This section contains a synopsis of the Planning Commission hearing. A comprehensive analysis of the project and its conformance with applicable policies and guidelines can be found in staff's report to Planning Commission (see attached).

A public hearing was held before the Planning Commission on the evening of October 8, 2008. Planning staff gave a brief report, followed by Tim Steele, who gave a brief statement on behalf of the applicant, Sobrato Development Corporation.

Two members of the public spoke, John Urban and Mara Craggs. Mr. Urban's comments focused on traffic. He expressed concerns with the existing and future design of the intersection of Campbell Avenue and El Camino Real. Staff responded that the City is taking the lead on developing a plan for the intersection, and that design is already underway with the City's Departments of Transportation and Public Works. Staff also noted that the applicant would be required to pay a fair share contribution towards improvements at the intersection of Campbell and El Camino Real.

John Urban also raised concerns regarding the proposed driveway location nearest the northwest corner of the site, stating that left turns into that driveway could create operational impacts. In the applicant's closing remarks, Tim Steele noted that operational issues were not anticipated from the left turn into the driveway nearest the intersection, but that nonetheless, the function of the left-in movement would be evaluated after occupancy, and the allowance of a left-hand-turn into that driveway could be eliminated if operational issues occurred.

Mara Craggs, the second speaker, raised four issues. She stated that no more housing is needed in San Jose right now, that the structure is too massive, that the density is too high, and that BART may not come to San Jose. In response, staff first noted that the Housing and Growth Management Major Strategies in the General Plan promote infill housing development. Second, staff noted that the massing of the structure is comparable with what is anticipated by the High Density Residential (25-50 du/ac) General Plan designation. Staff also noted that this structure would relate more to the commercial and mixed use development that is anticipated immediately northwest of the site as part of the Draft Santa Clara Station Area Plan, and smaller, three-story massing is already developed southeast of the site, as the larger massing of this structure transitions to the single-family neighborhood. In response to Ms. Craggs' third point, staff confirmed the net acreage after frontage dedication and noted a reduction in the maximum number of units to 255 (down from the 259 of the original project description), with which the applicant concurred. The first page of the Draft Development Standards has been updated to reflect the decrease in the number of units. This revised page is attached, and the other pages remain unchanged. Staff concluded by stating that the density proposed is needed to support a future BART station, and while staff firmly believes BART will proceed to this location, the existing CalTrain, bus lines, Santa Clara University, and nearby commercial, all support a high-density project at this site.

The public hearing was then closed. Commissioners Kamkar and Jensen encouraged the applicant to use green building practices. Commissioner Jensen encouraged a reduction in parking and easy access for future residents from the site towards the future BART station. Commissioner Do commented on the physical appearance of the structure beyond where the residential units wrap and disguise the at-grade parking along Campbell Avenue, as shown in the conceptual elevations, and he encouraged staff to pursue quality architecture around the entire perimeter. Commissioner Kalra made a motion to recommend approval of the proposed project for up to 255 units with Draft Development Standards as recommended by staff.

EVALUATION AND FOLLOW-UP

Not applicable.

POLICY ALTERNATIVES

Denial of the subject rezoning would mean that the site's zoning would remain as HI Heavy Industrial. The proposed residential project could not be constructed in the current zoning district.

PUBLIC OUTREACH/INTEREST

- ☐ **Criteria 1:** Requires Council action on the use of public funds equal to $1 million or greater.
  (Required: Website Posting)
- ☐ **Criteria 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- ☐ **Criteria 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

Although this item does not meet any of the above criteria, staff followed Council Policy 6-30; Public Outreach Policy. On July 30, 2008, a noticed community meeting was held for the proposed rezoning and associated development permit. The staff report to Planning Commission outlines the community feedback at that meeting. A notice of the public hearing was distributed to the owners and tenants of all properties located within 1,000 feet of the project site and posted on the City website. The rezoning was also published in a local newspaper, and this staff report is also posted on the City's website. Staff has been available to respond to questions from the public.

