Santa Clara County - Clerk-Recorder Office
State of California

County of Santa Clara

Office of the County Clerk-Recorder
Business Division

County Government Center
70 West Hedding Street, E. Wing, 1st Floor
San Jose, California 95110 (408) 299-5688

File Number: ENV20640

ENVIRONMENTAL FILING
No. of Pages: 284
Total Fees: $0.00
File Date: 02/08/2017
Expires: 03/10/2017

REGINA ALCOMENDRAS, Clerk-Recorder
By: Raymund A Reyes, Deputy Clerk-Recorder

CEQA DOCUMENT DECLARATION

ENVIRONMENTAL FILING FEE RECEIPT

PLEASE COMPLETE THE FOLLOWING:

1. LEAD AGENCY: City of Campbell
2. PROJECT TITLE: Opa's Building Expansion
3. APPLICANT NAME: Jeffery Eaton, Eaton Hall Architecture PHONE: (408) 599-7009
4. APPLICANT ADDRESS: 1501 The Alameda, Suite 105, San Jose, CA 95126
5. PROJECT APPLICANT IS A: ☐ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☒ Private Entity
6. NOTICE TO BE POSTED FOR 21 DAYS.
7. CLASSIFICATION OF ENVIRONMENTAL DOCUMENT

a. PROJECTS THAT ARE SUBJECT TO DFG FEES

☐ 1. ENVIRONMENTAL IMPACT REPORT (PUBLIC RESOURCES CODE §21152)	$ 3,078.25	$ 0.00
☐ 2. NEGATIVE DECLARATION (PUBLIC RESOURCES CODE §21080(C)	$ 2,216.25	$ 0.00
☐ 3. APPLICATION FEE WATER DIVERSION (STATE WATER RESOURCES CONTROL BOARD ONLY)	$ 850.00	$ 0.00
☐ 4. PROJECTS SUBJECT TO CERTIFIED REGULATORY PROGRAMS	$ 1,046.50	$ 0.00
☐ 5. COUNTY ADMINISTRATIVE FEE (REQUIRED FOR a-1 THROUGH a-4 ABOVE) Fish & Game Code §711.4(e)	$ 50.00	$ 0.00

b. PROJECTS THAT ARE EXEMPT FROM DFG FEES

☐ 1. NOTICE OF EXEMPTION ($50.00 COUNTY ADMINISTRATIVE FEE REQUIRED)	$ 50.00	$ 0.00
☐ 2. A COMPLETED "CEQA FILING FEE NO EFFECT DETERMINATION FORM" FROM THE DEPARTMENT OF FISH & GAME, DOCUMENTING THE DFG'S DETERMINATION THAT THE PROJECT WILL HAVE NO EFFECT ON FISH, WILDLIFE AND HABITAT, OR AN OFFICIAL, DATED RECEIPT / PROOF OF PAYMENT SHOWING PREVIOUS PAYMENT OF THE DFG FILING FEE FOR THE *SAME PROJECT IS ATTACHED ($50.00 COUNTY ADMINISTRATIVE FEE REQUIRED)		
DOCUMENT TYPE: ☐ ENVIRONMENTAL IMPACT REPORT ☐ NEGATIVE DECLARATION	$ 50.00	$ 0.00

c. NOTICES THAT ARE *NOT* SUBJECT TO DFG FEES *OR* COUNTY ADMINISTRATIVE FEES

☐ NOTICE OF PREPARATION ☒ NOTICE OF INTENT	NO FEE	$ NO FEE

8. OTHER: _____ FEE (IF APPLICABLE): $ _____
9. TOTAL RECEIVED..... $ 0.00

*NOTE: "***SAME PROJECT***" MEANS NO CHANGES. IF THE DOCUMENT SUBMITTED IS NOT THE SAME (OTHER THAN DATES), A "NO EFFECT DETERMINATION" LETTER FROM THE DEPARTMENT OF FISH AND GAME FOR THE **SUBSEQUENT** FILING OR THE APPROPRIATE FEES ARE REQUIRED.

THIS FORM MUST BE COMPLETED AND ATTACHED TO THE FRONT OF ALL CEQA DOCUMENTS LISTED ABOVE (*INCLUDING COPIES*) SUBMITTED FOR FILING. WE WILL NEED AN ORIGINAL (WET SIGNATURE) AND TWO (2) COPIES. *(YOUR ORIGINAL WILL BE RETURNED TO YOU AT THE TIME OF FILING.)*

CHECKS FOR ALL FEES SHOULD BE MADE PAYABLE TO: SANTA CLARA COUNTY CLERK-RECORDER

PLEASE NOTE: FEES ARE ANNUALLY ADJUSTED (Fish & Game Code §711.4(b); PLEASE CHECK WITH THIS OFFICE AND THE DEPARTMENT OF FISH AND GAME FOR THE LATEST FEE INFORMATION.

"... NO PROJECT SHALL BE OPERATIVE, VESTED, OR FINAL, NOR SHALL LOCAL GOVERNMENT PERMITS FOR THE PROJECT BE VALID, UNTIL THE FILING FEES REQUIRED PURSUANT TO THIS SECTION ARE PAID." Fish & Game Code §711.4(c)(3)

(Fees Effective 01-01-2017)

Regina Alcomendras
Santa Clara County
Clerk-Recorder
(408) 299-5688
https://www.sccgov.org

Receipt: 17-26385

Product	**Name**	**Extended**
CEQA	ENVIRONMENTAL FILING	$0.00
	# Pages	284
	Document #	ENV20640
	Document Info:	CITY OF CAMPBELL
	Filing Type	F
Total		$0.00
Change (Cash)		$0.00

Paid By CITY OF CAMPBELL

PLEASE KEEP FOR REFERENCE

2/8/17 10:57 AM rreyes

State of California - Department of Fish and Wildlife

2016 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 12/15/15) Previously DFG 753.5a

RECEIPT NUMBER: ENV20640

STATE CLEARINGHOUSE NUMBER *(If applicable)*

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEADAGENCY EMAIL	DATE
CITY OF CAMPBELL	planning@cityofcampbell.com	02/08/2017

COUNTY/STATE AGENCY OF FILING	DOCUMENT NUMBER
SANTA CLARA	

PROJECT TITLE
OPA'S BUILDING EXPANSION

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL	PHONE NUMBER
JEFFERY EATON, EATON HALL ARCHITECTURE		(408) 866-2140

PROJECT APPLICANT ADDRESS	CITY	STATE	ZIP CODE
1501 THE ALAMEDA, SUITE 105	SAN JOSE	CA	95126

PROJECT APPLICANT *(Check appropriate box)*

☐ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☒ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$3,070.00	$	
☐ Mitigated/Negative Declaration (MND)(ND)	$2,210.25	$	
☐ Certified Regulatory Program document (CRP)	$1,043.75	$	
☐ Exempt from fee			
☐ Notice of Exemption (attach)			
☐ CDFW No Effect Determination (attach)			
☐ Fee previously paid (attach previously issued cash receipt copy)			
☐ Water Right Application or Petition Fee (State Water Resources Control Board only)	$850.00	$	
☐ County documentary handling fee		$	
☐ Other		$	

PAYMENT METHOD:

☐ Cash ☐ Credit ☐ Check ☒ Other **TOTAL RECEIVED** $ $0.00

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X Raymund A. Reyes	Raymund A Reyes, Deputy County Clerk-Recorder

NOTICE OF INTENT
INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
CITY OF CAMPBELL, CALIFORNIA

Notice is hereby given of the intent of the Campbell Planning Commission to adopt a Mitigated Negative Declaration for the Opa's Building Expansion, which includes a Site and Architectural Review Permit (PLN2016-187) to allow for the construction of a ±10,819 square foot addition in place of the existing parking lot behind Opa's/Mo's and extending over a portion of Willard Hicks within the City's downtown, contingent upon the approval of a Parking Adjustment (PLN2017-009) by the City Council pursuant to Public Resources Code Section 21092(b)(1), on property located at **276-280 E. Campbell Avenue & a portion of a City parking lot (46 S. First Street), Campbell, CA 95008**.

The project also includes the removal of one driveway and one tree on public property, the expansion of an existing trash enclosure and restriping of parking stalls on the adjoining City parking lot. The California Environmental Quality Act (CEQA) requires this notice to disclose whether any listed toxic sites are present at the location. The project location does not contain a toxic site pursuant to Section 65962.5 of the Government Code.

The Initial Study (PLN2016-309) prepared by the City was undertaken for the purpose of determining whether the project may have a significant effect on the environment. On the basis of the Initial Study, Community Development Department staff has determined that the project will not have a significant effect on the environment with the incorporation of mitigation measures and has therefore prepared a draft Mitigated Negative Declaration for consideration by the Campbell Planning Commission.

All interested parties are invited and encouraged to submit comments in writing regarding the draft Negative Declaration and/or attend the below described public hearings. The public review period for the draft Negative Declaration begins on **February 8, 2017** and ends on **February 28, 2017**. Any comments must be submitted in writing, including email, to the Community Development Department by 5:00 p.m. on **February 28, 2017**. The Environmental Checklist and draft Mitigated Negative Declaration are available for review from 8:00 a.m. to 5:00 p.m. at the Community Development Department, City Hall, 70 North First Street, Campbell, CA or online at http://www.cityofcampbell.com/501/Public-Notices under 'Environmental Notices'.

The Campbell Planning Commission will consider the project and draft Mitigated Negative Declaration at a public hearing to be held on **February 28, 2017**. The Campbell City Council is tentatively scheduled to a hold a public hearing on **March 21, 2017**, to consider the Planning Commission's recommendation on the Parking Adjustment (PLN2017-009). Both meetings will be held at 7:30 p.m., or shortly thereafter, in the City Hall City Council Chambers, 70 North First Street, Campbell, CA.

Please be advised that if you challenge the decision on the Mitigated Negative Declaration and/or project in court, you may be limited to raising only those issues you or someone else raised at the public hearings described in this notice, or in written correspondence delivered to the City of Campbell prior to the public hearings. Questions and written comments may be addressed to Stephen Rose, Associate Planner at (408) 866-2142 or by email at stephenr@cityofcampbell.com.

PLANNING COMMISSION
CITY OF CAMPBELL
PAUL KERMOYAN
SECRETARY

CITY OF CAMPBELL
Community Development Department

DRAFT
MITIGATED NEGATIVE DECLARATION

The Community Development Director has reviewed the proposed project described below to determine whether it could have a significant effect on the environment as a result of the 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.

Project Title: Opa's Building Expansion

File Number(s):
Site and Architectural Review Permit (PLN2016-187)
CEQA Review (PLN2016-309)
Parking Modification Permit (PLN2017-009)

Project Location: 276 through 280 E. Campbell Avenue & portion of a City parking lot (46 S. First Street)

Name and Address of Project Proponent:
Jeffery Eaton, Eaton Hall Architecture
1501 The Alameda, #105
San Jose, CA 95126

Lead Agency Name and Address:
City of Campbell
Community Development Department
70 N. First Street
Campbell, CA 95008

Contact Person(s):
Stephen Rose, Associate Planner
(408) 866-2142
stephenr@cityofcampbell.com

Zoning Designation:
C-3 (Central Business District)

General Plan Designation:
Central Commercial

Other public agencies whose approval is required: None

Surrounding Land Use | Zoning District (Overlay) | General Plan Designation:
North: Commercial | C-3 (Central Commercial) | *Central Commercial*
South: | Public Parking Lot | C-3 (Central Commercial) | *Central Commercial*
East: Commercial | C-3 (Central Commercial) | *Central Commercial*
West: Commercial | C-3 (Central Commercial) | *Central Commercial*

Project Location: The project site is located at the southeast corner of E. Campbell Avenue and S. First Street, and consists of a single rectangular shaped parcel 15,924 square feet in area, as well as a small portion of the City parking lot located at 46 S. First Street. The General Plan land use designation of both properties is General Commercial and the zoning designation is C-3 (Central Business District). Surrounding properties are developed with a one-story building to the east, a public parking lot to the south, a two-story building at the far northwest corner (Starbucks), and a one-story book store (Recycle Bookstore) to the north.

Project Description: The applicant, Jeffery Eaton, is requesting approval of a Site and Architectural Review Permit (PLN2016-187) to allow for the construction of a 10,819 square-foot addition in place of the existing parking lot behind 276-278 E. Campbell Avenue (Opa's/Mo's) and extending over a portion of 280 E. Campbell Avenue (Willard Hicks) within the City's downtown. The building in the rear parking lot will be three-stories tall, and includes a restaurant/retail tenant space on the ground level with two-stories of office space above. The second-floor of the office space will extend over Willard Hicks, effectively adding a second-story and an outdoor patio area above the existing restaurant.

The applicant's proposal also includes the removal of one driveway and tree on public property, the expansion of an existing trash enclosure and restriping of parking stalls on the adjoining City parking lot, and a request for a Sign Exception (PLN2017-011) to allow for the installation of a decorative painted sign/mural. As the project is located in the downtown, it will also require City Council authorization of a Parking Exception (PLN2017-009) to adjust the off-street parking requirements of the project, and allow for the removal of the existing parking lot.

Background: On June 26, 2012 the Planning Commission approved minor modifications to a previously approved Site and Architectural Review Permit (PLN2010-271), allowing for the completion of the existing 10,300 square foot building and construction of a multi-tenant trash enclosure over a portion of the City parking lot at 46 S. First Street. The tenants which now occupy the building, Opa's, Mo's, and Willard Hicks, have been met with great success in the community and, as a result, have exceeded the planned storage capacity of the building and associated trash enclosure. Today, the rear parking lot primarily functions as an 'employee' parking lot[1] and loading/unloading zone for deliveries. The parking lot is also used for the storage of supplies awaiting pickup and an informal break area for staff (crates used for seating). The trash enclosure has also been an area of concern, having frequently been overloaded. The project seeks to resolve these issues, by expanding the existing building and enlarging the trash enclosure.

Finding: The Community Development Director finds that 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 proponent, before public

[1] While customers may still park in the parking lot, employee vehicles are often stacked on the property preventing safe access.

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 Environmental Effects to a Less Than Significant Level:

Mitigation Measure AQ-1: BAAQMD Required Dust Control Measures: The contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures, including:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- A publically visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ-2: BAAQMD Required Basic Exhaust Emissions Reduction Measures. The contractor shall implement the following measures during excavation to reduce construction-related exhaust emissions:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for workers at all access points.
- All off-road equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Mitigation Measure AQ-3: BAAQMD Regulation 8, Rule 3 for Architectural Coatings. Emissions of VOC due to the use of architectural coatings are regulated by the limits contained in Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was revised on January 1, 2011 to include more stringent VOC limit requirements. The revised VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

Mitigation Measure AQ-4: Implement Enhanced Exhaust Emissions Reduction Measures. The construction contractor shall implement the following measures during construction to further reduce construction-related exhaust emissions:
All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and
2. All off-road equipment shall have:
    a. Engines that meet or exceed either USEPA or CARB Tier 2 off-road emission standards, and
    b. Engines that are retrofitted with a CARB Level 2 Verified Diesel Emissions Control Strategy (VDECS). Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such are available.

Mitigation Measure TT-1: Parking Impact Fee: The project shall pay the City of Campbell at least $6,000 per parking space the project is deficient. The number of 'deficient' parking spaces shall be based on the number of stalls the project is required to provide by the City of Campbell Municipal Code prior to approval of a Parking Modification Permit. These fees shall be used toward improving parking facilities in the Campbell Downtown and may be used toward the preparation of a Parking Demand Study, Parking Management Plan, the installation of

LED signs indicating number of available parking spaces in public parking garages (or green/red lights indicating the availability of parking spaces overhead stalls), the soft or hard costs of developing new public parking spaces, or the development of a plan to realign Orchard City Drive to accommodate more parking spaces in the Water Tower Plaza parking lot. As a minimum, any additional fees or requirements imposed by the City Council and agreed to by the project proponent as conditions of approval on the Parking Modification Permit, shall thereafter be considered as Mitigation Measures of the project.

PUBLIC REVIEW PERIOD

Any person may file a written protest of the draft Mitigated Negative Declaration before 5:00 p.m. on **February 28, 2017**. Such protest must be filed at the Community Development Department, City Hall, 70 North First Street, Campbell, California. The written protest should make a "fair argument" that the project will have one or more significant effects on the environment based on substantial evidence.

Signature

February 7, 2017
Date

Stephen Rose, Associate Planner
Printed Name

City of Campbell
Agency

Encl: Initial Study
Mitigation Monitoring and Reporting Program (MMRP)

INITIAL STUDY

Opa's Building Expansion

An environmental evaluation
prepared in compliance with the
California Environmental Quality Act

Prepared by
Stephen Rose
Associate Planner

City of Campbell
Community Development Department
Planning Division
70 N. First Street
Campbell, CA 95008

Public Review Period
February 8, 2016 – February 28, 2016

I. PROJECT OVERVIEW

Project Title: Opa's Building Expansion

File Number(s):
Site and Architectural Review Permit (PLN2016-187)
CEQA Review (PLN2016-309)
Parking Modification Permit (PLN2017-009)

Project Location: 276 through 280 E. Campbell Avenue & portion of a City parking lot (46 S. First Street)

Name and Address of Project Proponent:
Jeffery Eaton, Eaton Hall Architecture
1501 The Alameda, #105
San Jose, CA 95126

Lead Agency Name and Address:
City of Campbell
Community Development Department
70 N. First Street
Campbell, CA 95008

Contact Person(s):
Stephen Rose, Associate Planner
(408) 866-2142
stephenr@cityofcampbell.com

Zoning Designation:
C-3 (Central Business District)

General Plan Designation:
Central Commercial

Other public agencies whose approval is required: None

Surrounding Land Use | Zoning District (Overlay) | General Plan Designation:
North: Commercial | C-3 (Central Commercial) | *Central Commercial*
South: | Public Parking Lot | C-3 (Central Commercial) | *Central Commercial*
East: Commercial | C-3 (Central Commercial) | *Central Commercial*
West: Commercial | C-3 (Central Commercial) | *Central Commercial*

Project Location: The project site is located at the southeast corner of E. Campbell Avenue and S. First Street, and consists of a single rectangular shaped parcel 15,924 square feet in area, as well as a small portion of the City parking lot located at 46 S. First Street. The General Plan land use designation of both properties is General Commercial and the zoning designation is C-3 (Central

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[1] While customers may still park in the parking lot, employee vehicles are often stacked on the property preventing safe access.

PROJECT DATA

276 E. Campbell Avenue:

APN Number:	412-07-065
Lot Area:	15,924 square-feet (.37 acres)
Zoning Designation(s):	C-3 (Central Business District)
General Plan Designation(s):	Central Commercial
Proposed Building Area:	21,119 square-feet (10,300 sq. ft. existing + 10,819 sq. ft. addition)
Floor Area Ratio (FAR):	1.33

46 S. First Street:

APN Number:	412-07-022
Lot Area:	27,098 square-feet (.62 acres)
Zoning Designation(s):	C-3 (Central Business District)
General Plan Designation(s):	Central Commercial

Project Location

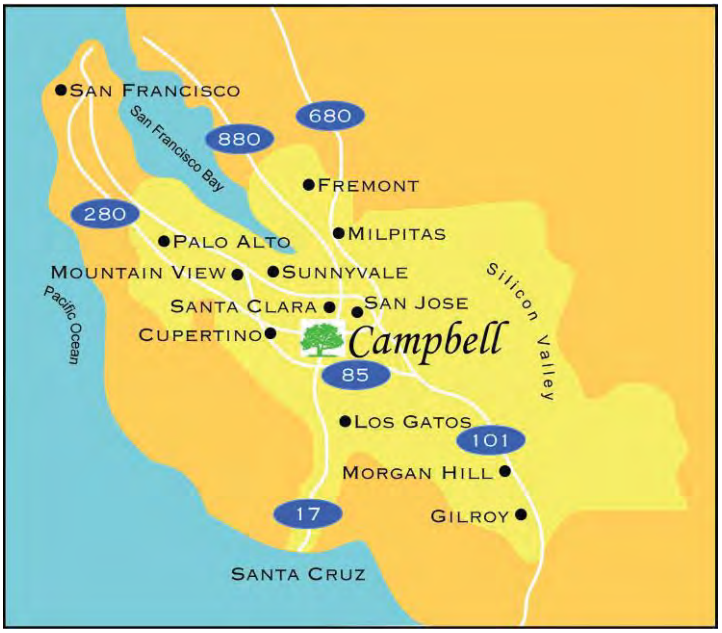
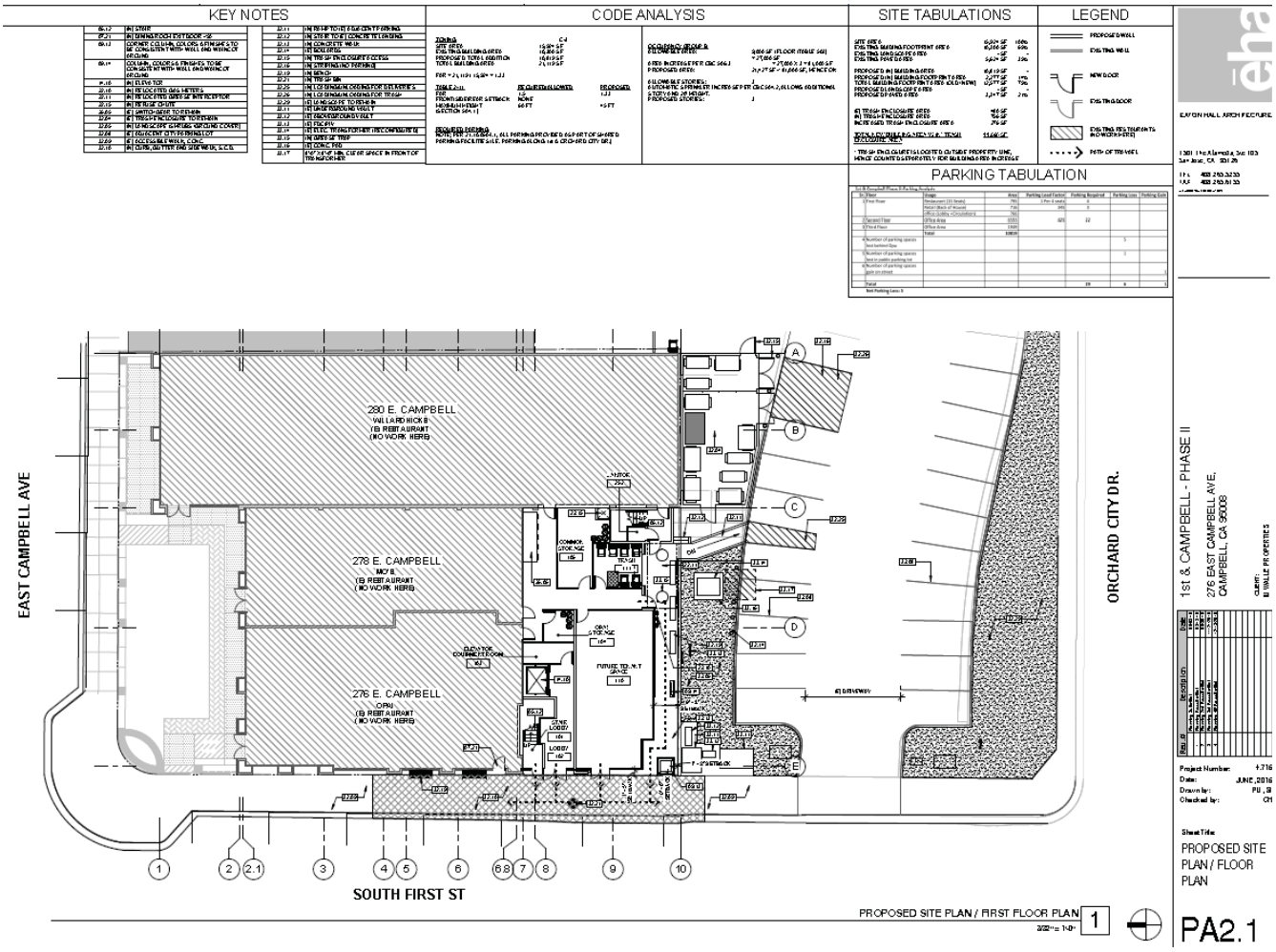


Figure 1: Regional Setting

Figure 2: Project Site

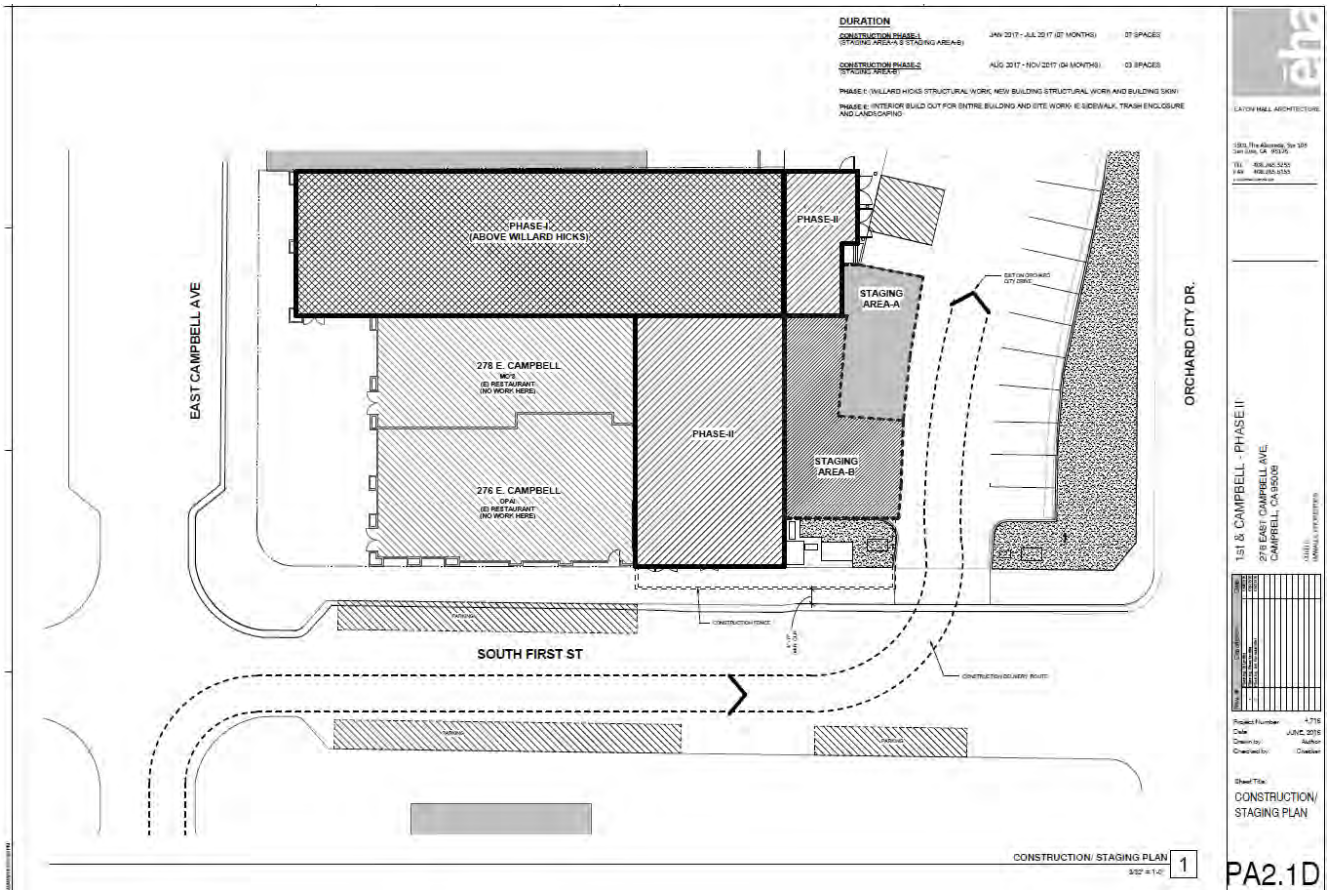
Site Photographs

Proposed Site Plan



Proposed Elevations & Perspective Renderings

Proposed Construction Staging/Phasing Plan



II. ENVIRONMENTAL IMPACT EVALUATION:

The following evaluation has been prepared to determine if the proposed project may result in a "significant impact" on the environment. For the purposes of this study, a significant impact means a substantial or potentially substantial change in the physical environment. The following terms used in the evaluation are defined as specified below:

> "**Potentially Significant Impact**" means that there is either substantial evidence that an effect may be significant or, due to lack of existing information, may have potential to be a significant effect.
>
> "**Less than Significant With Mitigation Incorporated**" means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.
>
> "**Less Than Significant Impact**" means that there is sufficient evidence available to determine that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.
>
> "**No Impact**" means that the effect does not apply to the proposed project, or clearly will not impact nor be impacted by the project.

A description of the proposed mitigation measures and the factual data or evidence used to reach conclusions regarding impact significance follows each section. The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Less Than Significant with Mitigation Incorporation" as indicated by the checklist on the following pages. The impacts of the project, as well as a recommended mitigation measures, are summarized in Section III: Recommendation and Determination.

☐ (1) Aesthetics (Page 10)	☐ (2) Agriculture Resources (Page 12)	☒ (3) Air Quality (Page 13)
☐ (4) Biological Resources (Page 15)	☐ (5) Cultural Resources (Page 16)	☐ (6) Geology/Soils (Page 17)
☐ (7) Greenhouse Gas Emissions (Page 18)	☐ (8) Hazards & Hazardous Material (Page 19)	☐ (9) Hydrology/Water Quality (Page 21)
☐ (10) Land Use/Planning (Page 23)	☐ (11) Mineral Resources (Page 24)	☐ (12) Noise (Page 25)
☐ (13) Population/Housing (Page 26)	☐ (14) Public Services (Page 27)	☐ (15) Recreation (Page 28)
☒ (16) Transportation/Traffic (Page 29)	☐ (17) Utilities/Service System (Page 32)	☐ (18) Mandatory Findings of Significance (Page 33)

1. AESTHETICS

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
(b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
(c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
(d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion:

(a): Scenic resources are areas or features that are visually or aesthetically pleasing and therefore, contribute affirmatively to the definition of a distinct community or region. The City of Campbell General Plan (hereinafter "General Plan") has not identified any scenic vistas or scenic resources within the project area and the project is not located near a state scenic highway. A significant impact may occur if a project were to introduce incompatible scenic elements or substantially block views of a scenic vista.

To assist in the evaluation of aesthetic impacts, staff engaged the services of Marvin Bamberg, the City's Architectural Advisor (contracted by the City). In Marvin Bamberg's report, the overall impression of the project aesthetics is positive, finding that the "height and massing of the building seems quite appropriate" for the location and "compatible with other development further to the west on Campbell Avenue". Further, Marvin Bamberg concludes that the "use of materials in the proposal is good" in that it breaks away from the "totally stucco appearance of the other buildings onsite". Marvin goes on to note that other than for a few missteps (which the applicant has since proposed changes to address), the overall concept makes for a "stellar project" that "tips its hat to the quasi-classical elements of the existing buildings, while offering a more contemporary aesthetic in the new construction" that is "nicely varied" with "well-proportioned facades".

While not recognized as a scenic resource, the report gave consideration to the project's impact on views of the Campbell Water Tower from nearby businesses. The report concluded that while the view from Starbucks (a coffee shop located northwest of the project site) will be diminished, it would not be lost entirely, and that the view itself is of only minor value.

As the project has no scenic vista in its vicinity, it can be concluded that no impact will occur.

(b): The proposed project is not located adjacent to or within the proximity of a state listed scenic highway. Therefore, the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway and no impacts would occur.

(c): As discussed in (a), the project will build on the visual character and quality of the site and architectural features. Therefore, the project would be compatible with the surrounding commercial uses and will not degrade the existing visual character or quality of the site and its surroundings.

(d): Development of the proposed project will include installation of new lighting fixtures. As all new lighting is subject to the City's Lighting Design Standards (CMC Sec. 21.18.090)—which requires lighting to be designed and installed so that light rays are not emitted across property lines—the project would not result in new sources of substantial light or glare.

2. AGRICULTURAL RESOURCES

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
(b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
(c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Discussion:

(a to c): The project site is not used or zoned for farmland or other agricultural or horticultural purpose. Neither the project site nor the surrounding properties contain farmland or support an agricultural activity that could be impacted by the project. As a result, no reasonably foreseeable impact to farmland, agricultural/horticultural uses, or conflict with existing zoning for an agricultural use, or a Williamson Act contract will occur from the project.

3. AIR QUALITY

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
(b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
(c)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
(d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
(e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion:

Direct responses to issues (a) through (e) have been provided on pages 2 through 12 of the attached Air Quality, Greenhouses Gas, and Health Risk Assessment – First and Campbell, prepared by RCH Group, dated August 11, 2016. The assessment concludes that the project would result in a less than significant impact for items (a) and (e), and would result in a less than significant impact for items (b) through (d) with the incorporation of the following Mitigation Measures:

Mitigation Measure AQ-1: BAAQMD Required Dust Control Measures: The contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures, including:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- A publically visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ-2: BAAQMD Required Basic Exhaust Emissions Reduction Measures. The contractor shall implement the following measures during excavation to reduce construction-related exhaust emissions:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for workers at all access points.
- All off-road equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Mitigation Measure AQ-3: BAAQMD Regulation 8, Rule 3 for Architectural Coatings. Emissions of VOC due to the use of architectural coatings are regulated by the limits contained in Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was revised on January 1, 2011 to include more stringent VOC limit requirements. The revised VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

Mitigation Measure AQ-4: Implement Enhanced Exhaust Emissions Reduction Measures. The construction contractor shall implement the following measures during construction to further reduce construction-related exhaust emissions:

All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and
2. All off-road equipment shall have:
    a. Engines that meet or exceed either USEPA or CARB Tier 2 off-road emission standards, and
    b. Engines that are retrofitted with a CARB Level 2 Verified Diesel Emissions Control Strategy (VDECS). Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such are available.

In addition to these Mitigation Measures, demolition activities are regulated through Best Management Practices (BMP's) as required by City ordinances, which is designed to limit air and water contamination related to construction activity. Through the implementation BMP's, and implementation of Mitigation Measure AQ-1 (which is similar to these practices) the potential short-term air quality impacts associated with construction would be less than significant.

4. BIOLOGICAL RESOURCES

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

Discussion:

(a to d): According to the California Natural Diversity Database and the City's General Plan, no species identified as a candidate, sensitive or special status species, or habitat where such species are known to occupy (e.g. aquatic, wetland habitats) are located at or near the project site.

(e): The applicant shall be required to provide a detailed landscape and irrigation plan which conforms to the City's Water Efficient Landscaping Standards (WELS). The landscaping will be designed to minimize irrigation and runoff, and promote surface infiltration where appropriate. One tree, in the adjacent City parking lot is proposed for removal, which will be considered as part of the public hearing process in accordance with City procedure. Therefore, the project will incur a less than significant impact.

(f): No adopted Habitat Conservation Plan, Natural Community Conservation Plan or approved local, regional or state habitat conservation plans apply to the project or the project site.

5. CULTURAL RESOURCES

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
(b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
(c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
(d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion:

(a-d): There are no known historical resources, archeological resources, paleontological, unique geological features, or human remains known to exist on the project site. If archaeological, paleontological, cultural resources, or human remains are discovered, a standard City Condition of Approval will require proper handling of any discovered archeological or paleontological resources, per General Plan Strategy CNR-1.1b.

> Archaeological Resources: In accordance with CEQA and the State Public Resources Code, require the discontinuation of all work in the immediate vicinity and the preparation of a resource mitigation plan and monitoring program by a licensed archaeologist if archaeological resources are found on any sites within the City.

Should human remains be discovered during excavation or construction, such remains shall be handled pursuant to § 7050.5 of the California Health and Safety Code and § 5097.94 of the California Public Resources Code. Specifically, in the event a human burial or skeletal element is identified during excavation or construction, work in that location shall stop immediately until the find can be properly treated. The Santa Clara County Coroner shall be notified and shall make a determination as to whether remains are Native American in origin and take such actions as required by law. As such, no mitigation pertaining to the handling of human remains is required.

6. GEOLOGY AND SOILS

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii) Strong seismic ground shaking?	☐	☐	☒	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	iv) Landslides?	☐	☐	☐	☒
(b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
(c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
(d)	Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
(e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
(f)	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☐	☒

Discussion:

(a): The project site is located within the seismically active San Francisco Bay Area. According to maps prepared under the Alquist-Priolo Earthquake Fault Zone Act, there are no zoned active faults within the City of Campbell. Therefore, ground rupture is not likely to occur at the site. The nearest major earthquake faults are the Monte Vista Shannon Fault, San Andreas Fault, the Hayward-Rogers Creek Fault and the Calaveras Fault, all of which pose the greatest earthquake threat because of their high quake potential. The project will likely be subjected to at least one moderate to severe earthquake that will cause moderate to severe ground shaking during the useful life of the buildings. Because construction practices in the State of California—pursuant to the California Building Code—take into account that earthquakes could potentially damaged buildings, they are designed to withstand moderate ground-shaking, the project results in a less than significant impact. Lastly, according to the State Seismic Hazard Zones Map, the project site is not located in any hazard zone and therefore does not have the potential for liquefaction or earthquake-induced landslides.

(b): The project does not involve any grading, which would not result in substantial soil erosion or the loss of topsoil.

(c-d): According to the Santa Clara County Geologic Hazard Zones Map, the project site is not geologically unstable and would not pose a risk of landslide, lateral spreading, subsidence, liquefaction or collapse. The site is not proposing the use of any septic tanks or alternative waste water disposal systems.

(f): As discussed in Section 5 (Cultural Resources), no unique paleontological resources or unique geological features are known to exist on the project site.

7. GREENHOUSE GAS EMISSIONS

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?	☐	☐	☒	☐
(b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion:

Direct responses to issues (a) & (b) have been provided on pages 12 through 14 of the attached Air Quality, Greenhouses Gas, and Health Risk Assessment – First and Campbell, prepared by RCH Group, dated August 11, 2016. The assessment concludes that the project would result in a less than significant impact for items (a) and (b) and therefore no mitigation measures are required.

8. HAZARDS AND HAZARDOUS MATERIALS

Issues *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☐	☒	☐
(b)	Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
(c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
(d)	Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
(e)	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?	☐	☐	☐	☒
(f)	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?	☐	☐	☐	☒
(g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
(h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion:

(a and b): No routine transport, use or disposal of hazardous materials would be associated with the project. A slight hazardous potential would exist during project construction when materials and construction equipment are at the site; however, long-term hazard risk is very low. Hazard risks during construction would be regulated by the City's standard conditions of approval and will be required to be performed in accordance with state and federal hazardous materials regulations and current Best Management Practices (BMP's) for construction activities. The use of toxic chemicals for landscaping (pesticides, herbicides, etc.) will not be above what is generally required for landscape maintenance and is not considered significant.

(c): The project site is located over ¼ mile from St. Lucy's private school, located southwest of the project site. The operation of the project will not include hazardous emission or handling of hazardous or acutely hazardous materials, substances. Further, as discussed in Section 3 (Air Quality), construction and demolition related air pollutants that may constitute a hazard will be mitigated to a less than significant level, in addition to being regulated through Best Management Practices as required by City Ordinances. As the Best Management Practices are universally applicable on construction projects in the City of Campbell, additional project specific mitigation measures are not required.

(d): The project site is not listed on the Hazardous Waste and Substances Sites List (available at http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm) compiled pursuant to Government Code Section 65962.5, therefore it would not create a significant hazard to the public or the environment.

(e to f): The project site is not located within the Santa Clara County Airport Land Use Commission jurisdiction, or within two miles of a public airport or within the vicinity of a private airstrip.

(g): The project would not interfere with emergency response or evacuation plans. Sufficient emergency access and emergency services staff would be provided for the project site in compliance with the State Building Code Standards and requirements of the Santa Clara County Fire and Health Departments. The project would improve sidewalk access and lighting in the area, thereby potentially improving access for emergency response or emergency evacuation.

(h): The project site is not located near any wildland areas and would not increase a wildland fire hazard.

9. HYDROLOGY AND WATER QUALITY

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	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)?	☐	☐	☐	☒
(b)	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 a substantial erosion or siltation on- or off-site.	☐	☐	☐	☒
(c)	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?	☐	☐	☐	☒
(d)	Create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm?	☐	☐	☐	☒
(e)	Create significant increases in erosion of the project site or surrounding areas?	☐	☐	☐	☒
(f)	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?	☐	☐	☐	☒
(g)	Otherwise substantially degrade water quality?	☐	☐	☐	☒
(h)	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?	☐	☐	☐	☒
(i)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
(j)	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?	☐	☐	☐	☒
(k)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
(l)	Potentially impact stormwater runoff from construction activities?	☐	☐	☒	☐
(m)	Potentially impact stormwater runoff from post-construction activities?	☐	☐	☐	☒
(n)	Result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters?	☐	☐	☐	☒
(o)	Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
(p)	Result in a potential for discharge of stormwater pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?	☐	☐	☐	☒

Discussion:

(a and b): No violations of any water quality standards are expected from the project. The project would not 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.

(c to g): No significant increase in impervious surface area of the lot would result from the project (replacing an impervious parking lot with a building, and adding a second-story to an existing one-story building). However, all additional runoff would be conveyed into the public storm drain system. These changes to the Project site would not substantially alter the existing drainage pattern of the area

due to the small size of the site. Storm water would be conveyed into the public storm drain system. The course of streams or rivers would not be affected by the proposed Project. The runoff from construction of the proposed Project would not exceed the capacity of existing or planned stormwater drainage systems, provide substantial additional sources of polluted runoff, or substantially degrade water quality.

(h and i): The entire Project site is located in Flood Zone X, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (Area Number 06085C0237H, effective 05/18/2009). Flood Zone X is defined as an areas determined to be outside the 0.2% annual chance floodplain. Therefore, the project would not result in housing being placed in a flood zone (the project does not propose any housing units), and would not impede or redirect flood flows.

(j and k): The Project site is located downstream of Lexington Reservoir, in an area defined by the Association of Bay Area Governments as a dam failure inundation area. However, as the property is located in Flood Zone X, the project would not expose a significant number of people or structures to a new significant risk of loss, injury, or death involving flooding. Furthermore, as the project is not modifying flood protection measures or creating a condition where adjacent properties are exposed to a new significant risk of loss, injury or death involving flooding, no additional exposure to water-related hazards is expected as a result of the project construction or operation.

(l): As discussed in Section 3 (Air Quality), construction and demolition activities are regulated through Best Management Practices (BMP's) as required by City ordinances, which is designed to limit air and water contamination related to construction activity. Through the implementation BMP's the potential short-term air and water quality impacts associated with construction is less than significant.

(n): The project will not include uses that would include vehicle fueling, waste handling, hazardous material storage, or other outdoor work areas that could result in the potential discharge of stormwater pollutants.

(o and p): The Project had been reviewed for compliance with Provision C.3 of the National Pollution Discharge Elimination System (NPDES) and had been determined to be below the required thresholds to trigger pollution prevention measures. The project site is not located near San Tomas Aquino Creek (located roughly three quarter miles to the west of the project site), and therefore would not have any effect on water bodies on the Section 303 (d) list. Furthermore, as the project site does not include any material storage, vehicle or equipment fueling, vehicle or equipment maintenance, waste handling, hazardous materials handling or storage, delivery areas, loading docks, or other outdoor work areas, the project would not violate any water quality standards as it would not result in the potential for stormwater pollutants.

10. LAND USE and PLANNING

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Physically divide an established community?	☐	☐	☐	☒
(b)	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?	☐	☐	☒	☐
(c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion:

(a): Projects that have the potential to physically divide an established community typically include construction that would eliminate formal or informal travel ways through a property. While no formal pathways through the impacted area of the project site exist, pedestrians occasionally use the rear parking lot as a shortcut between the public sidewalk on S. First Street and the City parking lot at 46 S. First Street. As this informal travel way would be retained and improved by the project, it can be concluded that the project would not physically divide an established community.

(b): The Campbell General Plan Land Use Element Diagram and Campbell Zoning Map designate the project site as *Central Commercial* and C-3 (Central Business District), respectively. The project would result in the creation of a mixed-use project with a pedestrian-oriented retail/restaurant space on the ground floor, with a professional office use above. As various goals, policies, standards and strategies of the Campbell General Plan, and Downtown Development Plan, and C-3 zoning district encourage such development, the project may be found consistent with the City of Campbell General Plan and Zoning Ordinance. Furthermore, the project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

(c): No habitat conservation plan or natural community conservation plans are applicable to the project site.

11. MINERAL RESOURCES

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
(b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion:

(a to b): No known mineral resources are present at the project site.

12. NOISE

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	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?	☐	☐	☐	☒
(b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
(c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
(d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
(e)	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?	☐	☐	☐	☒
(f)	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?	☐	☐	☐	☒

Discussion:

(a to c): The proposed project is for a commercial use (retail/restaurant and office), in a commercial zoning district (C-3 – Central Commercial) that will be consistent with uses (retail, office, restaurant uses) in the surrounding neighborhood (Campbell Downtown). The project and anticipated land uses are not anticipated to create any additional noise or vibration beyond that which already exist.

(d): Construction will result in temporarily increasing ambient noise levels in the project vicinity. However, construction is governed by CMC Sec. 18.04.052, which limits construction activity from 8 AM to 5 PM., Monday through Friday, 9 AM to 4 PM on Saturday, and prohibits construction on Sunday. Additionally, loud environmentally disruptive noise over 50 dBA (e.g., air compressors without mufflers, continuously running motors or generators, loud playing musical instruments or radios) is prohibited. As such, temporary ambient noise level increases associated with construction will be less than significant.

(e and f): The project is not located within the vicinity of an airport land use plan or within two miles of an airport. The project is not located within the vicinity of a private airstrip.

13. POPULATION AND HOUSING

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
(b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
(c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion:

(a): The proposed project would not induce substantial population growth as the project does not include the creation of housing units or the installation of infrastructure in preparation of additional housing units. Although the project would create new employment opportunities that may nominally increase the market demand for new housing, the City is committed to the continued creation of new housing within the community, as evinced by its certified General Plan Housing Element.

(b and c): The project would not result in the displacement of existing housing or people, necessitating the construction of replacement housing elsewhere.

14. PUBLIC SERVICES

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Would the project result in substantial adverse physical impacts associated with the provision of or 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:				
	i) Fire Protection?	☐	☐	☒	☐
	ii) Police Protection?	☐	☐	☒	☐
	iii) Schools?	☐	☐	☒	☐
	iv) Parks?	☐	☐	☒	☐
	v) Other public facilities?	☐	☐	☒	☐

Discussion:

(a): The project would result in a less than significant demand, and therefore impact to fire protection, and police protection services as a result of the project adding new floor area, occupants, and customers to the property. The restaurant concept (if implemented) would not have hard alcohol service, a separate bar, or late night hours which may result in an increase in demand for police services. Professional office uses are generally not considered to increase demand for police service, and the building will be equipped with a fire sprinkler system diminishing demand for fire protection services. In that the project would induce a less than significant increase in population growth (see Population and Housing), it can be further concluded that the project would result in a less than significant increase in demand for school, park, and other public services.

15. RECREATION

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
(b)	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?	☐	☐	☐	☒

Discussion:

(a): The project would not increase demand for existing recreational facilities nor would it involve the construction or expansion of recreational facilities.

(b): The project does not any include recreational facilities.

16. TRANSPORTATION and TRAFFIC

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	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 on roads, or congestion at intersections)?	☐	☐	☒	☐
(b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
(c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
(d)	Substantially increase hazards due to a design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
(e)	Result in inadequate emergency access?	☐	☐	☐	☒
(f)	Result in inadequate parking capacity?	☐	☒	☐	☐
(g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Discussion:

(a and b): The traffic generated by the project would be minor and adequately served by the existing capacity of the street system. The streets which serve the project include commercial/industrial collectors (i.e. E. Campbell Avenue & S. First Street) and a Class II Arterial (i.e. Orchard City Drive), as identified by Figure LUT-3 from the Campbell General Plan. Both roadway classifications are intended to serve higher traffic volumes. A summary of the weekday (AM & PM) peak trip generation for the project, under two different land use scenario's (office and restaurant and office with retail) has been provided in the table below:

Weekday Trip Generation										
			AM Peak			PM Peak				
Land Use	Qty	Units	Total	Inbound	Outbound	Total	Inbound	Outbound	ADT	ITE Code
Restaurant (High-Turnover Sit-Down)	0.795	ksf	9	5	4	8	5	3	101	932
Non-Medical Office	8.542	ksf	13	12	2	13	2	11	94	710
Specialty Retail	0.795	ksf	5	3	3	2	1	1	35	826
Total Gross Trips (Office/Restaurant)			**22**	**16**	**5**	**21**	**7**	**14**	**195**	
Total Gross Trips (Office/Retail)			**19**	**14**	**4**	**15**	**3**	**12**	**129**	

Based on ITE trip generation figures, it can be anticipated that the number of trips would be highest in the morning, under the office/restaurant land use scenario which has a total of 22 AM peak trips. The VTA TIA Guidelines use a standard of 100 net new weekday (AM or PM peak hour) or weekend peak hour trips, to determine when a traffic impact analysis should be conducted. As the project would result in less than 30 peak hour trips, under the most intensive land use scenario, and would distribute those trips over a roadway system meant to serve higher traffic volumes, it can be concluded that the project would result in a less than significant traffic impact.

(c): The project would not 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.

(d and e): No physical changes in roadway configurations are proposed for the project. The project will be required to comply with all City and Santa Clara County Fire Department standards for emergency access. The Santa Clara Fire Department also conducted an exercise on October 26, 2016 at the project site, which concluded that adequate fire access can be achieved without needing to eliminate street side parking, trees, or modifying the project design.

(f): The project is required to provide parking in accordance with the City of Campbell Parking and Loading Ordinance (CMC21.28.040) and standards for parking in the C-3 (Central Business District) zoning district (CMC21.10.060.I). The project will result in the removal of five parking spaces, in addition to one parking space within an adjoining public parking lot, and require the imposition of time restrictions (for late night and early morning) on parking stalls nearest the trash enclosure to accommodate service to the bins. The project would add one new parking space on S. First Street, where a driveway would be replaced with curb/gutter and sidewalk. During construction activities, staging activities in the public parking lot will temporarily result in the removal of seven parking spaces during Phase-1 construction activities (spanning approximately 7 months) and three spaces during Phase-2 construction activities (anticipated to span approximately 4 months). Once the project is complete, the net loss of parking spaces combined with the parking demand of the proposed office and commercial space would result in a 'per code' parking deficiency of either 30 (office & retail) or 31 (office & restaurant) depending on the land use mixture and assuming the restaurant would be limited to 12-seats.