COORDINATION

This project was coordinated with the Department of Public Works, Department of Transportation, Fire Department, Police Department, Environmental Services Department and the City Attorney.

FISCAL/POLICY ALIGNMENT

This project is consistent with applicable General Plan policies and City Council approved design guidelines as further discussed in attached staff report.

COST SUMMARY/IMPLICATIONS

Not applicable.

BUDGET REFERENCE

Not applicable.

CEQA

CEQA: Mitigated Negative Declaration

Susan Walton
JOSEPH HORWEDEL, SECRETARY
Planning Commission

For questions please contact Susan Walton at 408-535-7800.

Attachment: First page of draft Development Standards

cc: Sobrato Development Co., Attn: Tim Steele, 10500 N. De Anza Blvd., Suite 200, Cupertino, CA 95014

DRAFT

PDC07-081

LAND USE PLAN DEVELOPMENT STANDARDS (updated 10/8/08)

DEVELOPMENT STANDARDS

Permitted Uses:
Up to ~~259~~ 255 multi-family residential units.

Building Height:
- Height- 65 feet maximum, with minor architectural projections, building elements related to elevators, etc. not to exceed 70 feet.

Perimeter Building Setbacks:

Minimum Front Setbacks (Campbell Avenue)
- Minimum 10 feet

Minimum Rear Setbacks (curved property line along rail line)
- Minimum 35 feet

Minimum Side Setbacks (adjacent to southern property line)
- Minimum 30 feet

Private/Common Open Space Combined

A combination of common and private open space at a ratio of at least 160 square feet per unit.

Parking
Parking ratios for vehicles and bicycles as below:

Automobile/motorcycle:

Table 20-210 Multiple Dwelling			
	Type of Parking Facility		
Living Unit Size	All Open Parking	One-Car Garage	Two-Car Garage
0 Bedroom (Studio)	1.5	1.6	2.2
1 Bedroom	1.5	1.7	2.3
2 Bedroom	1.8	2.0	2.5
3 Bedroom	2.0	2.2	2.6
Each Additional Bedroom	0.15	0.15	0.15

Bicycle: 1 space per 4 dwelling units.

A reduction in the required off-street parking spaces of up to ten percent (10%) may be authorized with a Planned Development Permit.

CITY OF SANTA CLARA

AGENDA MATERIAL ROUTE SHEET

Council Date: 11/25/08

SUBJECT: 1270 Campbell Avenue - Planning Commission Recommendation to adopt Resolution

CERTIFICATION

The proposed Agenda Report - resolution
Regarding 1279 Campbell ave.
has been reviewed and is hereby certified.

PUBLICATION REQUIRED:

The attached Notice/Resolution/Ordinance is to be published _____ time(s) at least _____ days before the scheduled meeting/public hearing/bid opening/etc., which is scheduled for _____, 200__.

AUTHORITY SOURCE FOR PUBLICATION REQUIREMENT:

Federal Codes:
Title _____ *U.S.C. §* _____
(Titles run 1 through 50)

California Codes:
Code _____ *§* _____
(i.e., Government, Street and Highway, Public Resources)

Federal Regulations:
Title _____ *C.F.R. §* _____
(Titles run 1 through 50)

California Regulations:
Title _____ *California Code of Regulations §* _____
(Titles run 1 through 28)

City
City Charter § _____ *(i.e., 1310. Public Works Contracts. Notice published at least once at least ten days before bid opening)*
City Code § _____

1. As to City Functions, by — Kevin L. Riley, Department Head

2. As to Legality, by — Helene Leichter, City Attorney's Office / CAO Assignment No 08-0666

3. As to Environmental Impact Requirements, by — Kevin L. Riley, Director of Planning and Inspection

4. As to Substance, by — J. Sparacino, City Manager

Revision Date June 7, 2005

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