Restaurant & Office Use						
Location	Usage	Area	Code Requirement	Parking Required	Parking Loss	Parking Gain
1st Floor	Restaurant	795	1 per 4 seats	4 (based on 12 seats; no outdoor)		
1st Floor	Trash Room	141	1:425 for Office	.33		
1st Floor	Rest. Storage	575	N/A	0		
1st Floor	Lobby & Circulation	766	1:425 for Office	1.8		
2nd Floor	Office Area	6593	1:425 for Office	15.5		
3rd Floor	Office Area	1949	1:425 for Office	4.6		
Behind Opa Parking Lot					5	
Public Parking Lot					1	
Street Parking						-1
	Total	**10819**		**26**	**6**	**-1**
				Total Parking Provided	0	
				Total Parking Required	32	-1
				Deficit/Surplus	**31**	

Retail & Office Use						
Location	Usage	Area	Code Requirement	Parking Required	Parking Loss	Parking Gain
1st Floor	Retail	795	1:345 for Retail	2.3		
1st Floor	Trash Room	141	1:425 for Office	.33		
1st Floor	Rest. Storage	475	N/A	0		
1st Floor	Retail Storage	100*	1:345 for Retail	.28		
1st Floor	Lobby & Circulation	766	1:425 for Office	1.8		
2nd Floor	Office Area	6593	1:425 for Office	15.5		
3rd Floor	Office Area	1949	1:425 for Office	4.6		
Behind Opa's Parking Lot					5	
Public Parking Lot					1	
Street Parking						-1
	Total	**10819**		**25**	**6**	**-1**
*: estimated retail storage				Total Parking Provided	0	
				Total Parking Required	31	-1
				Deficit/Surplus	30	

In order to comply with the City's parking requirements, the project proponent applied for a Parking Modification Permit (PLN2017-009) to reduce the number of required parking spaces. In consideration of the request, the decision making-body (i.e. City Council for the subject project) can determine that the anticipated number of parking spaces necessary to serve the project would be less than required by the applicable parking standard due to the unique nature and circumstances of the project (e.g. proximity to light rail) or due to special development features (e.g. payment of a parking impact fee). At this time the project proponent has volunteered to pay a parking impact fee of $6,000 per parking space the project would be deficient 'per code' (before adjustments). This would roughly translate to $186,000 based on a parking deficiency of 31 parking spaces under the more 'parking intensive' office & restaurant land use scenario. The dollar amount proposed by the project proponent is not intended to pay for the soft or hard costs to acquire land and build parking spaces (which would be much higher). Instead, the dollar amount is based on the fee established by the 'Downtown Parking In-lieu Fee Policy (DPIFP)', established November 20, 2007 (Joint City Council Resolution No. 10845 & Redevelopment Agency Resolution No. 2007-14), which was intended to provide the option for new development/uses to pay a parking in-lieu fee instead of providing new parking spaces, which would then be used to help pay for new parking[2].

To consider the parking impact(s) that the proposed project would create, staff prepared a 'Downtown Parking Assessment' (attached) which served to evaluate the existing demand and supply (i.e. capacity) of all uses and parking spaces in the downtown based on the code requirements. The study

[2] This fee was made 'interim' until the results of the Downtown Parking Demand Study was completed and could be considered by the Council. Eventually, it was decided not to prepare the Parking Demand Study because of poor economic conditions, and in continued consideration of the economic downtown, the DPIFP was suspended on July 6, 2010.

concluded that the parking supply in the Downtown is roughly 17 stalls under what is required to serve all uses and tenants under the 'Shared Parking' scenario (which assumed that all businesses in the downtown had equal access to all parking spaces at all times). Under the 'Public Parking' scenario (which focused on evaluating the parking demand generated on public parking facilities by uses without private parking), the assessment determined that the downtown has a parking surplus of 173 parking spaces.

Notwithstanding the conclusions of the assessment, it can be reasonably concluded that the per-code impact of up to 31 parking spaces, in a downtown with a limited parking supply, will create a significant impact unless adequately mitigated. As such, the 'voluntary' payment of $6,000 dollars per stall would be imposed as a Mitigation Measure on the project, and earmarked toward improving existing parking facilities in the downtown to offset parking impacts, in accordance with the following mitigation measure:

> **Mitigation Measure TT-1**: Parking Impact Fee: The project shall pay the City of Campbell at least $6,000 per parking space the project is deficient. The number of 'deficient' parking spaces shall be based on the number of stalls the project is required to provide by the City of Campbell Municipal Code prior to approval of a Parking Modification Permit. These fees shall be used toward improving parking facilities in the Campbell Downtown and may be used toward the preparation of a Parking Demand Study, Parking Management Plan, the installation of LED signs indicating number of available parking spaces in public parking garages (or green/red lights indicating the availability of parking spaces overhead stalls), the soft or hard costs of developing new public parking spaces, or the development of a plan to realign Orchard City Drive to accommodate more parking spaces in the Water Tower Plaza parking lot. As a minimum, any additional fees or requirements imposed by the City Council and agreed to by the project proponent as conditions of approval on the Parking Modification Permit, shall thereafter be considered as Mitigation Measures of the project.

Whereas the payment of $6,000 per stall may not adequately offset all parking impacts of the project, the Mitigation Measure incorporates flexibility for the City Council to impose additional fees or requirements on the project as deemed necessary to approve a Parking Modification Permit. As mitigated, the project's impacts to parking capacity would be less than significant.

(g): The project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). The project is located within walking distance to the Downtown Campbell VTA Light Rail Station.

17. UTILITIES and SERVICE SYSTEMS

	Issues *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
(b)	Require or result in the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
(c)	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?	☐	☐	☐	☒
(d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
(e)	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?	☐	☐	☐	☒
(f)	Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
(g)	Comply with federal, state, and local statutes and regulations related to solid wastes.	☐	☐	☐	☒

Discussion:

(a and b): The utilities proposed for the project, including sewage disposal, tie into existing service mains and would not require new or expanded service systems. The project would not generate significant amounts of new wastewater, and would therefore not exceed wastewater treatment requirements for the Regional Water Quality Control Board or require the construction of new water or wastewater treatment facilities.

(c to e): Storm drainage for the project will tie into existing service mains and will not result in the construction of new storm water drainage facilities or expansion of existing facilities. The water supply for the project ties into existing service mains. Therefore, the Project would not require new or altered service systems or new or expanded water resources or entitlements.

(f and g): Existing capacity at local landfills can accommodate the amount of construction material waste and no significant increase in new solid waste generation is expected as a result of project operation. The project would comply with Federal, State, and local statutes and regulations related to solid waste.

18. MANDATORY FINDINGS OF SIGNIFICANCE

	Issues	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	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?	☐	☐	☒	☐
(b)	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?)	☐	☐	☒	☐
(c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion:

(a): Based on the findings of the Initial Study, construction and operation of the project, with mitigation, would not substantially degrade the quality the environment; reduce the habitat, population, or range of species; nor eliminate important examples of California history or prehistory.

(b): Based on the findings of this Initial Study, the project would not have individual or cumulative environmental impacts that cannot be mitigated to a less than significant level.

(c): Based on the findings of the Initial Study, there is no evidence to demonstrate that the project would cause a substantial adverse effect on human beings, either directly or indirectly.

III. RECOMMENDATION and DETERMINATION

On the basis of this initial evaluation, and incorporation of the recommended mitigation measures into the project design:

1.	I find that the project could not have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.	☐
2.	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.	☒
3.	I find the proposed project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.	☐
4.	I find that the proposed project **may have a "potentially significant impact" or "potentially significant unless mitigated impact"** on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.	☐
5.	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	☐

Stephen Rose
PROJECT PLANNER

Associate Planner
TITLE

City of Campbell
AGENCY

SIGNATURE

February 7, 2017
DATE

IV. REFERENCE MATERIALS

Attachments (May be viewed online on the City of Campbell 'Public Notices' web page (http://www.cityofcampbell.com/501/Public-Notices) under 'Environmental Notices' or at the Campbell Community Development Department office (70 N First St., Campbell, CA 95008) during normal business hours).

1. Architectural Consultant Plan Review – Additions and Remodeling of 1st & Campbell Phase II, prepared by MBA Architects, dated June 24, 2016
2. Air Quality, Greenhouses Gas, and Health Risk Assessment – First and Campbell, prepared by RCH Group, dated August 11, 2016
3. Campbell Downtown Parking Assessment, prepared by City of Campbell Planning Division, dated January 20, 2017
4. Downtown City of Campbell Parking Study, prepared by Gordon H. Chong & Partners and Walker Parking Consultants, dated September 1999

Reference Documents:

1. Bay Area Air Quality Management District (BAAQMD), June 2010, CEQA Air Quality Guidelines.
2. Bay Area Air Quality Management District (BAAQMD), December 2008, Source Inventory of Bay Area Greenhouse Gas Emissions.
3. California Environmental Protection Agency (CEPA) California Air Resources Board (CARB), April 2005, Air Quality and Land Use Handbook: A Community Health Perspective.
4. California Environmental Protection Agency (CEPA) California Air Resources Board (CARB), November 16, 2007, Staff Report: California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit.
5. California Natural Diversity Database, 2000.
6. California Office of Planning and Research (OPR), June 19, 2008, Technical Advisory: CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review.
7. California Environmental Quality Act (CEQA) Statues and Guidelines, 2016.
8. California Department of Transportation (DOT), updated December 16, 2016, Officially Designated State Scenic Highways. Retrieved January 23, 2017 from:

   http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/scenic_hwy.htm
9. City of Campbell General Plan.
10. City of Campbell Zoning Code.
11. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community Map Number 06085C0237H, Panel 237 of 830, Effective Date May 18, 2009.
12. State of California, Seismic Hazard Zones Map, San Jose West Quadrangle, February 7, 2002.

13. U.S. Environmental Protection Agency, April 15, 2009, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007.
14. SCVURPPP Hydromodification Management Plan (2005), Retrieved January 26, 2017 from: http://www.scvurppp-w2k.com/pdfs/0506/hmp_factsheet.pdf
15. 2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report), Retrieved January 26, 2017 from: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

ATTACHMENT 1

ARCHITECTURAL CONSULTANT PLAN REVIEW

ARCHITECTURAL CONSULTANT

PLAN REVIEW

Additions and Remodeling of

1st & CAMPBELL PHASE II

for the city of

Campbell, CA

Submitted 24 JUNE 2016

ARCHITECTS

MBA

WWW.MBA-ARCHITECTS.NET

MARVIN BAMBURG ASSOCIATES INC. 1176 LINCOLN AVE. SAN JOSE, CA 95125 408/297-0288 FAX 408/297-0384

ARCHITECTURAL PLAN REVIEW of the property at 1st & CAMPBELL

a proposal by Imwalle Properties, June 2016

This design review is provided by Marvin Bamburg, AIA, CSI, LEED-AP, of MBA ARCHITECTS under contract with the City of Campbell. It is intended for the use of the Planning Department and the Planning Commission for guidance in the approval process of the proposed development. These comments should not imply that there are design deficiencies or that any aspect of this project is poorly designed. Rather, the recommendations are intended to add to and enhance the fine development that is proposed.

Relevant documents:

- The developer's submission of plans prepared by EATON HALL ARCHITECTURE of San Jose, CA Project 4.716, consisting of 14 sheets dated JUNE 2016.
- Email from Stephen Rose to marvin@mba-architects.net dated 9 June 2016

General commentary:

The intensification in use of this property, as allowed by the current zoning, is a good way to develop a more sophisticated City and to augment the economic viability of the downtown commercial area. This proposal takes advantage of existing neglected space on site and provides for vertical expansion to three stories. The resulting height and massing of the buildings seems

quite appropriate for this location and is compatible with other development further to the west on Campbell Avenue. This is an expansion scenario that is likely to continue for years to come.

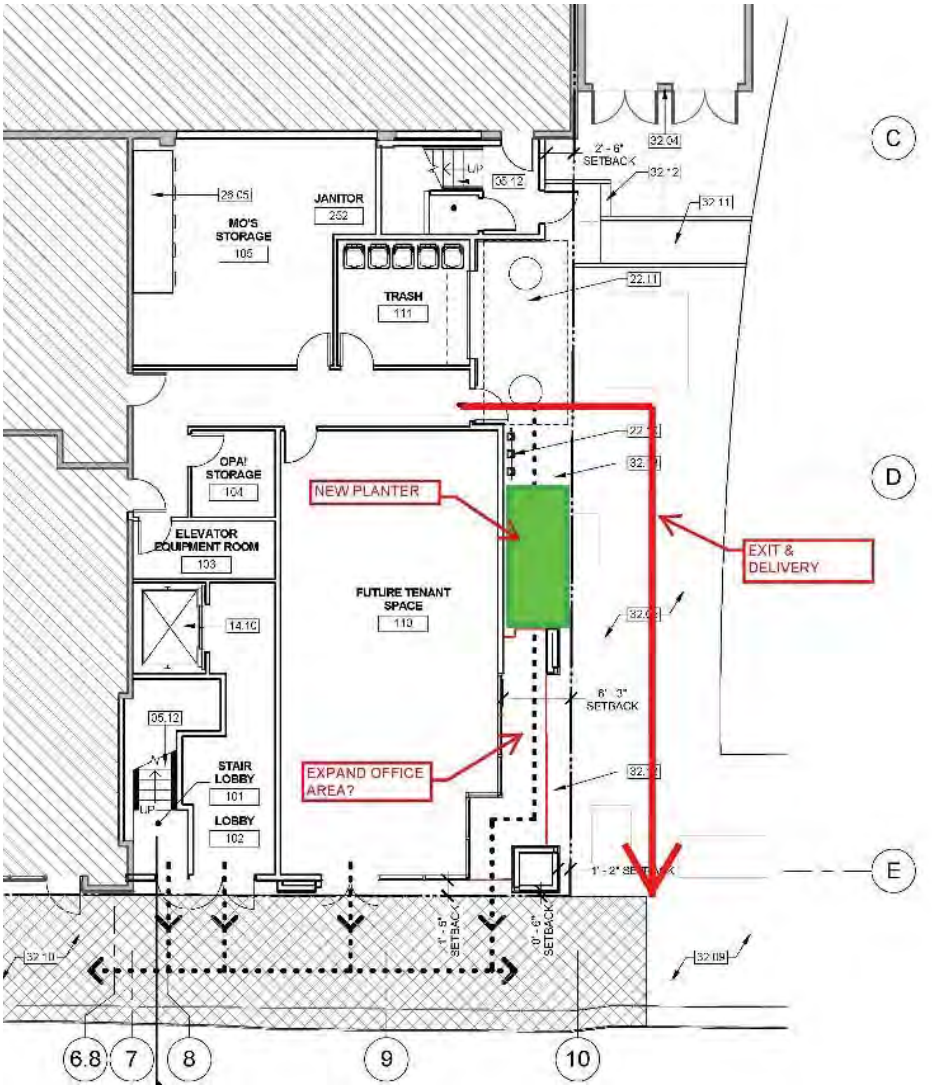
Overall Concept:

Naturally as buildings rise to greater heights, some pedestrian views will be affected. In this case the view of the water tower from Starbucks will be diminished in part, but not lost entirely. In the opinion of this reviewer, the water tower view is of minor value.

The use of materials in the proposal is good, breaking from the totally stucco appearance of the other buildings on site. If the colors shown on the submitted plans are accurate, they also will add some variation to the monotony of the existing color scheme. The new design tips its hat to the quasi-classical elements of the existing buildings, while offering a more contemporary aesthetic in the new construction – nicely varied and well-proportioned facades.

The one glaring deviation, from an otherwise stellar project, is the architectural treatment of the second floor addition to 280 E. Campbell Avenue, WILLARD HICKS RESTAURANT. For some unknown reason, the architecture of this addition is of a barn-like nature with sloping roofs, horizontal siding and a raised roof vent element. Such design is neither compatible with the building's first floor design nor the proposed new building on First Street.

Perhaps some attention should be given to the actual operations of the ground floor restaurants. Specifically deliveries that must be made from vehicles parked on First Street.

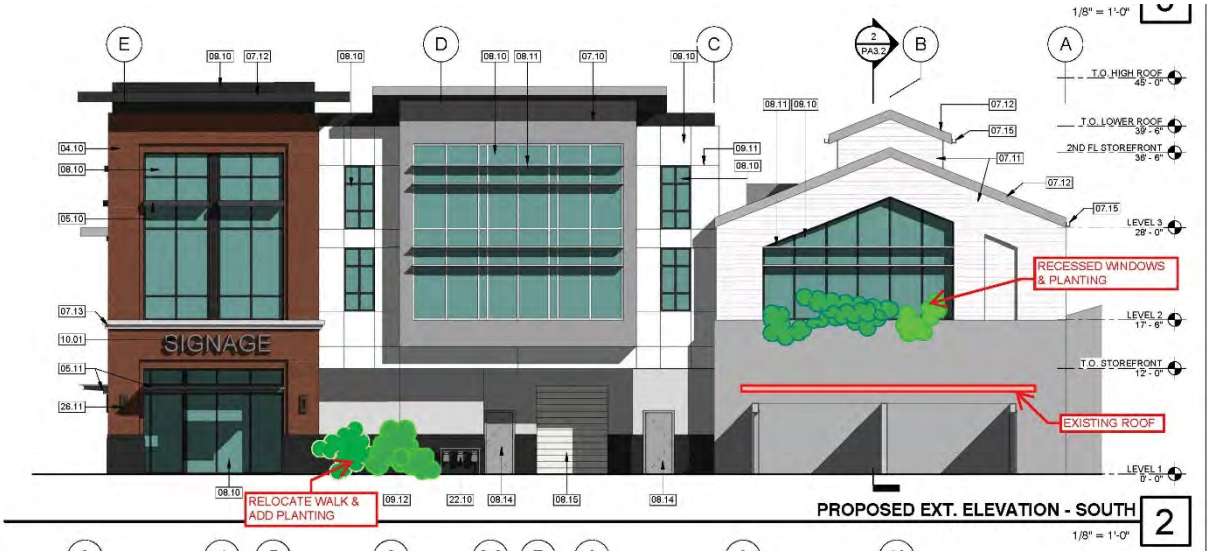


Specific Details:

1. Sheet PA2.1

    a. The exit route from the east stairway is along the building forcing a reduced footprint at the ground floor and reducing the east pier to only a thin wall. This will look peculiar and should be corrected. It is possible to offset the wall at the east pier as was done for the west pier to allow passage between the pier and the office wall, but that reduces the office floor plate unnecessarily. If an exit path further to the south could be developed, the office floor plate could be expanded to align with the second floor. This might also allow a planter to be installed between the east pier and the gas meters; an element that would help soften the harsh surfaces and the plethora of existing electrical and plumbing devices in that area. This pathway also serves as the delivery route for the ground floor restaurants - a situation that requires more thought. In particular, deliveries to WILLARD HICKS are shown going thru the exit stairwell; probably not the best route.

b. The drawing seems to indicate a new public sidewalk on First Street. Will that be standard concrete or does the crosshatch suggest a more decorative material?

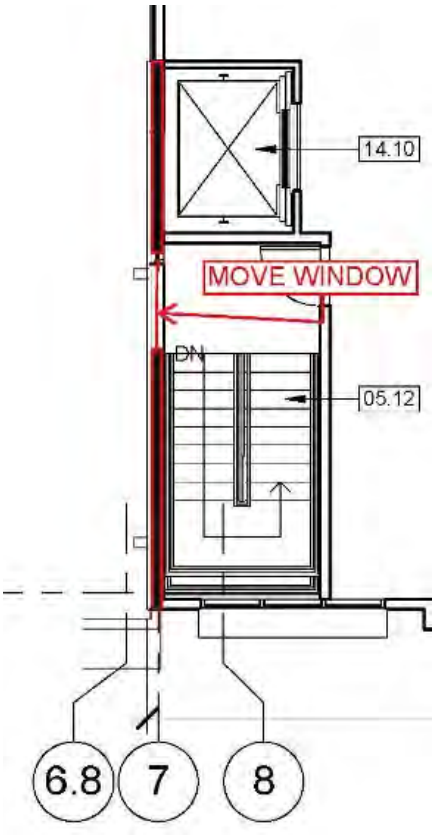


2. Sheet PA2.2

a. If the south-facing windows at the second floor offices over WILLARD HICKS could be recessed several feet it would allow a planter to be installed there with plants that could droop over the sill to enhance the existing blank wall of the ground floor (above the trash enclosures). The recess would also provide some shading of the windows from the south sun.

b. The architect has taken some liberties with the depiction of the existing south wall of WILLARD HICKS and the existing trash enclosures there. They should be drawn more accurately and with all components (the roof over the trash enclosures is missing) to give an accurate presentation. This might be an opportunity to provide enclosures of better design.

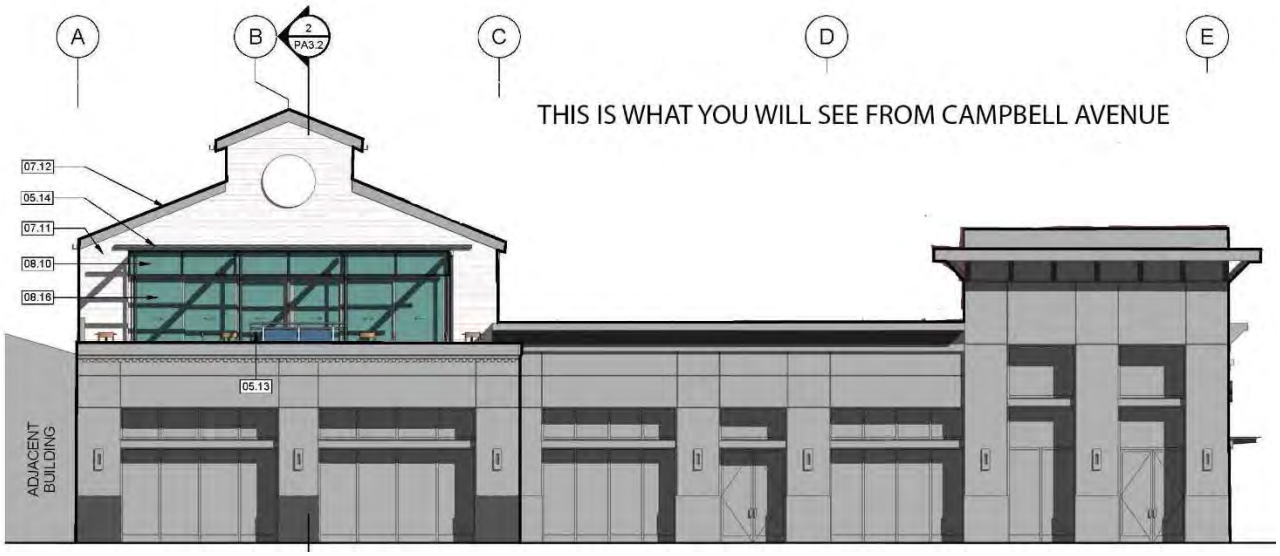
c. At the 3rd floor on wall line 7, a window is shown at the stair landing and overlapping the elevator. The window need not be the same size as others on that wall line and should not overlap the elevator shaft. A window into the stairwell is quite appropriate.



3. Sheet PA3.1

    a. These exterior elevations clearly exhibit the incompatibility of the proposed second floor addition over WILLARD HICKS.

    b. The proposed trellis on the Campbell Avenue side of the second floor addition over WILLARD HICKS is also incompatible with the existing architecture tending to appear as a collection of sticks. It should relate to the existing Campbell Avenue façade, with substantial stucco piers supporting the trelliswork.



Recommendations:

A. Redesign the exterior architecture of the second floor addition over WILLARD HICKS (see Overall Concept above).

B. Review and redesign (if possible) the delivery and exit route on the south side of the building pursuant to the discussion in 1a above.

C. Consider installing a second story planter at the south windows of the offices over WILLARD HICKS per the discussion in 2a above.

D. Move and resize the window at the 3rd floor stairwell/elevator as discussed in 2c above.

E. Revise the elevation drawings to depict the actual existing conditions as discussed in 2b above.

F. Redesign the second floor trellis above WILLARD HICKS per 3b above.

ATTACHMENT 2

AIR QUALITY, GREENHOUSE GAS, AND HEALTH RISK ASSESSMENT

Air Quality, Greenhouse Gas, and Health Risk Assessment
First and Campbell

Prepared for:

Imwalle Properties
115 S Market Street, Suite 190
San Jose, California 95113

Prepared by:

RCH Group
11060 White Rock Road
Rancho Cordova, California 95670

August 11, 2016

TABLE OF CONTENTS

First and Campbell
Air Quality, Greenhouse Gases, and Health Risk Assessment

1.0 INTRODUCTION

This document provides an overview of the existing air quality conditions at the project site, the air quality regulatory framework, an analysis of potential air quality impacts that would result from implementation of the proposed project, and identification of applicable mitigation measures. Other issues related to air emissions covered in this document include the assessment of emissions related to air quality health impacts (health risk assessment or HRA). Issues related to climate change and greenhouse gas (GHG) emissions are also included.

The air quality setting and regulatory context are described in **Attachment A**. Emission calculation supporting information are included in **Attachment B**. **Attachment C** provides additional information on the methodology used for the HRA. The GHG setting and regulatory context are described in **Attachment D**.

2.0 PROJECT OVERVIEW

The project site currently includes three restaurants (Willard Hicks, Mo's, and Opa!). The proposed project includes a small amount of ground floor retail (approximately 800 square feet) and approximately 2,350 square feet of additional ground floor area dedicated to an office lobby, storage, and service area. The proposed project also includes an entire second story of office space above the restaurants (approximately 8,560 square feet).

Construction activities are expected to commence in April 2017 with interior demolition, grading, and site improvements and building construction would occur between April and October of 2017. Construction activities would be completed following paving and architectural coating in October of 2017. Notably, the construction timeline for the proposed project may be subject to change and seasonality of construction but these changes would have a negligible impact on the air quality analysis.

3.0 IMPACT ANALYSIS AND MITIGATION

Intermittent (short-term construction emissions that occur from activities, such as minimal removal of structures, site-grading, and building construction) and long-term air quality impacts related to the operation of the proposed project were evaluated. The analysis focuses on daily and annual emissions from these construction and operational (mobile, area, stationary, and fugitive sources) activities. This air quality analysis is consistent with the methods described in the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines* (dated June 2010, updated in May 2011, and revised in May 2012).[1] Mitigation measures are presented to reduce impacts to less than significant, as applicable.

1 The Air District's June 2010 adopted thresholds of significance were challenged in a lawsuit. Although the BAAQMD's adoption of significance thresholds for air quality analysis has been subject to judicial actions, the lead agency can rely upon the BAAQMD's Revised Draft Options and Justification Report (October 2009) for substantial evidence to support the BAAQMD recommended thresholds. Therefore, the lead agency has determined the BAAQMD recommended thresholds are appropriate for use in this analysis.

The air quality analysis includes a review of criteria pollutant[2] emissions such as carbon monoxide (CO)[3], nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOC) as reactive organic gases (ROG)[4], particulate matter less than 10 micrometers (PM10), particulate matter less than 2.5 micrometers (PM2.5).[5]

The HRA addresses diesel particulate matter (DPM) emissions from on-site construction equipment and haul trucks and cumulative impacts from nearby permitted stationary sources, East Campbell Avenue and rail activities.

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

a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

The Bay Area Air Quality Management District (BAAQMD) adopted its 2010 Bay Area Clean Air Plan (CAP) in accordance with the requirements of the California Clean Air Act (CCAA) to implement all feasible measures to reduce ozone; provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gas (GHG) emissions in a single, integrated plan; and establish emission control measures to be adopted or implemented in the 2010 through 2012 timeframe.[6] The primary goals of the 2010 Bay Area CAP are to:

- Attain air quality standards;
- Reduce population exposure and protecting public health in the Bay Area; and
- Reduce GHG emissions and protect the climate.

BAAQMD recommends that approving a project where an air quality plan consistency determination is required to analyze the project with respect to the following questions: (1) Does the project support the primary goals of the air quality plan; (2) Does the project include

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2 Criteria air pollutants refer to those air pollutants for which the United States Environmental Protection Agency (USEPA) and California Air Resources Board (CARB) has established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) under the Federal Clean Air Act (CAA).

3 CO is a non–reactive pollutant that is a product of incomplete combustion of organic material, and is mostly associated with motor vehicle traffic, and in wintertime, with wood–burning stoves and fireplaces.

4 VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROGs are any reactive compounds of carbon, excluding methane, CO, CO_2 carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

5 PM10 and PM2.5 consists of airborne particles that measure 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.

6 In 2015, the BAAQMD initiated an update to the 2010 CAP. On February 28, 2014, the District held a public meeting to report progress on implementing the control measures in the 2010 CAP, to solicit ideas and strategies to further reduce ozone precursors, particulate matter, toxic air contaminants, and greenhouse gases, and to seek input on innovative strategies to reduce greenhouse gases, mechanisms for tracking progress in reducing GHG's, and how the District may further support actions to reduce GHGs. The culmination of this effort will be an updated CAP.

applicable control measures from the air quality plan; and (3) Does the project disrupt or hinder implementation of any 2010 CAP control measures? If the first two questions are concluded in the affirmative and the third question concluded in the negative, the BAAQMD considers the project consistent with air quality plans prepared for the Bay Area.

Any project that would not support the 2010 CAP goals would not be considered consistent with the 2010 CAP. The recommended measure for determining project support of these goals is consistency with BAAQMD CEQA thresholds of significance. As presented in the subsequent impact discussions, the proposed project with mitigations would not exceed the BAAQMD significance thresholds; therefore, the proposed project with mitigations would support the primary goals of the 2010 CAP. As mentioned, projects that incorporate all feasible control measures in the air quality plan are considered consistent with the 2010 CAP.

The proposed project with mitigation measures incorporated would support the primary goals of the 2010 CAP and would be consistent with all applicable 2010 CAP control measures, and would not disrupt or hinder implementation of any 2010 CAP control measures. Therefore, there would be a less-than-significant impact associated with, conflicting with, or obstructing implementation of the applicable air quality plan. The air quality setting and regulatory context are described in **Attachment A**.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐

The project site currently includes three restaurants (Willard Hicks, Mo's, and Opa!). The proposed project includes a small amount of ground floor retail (approximately 800 square feet) and approximately 2,350 square feet of additional ground floor area dedicated to an office lobby, storage, and service area. The proposed project also includes an entire second story of office space above the restaurants (approximately 8,560 square feet).

Construction activities are expected to commence in April 2017 with interior demolition, grading, and site improvements and building construction would occur between April and October of 2017. Construction activities would be completed following paving and architectural coating in October of 2017. Notably, the construction timeline for the proposed project may be subject to change and seasonality of construction but these changes would have a negligible impact on the air quality analysis.

The proposed project would generate short-term emissions of air pollutants, including fugitive dust and equipment exhaust emissions. The BAAQMD *CEQA Air Quality Guidelines* recommend quantification of construction-related exhaust emissions and comparison of those emissions to significance thresholds. The CalEEMod (California Emissions Estimator Model, Version 2013.2.2) was used to quantify construction-related pollutant emissions. Emission calculation supporting information are included in **Attachment B**.

Analyzed air quality pollutants include: carbon monoxide (CO), reactive organic compounds (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), particulate matter equal to or less than 10

micrometers (coarse particulates or PM10), and particulate matter equal to or less than 2.5 micrometers (fine particulates or PM2.5). The emissions generated from construction activities include:

- Dust (including PM10 and PM2.5) primarily from "fugitive" sources (i.e., emissions released through means other than through a stack or tailpipe) such as material handling and travel on unpaved surfaces; and
- Combustion emissions of criteria air pollutants (ROG, NO_x, CO, PM10, and PM2.5) primarily from operation of heavy off-road equipment, haul trucks, (primarily diesel-operated), and worker automobile trips (primarily gasoline-operated).

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. High winds (greater than 10 miles per hour) occur infrequently in the area, less than two percent of the time. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM10 concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts.

Erosion control measures and water programs are typically undertaken to minimize these fugitive dust and particulate emissions. A dust control efficiency of over 50 percent due to daily watering and other measures (e.g., limiting vehicle speed to 15 mph, management of stockpiles, screening process controls, etc.) was estimated. Based on CalEEMod, one water application per day reduces fugitive dust by 34 percent, two water applications per day reduces fugitive dust by 55 percent, and three water applications per day reduces fugitive dust by 61 percent.

Table AQ-1 provides the estimated short-term construction emissions that would be associated with the proposed project and compares those emissions to the BAAQMD's significance thresholds for construction exhaust emissions. As the construction phases (i.e., grading, building construction, paving, etc.) are sequential, the average daily construction period emissions (i.e., total construction period emissions divided by the number of construction days) were compared to the BAAQMD significance thresholds. All construction-related emissions would be below the BAAQMD significance thresholds.

Table AQ-1: Estimated Daily Construction Emissions (pounds per day)

Condition	ROG	NO_x	PM10	PM2.5	CO
	Unmitigated				
Construction	2.34	14.3	0.95	0.87	9.53
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No
	Mitigated				
Construction	1.54	12.1	0.32	0.31	9.40
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No

SOURCE: CalEEMod Version 2013.2.2.

The BAAQMD's *CEQA Air Quality Guidelines* consider these impacts to be less than significant if best management practices are employed to reduce these emissions. **Mitigation Measures AQ-1 through AQ-3** address the implementation of best management practices to reduce fugitive dust and combustion exhaust emissions per BAAQMD's *CEQA Air Quality Guidelines*.

Proposed project emissions would be less than the significance thresholds (See **Table AQ-1**) and the proposed project would also include **Mitigation Measures AQ-1 through AQ-3** per BAAQMD's *CEQA Air Quality Guidelines*. Therefore, proposed project impacts that would be associated with construction emissions would be less than significant with mitigation incorporated.

Mitigation Measure AQ-1: *BAAQMD Required Dust Control Measures:* The contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures, including:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- A publically visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ-2: *BAAQMD Required Basic Exhaust Emissions Reduction Measures.* The contractor shall implement the following measures during excavation to reduce construction-related exhaust emissions:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for workers at all access points.
- All offroad equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Mitigation Measure AQ-3: *BAAQMD Regulation 8, Rule 3 for Architectural Coatings.* Emissions of VOC due to the use of architectural coatings are regulated by the limits contained in

Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was revised on January 1, 2011 to include more stringent VOC limit requirements. The revised VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

The CalEEMod was also used to estimate emissions that would be associated with motor vehicle use, space and water heating, and landscape maintenance emissions expected to occur after the proposed project construction is complete and operational. The proposed project land use types and size and other project-specific information were input to the model. Unless otherwise noted, the CalEEMod model defaults for Santa Clara County were used. CalEEMod provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport. CalEEMod output worksheets are included in **Attachment B**.

The proposed project land uses were input into CalEEMod, which include retail and office space; approximately 10,920 square feet. The trip rate used in the air quality analysis was assumed to be 196 daily trips.[7]

Estimated daily and annual operational emissions that would be associated with the proposed project are presented in **Tables AQ-2 and AQ-3** and are compared to BAAQMD's thresholds of significance. As indicated in **Tables AQ-2 and AQ-3**, the estimated proposed project operational emissions would be below the BAAQMD's significance thresholds and would be less than significant.

Table AQ-2: Estimated Daily Project Operational Emissions (pounds per day)

Condition	ROG	NO_x	PM10	PM2.5	CO
Area	0.27	<0.01	<0.01	<0.01	<0.01
Energy	0.00	0.04	<0.01	<0.01	0.03
Mobile	0.64	1.24	0.93	0.26	6.09
Total Project	**0.91**	**1.29**	**0.93**	**0.26**	**6.13**
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No

SOURCE: CalEEMod Version 2013.2.2.

Table AQ-3: Estimated Annual Project Operational Emissions (tons per year)

Condition	ROG	NOx	PM10	PM2.5	CO
Area	0.05	<0.01	<0.01	<0.01	<0.01
Energy	0.00	0.01	<0.01	<0.01	0.01
Mobile	0.09	0.17	0.13	0.04	0.80
Total Project	**0.14**	**0.18**	**0.13**	**0.04**	**0.81**
Significance Threshold	10	10	15	10	---
Significant (Yes or No)?	No	No	No	No	No

7 ITE Trip Generation, 9th Edition, 2012.

SOURCE: CalEEMod Version 2013.2.2.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐

As shown in **Tables AQ-1 through AQ-3**, proposed project-related emissions would be less than the BAAQMD significance thresholds with the implementation of **Mitigation Measures AQ-1 through AQ-3** per BAAQMD's *CEQA Air Quality Guidelines.* The BAAQMD *CEQA Air Quality Guidelines* recommend that cumulative air quality effects from criteria air pollutants also be addressed by comparison to the mass daily and annual thresholds. These thresholds were developed to identify a cumulatively considerable contribution to a significant regional air quality impact. Project-related emissions would be below the significance thresholds with implementation of the recommended mitigations measures. Therefore, the proposed project would not be cumulatively considerable and cumulative impacts would be less than significant with mitigation incorporated.

d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The maximally exposed individual (MEI) represents the worst–case risk estimate, based on a theoretical person continuously exposed for a lifetime at the point of highest compound concentration in the air. This is a highly conservative assumption, since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption assumes that residents are experiencing outdoor concentrations for the entire exposure period.

This HRA analyzes the incremental cancer risks to sensitive receptors in the vicinity of the proposed project, using emission rates (in pounds per hour) from CARB's CalEEMod emission model. DPM (reported as exhaust of PM2.5) emission rates were input into the USEPA's AERMOD atmospheric dispersion model to calculate ambient air concentrations at receptors in the proposed project vicinity. This HRA is intended to provide a worst–case estimate of the increased exposure by employing a standard emission estimation program, an accepted pollutant dispersion model, approved toxicity factors, and conservative exposure parameters.

In accordance with OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,* this HRA was accomplished by applying the highest estimated concentrations of TAC at the receptors analyzed to the established cancer potency factors and acceptable reference concentrations for non-cancer health effects. The maximum DPM concentrations occurred at a residential receptor (also known as the MEI) to the north of the proposed project

along Civic Center Drive. Increased cancer risks were calculated using the modeled DPM concentrations and OEHHA-recommended methodologies for both a child exposure (3rd trimester through 2 years of age) and adult exposure. The cancer risk calculations were based on applying the OEHHA-recommended age sensitivity factors and breathing rates, as well as fraction of time at home and an exposure duration of 30 years, to the DPM concentration exposures. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing air pollutants. The supporting methodology and assumptions used in this HRA are provided in **Attachment C.**

These conservative methodologies overestimate both non-carcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. Therefore, for carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the HRA methodology. The extrapolation of toxicity data in animals to humans, the estimation of concentration prediction methods within dispersion models; and the variability in lifestyles, fitness and other confounding factors of the human population also contribute to the overestimation of health impacts. Therefore, the results of this HRA are highly overstated.

Cumulative Health Impact Methodology

The BAAQMD's *CEQA Air Quality Guidelines* also include standards and methods for determining the significance of cumulative health risk impacts. The method for determining cumulative health risk requires the tallying of health risk from permitted stationary sources, major roadways and any other identified substantial TAC sources in the vicinity of a project site (i.e., within a 1,000-foot radius) and then adding the individual sources to determine whether the BAAQMD's cumulative health risk thresholds are exceeded.

The BAAQMD has developed a geo-referenced database of permitted stationary emissions sources throughout the San Francisco Bay Area and the *Stationary Source Risk & Hazard Analysis Tool* (May, 2012) for estimating cumulative health risks from the permitted sources. Four permitted sources are located within approximately 1,000 feet of the project site.

BAAQMD has also developed a geo-referenced database of major roadways in the Bay Area and the *Highway Screening Analysis Tool (*May 2011*)* for estimating cumulative health risks from such roadways. Highway 17 is beyond 1,000 feet of the proposed project and thus, was not included in the cumulative analysis. BAAQMD *CEQA Air Quality Guidelines* also require the inclusion of surface streets within 1,000 feet of the project with annual average daily traffic (AADT) of 10,000 or greater. Upon review of nearby roadways, one roadways meets the criteria: East Campbell Avenue. Existing residences are within 350 feet of East Campbell Avenue and estimated AADT is 28,150. BAAQMD has developed a county-specific tool; *Roadway Screening Analysis Calculator*, for estimating cumulative health risks from minor roadways. Rail operations are also located within 1,000 feet to the east, and thus was included in the cumulative analysis.

Health Impacts on Existing Residences

The following describes the health risk assessment associated with existing receptors as a result of project construction activities and cumulative sources. With implementation of required BAAMQD mitigation measures for construction activity and equipment described previously as

Mitigation Measures AQ-1 through AQ-3, the maximum cancer risk from construction DPM for an existing residential-adult receptor would be 0.8 per million and for a residential-child receptor would be 16.6 per million. The total maximum cancer risk from unmitigated proposed project construction emissions for a residential receptor would be 16.6 per million.[8] The maximum cancer risk from construction DPM for a school-child would be 0.4 per million. Thus, the cancer risk due to construction activities is potentially above the BAAQMD threshold of 10 per million and would be potentially significant.

Table AQ-4: Estimated Unmitigated Health Impacts for Existing Receptors

Source	Cancer Risk	Hazard Impact	PM2.5 Concentration
	Proposed Project		
Unmitigated Proposed Project	**16.6**	**0.36**	**0.12**
Significance Threshold	10	1.0	0.3
Significant (Yes or No)?	**Yes**	No	No
	Cumulative		
City of Campbell, 70 North First Street[a]	0.59	<0.01	<0.01
City of Campbell, 70 North First Street[a]	5.25	0.03	<0.01
City of Campbell, 77 North Harrison Avenue[a]	2.40	0.02	<0.01
Orchard Valley Coffee, 349 East Campbell Avenue[a]	<0.01	<0.01	0.08
East Campbell Avenue[b]	4.44	<0.01	0.08
Rail Activities[c]	24.1	0.01	0.05
Unmitigated Proposed Project	16.6	0.36	0.12
Cumulative Impact	**53.4**	**0.42**	**0.33**
Significance Threshold	100	10	0.8
Significant (Yes or No)?	No	No	No

a Cancer Risk, Hazard Impact, and $PM_{2.5}$ Concentration values for permitted stationary sources are based on BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*, dated May 30, 2012.
b Cancer Risk, Health Impact, and $PM_{2.5}$ Concentration values for local roadways are based on BAAQMD's Roadway Screening Analysis Calculator, dated April 16, 2015.
c Cancer Risk, Hazard Impact, and $PM_{2.5}$ Concentration values based on the assumption of the number of diesel locomotives passing by on a weekly basis. The AERMOD model was used to estimate maximum downwind concentrations and potential health risk at sensitive receptors from the rail line source.

The estimated cancer risk impacts at the nearest existing residence due to rail activities is 24.1 per million. The estimated cancer risk impacts at the nearest existing residence due to nearby permitted sources is 8.2 per million. The estimated cancer risk impacts at the nearest existing residence due to East Campbell Avenue is 4.4 per million. The cumulative cancer risk from the construction activities and other nearby sources is 53.4 per million and thus, below the BAAQMD significance threshold of 100 per million and would be less than significant (see **Table AQ-4**).

However, with the implementation of **Mitigation Measure AQ-4**, the maximum cancer risk from construction for a residential-adult receptor would be 0.3 per million and for a residential-child receptor would be 5.8 per million. The total maximum cancer risk from unmitigated proposed

8 This theoretical individual would be born at the beginning of the proposed project construction at the maximum exposed existing receptor and subsequently be exposed to the full construction period.

project construction emissions for a residential receptor would be 5.8 per million. The maximum cancer risk from construction DPM for a school-child would be 0.1 per million. Thus, the cancer risk due to construction activities would be below the BAAQMD significance threshold of 10 per million and would be less than significant with mitigation incorporated. Cumulative cancer risk from the mitigated construction activities plus other nearby emission sources would also be below the BAAQMD significance threshold of 100 per million and would also be less than significant with mitigation (see **Table AQ-5**).

Mitigation Measure AQ-4: *Implement Enhanced Exhaust Emissions Reduction Measures.* The construction contractor shall implement the following measures during construction to further reduce construction-related exhaust emissions:

All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and
2. All off-road equipment shall have:
   a. Engines that meet or exceed either USEPA or CARB Tier 2 off-road emission standards, and
   b. Engines that are retrofitted with a CARB Level 2 Verified Diesel Emissions Control Strategy (VDECS). Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such are available.

Table AQ-5: Estimated Mitigated Health Impacts for Existing Receptors

Source	Cancer Risk	Hazard Impact	PM2.5 Concentration
	Proposed Project		
Mitigated Proposed Project	**5.82**	**0.13**	**0.04**
Significance Threshold	10	1.0	0.3
Significant (Yes or No)?	No	No	No
	Cumulative		
City of Campbell, 70 North First Street[a]	0.59	<0.01	<0.01
City of Campbell, 70 North First Street[a]	5.25	0.03	<0.01
City of Campbell, 77 North Harrison Avenue[a]	2.40	0.02	<0.01
Orchard Valley Coffee, 349 East Campbell Avenue[a]	<0.01	<0.01	0.08
East Campbell Avenue[b]	4.44	<0.01	0.08
Rail Activities[c]	24.1	0.01	0.05
Mitigated Proposed Project	5.82	0.13	0.04
Cumulative Impact	**42.6**	**0.19**	**0.25**
Significance Threshold	100	10	0.8
Significant (Yes or No)?	No	No	No

a Cancer Risk, Hazard Impact, and $PM_{2.5}$ Concentration values for permitted stationary sources are based on BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*, dated May 30, 2012.
b Cancer Risk, Health Impact, and $PM_{2.5}$ Concentration values for local roadways are based on BAAQMD's Roadway Screening Analysis Calculator, dated April 16, 2015.
c Cancer Risk, Hazard Impact, and $PM_{2.5}$ Concentration values based on the assumption of the number of diesel locomotives passing by on a weekly basis. The AERMOD model was used to estimate maximum downwind concentrations and potential health risk at sensitive receptors from the rail line source.

Non-Cancer Health Hazard

Both acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of a project's incremental DPM exposure concentration to a published reference exposure level (REL) as determined by OEHHA. To compute the total HI, individual ratios or Hazard Quotients (HQs) of each individual air toxic are added to produce an overall HI. If the overall HI is greater than 1.0, then the impact is considered to be significant.

The chronic reference exposure level for DPM as determined by OEHHA is 5 $\mu g/m^3$. There is no acute REL for DPM. However, diesel exhaust does contain acrolein and other compounds, which do have an acute REL. Based on BAAQMD's DPM speciation data, acrolein emissions are approximately 1.3 percent of the total DPM emissions. The acute REL for acrolein as determined by OEHHA[9] is 2.5 $\mu g /m^3$.

The unmitigated and mitigated chronic HI would be 0.02 and 0.01, respectively. Thus, the chronic HI would be well below the BAAQMD significance threshold of 1 and the proposed project impact would less than significant. The cumulative chronic health impacts would also be well below the BAAQMD threshold of 10 (see **Tables AQ-4 and AQ-5**).

The unmitigated and mitigated acute HI would be 0.36 and 0.13, respectively. Thus, the acute HI would be below the BAAQMD significance threshold of 1 and the proposed project impact would be less than significant. The cumulative acute health impacts would be well below the BAAQMD significance threshold of 10 (see **Tables AQ-4 and AQ-5**).

PM2.5 Concentration

Dispersion modeling also estimated the exposure of sensitive receptors to project-related concentrations of PM2.5. The BAAQMD *Air Quality Guidelines* requires inclusion of only PM2.5 exhaust emissions in this analysis (i.e., fugitive dust emissions are addressed under BAAQMD dust control measures and are required by law to be implemented during project construction). The unmitigated annual PM2.5 concentration from proposed project construction activities would be 0.12 $\mu g/m^3$. With implementation of **Mitigation Measure AQ-4**, the annual PM2.5 concentration would be reduced to 0.04 $\mu g/m^3$. Thus, the annual PM2.5 concentration due to project construction would be below the BAAQMD significance threshold of 0.3 $\mu g/m^3$ and would be considered less than significant with mitigation (see **Tables AQ-4 and AQ-5**). The annual cumulative PM2.5 concentration would be below the BAAQMD significance threshold of 0.8 $\mu g/m^3$ and would be considered less than significant (see **Tables AQ-4 and AQ-5**).

9 California Office of Environmental Health Hazards Assessment Toxicity Criteria Database, 2010. http://www.oehha.ca.gov/tcdb/index.asp

e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Though offensive odors from stationary and mobile sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Generally, odor emissions are highly dispersive, especially in areas with higher average wind speeds. However, odors disperse less quickly during inversions or during calm conditions, which hamper vertical mixing and dispersion.

The BAAQMD's significance criteria for odors are subjective and are based on the number of odor complaints generated by a project. Generally, the BAAQMD considers any project with the potential to frequently expose members of the public to objectionable odors to cause a significant impact. With respect to the proposed project, diesel-fueled construction equipment exhaust would generate some odors. However, these emissions typically dissipate quickly and would be unlikely to affect a substantial number of people. Therefore, odor impacts associated with the location of the proposed project would be less than significant.

GREENHOUSE GAS EMISSIONS — *Would the project:*

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

CalEEMod was used to quantify GHG emissions associated with construction activities of the proposed project, as well as long-term operational emissions produced by motor vehicles, natural gas combustion for space and water heating, electricity use, and landscape maintenance equipment. CalEEMod incorporates GHG emission factors for the central electric utility serving the Bay Area and mitigation measures based on the California Air Pollution Control Officer's Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures* and the *California Climate Action Registry General Reporting Protocol*.

CalEEMod is sensitive to the year selected, since vehicle emissions have and continue to be reduced due to fuel efficiency standards and low carbon fuels. The operational year of 2018 was analyzed since it is the first full year that the proposed project could conceivably be occupied. The proposed project would be located approximately 0.1 miles from the Campbell Station. This proposed project element would tend to reduce motor vehicle emissions as it would tend to reduce daily trips by increasing the use of mass transportation. Lastly, the proposed project may install solar panels on the roof. This proposed project element would tend to reduce energy-related emissions as it would tend to reduce energy usage. However, to be conservative (overestimation) in the estimation of GHG emissions, credit was not applied for reduction in daily trips or energy usage.

Default rates for energy consumption were assumed in the model. Emissions rates associated with electricity consumption were adjusted to account for Pacific Gas & Electric utility's projected 2018 CO_2 intensity rate. This 2018 rate is based, in part, on the requirement of a renewable energy

portfolio standard of 33 percent by the year 2020. CalEEMod uses a default rate of 641 pounds of CO_2 per megawatt of electricity produced. The projected CO_2 intensity rate of 328 pounds of CO_2 per megawatt of electricity produced was used.[10] Generally, the estimated number of employees were based on a rate of one employee per 228 square feet for the office building and one employee per 549 square feet for the retail. The office space would have approximately 38 employees and the retail space would have approximately four employees.

Estimated construction and operational GHG emissions from the proposed project are presented in **Table GHG-1**. The estimated construction GHG emissions are 83.1 metric tons of CO_2e. As indicated, 30-year amortized annual construction related GHG emissions would be approximately 2.77 metric tons of CO_2e. There is no BAAQMD CEQA significance threshold for construction-related GHG emissions. The GHG construction and operational emissions would be 154 metric tons per year, which is below the BAAQMD threshold of 1,100 metric tons. The GHG construction and operational emissions would be 3.7 metric tons per service population (approximately 42 employees) per year, which is below the BAAQMD threshold of 4.6 metric tons per service population. Thus, the proposed project impacts on GHG emissions would be less than significant. GHG emissions would be lower if solar panels (under consideration) were included as part of the proposed project. The greenhouse gas setting and regulatory context are described in **Attachment D**.

Table GHG-1: Estimated Greenhouse Gas Emissions

Source	Annual CO_2e Metric Tons
Construction (30-year amortized)	2.77
Area Sources	<0.01
Energy	37.7
Mobile	104
Solid Waste	4.7
Water	4.0
Total Emissions (Construction Plus Operations)	**154**
BAAQMD Brightline Threshold	1,100
Potentially Significant?	No
Service Population	42
Total Emissions per Service Population	**3.7**
BAAQMD Efficiency Threshold	4.6
Potentially Significant?	No

SOURCE: CalEEMod Version 2013.2.2.

10 PG&E, *Greenhouse Gas Emission Factors: Guidance for PG&E Customers*, November 2015, http://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

The County of Santa Clara has adopted a Climate Action Plan (CAP)[11] regarding the reduction of GHG emissions. The County has established a baseline government and community-wide inventory of GHG emissions. The proposed project would result in a significant impact if it would be in conflict with AB 32 State goals and the goals, policies, and measures of the applicable CAP for reducing GHG emissions. The assumption is that AB 32 and the CAP will be successful in reducing GHG emissions and reducing the cumulative GHG emissions statewide by 2020. The County and State have taken these measures, because no project individually could have a major impact (either positively or negatively) on the global concentration of GHG. The proposed project has been reviewed relative to the AB 32 measures and County of Santa Clara CAP and it has been determined that the proposed project would not conflict with the goals of AB 32 and the applicable CAP.

The principal State plan and policy adopted for the purpose of reducing GHG emissions is AB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. Statewide plans and regulations such as GHG emissions standards for vehicles and the low carbon fuel standards are being implemented at the statewide level, and compliance at the specific plan or project level is not addressed. Therefore, the proposed project does not conflict with these plans and regulations.

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Attachment A

Air Quality Setting and Regulatory Context

The project site is located within the San Francisco Bay Area Air Basin (Air Basin), which encompasses Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin, and Napa Counties, and the southern portions of Solano and Sonoma Counties. The Air Basin is characterized by complex terrain which distorts normal wind flow patterns, consisting of coastal mountain ranges, inland valleys, and bays.

Regional Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological and geographical conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and San Francisco Bay), determine the effect of air pollutant emissions on local air quality.

The climate of the greater San Francisco Bay Area, including Santa Clara County, is a Mediterranean-type climate characterized by warm, dry summers and mild, wet winters. The climate is determined largely by a high-pressure system that is often present over the eastern Pacific Ocean off the West Coast of North America. In winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. During summer and fall, air emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are favorable to the formation of photochemical pollutants, such as ozone and secondary particulates, such as sulfates and nitrates.

The proposed project lies in the Santa Clara Valley climatological sub-region of the Bay Area. The northwest-southeast oriented Santa Clara Valley is bounded by the Santa Cruz Mountains to the west, the Diablo Range to the east, and the San Francisco Bay to the north. Temperatures are warm in summer, under mostly clear skies, although a relatively large diurnal range results in cool nights. Winter temperatures are mild, except for very cool but generally frostless mornings. The San Jose Airport mean maximum temperatures range from the high 70's to the low 80's during the summer to the high 50's to the low 60's during the winter, and mean minimum temperatures range from the high 50's during the summer to the low 40's during the winter.[1]

Rainfall amounts are modest ranging from 13 to 20 inches annually. The wind patterns in the Santa Clara Valley are influenced greatly by the terrain, resulting in a prevailing flow roughly parallel to the valley's northwest-southeast axis with a north-northwesterly sea breeze

[1] Bay Area Air Quality Management District. October 4, 2010, Bay Area Climatology http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Bay-Area-Climatology.aspx.

extending up the valley during the afternoon and early evening and a light south-southeasterly drainage flow occurring during the late evening and early morning.[2] The regional average annual wind speed is 7.1 miles per hour.

Local Air Quality

The Bay Area Air Quality management District (BAAQMD) maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The monitoring station closest to the project site is in San Jose (158 East Jackson Street), approximately five miles northeast of the project site; where levels of ozone, particulate matter less than 10 micrometers (PM10), particulate matter less than 2.5 micrometers (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are recorded.

Table AQ-1 summarizes the most recent three years of data (2013 through 2015) from the San Jose air monitoring station. The federal 24-hour PM2.5 standard was exceeded twice in 2015, twice in 2014, and six times in 2013; while the State PM10 standard was exceeded once in 2015, once in 2014, and five times in 2013. The federal 8-hour ozone standard was exceeded twice in 2015 and once in 2013. No other State or federal air quality standards were exceeded during the three-year period.

The Bay Area is currently designated "nonattainment" for state and national (1-hour and 8-hour) ozone standards, for the state PM10 standards, and for state and national (annual average and 24-hour) PM2.5 standards. The Bay Area is designated "attainment" or "unclassifiable" with respect to the other ambient air quality standards.

[2] Bay Area Air Quality Management District. October 4, 2010, Bay Area Climatology http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Bay-Area-Climatology.aspx.

Table AQ–1: Air Quality Data Summary (2013 through 2015)

Pollutant	Standard[a]	Monitoring Data by Year 2013	2014	2015
Ozone				
Highest 1 Hour Average (ppm)[b]	0.09	0.093	0.089	0.094
Days over State Standard		0	0	0
Highest 8 Hour Average (ppm)[b]	0.075	**0.079**	0.066	**0.081**
Days over National Standard		**1**	0	**2**
Nitrogen Dioxide (NO_2)				
Highest 1 Hour Average (ppm)[b]	0.180	0.059	0.058	0.049
Days over State Standard		0	0	0
Annual Average ($\mu g/m^3$)[b]	0.030/0.053	0.015	0.013	0.013
Carbon Monoxide (CO)				
Highest 1 Hour Average (ppm)[b]	9.0	3.1	2.4	2.4
Days over State Standard		0	0	0
Highest 8 Hour Average (ppm)[b]	20	2.5	1.9	1.8
Days over State Standard		0	0	0
Coarse Particulate Matter (PM10)				
Highest 24 Hour Average ($\mu g/m^3$)[b]	50	**58.1**	**55.0**	**58.0**
Days over State Standard		**5**	**1**	**1**
State Annual Average ($\mu g/m^3$)[b]	20	**22.3**	19.9	**22.0**
Fine Particulate Matter (PM2.5)				
Highest 24 Hour Average ($\mu g/m^3$)[b]	35	**57.7**	**60.4**	**49.4**
Days over National Standard		**6**	**2**	**2**
State Annual Average ($\mu g/m^3$)[b]	12	**12.4**	8.4	10.0

*NOTES: Values in **bold** are in excess of at least one applicable standard.*
Generally, state standards and national standards are not to be exceeded more than once per year.
ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.
PM10 is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.

Source: Annual Bay Area Air Quality Summaries, http://www.baaqmd.gov/about-air-quality/air-quality-summaries

The BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor air toxics in the Bay Area. Based on findings of the latest report, diesel particulate matter (DPM) was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed four percent of the cancer risk-weighted emissions, and benzene contributed three percent. Collectively, five compounds—DPM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). A 75 percent reduction in DPM was predicted between 2005 and 2015 when the inventory accounted for California Air Resources Board (CARB)'s diesel regulations. Overall, cancer risk from toxic air

contaminants (TAC) dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for state diesel regulations and other reductions.[3]

Modeled cancer risks from TAC in 2005 were highest near sources of DPM: near core urban areas, along major roadways and freeways, and near maritime shipping terminals. Peak modeled risks were found to be located east of San Francisco, near West Oakland, and the maritime Port of Oakland. BAAQMD has identified seven impacted communities in the Bay Area:

- Western Contra Costa County and the cities of Richmond and San Pablo.
- Western Alameda County along the Interstate 880 corridor and the cities of Berkeley, Alameda, Oakland, and Hayward.
- San Jose.
- Eastern side of San Francisco.
- Concord.
- Vallejo.
- Pittsburgh and Antioch.

The proposed project is within the city of Campbell, which is not part of the seven CARE program impacted communities in the Bay Area. The health impacts in the Bay Area, as determined both by pollution levels and by existing health vulnerabilities in a community, is approximately 160 cancer risk per million persons, while in Campbell, the health impacts is approximately 142 cancer risk per million persons.[4]

Nearby Sensitive Receptors

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences,

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[3] BAAQMD. Improving Air Quality & Health in Bay Area Communities, Community Air Risk Program (CARE) Retrospective & Path Forward (2004 – 2013). April 2014. http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE_Retrospective_April2014.ashx?la=en

[4] BAAQMD. Identifying Areas with Cumulative Impacts from Air Pollution in the San Francisco Bay Area. March 2014. http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CARE%20Program/Documents/ImpactCommunities_2_Methodology.ashx?la=en

resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience. According to the BAAQMD, workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees.

BAAQMD considers the relevant zone of influence for an assessment of air quality health risks to be within 1,000 feet of a project site. The project site is directly adjacent to Campbell Avenue. Existing residences are located a couple blocks to the north and within 250 feet to the southwest of the project site. Nelly's Childcare and Preschool is located to the southeast of the project site.

Air Quality Significance Thresholds

The significance of potential impacts was determined based on State CEQA Guidelines, Appendix G, and the BAAQMD *CEQA Air Quality Guidelines*. Using Appendix G evaluation thresholds, the proposed project would be considered to have significant air quality impacts if it were to:

A. Conflict with or obstruct implementation of the applicable air quality plan;

B. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

C. Expose sensitive receptors to substantial pollutant concentrations;

D. Create objectionable odors affecting a substantial number of people; or

E. Result in a cumulatively considerable net increase of any nonattainment pollutant, and/or health impacts (including releasing emissions that exceed quantitative thresholds for ozone precursors).

The air quality analysis follows the methodology presented in the recent CEQA Guidelines released by the BAAQMD in May 2012. However, since the May 2012 *CEQA Air Quality Guidelines* do not provide specific significance thresholds, the thresholds and methodologies from the BAAQMD's 2012 *CEQA Air Quality Guidelines* were used to evaluate the potential impacts of remediation activities. The thresholds of significance applied to assess project-level air quality impacts are:

- Average daily construction exhaust emissions of 54 pounds per day of ROG, NO_x, or PM2.5 or 82 pounds per day of PM10;
- Average daily operation emissions of 54 pounds per day of ROG, NO_x, or PM2.5 or 82 pounds per day of PM10; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or PM2.5 or 15 tons per year of PM10;
- Exposure of persons by siting a new source or a new sensitive receptor to substantial levels of toxic air contaminants (TAC) resulting in (a) a cancer risk level greater than 10 in one million, (b) a noncancerous risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM2.5 of greater than 0.3 micrograms per cubic

meter ($\mu g/m^3$). For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers; or

- Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people.

Assessment of a significant cumulative impact if it would result in:

- Exposure of persons, by siting a new source or a new sensitive receptor, to substantial levels of TAC during either construction or operation resulting in (a) a cancer risk level greater than 100 in a million, (b) a noncancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average $PM_{2.5}$ of greater than 0.8 $\mu g/m^3$.

The BAAQMD air quality significance thresholds are found in **Table AQ-2**.

Table AQ–2: BAAQMD Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Daily Operational Thresholds	Annual Operational Thresholds
Criteria Air Pollutants			
Reactive Organic Compounds (ROG)	54	54	10
Nitrogen Oxides (NOx)	54	54	10
Coarse Particulate matter (PM10)	82	82	15
Fine Particulate Matter (PM2.5)	54	54	10
Carbon Monoxide (CO)	NA	9.0 ppm (8-hour) and 20.0 ppm (1-hour)	
Fugitive Dust	Best Management Practices	NA	
Project Health Risk and Hazards			
Excess Cancer Risk	10 per million	10 per million	
Chronic Hazard Index	1.0	1.0	
Acute Hazard Index	1.0	1.0	
Incremental Annual Average PM2.5	0.3 $\mu g/m^3$	0.3 $\mu g/m^3$	
Cumulative Health Risk and Hazards			
Excess Cancer Risk	100 per million	100 per million	
Chronic Hazard Index	10.0	10.0	
Acute Hazard Index	10.0	10.0	
Incremental Annual Average PM2.5	0.8 $\mu g/m^3$	0.8 $\mu g/m^3$	
Greenhouse Gas Emissions			
Annual Emissions	1,100 metric tons or 4.6 metric tons per capita		

SOURCE: BAAQMD Adopted Air Quality CEQA Thresholds of Significance - June 2, 2010, http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Summary_Table_Proposed_BAAQMD_CEQA_Thresholds_May_3_2010.ashx?la=en

The BAAQMD *CEQA Air Quality Guidelines* identify a project-specific threshold of either 1,100 metric tons of CO_2e per year or 4.6 metric tons of CO_2e per year per service population (i.e., the number of residents plus the number of employees associated with a new development), which is also considered a cumulatively considerable contribution to the global GHG burden and,

therefore, a significant cumulative impact. This analysis applies the 4.6 metric tons of CO_2e per year per service population significance criterion to the proposed project GHG emissions.

Attachment B

Air Quality Calculation Assumptions and Methodologies

The air quality analysis focuses on daily and annual emissions from the proposed project construction activities (offroad equipment, haul trucks, and fugitive dust) and operations. This air quality analysis is consistent with the methods described in the BAAQMD *CEQA Air Quality Guidelines* (dated June 2010, updated in May 2011, and revised in May 2012).[1] Mitigation measures are presented to reduce impacts to less than significant, as applicable.

Air quality calculations were made for combustion sources such as on-road vehicles from employees and haul trucks as well as onsite combustion equipment such as loaders and excavators. Fugitive dust from grading, loading/unloading, and vehicle movement on unpaved surfaces was also calculated.

The air quality analysis includes a review of criteria pollutant[2] emissions such as carbon monoxide (CO)[3], nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOC) as reactive organic gases (ROG)[4], particulate matter less than 10 micrometers (PM10), particulate matter less than 2.5 micrometers (PM2.5).[5] The HRA addresses diesel particulate matter (DPM) emissions from on-site offroad equipment and haul trucks and cumulative impacts from nearby rail activities and stationary permitted sources.

Regulatory models used to estimate air quality impacts include:

- California Air Resources Board's (CARB) EMFAC[6]emissions inventory model. EMFAC is the latest emission inventory model that calculates emission inventories and emission

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1 The Air District's June 2010 adopted thresholds of significance were challenged in a lawsuit. Although the BAAQMD's adoption of significance thresholds for air quality analysis has been subject to judicial actions, the lead agency has determined that BAAQMD's Revised Draft Options and Justification Report (October 2009) provide substantial evidence to support the BAAQMD recommended thresholds. Therefore, the lead agency has determined the BAAQMD recommended thresholds are appropriate for use in this analysis.

2 Criteria air pollutants refer to those air pollutants for which the United States Environmental Protection Agency (USEPA) and California Air Resources Board (CARB) has established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) under the Federal Clean Air Act (CAA).

3 CO is a non–reactive pollutant that is a product of incomplete combustion of organic material, and is mostly associated with motor vehicle traffic, and in wintertime, with wood–burning stoves and fireplaces.

4 VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROGs are any reactive compounds of carbon, excluding methane, CO, CO_2, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

5 PM10 and PM2.5 consists of airborne particles that measure 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.

6 CARB EMFAC User's Guide, December 20, 2012, http://www.arb.ca.gov/msei/modeling.htm

rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.

- CARB OFFROAD[7] emissions inventory model. OFFROAD is the latest emission inventory model that calculates emission inventories and emission rates for off-road equipment such as loaders, excavators, and off-road haul trucks operating in California. This model reflects CARB's current understanding of how equipment operates and how much they emit. OFFROAD can be used to show how California off-road equipment emissions have changed over time and are projected to change in the future.

- CalEEMod (California Emissions Estimator Model Version 2013.2.2)[8] land use emissions model estimates emissions due to demolition and construction activities and operations.

- AERMOD (American Meteorological Society/USEPA Regulatory Model) is an atmospheric dispersion model which can simulate point, area, volume, and line emissions sources and has the capability to include simple, intermediate, and complex terrain along with meteorological conditions and multiple receptor locations.[9,10] AERMOD is commonly executed to yield 1-hour maximum and annual average concentrations (in $\mu g/m^3$) at each receptor.

Construction activities are expected to commence in April 2017 with interior demolition, grading, and site improvements and building construction would occur between April and October of 2017. Construction activities would be completed following paving and architectural coating in October of 2017. **Table AQ-3** provides the estimated construction schedule for each phase: demolition, site preparation, grading, building construction, paving, and coating.

Table AQ-3: Estimated Project Construction Schedule

Phase	Description	Start	End	Working Days
1	Demolition	04/01/2017	04/07/2017	5
2	Site Preparation	04/08/2017	04/10/2017	1
3	Grading	04/11/2017	04/12/2017	2
4	Building Construction	04/13/2017	10/15/2017	132
5	Paving	10/16/2017	10/22/2017	5
6	Architectural Coating	10/23/2017	10/29/2017	5

SOURCE: CalEEMod Version 2013.2.2.

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7 CARB OFFROAD Instructions, http://www.arb.ca.gov/msprog/ordiesel/info_1085/oei_write_up.pdf

8 California Emissions Estimator Model User's Guide, July 2013. http://www.caleemod.com/

9 USEPA Preferred/Recommended Models, *AERMOD Modeling System*, http://www.epa.gov/ttn/scram/dispersion_prefrec.htm#aermod.

10 Title 40 CFR Part 51, *Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule,* http://www.epa.gov/ttn/scram/guidance/guide/appw_05.pdf.

Project construction would generate short-term emissions of air pollutants, including fugitive dust and equipment exhaust emissions. The BAAQMD *CEQA Air Quality Guidelines* recommend quantification of construction-related exhaust emissions and comparison of those emissions to significance thresholds. The CalEEMod was used to quantify construction-related pollutant emissions. CalEEMod output worksheets are also included in **Attachment AQ-2**.

The estimated construction equipment associated with the proposed project along with the number of pieces of equipment, daily hours of operation, horsepower (hp), and load factor (i.e., percent of full throttle) are shown in **Table AQ-4**.

Table AQ-4: Estimated Project Construction Equipment Usage

Phase	Equipment	Amount	Daily Hours	HP	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
Demolition	Rubber Tired Dozers	1	1	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6	97	0.37
Site Preparation	Graders	1	8	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Concrete/Industrial Saws	1	8	81	0.73
Grading	Rubber Tired Dozers	1	1	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6	97	0.37
Building Construction	Cranes	1	4	226	0.29
Building Construction	Forklifts	2	6	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8	97	0.37
Paving	Cement and Mortar Mixers	4	6	9	0.56
Paving	Pavers	1	7	125	0.42
Paving	Tractors/Loaders/Backhoes	1	7	97	0.37
Paving	Rollers	1	7	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48

SOURCE: CalEEMod Version 2013.2.2.

Based on CalEEMod, a total of approximately 25 haul truck trips were estimated during site preparation. An average daily construction crew of 10 employees would be present on-site during building construction with less workers during other construction phases. **Table AQ-5** provides a list of the expected trips and trip lengths by construction phase of haul trucks, vendors, and construction workers.

Table AQ-5: Daily Construction Trips and Trip Lengths

Phase	Worker Trips	Vendor Trips	Haul Truck Trips	Worker Trip Length (mile)	Vendor Trip Length (mile)	Haul Trip Length (mile)
Demolition	10	0	2	12.4	7.3	20.0
Site Preparation	5	0	25	12.4	7.3	20.0
Grading	10	0	0	12.4	7.3	20.0
Building Construction	3	2	0	12.4	7.3	20.0
Paving	18	0	0	12.4	7.3	20.0
Architectural Coating	1	0	0	12.4	7.3	20.0

SOURCE: CalEEMod Version 2013.2.2.

Attachment B

Construction and Operational Emissions

CalEEMod Output Files

- Annual
- Summer
- Winter

1st & Campbell - Phase III

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.56	1000sqft	0.00	8,560.00	0
Regional Shopping Center	2.36	1000sqft	0.05	2,360.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E, November 2015

Land Use - First floor is a 2,356 SF retail building addition. Second/Thrid floor is 8,563 SF of office space. No paving/parking.

Construction Phase - Demolition is interior demoltion only- no buildings will be demolished

Off-road Equipment - No construction equipment during demolition - Interior demolition only.

Off-road Equipment -

Off-road Equipment -

Grading - Minor excavation for foundation and footings (small amount of soil export)

Demolition - Interior Demolition Material

Architectural Coating -

Landscape Equipment - No Landscaping

Energy Use - PG&E, November 2015

Construction Off-road Equipment Mitigation - BAAQMD Basic and Enhanced Mitigation Measures

Mobile Land Use Mitigation - 0.1 from Campbell Station

Energy Mitigation - Solar Pannels for the roof

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	132.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	PhaseEndDate	10/27/2017	10/29/2017
tblConstructionPhase	PhaseEndDate	10/13/2017	10/15/2017
tblConstructionPhase	PhaseEndDate	10/20/2017	10/22/2017
tblGrading	AcresOfGrading	0.00	0.05
tblGrading	AcresOfGrading	0.50	0.05
tblGrading	MaterialExported	0.00	200.00
tblLandUse	LotAcreage	0.20	0.00
tblLandUse	LotAcreage	0.05	0.05

tblProjectCharacteristics	CO2IntensityFactor	641.35	328
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1519	0.9263	0.6193	9.0000e-004	4.7500e-003	0.0616	0.0663	1.4500e-003	0.0568	0.0582	0.0000	82.5792	82.5792	0.0230	0.0000	83.0628
Total	**0.1519**	**0.9263**	**0.6193**	**9.0000e-004**	**4.7500e-003**	**0.0616**	**0.0663**	**1.4500e-003**	**0.0568**	**0.0582**	**0.0000**	**82.5792**	**82.5792**	**0.0230**	**0.0000**	**83.0628**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1004	0.7879	0.6112	9.0000e-004	4.1500e-003	0.0206	0.0247	1.2000e-003	0.0199	0.0211	0.0000	82.5791	82.5791	0.0230	0.0000	83.0627
Total	**0.1004**	**0.7879**	**0.6112**	**9.0000e-004**	**4.1500e-003**	**0.0206**	**0.0247**	**1.2000e-003**	**0.0199**	**0.0211**	**0.0000**	**82.5791**	**82.5791**	**0.0230**	**0.0000**	**83.0627**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**33.89**	**14.94**	**1.30**	**0.00**	**12.63**	**66.62**	**62.75**	**17.24**	**64.98**	**63.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Energy	8.3000e-004	7.5100e-003	6.3100e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	37.3857	37.3857	2.7400e-003	6.8000e-004	37.6553
Mobile	0.0859	0.1723	0.8046	1.7700e-003	0.1269	2.2900e-003	0.1292	0.0339	2.1100e-003	0.0361	0.0000	131.0649	131.0649	5.2100e-003	0.0000	131.1743
Waste						0.0000	0.0000		0.0000	0.0000	2.1192	0.0000	2.1192	0.1252	0.0000	4.7493
Water						0.0000	0.0000		0.0000	0.0000	0.5381	1.9069	2.4450	0.0554	1.3400e-003	4.0246
Area	0.0484	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.1351**	**0.1798**	**0.8110**	**1.8200e-003**	**0.1269**	**2.8600e-003**	**0.1298**	**0.0339**	**2.6800e-003**	**0.0366**	**2.6574**	**170.3576**	**173.0150**	**0.1886**	**2.0200e-003**	**177.6038**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Energy	8.3000e-004	7.5100e-003	6.3100e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	34.4651	34.4651	2.4800e-003	6.3000e-004	34.7127
Mobile	0.0816	0.1434	0.6995	1.4100e-003	0.1000	1.8600e-003	0.1018	0.0267	1.7100e-003	0.0284	0.0000	104.4006	104.4006	4.2600e-003	0.0000	104.4901
Waste						0.0000	0.0000		0.0000	0.0000	2.1192	0.0000	2.1192	0.1252	0.0000	4.7493
Water						0.0000	0.0000		0.0000	0.0000	0.5381	1.9069	2.4450	0.0554	1.3400e-003	4.0238
Area	0.0484	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.1308**	**0.1509**	**0.7059**	**1.4600e-003**	**0.1000**	**2.4300e-003**	**0.1024**	**0.0267**	**2.2800e-003**	**0.0290**	**2.6574**	**140.7727**	**143.4301**	**0.1874**	**1.9700e-003**	**147.9760**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.20**	**16.05**	**12.95**	**19.78**	**21.24**	**15.03**	**21.10**	**21.24**	**14.93**	**20.78**	**0.00**	**17.37**	**17.10**	**0.65**	**2.48**	**16.68**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2017	4/7/2017	5	5	
2	Site Preparation	Site Preparation	4/8/2017	4/10/2017	5	1	
3	Grading	Grading	4/11/2017	4/12/2017	5	2	
4	Building Construction	Building Construction	4/13/2017	10/15/2017	5	132	
5	Paving	Paving	10/16/2017	10/22/2017	5	5	
6	Architectural Coating	Architectural Coating	10/23/2017	10/29/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.054

Acres of Grading (Grading Phase): 0.054

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,380; Non-Residential Outdoor: 5,460 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	2.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	25.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	2.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0100e-003	0.0262	0.0215	3.0000e-005		1.8200e-003	1.8200e-003		1.7300e-003	1.7300e-003	0.0000	2.6848	2.6848	5.3000e-004	0.0000	2.6960
Total	**3.0100e-003**	**0.0262**	**0.0215**	**3.0000e-005**	**2.7000e-004**	**1.8200e-003**	**2.0900e-003**	**4.0000e-005**	**1.7300e-003**	**1.7700e-003**	**0.0000**	**2.6848**	**2.6848**	**5.3000e-004**	**0.0000**	**2.6960**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	2.7000e-004	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0673	0.0673	0.0000	0.0000	0.0674
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.1400e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1929	0.1929	1.0000e-005	0.0000	0.1931
Total	**1.0000e-004**	**3.9000e-004**	**1.3600e-003**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2602**	**0.2602**	**1.0000e-005**	**0.0000**	**0.2605**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9500e-003	0.0261	0.0206	3.0000e-005		1.0000e-003	1.0000e-003		9.8000e-004	9.8000e-004	0.0000	2.6848	2.6848	5.3000e-004	0.0000	2.6960
Total	**1.9500e-003**	**0.0261**	**0.0206**	**3.0000e-005**	**1.2000e-004**	**1.0000e-003**	**1.1200e-003**	**2.0000e-005**	**9.8000e-004**	**1.0000e-003**	**0.0000**	**2.6848**	**2.6848**	**5.3000e-004**	**0.0000**	**2.6960**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	2.7000e-004	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0673	0.0673	0.0000	0.0000	0.0674
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.1400e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1929	0.1929	1.0000e-005	0.0000	0.1931
Total	**1.0000e-004**	**3.9000e-004**	**1.3600e-003**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2602**	**0.2602**	**1.0000e-005**	**0.0000**	**0.2605**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-004	6.3400e-003	3.6200e-003	0.0000		3.9000e-004	3.9000e-004		3.5000e-004	3.5000e-004	0.0000	0.4336	0.4336	1.3000e-004	0.0000	0.4364
Total	**6.3000e-004**	**6.3400e-003**	**3.6200e-003**	**0.0000**	**4.0000e-005**	**3.9000e-004**	**4.3000e-004**	**0.0000**	**3.5000e-004**	**3.5000e-004**	**0.0000**	**0.4336**	**0.4336**	**1.3000e-004**	**0.0000**	**0.4364**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	3.3400e-003	2.7200e-003	1.0000e-005	2.1000e-004	4.0000e-005	2.5000e-004	6.0000e-005	4.0000e-005	1.0000e-004	0.0000	0.8418	0.8418	1.0000e-005	0.0000	0.8419
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0193	0.0193	0.0000	0.0000	0.0193
Total	**2.5000e-004**	**3.3500e-003**	**2.8300e-003**	**1.0000e-005**	**2.3000e-004**	**4.0000e-005**	**2.7000e-004**	**7.0000e-005**	**4.0000e-005**	**1.1000e-004**	**0.0000**	**0.8611**	**0.8611**	**1.0000e-005**	**0.0000**	**0.8612**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	4.1300e-003	3.5100e-003	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.4336	0.4336	1.3000e-004	0.0000	0.4364
Total	**2.1000e-004**	**4.1300e-003**	**3.5100e-003**	**0.0000**	**2.0000e-005**	**9.0000e-005**	**1.1000e-004**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.4336**	**0.4336**	**1.3000e-004**	**0.0000**	**0.4364**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	3.3400e-003	2.7200e-003	1.0000e-005	2.1000e-004	4.0000e-005	2.5000e-004	6.0000e-005	4.0000e-005	1.0000e-004	0.0000	0.8418	0.8418	1.0000e-005	0.0000	0.8419
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0193	0.0193	0.0000	0.0000	0.0193
Total	**2.5000e-004**	**3.3500e-003**	**2.8300e-003**	**1.0000e-005**	**2.3000e-004**	**4.0000e-005**	**2.7000e-004**	**7.0000e-005**	**4.0000e-005**	**1.1000e-004**	**0.0000**	**0.8611**	**0.8611**	**1.0000e-005**	**0.0000**	**0.8612**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8000e-004	0.0000	7.8000e-004	4.2000e-004	0.0000	4.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-003	0.0105	8.5800e-003	1.0000e-005		7.3000e-004	7.3000e-004		6.9000e-004	6.9000e-004	0.0000	1.0739	1.0739	2.1000e-004	0.0000	1.0784
Total	**1.2000e-003**	**0.0105**	**8.5800e-003**	**1.0000e-005**	**7.8000e-004**	**7.3000e-004**	**1.5100e-003**	**4.2000e-004**	**6.9000e-004**	**1.1100e-003**	**0.0000**	**1.0739**	**1.0739**	**2.1000e-004**	**0.0000**	**1.0784**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	5.0000e-005	4.5000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0772	0.0772	0.0000	0.0000	0.0772
Total	**3.0000e-005**	**5.0000e-005**	**4.5000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0772**	**0.0772**	**0.0000**	**0.0000**	**0.0772**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5000e-004	0.0000	3.5000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.8000e-004	0.0104	8.2500e-003	1.0000e-005		4.0000e-004	4.0000e-004		3.9000e-004	3.9000e-004	0.0000	1.0739	1.0739	2.1000e-004	0.0000	1.0784
Total	**7.8000e-004**	**0.0104**	**8.2500e-003**	**1.0000e-005**	**3.5000e-004**	**4.0000e-004**	**7.5000e-004**	**1.9000e-004**	**3.9000e-004**	**5.8000e-004**	**0.0000**	**1.0739**	**1.0739**	**2.1000e-004**	**0.0000**	**1.0784**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	5.0000e-005	4.5000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0772	0.0772	0.0000	0.0000	0.0772
Total	**3.0000e-005**	**5.0000e-005**	**4.5000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0772**	**0.0772**	**0.0000**	**0.0000**	**0.0772**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0841	0.8365	0.5306	7.5000e-004		0.0565	0.0565		0.0519	0.0519	0.0000	69.4260	69.4260	0.0213	0.0000	69.8727
Total	**0.0841**	**0.8365**	**0.5306**	**7.5000e-004**		**0.0565**	**0.0565**		**0.0519**	**0.0519**	**0.0000**	**69.4260**	**69.4260**	**0.0213**	**0.0000**	**69.8727**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3700e-003	0.0118	0.0165	3.0000e-005	8.5000e-004	1.7000e-004	1.0200e-003	2.4000e-004	1.6000e-004	4.0000e-004	0.0000	2.8056	2.8056	2.0000e-005	0.0000	2.8061
Worker	6.6000e-004	9.3000e-004	9.0000e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5277	1.5277	8.0000e-005	0.0000	1.5293
Total	**2.0300e-003**	**0.0127**	**0.0255**	**5.0000e-005**	**2.6500e-003**	**1.8000e-004**	**2.8400e-003**	**7.2000e-004**	**1.7000e-004**	**8.9000e-004**	**0.0000**	**4.3333**	**4.3333**	**1.0000e-004**	**0.0000**	**4.3354**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0366	0.7040	0.5250	7.5000e-004		0.0182	0.0182		0.0176	0.0176	0.0000	69.4259	69.4259	0.0213	0.0000	69.8726
Total	**0.0366**	**0.7040**	**0.5250**	**7.5000e-004**		**0.0182**	**0.0182**		**0.0176**	**0.0176**	**0.0000**	**69.4259**	**69.4259**	**0.0213**	**0.0000**	**69.8726**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3700e-003	0.0118	0.0165	3.0000e-005	8.5000e-004	1.7000e-004	1.0200e-003	2.4000e-004	1.6000e-004	4.0000e-004	0.0000	2.8056	2.8056	2.0000e-005	0.0000	2.8061
Worker	6.6000e-004	9.3000e-004	9.0000e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5277	1.5277	8.0000e-005	0.0000	1.5293
Total	**2.0300e-003**	**0.0127**	**0.0255**	**5.0000e-005**	**2.6500e-003**	**1.8000e-004**	**2.8400e-003**	**7.2000e-004**	**1.7000e-004**	**8.9000e-004**	**0.0000**	**4.3333**	**4.3333**	**1.0000e-004**	**0.0000**	**4.3354**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6000e-003	0.0246	0.0181	3.0000e-005		1.5000e-003	1.5000e-003		1.3900e-003	1.3900e-003	0.0000	2.4243	2.4243	6.7000e-004	0.0000	2.4384
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6000e-003**	**0.0246**	**0.0181**	**3.0000e-005**		**1.5000e-003**	**1.5000e-003**		**1.3900e-003**	**1.3900e-003**	**0.0000**	**2.4243**	**2.4243**	**6.7000e-004**	**0.0000**	**2.4384**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	2.1000e-004	2.0400e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3472	0.3472	2.0000e-005	0.0000	0.3476
Total	**1.5000e-004**	**2.1000e-004**	**2.0400e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3472**	**0.3472**	**2.0000e-005**	**0.0000**	**0.3476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0700e-003	0.0206	0.0170	3.0000e-005		4.7000e-004	4.7000e-004		4.6000e-004	4.6000e-004	0.0000	2.4243	2.4243	6.7000e-004	0.0000	2.4384
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0700e-003**	**0.0206**	**0.0170**	**3.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**2.4243**	**2.4243**	**6.7000e-004**	**0.0000**	**2.4384**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	2.1000e-004	2.0400e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3472	0.3472	2.0000e-005	0.0000	0.3476
Total	**1.5000e-004**	**2.1000e-004**	**2.0400e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3472**	**0.3472**	**2.0000e-005**	**0.0000**	**0.3476**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0569					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	5.4600e-003	4.6700e-003	1.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397
Total	**0.0578**	**5.4600e-003**	**4.6700e-003**	**1.0000e-005**		**4.3000e-004**	**4.3000e-004**		**4.3000e-004**	**4.3000e-004**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6397**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0193	0.0193	0.0000	0.0000	0.0193
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0193**	**0.0193**	**0.0000**	**0.0000**	**0.0193**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0569					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	5.8800e-003	4.5800e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.6383	0.6383	7.0000e-005	0.0000	0.6397
Total	**0.0572**	**5.8800e-003**	**4.5800e-003**	**1.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.6383**	**0.6383**	**7.0000e-005**	**0.0000**	**0.6397**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0193	0.0193	0.0000	0.0000	0.0193
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0193**	**0.0193**	**0.0000**	**0.0000**	**0.0193**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0816	0.1434	0.6995	1.4100e-003	0.1000	1.8600e-003	0.1018	0.0267	1.7100e-003	0.0284	0.0000	104.4006	104.4006	4.2600e-003	0.0000	104.4901
Unmitigated	0.0859	0.1723	0.8046	1.7700e-003	0.1269	2.2900e-003	0.1292	0.0339	2.1100e-003	0.0361	0.0000	131.0649	131.0649	5.2100e-003	0.0000	131.1743

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	94.25	20.29	8.39	170,664	134,417
Regional Shopping Center	101.34	117.93	59.57	171,370	134,973
Total	195.58	138.22	67.96	342,034	269,389

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.551461	0.058468	0.185554	0.123211	0.029507	0.004440	0.012712	0.023230	0.001775	0.001270	0.006089	0.000516	0.001766

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	26.2855	26.2855	2.3200e-003	4.8000e-004	26.4833
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	29.2061	29.2061	2.5800e-003	5.3000e-004	29.4259
NaturalGas Mitigated	8.3000e-004	7.5100e-003	6.3100e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1796	8.1796	1.6000e-004	1.5000e-004	8.2294
NaturalGas Unmitigated	8.3000e-004	7.5100e-003	6.3100e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1796	8.1796	1.6000e-004	1.5000e-004	8.2294

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	147403	7.9000e-004	7.2300e-003	6.0700e-003	4.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	7.8660	7.8660	1.5000e-004	1.4000e-004	7.9139
Regional Shopping Center	5876.4	3.0000e-005	2.9000e-004	2.4000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3136	0.3136	1.0000e-005	1.0000e-005	0.3155
Total		**8.2000e-004**	**7.5200e-003**	**6.3100e-003**	**4.0000e-005**		**5.7000e-004**	**5.7000e-004**		**5.7000e-004**	**5.7000e-004**	**0.0000**	**8.1796**	**8.1796**	**1.6000e-004**	**1.5000e-004**	**8.2294**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	147403	7.9000e-004	7.2300e-003	6.0700e-003	4.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	7.8660	7.8660	1.5000e-004	1.4000e-004	7.9139
Regional Shopping Center	5876.4	3.0000e-005	2.9000e-004	2.4000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3136	0.3136	1.0000e-005	1.0000e-005	0.3155
Total		**8.2000e-004**	**7.5200e-003**	**6.3100e-003**	**4.0000e-005**		**5.7000e-004**	**5.7000e-004**		**5.7000e-004**	**5.7000e-004**	**0.0000**	**8.1796**	**8.1796**	**1.6000e-004**	**1.5000e-004**	**8.2294**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	168718	25.1015	2.2200e-003	4.6000e-004	25.2905
Regional Shopping Center	27588.4	4.1046	3.6000e-004	8.0000e-005	4.1355
Total		**29.2061**	**2.5800e-003**	**5.4000e-004**	**29.4259**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	151846	22.5914	2.0000e-003	4.1000e-004	22.7614
Regional Shopping Center	24829.6	3.6941	3.3000e-004	7.0000e-005	3.7219
Total		**26.2855**	**2.3300e-003**	**4.8000e-004**	**26.4833**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0484	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Unmitigated	0.0484	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0427					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0484**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0427					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	**0.0484**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.0000**	**2.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.4450	0.0554	1.3400e-003	4.0238
Unmitigated	2.4450	0.0554	1.3400e-003	4.0246

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.5214 / 0.932472	2.1930	0.0497	1.2000e-003	3.6098
Regional Shopping Center	0.174811 / 0.107142	0.2520	5.7100e-003	1.4000e-004	0.4148
Total		**2.4450**	**0.0554**	**1.3400e-003**	**4.0246**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.5214 / 0.932472	2.1930	0.0497	1.2000e-003	3.6091
Regional Shopping Center	0.174811 / 0.107142	0.2520	5.7100e-003	1.4000e-004	0.4147
Total		**2.4450**	**0.0554**	**1.3400e-003**	**4.0238**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.1192	0.1252	0.0000	4.7493
Unmitigated	2.1192	0.1252	0.0000	4.7493

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	7.96	1.6158	0.0955	0.0000	3.6211
Regional Shopping Center	2.48	0.5034	0.0298	0.0000	1.1282
Total		**2.1192**	**0.1252**	**0.0000**	**4.7493**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	7.96	1.6158	0.0955	0.0000	3.6211
Regional Shopping Center	2.48	0.5034	0.0298	0.0000	1.1282
Total		**2.1192**	**0.1252**	**0.0000**	**4.7493**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

1st & Campbell - Phase III

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.56	1000sqft	0.00	8,560.00	0
Regional Shopping Center	2.36	1000sqft	0.05	2,360.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E, November 2015

Land Use - First floor is a 2,356 SF retail building addition. Second/Thrid floor is 8,563 SF of office space. No paving/parking.

Construction Phase - Demolition is interior demoltion only- no buildings will be demolished

Off-road Equipment - No construction equipment during demolition - Interior demolition only.

Off-road Equipment -

Off-road Equipment -

Grading - Minor excavation for foundation and footings (small amount of soil export)

Demolition - Interior Demolition Material

Architectural Coating -

Landscape Equipment - No Landscaping

Energy Use - PG&E, November 2015

Construction Off-road Equipment Mitigation - BAAQMD Basic and Enhanced Mitigation Measures

Mobile Land Use Mitigation - 0.1 from Campbell Station

Energy Mitigation - Solar Pannels for the roof

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	132.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	PhaseEndDate	10/27/2017	10/29/2017
tblConstructionPhase	PhaseEndDate	10/13/2017	10/15/2017
tblConstructionPhase	PhaseEndDate	10/20/2017	10/22/2017
tblGrading	AcresOfGrading	0.00	0.05
tblGrading	AcresOfGrading	0.50	0.05
tblGrading	MaterialExported	0.00	200.00
tblLandUse	LotAcreage	0.20	0.00
tblLandUse	LotAcreage	0.05	0.05

tblProjectCharacteristics	CO2IntensityFactor	641.35	328
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	23.1123	19.1542	12.0161	0.0286	0.8757	0.8581	1.6030	0.4419	0.7895	1.1355	0.0000	2,859.2269	2,859.2269	0.3569	0.0000	2,866.7225
Total	**23.1123**	**19.1542**	**12.0161**	**0.0286**	**0.8757**	**0.8581**	**1.6030**	**0.4419**	**0.7895**	**1.1355**	**0.0000**	**2,859.2269**	**2,859.2269**	**0.3569**	**0.0000**	**2,866.7225**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	22.8939	14.7318	11.7946	0.0286	0.5186	0.4029	0.8474	0.2126	0.3928	0.6041	0.0000	2,859.2269	2,859.2269	0.3569	0.0000	2,866.7225
Total	**22.8939**	**14.7318**	**11.7946**	**0.0286**	**0.5186**	**0.4029**	**0.8474**	**0.2126**	**0.3928**	**0.6041**	**0.0000**	**2,859.2269**	**2,859.2269**	**0.3569**	**0.0000**	**2,866.7225**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.94	23.09	1.84	0.00	40.78	53.05	47.13	51.89	50.25	46.80	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Energy	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059
Mobile	0.6165	1.1225	5.3893	0.0130	0.9121	0.0159	0.9280	0.2432	0.0146	0.2578		1,060.6508	1,060.6508	0.0399		1,061.4876
Total	**0.8860**	**1.1636**	**5.4250**	**0.0133**	**0.9121**	**0.0190**	**0.9311**	**0.2432**	**0.0178**	**0.2609**		**1,110.0584**	**1,110.0584**	**0.0408**	**9.1000e-004**	**1,111.1960**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Energy	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059
Mobile	0.5855	0.9351	4.5682	0.0104	0.7184	0.0129	0.7312	0.1915	0.0118	0.2034		844.4246	844.4246	0.0326		845.1087
Total	**0.8550**	**0.9762**	**4.6039**	**0.0106**	**0.7184**	**0.0160**	**0.7344**	**0.1915**	**0.0150**	**0.2065**		**893.8322**	**893.8322**	**0.0335**	**9.1000e-004**	**894.8171**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	3.50	16.11	15.14	20.00	21.24	15.85	21.13	21.24	15.66	20.86	0.00	19.48	19.48	17.81	0.00	19.47

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2017	4/7/2017	5	5	
2	Site Preparation	Site Preparation	4/8/2017	4/10/2017	5	1	
3	Grading	Grading	4/11/2017	4/12/2017	5	2	
4	Building Construction	Building Construction	4/13/2017	10/15/2017	5	132	
5	Paving	Paving	10/16/2017	10/22/2017	5	5	
6	Architectural Coating	Architectural Coating	10/23/2017	10/29/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.054

Acres of Grading (Grading Phase): 0.054

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,380; Non-Residential Outdoor: 5,460 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	2.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	25.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	2.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1070	0.0000	0.1070	0.0162	0.0000	0.0162			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**1.2049**	**10.4761**	**8.5825**	**0.0120**	**0.1070**	**0.7266**	**0.8336**	**0.0162**	**0.6930**	**0.7092**		**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.3200e-003	0.1032	0.0726	3.0000e-004	6.9700e-003	1.3700e-003	8.3400e-003	1.9100e-003	1.2600e-003	3.1700e-003		29.7227	29.7227	2.1000e-004		29.7272
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0418	0.4908	1.1300e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		91.3818	91.3818	4.3200e-003		91.4725
Total	**0.0434**	**0.1450**	**0.5634**	**1.4300e-003**	**0.1013**	**2.0600e-003**	**0.1033**	**0.0269**	**1.9000e-003**	**0.0288**		**121.1045**	**121.1045**	**4.5300e-003**		**121.1997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0482	0.0000	0.0482	7.2900e-003	0.0000	7.2900e-003			0.0000			0.0000
Off-Road	0.7808	10.4226	8.2500	0.0120		0.4008	0.4008		0.3909	0.3909	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**0.7808**	**10.4226**	**8.2500**	**0.0120**	**0.0482**	**0.4008**	**0.4490**	**7.2900e-003**	**0.3909**	**0.3982**	**0.0000**	**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.3200e-003	0.1032	0.0726	3.0000e-004	6.9700e-003	1.3700e-003	8.3400e-003	1.9100e-003	1.2600e-003	3.1700e-003		29.7227	29.7227	2.1000e-004		29.7272
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0418	0.4908	1.1300e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		91.3818	91.3818	4.3200e-003		91.4725
Total	**0.0434**	**0.1450**	**0.5634**	**1.4300e-003**	**0.1013**	**2.0600e-003**	**0.1033**	**0.0269**	**1.9000e-003**	**0.0288**		**121.1045**	**121.1045**	**4.5300e-003**		**121.1997**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0799	0.0000	0.0799	9.6100e-003	0.0000	9.6100e-003			0.0000			0.0000
Off-Road	1.2694	12.6852	7.2319	9.3300e-003		0.7705	0.7705		0.7089	0.7089		955.8663	955.8663	0.2929		962.0167
Total	**1.2694**	**12.6852**	**7.2319**	**9.3300e-003**	**0.0799**	**0.7705**	**0.8504**	**9.6100e-003**	**0.7089**	**0.7185**		**955.8663**	**955.8663**	**0.2929**		**962.0167**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4573	6.4481	4.5388	0.0187	0.4355	0.0856	0.5211	0.1192	0.0787	0.1979		1,857.6697	1,857.6697	0.0134		1,857.9514
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	0.0209	0.2454	5.7000e-004	0.0472	3.5000e-004	0.0475	0.0125	3.2000e-004	0.0128		45.6909	45.6909	2.1600e-003		45.7362
Total	**0.4753**	**6.4690**	**4.7842**	**0.0193**	**0.4827**	**0.0859**	**0.5686**	**0.1318**	**0.0790**	**0.2108**		**1,903.3606**	**1,903.3606**	**0.0156**		**1,903.6876**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0360	0.0000	0.0360	4.3200e-003	0.0000	4.3200e-003			0.0000			0.0000
Off-Road	0.4275	8.2628	7.0104	9.3300e-003		0.1833	0.1833		0.1788	0.1788	0.0000	955.8663	955.8663	0.2929		962.0167
Total	**0.4275**	**8.2628**	**7.0104**	**9.3300e-003**	**0.0360**	**0.1833**	**0.2193**	**4.3200e-003**	**0.1788**	**0.1831**	**0.0000**	**955.8663**	**955.8663**	**0.2929**		**962.0167**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4573	6.4481	4.5388	0.0187	0.4355	0.0856	0.5211	0.1192	0.0787	0.1979		1,857.6697	1,857.6697	0.0134		1,857.9514
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0181	0.0209	0.2454	5.7000e-004	0.0472	3.5000e-004	0.0475	0.0125	3.2000e-004	0.0128		45.6909	45.6909	2.1600e-003		45.7362
Total	**0.4753**	**6.4690**	**4.7842**	**0.0193**	**0.4827**	**0.0859**	**0.5686**	**0.1318**	**0.0790**	**0.2108**		**1,903.3606**	**1,903.3606**	**0.0156**		**1,903.6876**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7814	0.0000	0.7814	0.4169	0.0000	0.4169			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**1.2049**	**10.4761**	**8.5825**	**0.0120**	**0.7814**	**0.7266**	**1.5080**	**0.4169**	**0.6930**	**1.1099**		**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0418	0.4908	1.1300e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		91.3818	91.3818	4.3200e-003		91.4725
Total	**0.0361**	**0.0418**	**0.4908**	**1.1300e-003**	**0.0943**	**6.9000e-004**	**0.0950**	**0.0250**	**6.4000e-004**	**0.0257**		**91.3818**	**91.3818**	**4.3200e-003**		**91.4725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3516	0.0000	0.3516	0.1876	0.0000	0.1876			0.0000			0.0000
Off-Road	0.7808	10.4226	8.2500	0.0120		0.4008	0.4008		0.3909	0.3909	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**0.7808**	**10.4226**	**8.2500**	**0.0120**	**0.3516**	**0.4008**	**0.7525**	**0.1876**	**0.3909**	**0.5785**	**0.0000**	**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0361	0.0418	0.4908	1.1300e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		91.3818	91.3818	4.3200e-003		91.4725
Total	**0.0361**	**0.0418**	**0.4908**	**1.1300e-003**	**0.0943**	**6.9000e-004**	**0.0950**	**0.0250**	**6.4000e-004**	**0.0257**		**91.3818**	**91.3818**	**4.3200e-003**		**91.4725**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869		1,159.5310	1,159.5310	0.3553		1,166.9919
Total	**1.2740**	**12.6738**	**8.0395**	**0.0113**		**0.8553**	**0.8553**		**0.7869**	**0.7869**		**1,159.5310**	**1,159.5310**	**0.3553**		**1,166.9919**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0190	0.1732	0.1977	4.8000e-004	0.0133	2.5800e-003	0.0159	3.8000e-003	2.3700e-003	6.1700e-003		47.0098	47.0098	3.6000e-004		47.0173
Worker	0.0108	0.0126	0.1472	3.4000e-004	0.0283	2.1000e-004	0.0285	7.5000e-003	1.9000e-004	7.7000e-003		27.4145	27.4145	1.3000e-003		27.4417
Total	**0.0298**	**0.1857**	**0.3449**	**8.2000e-004**	**0.0416**	**2.7900e-003**	**0.0444**	**0.0113**	**2.5600e-003**	**0.0139**		**74.4243**	**74.4243**	**1.6600e-003**		**74.4591**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5544	10.6674	7.9551	0.0113		0.2763	0.2763		0.2671	0.2671	0.0000	1,159.5310	1,159.5310	0.3553		1,166.9919
Total	**0.5544**	**10.6674**	**7.9551**	**0.0113**		**0.2763**	**0.2763**		**0.2671**	**0.2671**	**0.0000**	**1,159.5310**	**1,159.5310**	**0.3553**		**1,166.9919**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0190	0.1732	0.1977	4.8000e-004	0.0133	2.5800e-003	0.0159	3.8000e-003	2.3700e-003	6.1700e-003		47.0098	47.0098	3.6000e-004		47.0173
Worker	0.0108	0.0126	0.1472	3.4000e-004	0.0283	2.1000e-004	0.0285	7.5000e-003	1.9000e-004	7.7000e-003		27.4145	27.4145	1.3000e-003		27.4417
Total	**0.0298**	**0.1857**	**0.3449**	**8.2000e-004**	**0.0416**	**2.7900e-003**	**0.0444**	**0.0113**	**2.5600e-003**	**0.0139**		**74.4243**	**74.4243**	**1.6600e-003**		**74.4591**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0406	9.8344	7.2432	0.0111		0.6018	0.6018		0.5572	0.5572		1,068.9366	1,068.9366	0.2968		1,075.1698
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0406**	**9.8344**	**7.2432**	**0.0111**		**0.6018**	**0.6018**		**0.5572**	**0.5572**		**1,068.9366**	**1,068.9366**	**0.2968**		**1,075.1698**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0753	0.8834	2.0400e-003	0.1698	1.2500e-003	0.1710	0.0450	1.1500e-003	0.0462		164.4872	164.4872	7.7700e-003		164.6504
Total	**0.0650**	**0.0753**	**0.8834**	**2.0400e-003**	**0.1698**	**1.2500e-003**	**0.1710**	**0.0450**	**1.1500e-003**	**0.0462**		**164.4872**	**164.4872**	**7.7700e-003**		**164.6504**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4267	8.2460	6.7942	0.0111		0.1868	0.1868		0.1828	0.1828	0.0000	1,068.9366	1,068.9366	0.2968		1,075.1698
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4267**	**8.2460**	**6.7942**	**0.0111**		**0.1868**	**0.1868**		**0.1828**	**0.1828**	**0.0000**	**1,068.9366**	**1,068.9366**	**0.2968**		**1,075.1698**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0650	0.0753	0.8834	2.0400e-003	0.1698	1.2500e-003	0.1710	0.0450	1.1500e-003	0.0462		164.4872	164.4872	7.7700e-003		164.6504
Total	**0.0650**	**0.0753**	**0.8834**	**2.0400e-003**	**0.1698**	**1.2500e-003**	**0.1710**	**0.0450**	**1.1500e-003**	**0.0462**		**164.4872**	**164.4872**	**7.7700e-003**		**164.6504**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7764					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**23.1087**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.6100e-003	4.1800e-003	0.0491	1.1000e-004	9.4300e-003	7.0000e-005	9.5000e-003	2.5000e-003	6.0000e-005	2.5700e-003		9.1382	9.1382	4.3000e-004		9.1473
Total	**3.6100e-003**	**4.1800e-003**	**0.0491**	**1.1000e-004**	**9.4300e-003**	**7.0000e-005**	**9.5000e-003**	**2.5000e-003**	**6.0000e-005**	**2.5700e-003**		**9.1382**	**9.1382**	**4.3000e-004**		**9.1473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7764					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0475	0.0475		0.0475	0.0475	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**22.8903**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0475**	**0.0475**		**0.0475**	**0.0475**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.6100e-003	4.1800e-003	0.0491	1.1000e-004	9.4300e-003	7.0000e-005	9.5000e-003	2.5000e-003	6.0000e-005	2.5700e-003		9.1382	9.1382	4.3000e-004		9.1473
Total	**3.6100e-003**	**4.1800e-003**	**0.0491**	**1.1000e-004**	**9.4300e-003**	**7.0000e-005**	**9.5000e-003**	**2.5000e-003**	**6.0000e-005**	**2.5700e-003**		**9.1382**	**9.1382**	**4.3000e-004**		**9.1473**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5855	0.9351	4.5682	0.0104	0.7184	0.0129	0.7312	0.1915	0.0118	0.2034		844.4246	844.4246	0.0326		845.1087
Unmitigated	0.6165	1.1225	5.3893	0.0130	0.9121	0.0159	0.9280	0.2432	0.0146	0.2578		1,060.6508	1,060.6508	0.0399		1,061.4876

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	94.25	20.29	8.39	170,664	134,417
Regional Shopping Center	101.34	117.93	59.57	171,370	134,973
Total	195.58	138.22	67.96	342,034	269,389

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.551461	0.058468	0.185554	0.123211	0.029507	0.004440	0.012712	0.023230	0.001775	0.001270	0.006089	0.000516	0.001766

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059
NaturalGas Unmitigated	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	403.844	4.3600e-003	0.0396	0.0333	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003		47.5111	47.5111	9.1000e-004	8.7000e-004	47.8003
Regional Shopping Center	16.0997	1.7000e-004	1.5800e-003	1.3300e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8941	1.8941	4.0000e-005	3.0000e-005	1.9056
Total		**4.5300e-003**	**0.0412**	**0.0346**	**2.5000e-004**		**3.1300e-003**	**3.1300e-003**		**3.1300e-003**	**3.1300e-003**		**49.4052**	**49.4052**	**9.5000e-004**	**9.0000e-004**	**49.7059**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.403844	4.3600e-003	0.0396	0.0333	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003		47.5111	47.5111	9.1000e-004	8.7000e-004	47.8003
Regional Shopping Center	0.0160997	1.7000e-004	1.5800e-003	1.3300e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8941	1.8941	4.0000e-005	3.0000e-005	1.9056
Total		**4.5300e-003**	**0.0412**	**0.0346**	**2.5000e-004**		**3.1300e-003**	**3.1300e-003**		**3.1300e-003**	**3.1300e-003**		**49.4052**	**49.4052**	**9.5000e-004**	**9.0000e-004**	**49.7059**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Unmitigated	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Total	**0.2650**	**1.0000e-005**	**1.1300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3900e-003**	**2.3900e-003**	**1.0000e-005**		**2.5300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Total	**0.2650**	**1.0000e-005**	**1.1300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3900e-003**	**2.3900e-003**	**1.0000e-005**		**2.5300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

1st & Campbell - Phase III

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.56	1000sqft	0.00	8,560.00	0
Regional Shopping Center	2.36	1000sqft	0.05	2,360.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E, November 2015

Land Use - First floor is a 2,356 SF retail building addition. Second/Thrid floor is 8,563 SF of office space. No paving/parking.

Construction Phase - Demolition is interior demoltion only- no buildings will be demolished

Off-road Equipment - No construction equipment during demolition - Interior demolition only.

Off-road Equipment -

Off-road Equipment -

Grading - Minor excavation for foundation and footings (small amount of soil export)

Demolition - Interior Demolition Material

Architectural Coating -

Landscape Equipment - No Landscaping

Energy Use - PG&E, November 2015

Construction Off-road Equipment Mitigation - BAAQMD Basic and Enhanced Mitigation Measures

Mobile Land Use Mitigation - 0.1 from Campbell Station

Energy Mitigation - Solar Pannels for the roof

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	DPF	No Change	Level 2
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	132.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	PhaseEndDate	10/27/2017	10/29/2017
tblConstructionPhase	PhaseEndDate	10/13/2017	10/15/2017
tblConstructionPhase	PhaseEndDate	10/20/2017	10/22/2017
tblGrading	AcresOfGrading	0.00	0.05
tblGrading	AcresOfGrading	0.50	0.05
tblGrading	MaterialExported	0.00	200.00
tblLandUse	LotAcreage	0.20	0.00
tblLandUse	LotAcreage	0.05	0.05

tblProjectCharacteristics	CO2IntensityFactor	641.35	328
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	23.1123	19.4994	13.8170	0.0286	0.8757	0.8582	1.6030	0.4419	0.7895	1.1355	0.0000	2,851.1901	2,851.1901	0.3569	0.0000	2,858.6859
Total	**23.1123**	**19.4994**	**13.8170**	**0.0286**	**0.8757**	**0.8582**	**1.6030**	**0.4419**	**0.7895**	**1.1355**	**0.0000**	**2,851.1901**	**2,851.1901**	**0.3569**	**0.0000**	**2,858.6859**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	22.8939	15.0770	13.5955	0.0286	0.5186	0.4029	0.8474	0.2126	0.3928	0.6041	0.0000	2,851.1901	2,851.1901	0.3569	0.0000	2,858.6859
Total	**22.8939**	**15.0770**	**13.5955**	**0.0286**	**0.5186**	**0.4029**	**0.8474**	**0.2126**	**0.3928**	**0.6041**	**0.0000**	**2,851.1901**	**2,851.1901**	**0.3569**	**0.0000**	**2,858.6859**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.94	22.68	1.60	0.00	40.78	53.05	47.13	51.89	50.25	46.80	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Energy	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059
Mobile	0.6393	1.2440	6.0903	0.0122	0.9121	0.0160	0.9280	0.2432	0.0147	0.2579		993.3493	993.3493	0.0399		994.1871
Total	**0.9088**	**1.2852**	**6.1261**	**0.0124**	**0.9121**	**0.0191**	**0.9312**	**0.2432**	**0.0178**	**0.2610**		**1,042.7569**	**1,042.7569**	**0.0409**	**9.1000e-004**	**1,043.8955**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Energy	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059
Mobile	0.6091	1.0346	5.3605	9.6800e-003	0.7184	0.0129	0.7313	0.1915	0.0119	0.2034		791.1146	791.1146	0.0326		791.7996
Total	**0.8786**	**1.0758**	**5.3963**	**9.9300e-003**	**0.7184**	**0.0161**	**0.7344**	**0.1915**	**0.0151**	**0.2066**		**840.5222**	**840.5222**	**0.0336**	**9.1000e-004**	**841.5080**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	3.32	16.29	11.91	19.92	21.24	15.78	21.13	21.24	15.54	20.85	0.00	19.39	19.39	17.80	0.00	19.39

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2017	4/7/2017	5	5	
2	Site Preparation	Site Preparation	4/8/2017	4/10/2017	5	1	
3	Grading	Grading	4/11/2017	4/12/2017	5	2	
4	Building Construction	Building Construction	4/13/2017	10/15/2017	5	132	
5	Paving	Paving	10/16/2017	10/22/2017	5	5	
6	Architectural Coating	Architectural Coating	10/23/2017	10/29/2017	5	5	

Acres of Grading (Site Preparation Phase): 0.054

Acres of Grading (Grading Phase): 0.054

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,380; Non-Residential Outdoor: 5,460 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	2.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	25.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	3.00	2.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1070	0.0000	0.1070	0.0162	0.0000	0.0162			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**1.2049**	**10.4761**	**8.5825**	**0.0120**	**0.1070**	**0.7266**	**0.8336**	**0.0162**	**0.6930**	**0.7092**		**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3500e-003	0.1086	0.1016	3.0000e-004	6.9700e-003	1.3700e-003	8.3400e-003	1.9100e-003	1.2600e-003	3.1700e-003		29.6531	29.6531	2.2000e-004		29.6577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0512	0.4677	1.0400e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		84.0076	84.0076	4.3200e-003		84.0983
Total	**0.0441**	**0.1598**	**0.5693**	**1.3400e-003**	**0.1013**	**2.0600e-003**	**0.1033**	**0.0269**	**1.9000e-003**	**0.0288**		**113.6607**	**113.6607**	**4.5400e-003**		**113.7559**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0482	0.0000	0.0482	7.2900e-003	0.0000	7.2900e-003			0.0000			0.0000
Off-Road	0.7808	10.4226	8.2500	0.0120		0.4008	0.4008		0.3909	0.3909	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**0.7808**	**10.4226**	**8.2500**	**0.0120**	**0.0482**	**0.4008**	**0.4490**	**7.2900e-003**	**0.3909**	**0.3982**	**0.0000**	**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3500e-003	0.1086	0.1016	3.0000e-004	6.9700e-003	1.3700e-003	8.3400e-003	1.9100e-003	1.2600e-003	3.1700e-003		29.6531	29.6531	2.2000e-004		29.6577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0512	0.4677	1.0400e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		84.0076	84.0076	4.3200e-003		84.0983
Total	**0.0441**	**0.1598**	**0.5693**	**1.3400e-003**	**0.1013**	**2.0600e-003**	**0.1033**	**0.0269**	**1.9000e-003**	**0.0288**		**113.6607**	**113.6607**	**4.5400e-003**		**113.7559**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0799	0.0000	0.0799	9.6100e-003	0.0000	9.6100e-003			0.0000			0.0000
Off-Road	1.2694	12.6852	7.2319	9.3300e-003		0.7705	0.7705		0.7089	0.7089		955.8663	955.8663	0.2929		962.0167
Total	**1.2694**	**12.6852**	**7.2319**	**9.3300e-003**	**0.0799**	**0.7705**	**0.8504**	**9.6100e-003**	**0.7089**	**0.7185**		**955.8663**	**955.8663**	**0.2929**		**962.0167**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5218	6.7886	6.3513	0.0187	0.4355	0.0858	0.5213	0.1192	0.0789	0.1982		1,853.3200	1,853.3200	0.0136		1,853.6055
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0179	0.0256	0.2338	5.2000e-004	0.0472	3.5000e-004	0.0475	0.0125	3.2000e-004	0.0128		42.0038	42.0038	2.1600e-003		42.0491
Total	**0.5397**	**6.8142**	**6.5851**	**0.0192**	**0.4827**	**0.0862**	**0.5688**	**0.1318**	**0.0792**	**0.2110**		**1,895.3238**	**1,895.3238**	**0.0158**		**1,895.6546**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0360	0.0000	0.0360	4.3200e-003	0.0000	4.3200e-003			0.0000			0.0000
Off-Road	0.4275	8.2628	7.0104	9.3300e-003		0.1833	0.1833		0.1788	0.1788	0.0000	955.8663	955.8663	0.2929		962.0167
Total	**0.4275**	**8.2628**	**7.0104**	**9.3300e-003**	**0.0360**	**0.1833**	**0.2193**	**4.3200e-003**	**0.1788**	**0.1831**	**0.0000**	**955.8663**	**955.8663**	**0.2929**		**962.0167**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5218	6.7886	6.3513	0.0187	0.4355	0.0858	0.5213	0.1192	0.0789	0.1982		1,853.3200	1,853.3200	0.0136		1,853.6055
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0179	0.0256	0.2338	5.2000e-004	0.0472	3.5000e-004	0.0475	0.0125	3.2000e-004	0.0128		42.0038	42.0038	2.1600e-003		42.0491
Total	**0.5397**	**6.8142**	**6.5851**	**0.0192**	**0.4827**	**0.0862**	**0.5688**	**0.1318**	**0.0792**	**0.2110**		**1,895.3238**	**1,895.3238**	**0.0158**		**1,895.6546**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7814	0.0000	0.7814	0.4169	0.0000	0.4169			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**1.2049**	**10.4761**	**8.5825**	**0.0120**	**0.7814**	**0.7266**	**1.5080**	**0.4169**	**0.6930**	**1.1099**		**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0512	0.4677	1.0400e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		84.0076	84.0076	4.3200e-003		84.0983
Total	**0.0358**	**0.0512**	**0.4677**	**1.0400e-003**	**0.0943**	**6.9000e-004**	**0.0950**	**0.0250**	**6.4000e-004**	**0.0257**		**84.0076**	**84.0076**	**4.3200e-003**		**84.0983**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3516	0.0000	0.3516	0.1876	0.0000	0.1876			0.0000			0.0000
Off-Road	0.7808	10.4226	8.2500	0.0120		0.4008	0.4008		0.3909	0.3909	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	**0.7808**	**10.4226**	**8.2500**	**0.0120**	**0.3516**	**0.4008**	**0.7525**	**0.1876**	**0.3909**	**0.5785**	**0.0000**	**1,183.8131**	**1,183.8131**	**0.2333**		**1,188.7118**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0512	0.4677	1.0400e-003	0.0943	6.9000e-004	0.0950	0.0250	6.4000e-004	0.0257		84.0076	84.0076	4.3200e-003		84.0983
Total	**0.0358**	**0.0512**	**0.4677**	**1.0400e-003**	**0.0943**	**6.9000e-004**	**0.0950**	**0.0250**	**6.4000e-004**	**0.0257**		**84.0076**	**84.0076**	**4.3200e-003**		**84.0983**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869		1,159.5310	1,159.5310	0.3553		1,166.9919
Total	**1.2740**	**12.6738**	**8.0395**	**0.0113**		**0.8553**	**0.8553**		**0.7869**	**0.7869**		**1,159.5310**	**1,159.5310**	**0.3553**		**1,166.9919**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0230	0.1809	0.3007	4.7000e-004	0.0133	2.6000e-003	0.0159	3.8000e-003	2.3900e-003	6.1900e-003		46.6490	46.6490	3.7000e-004		46.6568
Worker	0.0107	0.0154	0.1403	3.1000e-004	0.0283	2.1000e-004	0.0285	7.5000e-003	1.9000e-004	7.7000e-003		25.2023	25.2023	1.3000e-003		25.2295
Total	**0.0338**	**0.1963**	**0.4410**	**7.8000e-004**	**0.0416**	**2.8100e-003**	**0.0444**	**0.0113**	**2.5800e-003**	**0.0139**		**71.8513**	**71.8513**	**1.6700e-003**		**71.8863**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5544	10.6674	7.9551	0.0113		0.2763	0.2763		0.2671	0.2671	0.0000	1,159.5310	1,159.5310	0.3553		1,166.9919
Total	**0.5544**	**10.6674**	**7.9551**	**0.0113**		**0.2763**	**0.2763**		**0.2671**	**0.2671**	**0.0000**	**1,159.5310**	**1,159.5310**	**0.3553**		**1,166.9919**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0230	0.1809	0.3007	4.7000e-004	0.0133	2.6000e-003	0.0159	3.8000e-003	2.3900e-003	6.1900e-003		46.6490	46.6490	3.7000e-004		46.6568
Worker	0.0107	0.0154	0.1403	3.1000e-004	0.0283	2.1000e-004	0.0285	7.5000e-003	1.9000e-004	7.7000e-003		25.2023	25.2023	1.3000e-003		25.2295
Total	**0.0338**	**0.1963**	**0.4410**	**7.8000e-004**	**0.0416**	**2.8100e-003**	**0.0444**	**0.0113**	**2.5800e-003**	**0.0139**		**71.8513**	**71.8513**	**1.6700e-003**		**71.8863**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0406	9.8344	7.2432	0.0111		0.6018	0.6018		0.5572	0.5572		1,068.9366	1,068.9366	0.2968		1,075.1698
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0406**	**9.8344**	**7.2432**	**0.0111**		**0.6018**	**0.6018**		**0.5572**	**0.5572**		**1,068.9366**	**1,068.9366**	**0.2968**		**1,075.1698**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0644	0.0921	0.8418	1.8700e-003	0.1698	1.2500e-003	0.1710	0.0450	1.1500e-003	0.0462		151.2136	151.2136	7.7700e-003		151.3769
Total	**0.0644**	**0.0921**	**0.8418**	**1.8700e-003**	**0.1698**	**1.2500e-003**	**0.1710**	**0.0450**	**1.1500e-003**	**0.0462**		**151.2136**	**151.2136**	**7.7700e-003**		**151.3769**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4267	8.2460	6.7942	0.0111		0.1868	0.1868		0.1828	0.1828	0.0000	1,068.9366	1,068.9366	0.2968		1,075.1698
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4267**	**8.2460**	**6.7942**	**0.0111**		**0.1868**	**0.1868**		**0.1828**	**0.1828**	**0.0000**	**1,068.9366**	**1,068.9366**	**0.2968**		**1,075.1698**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0644	0.0921	0.8418	1.8700e-003	0.1698	1.2500e-003	0.1710	0.0450	1.1500e-003	0.0462		151.2136	151.2136	7.7700e-003		151.3769
Total	**0.0644**	**0.0921**	**0.8418**	**1.8700e-003**	**0.1698**	**1.2500e-003**	**0.1710**	**0.0450**	**1.1500e-003**	**0.0462**		**151.2136**	**151.2136**	**7.7700e-003**		**151.3769**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7764					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**23.1087**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.5800e-003	5.1200e-003	0.0468	1.0000e-004	9.4300e-003	7.0000e-005	9.5000e-003	2.5000e-003	6.0000e-005	2.5700e-003		8.4008	8.4008	4.3000e-004		8.4098
Total	**3.5800e-003**	**5.1200e-003**	**0.0468**	**1.0000e-004**	**9.4300e-003**	**7.0000e-005**	**9.5000e-003**	**2.5000e-003**	**6.0000e-005**	**2.5700e-003**		**8.4008**	**8.4008**	**4.3000e-004**		**8.4098**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	22.7764					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0475	0.0475		0.0475	0.0475	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**22.8903**	**2.3524**	**1.8324**	**2.9700e-003**		**0.0475**	**0.0475**		**0.0475**	**0.0475**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.5800e-003	5.1200e-003	0.0468	1.0000e-004	9.4300e-003	7.0000e-005	9.5000e-003	2.5000e-003	6.0000e-005	2.5700e-003		8.4008	8.4008	4.3000e-004		8.4098
Total	**3.5800e-003**	**5.1200e-003**	**0.0468**	**1.0000e-004**	**9.4300e-003**	**7.0000e-005**	**9.5000e-003**	**2.5000e-003**	**6.0000e-005**	**2.5700e-003**		**8.4008**	**8.4008**	**4.3000e-004**		**8.4098**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6091	1.0346	5.3605	9.6800e-003	0.7184	0.0129	0.7313	0.1915	0.0119	0.2034		791.1146	791.1146	0.0326		791.7996
Unmitigated	0.6393	1.2440	6.0903	0.0122	0.9121	0.0160	0.9280	0.2432	0.0147	0.2579		993.3493	993.3493	0.0399		994.1871

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	94.25	20.29	8.39	170,664	134,417
Regional Shopping Center	101.34	117.93	59.57	171,370	134,973
Total	195.58	138.22	67.96	342,034	269,389

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.551461	0.058468	0.185554	0.123211	0.029507	0.004440	0.012712	0.023230	0.001775	0.001270	0.006089	0.000516	0.001766

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059
NaturalGas Unmitigated	4.5300e-003	0.0412	0.0346	2.5000e-004		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003		49.4052	49.4052	9.5000e-004	9.1000e-004	49.7059

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	403.844	4.3600e-003	0.0396	0.0333	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003		47.5111	47.5111	9.1000e-004	8.7000e-004	47.8003
Regional Shopping Center	16.0997	1.7000e-004	1.5800e-003	1.3300e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8941	1.8941	4.0000e-005	3.0000e-005	1.9056
Total		**4.5300e-003**	**0.0412**	**0.0346**	**2.5000e-004**		**3.1300e-003**	**3.1300e-003**		**3.1300e-003**	**3.1300e-003**		**49.4052**	**49.4052**	**9.5000e-004**	**9.0000e-004**	**49.7059**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.403844	4.3600e-003	0.0396	0.0333	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003		47.5111	47.5111	9.1000e-004	8.7000e-004	47.8003
Regional Shopping Center	0.0160997	1.7000e-004	1.5800e-003	1.3300e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8941	1.8941	4.0000e-005	3.0000e-005	1.9056
Total		**4.5300e-003**	**0.0412**	**0.0346**	**2.5000e-004**		**3.1300e-003**	**3.1300e-003**		**3.1300e-003**	**3.1300e-003**		**49.4052**	**49.4052**	**9.5000e-004**	**9.0000e-004**	**49.7059**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Unmitigated	0.2650	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Total	**0.2650**	**1.0000e-005**	**1.1300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3900e-003**	**2.3900e-003**	**1.0000e-005**		**2.5300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2337					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5300e-003
Total	**0.2650**	**1.0000e-005**	**1.1300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.3900e-003**	**2.3900e-003**	**1.0000e-005**		**2.5300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Attachment C

Health Risk Assessment Assumptions and Methodologies

A health risk assessment (HRA) is accomplished in four steps: 1) hazards identification, 2) exposure assessment, 3) toxicity assessment, and 4) risk characterization. These steps cover the estimation of air emissions, the estimation of the air concentrations resulting from a dispersion analysis, the incorporation of the toxicity of the pollutants emitted, and the characterization of the risk based on exposure parameters such as breathing rate, age adjustment factors, and exposure duration; each depending on receptor type.

This HRA was conducted in accordance with technical guidelines developed by federal, state, and regional agencies, including USEPA, California Environmental Protection Agency (CalEPA), California Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxics Hot Spots Program Guidance*[1], and the BAAQMD *Health Risk Screening Analysis Guidelines*.[2] This HRA addresses the DPM emissions from on-site equipment and haul trucks during construction.

According to CalEPA, a HRA should not be interpreted as the expected rates of cancer or other potential human health effects, but rather as estimates of potential risk or likelihood of adverse effects based on current knowledge, under a number of highly conservative assumptions and the best assessment tools currently available.

Terms and Definitions

As the practice of conducting a HRA is particularly complex and involves concepts that are not altogether familiar to most people, several terms and definitions are provided that are considered essential to the understanding of the approach, methodology and results:

Acute effect – a health effect (non-cancer) produced within a short period of time (few minutes to several days) following an exposure to Toxic Air Contaminants (TACs).

Cancer risk – the probability of an individual contracting cancer from a lifetime (i.e., 70 year) exposure to TAC such as DPM in the ambient air.

Chronic effect – a health effect (non-cancer) produced from a continuous exposure occurring over an extended period of time (weeks, months, years).

Hazard Index (HI) – the unitless ratio of an exposure level over the acceptable reference dose (RfC). The HI can be applied to multiple compounds in an additive manner.

Hazard Quotient (HQ) – the unitless ratio of an exposure level over the acceptable reference dose (RfC). The HQ is applied to individual compounds.

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1 Office of Environmental Health Hazard Assessment, 2003. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, http://www.oehha.org/air/hot_spots/pdf/HRAguidefinal.pdf.

2 Bay Area Air Quality Management District, 2005. BAAQMD *Health Risk Screening Analysis Guidelines*, http://www.baaqmd.gov/pmt/air_toxics/risk_procedures_policies/hrsa_guidelines.pdf.

Toxic air contaminants (TAC) – any air pollutant that is capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). The current California list of TAC lists approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Human Health Effects - comprise disorders such as eye watering, respiratory or heart ailments, and other (i.e., non-cancer) related diseases.

Health Risk Assessment (HRA) – an analysis designed to predict the generation and dispersion of TAC in the outdoor environment, evaluate the potential for exposure of human populations, and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure.

Incremental – under CEQA, the net difference (or change) in conditions or impacts when comparing the baseline to future year project conditions.

Maximum exposed individual (MEI) – an individual assumed to be located at the point where the highest concentrations of TACs, and therefore, health risks are predicted to occur.

Non-cancer risks – health risks such as eye watering, respiratory or heart ailments, and other non-cancer related diseases.

Receptors – the locations where potential health impacts or risks are predicted (i.e., schools, residences, and recreational sites).

Limitations and Uncertainties

There are a number of important limitations and uncertainties commonly associated with a HRA due to the wide variability of human exposures to TACs, the extended timeframes over which the exposures are evaluated and the inability to verify the results. Among these challenges are the following:

- The HRA exposure estimates do not take into account that people do not usually reside at the same location for 70 years and that other exposures (i.e., school children) are also of much shorter durations than was assumed in this analysis. Therefore, the results of the HRA are highly overstated for those cases.
- Other limitations and uncertainties associated with HRA and identified by the CalEPA include: (a.) lack of reliable monitoring data; (b.) extrapolation of toxicity data in animals to humans; (c.) estimation errors in calculating TACs emissions; (d.) concentration prediction errors with dispersion models; and (e.) the variability in lifestyles, fitness and other confounding factors of the human population.

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a lifetime will contract cancer, based on the use of standard risk-assessment methodology. The MEI represents the worst–case risk estimate, based on a theoretical person continuously exposed for a lifetime at the point of highest compound concentration in the air. This is a highly

conservative assumption, since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption assumes that residents are experiencing outdoor concentrations for the entire exposure period.

These conservative methodologies overestimate both non-carcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. Therefore, for carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the HRA methodology. The extrapolation of toxicity data in animals to humans, the estimation of concentration prediction methods within dispersion models; and the variability in lifestyles, fitness and other confounding factors of the human population also contribute to the overestimation of health impacts. Therefore, the results of this HRA are highly overstated.

Hazard Identification

Diesel exhaust is a complex mixture of numerous individual gaseous and particulate compounds emitted from diesel-fueled combustion engines. Diesel particulate matter (DPM) is formed primarily through the incomplete combustion of diesel fuel. DPM is removed from the atmosphere through physical processes including atmospheric fall-out and washout by rain. Humans can be exposed to airborne DPM by deposition on water, soil, and vegetation; although the main pathway of exposure is inhalation.

In August 1998, the CARB identified DPM as an air toxic. The CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel- Fueled Engines and Vehicles* and *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines* and approved these documents on September 28, 2000.[3,4] The documents represent proposals to reduce DPM emissions, with the goal of reducing emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aimed to require the use of state-of-the-art catalyzed DPM filters and ultra-low-sulfur diesel fuel.

In 2001, CARB assessed the state-wide health risks from exposure to diesel exhaust and to other toxic air contaminants. It is difficult to distinguish the health risks of diesel emissions from those of other air toxics, since diesel exhaust contains approximately 40 different TACs. The CARB study detected diesel exhaust by using ambient air carbon soot measurements as a surrogate for diesel emissions. The study reported that the state-wide cancer risk from exposure to diesel exhaust was about 540 per million population as compared to a total risk for exposure to all ambient air toxics of 760 per million. This estimate, which accounts for about 70 percent of the total risk from TACs, included both urban and rural areas in the state. The estimate can also be considered an average worst-case for the state, since it assumes constant exposure to outdoor concentrations of diesel exhaust and does not account for expected lower concentrations indoors, where most of time is spent.

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[3] California Air Resources Board. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* October 2000. http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf

[4] California Air Resources Board. *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines.* October 2000. http://www.arb.ca.gov/diesel/documents/rmgfinal.pdf

Exposure Assessment

Dispersion is the process by which atmospheric pollutants disseminate due to wind and vertical stability. The results of a dispersion analysis are used to assess pollutant concentrations at or near an emission source. The results of an analysis allow predicted concentrations of pollutants to be compared directly to air quality standards and other criteria such as health risks based on modeled concentrations.

A rising pollutant plume reacts with the environment in several ways before it levels off. First, the plume's own turbulence interacts with atmospheric turbulence to entrain ambient air. This mixing process reduces and eventually eliminates the density and momentum differences that cause the plume to rise. Second, the wind transports the plume during its rise and entrainment process. Higher winds mix the plume more rapidly, resulting in a lower final rise. Third, the plume interacts with the vertical temperature stratification of the atmosphere, rising as a result of buoyancy in the unstable-to-neutrally stratified mixed layer. However, after the plume encounters the mixing lid and the stably stratified air above, its vertical motion is dampened.

Molecules of gas or small particles injected into the atmosphere will separate from each other as they are acted on by turbulent eddies. The Gaussian mathematical model such as AERMOD simulates the dispersion of the gas or particles within the atmosphere. The formulation of the Gaussian model is based on the following assumptions:

- The predictions are not time-dependent (all conditions remain unchanged with time)
- The wind speed and direction are uniform, both horizontally and vertically, throughout the region of concern
- The rate of diffusion is not a function of position
- Diffusion in the direction of the transporting wind is negligible when compared to the transport flow

Dispersion Modeling Approach

This section presents the methodology used for the dispersion modeling analysis. This section addresses all of the fundamental components of an air dispersion modeling analysis including:

- Model selection and options
- Receptor locations
- Meteorological data
- Source release characteristics

Air dispersion modeling was performed to estimate the downwind dispersion of DPM exhaust emissions resulting from construction activities. A description of the air quality modeling parameters, including air dispersion model selection, modeling domain, source exhaust parameters, meteorological data selection, and receptor network, is provided.

Model Selection and Options

AERMOD (Version 15181)[5] was used for the dispersion analysis. AERMOD is the USEPA preferred atmospheric dispersion modeling system for general industrial sources. The model can simulate point, area, volume, and line sources. AERMOD is the appropriate model for this analysis based on the coverage of simple, intermediate, and complex terrain. It also predicts both short-term and long-term (annual) average concentrations. The model was executed using the regulatory default options (stack-tip downwash, buoyancy-induced dispersion, and final plume rise), default wind speed profile categories, default potential temperature gradients, and assuming no pollutant decay.

The selection of the appropriate dispersion coefficients depends on the land use within three kilometers (km) of the project site. The types of land use were based on the classification method defined by Auer (1978); using pertinent United States Geological Survey (USGS) 1:24,000 scale (7.5 minute) topographic maps of the area. If the Auer land use types of heavy industrial, light-to-moderate industrial, commercial, and compact residential account for 50 percent or more of the total area, the USEPA *Guideline on Air Quality Models* recommends using urban dispersion coefficients; otherwise, the appropriate rural coefficients can be used. Based on observation of the area surrounding the project site, rural (urban is only designated within dense city centers such as downtown San Francisco) dispersion coefficients were applied in the analysis.

Receptor Locations

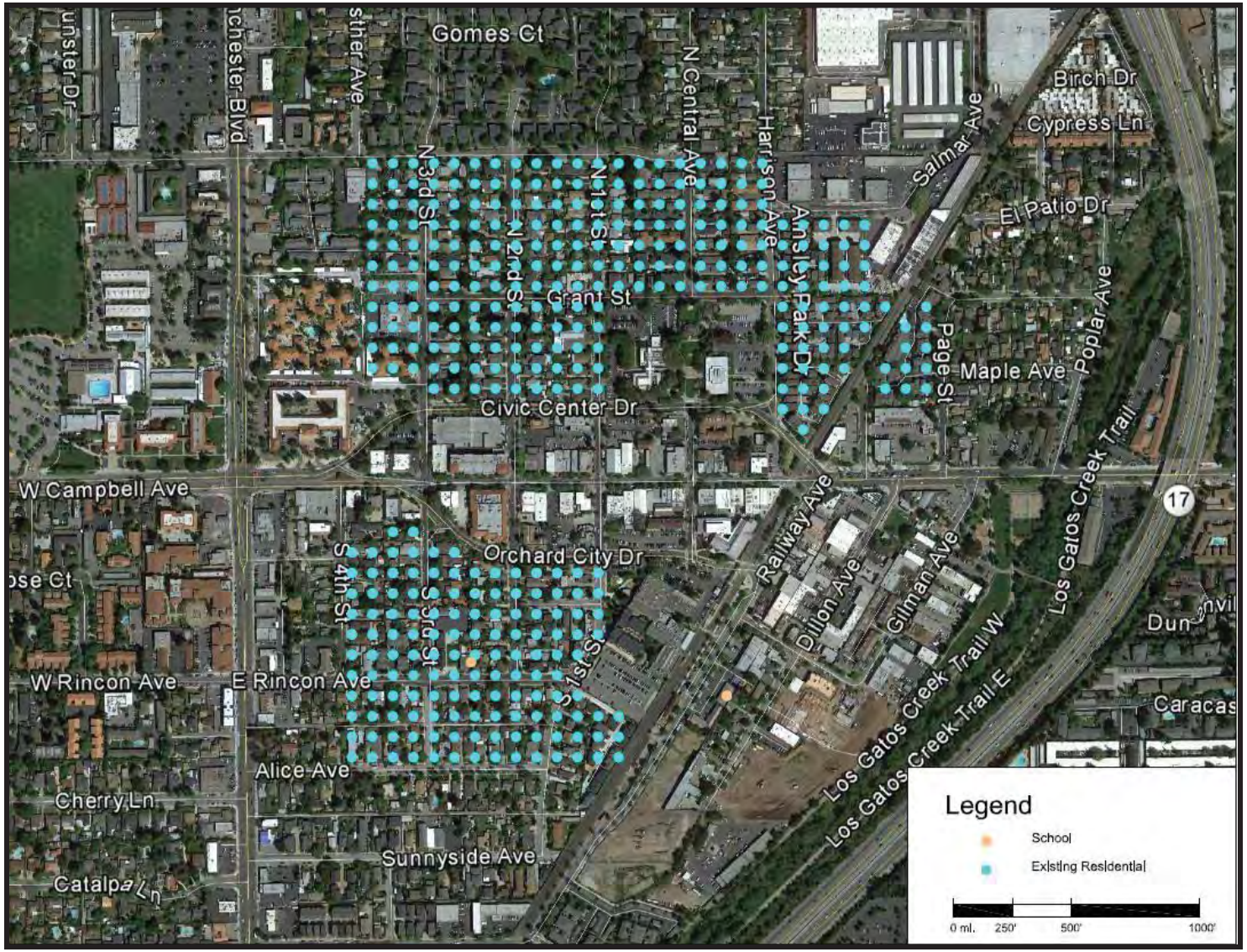
BAAQMD considers the relevant zone of influence for an assessment of air quality health risks to be within 1,000 feet of a project site. Sensitive receptors such as residences, schools, and outdoor recreational areas near the proposed project were chosen as the receptors to be analyzed. The project site is directly adjacent to Campbell Avenue and within a commercial land use area. Existing residences are located a couple blocks to the north and within 250 feet to the southwest of the project site. Nelly's Childcare and Preschool is located to the southeast of the project site.

Receptors were placed at a height of 1.8 meters (typical breathing height). Terrain elevations for receptor locations were used (i.e., complex terrain) based on available USGS information for the area. **Figure AQ-1** displays the location of the sensitive receptors used in the HRA. Sensitive receptors were placed at existing residences and schools/daycare centers to estimate health impacts due to proposed project construction on existing receptors.

5 US Environmental Protection Agency, AERMOD Modeling System, http://www.epa.gov/scram001/dispersion_prefrec.htm.

FIGURE AQ-1

HEALTH RISK ASSESSMENT RECEPTORS



Meteorological Data

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features affecting pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

Hourly meteorological data from San Jose International Airport (surface data), located approximately five miles to the north of the project, and Oakland International Airport (upper air) were used in the dispersion modeling analysis. Meteorological data from 2010 through 2014 were used. **Figure AQ-2** displays the wind rose during this period. Wind directions are predominately from the northwest and southeast and a high frequency of calm and low wind conditions, as shown in **Figure AQ-3**. The regional average annual wind speed is 6.6 miles per hour.

FIGURE AQ-2

WINDROSE FOR SAN JOSE INTERNATIONAL AIRPORT, CA

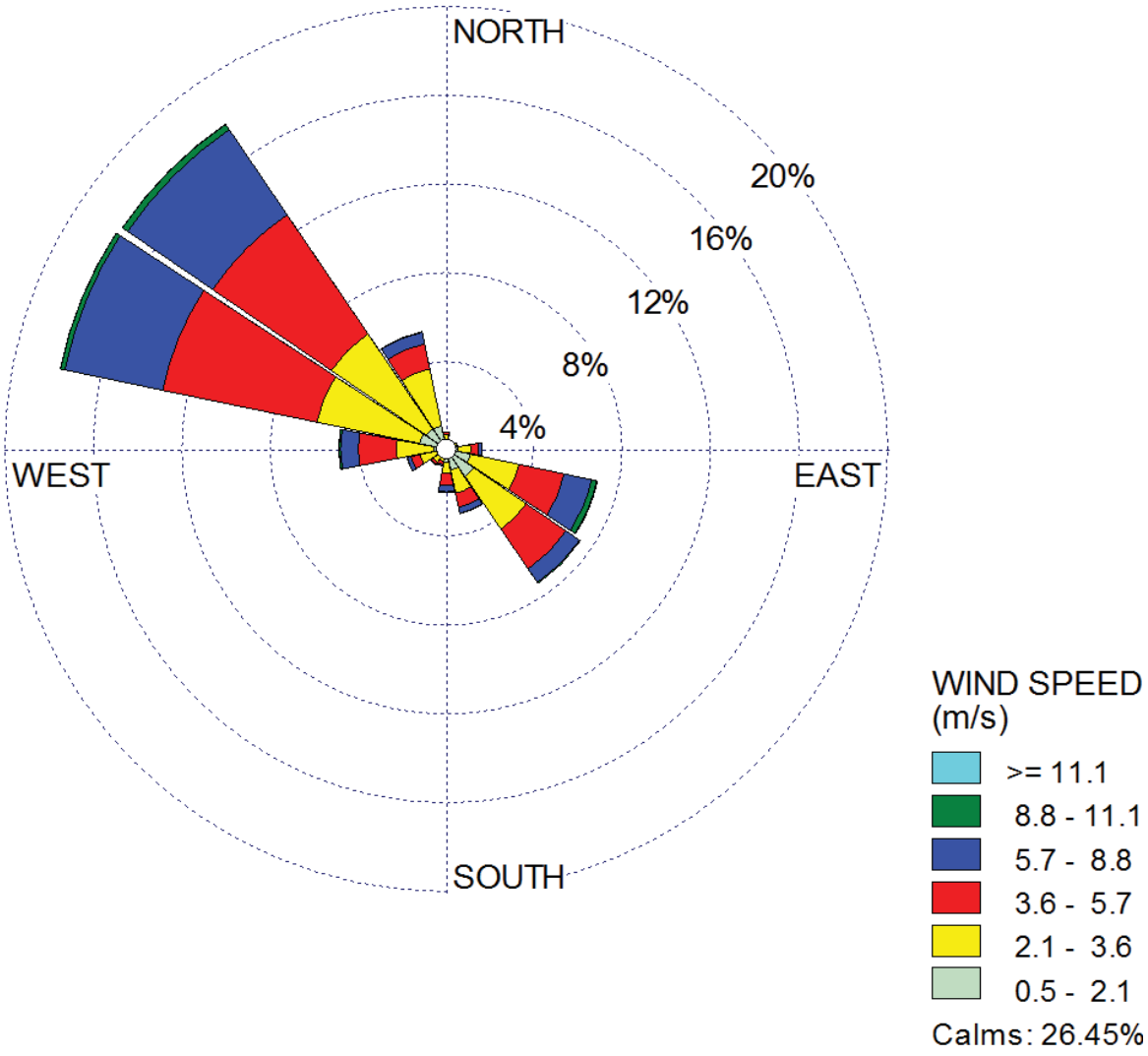
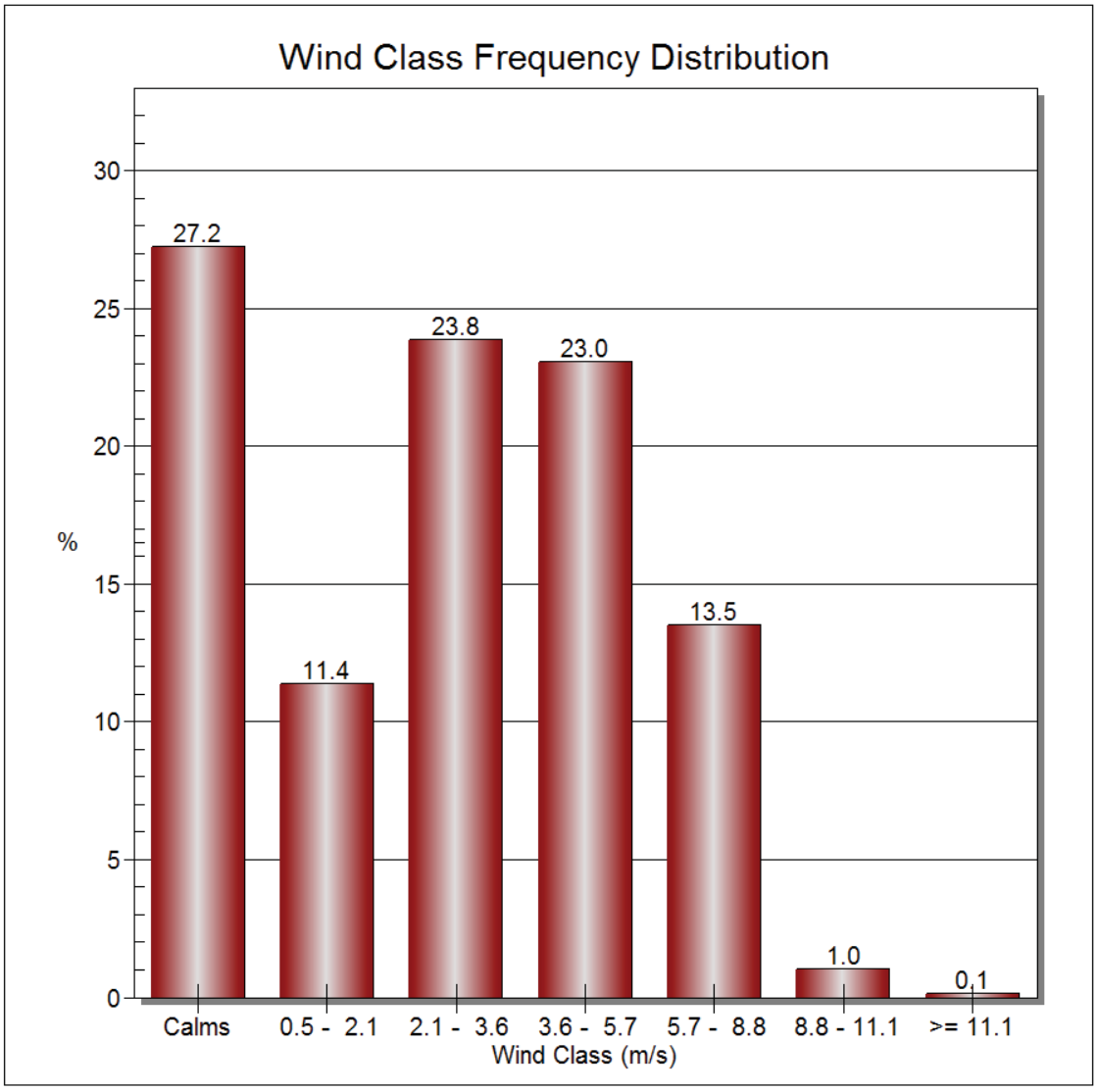


FIGURE AQ-3

WIND SPEED DISTRIBUTION FOR SAN JOSE INTERNATIONAL AIRPORT, CA



Source Release Characteristics

Construction equipment activities were treated as an area source. The release height of the off-road equipment exhaust was 3.05 meters. Haul trucks were treated as a line source (i.e., volume sources placed at regular intervals) located along an access road. The haul trucks were assigned a release height of 3.05 meters and an initial vertical dimension of 4.15 meters, which accounts for dispersion from the movement of vehicles. Typically, construction activities would occur between 8 a.m. and 5 p.m. (eight hours per day), on Monday through Friday.

Model parameters for volume sources include emission rate, release height, and plume width. Locomotive switch/line haul activities for the rail operations are simulated as volume sources with a release height of 4.15 meters, and a plume width of twelve meters.

Terrain elevations for emission source locations were used (i.e., complex terrain) based on available USGS DEM for the area. AERMAP (Version 11103)[6] was used to develop the terrain elevations.

Temporal factors (**Table AQ-6**) were used to describe the relationship of activity levels in one period of time to another period of time (i.e., the relationship of the activity during one-hour to the activity during a 24-hour period) for rail operations. The use of temporal factors gives the model the ability to more accurately reflect real world conditions.

TABLE AQ-6
EMISSION SOURCE TEMPORAL DISTRIBUTION FOR RAIL ACTIVITIES

Period	Activity Distribution	Hours per Day
6 a.m. – 6 p.m.	0.80	12
6 p.m. – 6 a.m.	0.20	12

SOURCE: California Air Resources Board, *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, April 2006, http://www.arb.ca.gov/ports/marinevess/documents/portstudy0406.pdf.

Railroad operations are typically described in terms of two different types of operation, line haul and switching. Line haul operations involve long-distance transportation between the Port and points across the country whereas switching is the local movement of railcars to prepare them for line haul transportation or to distribute them to destination terminals upon their arrival.

The types of information available for these two types of activity differs – for the on-port switching locomotives, information on each locomotive and its activity (e.g., fuel use and throttle notch setting frequency) can be used to estimate emissions, whereas for the line haul locomotives the information is more general (e.g., in terms of fuel use per ton of cargo and total tons of cargo carried). Published emissions information for switch and line haul locomotive operations in both throttle notch and fuel consumption modes along with facility operational data was used to estimate emissions.[7]

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[6] US Environmental Protection Agency, AERMAP, http://www.epa.gov/ttn/scram/dispersion_related.htm#aermap.

[7] U.S. Environmental Protection Agency. Emission Factors for Locomotives. April 2009. http://www.epa.gov/nonroad/locomotv/420f09025.pdf

Locomotives operate differently from other types of mobile sources with respect to how they transmit power from engine to wheels. While most mobile sources use a physical coupling such as a transmission to transfer power from the engine to the wheels, a locomotive's engine turns a generator or alternator powering an electric motor that, in turn, powers the locomotive's wheels. The physical connection of a typical mobile source means that the engine's speed is dictated by the vehicle's speed through a fixed set of gear ratios, resulting in the highly transient operating conditions (particularly engine speed and load) that characterize mobile source operations.

In contrast, the locomotive's engine and drive system operate more independently, such that the engine can be operated at a particular speed without respect to the speed of the locomotive itself. This allows operation under more steady-state load and speed conditions, and as a result locomotives have been designed to operate in a series of discrete throttle settings called notches, ranging from notch positions one through eight, plus an idle position.

Many locomotives also have a feature known as dynamic braking, in which the electric drive engine operates as a generator to help slow the locomotive, with the resistance-generated power being dissipated as heat. While the engine is not generating motive power under dynamic braking, it is generating power to run cooling fans, so this operating condition is somewhat different from idling. Switch engines typically do not feature dynamic braking.

Locomotive switching activities consist of:

- Breaking up inbound trains and sorting railcars into contiguous fragments, and delivering the fragments to terminals.
- Delivering empty container flat cars to terminals.
- Delivering rail cars to non-container facilities, and removing previously delivered rail cars.
- Rearranging full and empty railcars to facilitate loading by a terminal.
- Picking up outbound containers in less than full train configuration and transporting them to a yard for assembly into full trains – to be transported out of the facility by one of the line haul railroads.

Line haul locomotives are typically operated in groups of two to five units, with three or four units being most common, depending on the power requirements of the specific train being pulled and the horsepower capacities of available locomotives. Thus, two higher-horsepower locomotives may be able to pull a train that would take three units with lower power outputs. Locomotives operated in sets are connected such that every engine in the set is operated in unison by an engineer in one of the locomotives.

Based on Federal Railroad Administration's Office of Safety Analysis, this analysis included 20 daily haul rail operations.[8] Two line haul engines were assumed to operate simultaneously for

[8] Federal Railroad Administration, Office of Safety Analysis. *http://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Crossing.aspx*.

the rail operations. Notably, light rail is an electric powered transit system that runs on a track along Railway Avenue and thus, does not cause local emissions.

For locomotives, emissions were estimated as a function of power demand (expressed in horsepower-hours) multiplied by an emission factor (shown in **Table AQ-7)**, expressed in terms of grams per horsepower-hour (g/hp-hr), and then applied to the various activity data (**Table AQ-8**). Estimate emission efficiency improvements were accounted for to determine the lifetime exposure (**Table AQ-9**).

Table AQ-7: Emission Factors for Locomotives

Pollutant	Switch Emission Factor (g/hp-hr)	Haul Emission Factor (g/hp-hr)
PM10	0.19	0.18
PM2.5	0.18	0.17

SOURCE: U.S. Environmental Protection Agency. Emission Factors for Locomotives, April 2009.

Table AQ-8: Operational Assumptions for Locomotives

Parameters	Line Haul	Switching
Load Factor	0.20	0.25
Horsepower	3,300	2,500
Daily Operations	9	6

SOURCE: Detroit Diesel specification 4000 Series, September 2013. U.S. Environmental Protection Agency. Emission Factors for Locomotives, April 2009.

TABLE AQ-9
EMISSION FACTORS FOR LOCOMOTIVES BY YEAR

Year	Line Haul Emission Factor (g/gal)
2016	3.1
2017	2.9
2018	2.7
2019	2.5
2020	2.3
2021	2.2
2022	2.0
2023	1.9
2024	1.7
2025	1.6
2026	1.5
2027	1.4
2028	1.3
2029	1.1
2030	1.0
2031	1.0
2032	0.9
2033	0.8
2034	0.7
2035	0.7
2036	0.6
2037	0.6
2038	0.5
2039	0.5
2040	0.4

SOURCE: U.S. Environmental Protection Agency. *Emission Factors for Locomotives*, April 2009.

Exposure Parameters

This HRA was conducted following methodologies in OEHHA's Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.[9] This was accomplished by applying the estimated concentrations at the receptors analyzed to the established cancer risk estimates and acceptable reference concentrations for non-cancer health effects.

OEHHA's revisions to its *Guidance Manual* were primarily designed to ensure that the greater sensitivity of children to cancer and other health risks is reflected in HRAs. For example, OEHHA now recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also now recommends that statistical "age sensitivity factors" be incorporated into a HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the *Guidance Manual* revisions also

[9] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the *Guidance Manual*, this assumption is lessened to 30 years.

OEHHA has developed exposure factors (e.g., daily breathing rates) for six age groups including the last trimester to birth, birth to 2 years, 2 to 9 years, 2 to 16 years, 16 to 30 years, and 16 to 70 years. These age bins allow for more refined exposure information to be used when estimating exposure and the potential for developing cancer over a lifetime. This means that exposure variates are needed for the third trimester, ages zero to less than two, ages two to less than nine, ages two to less than 16, ages 16 to less than 30, and ages 16 to 70. Residential receptors utilize the 95th percentile breathing rate values. The breathing rates are age-specific and are 1,090 liters per kilogram-day for ages less than 2 years, 745 liters per kilogram-day for ages 2 to 16 years, and 335 liters per kilogram-day for ages 16 to 30 years. A school child breathing rate is 520 liters per kilogram-day and an off-site worker breathing rate is 230 liters per kilogram-day.

OEHHA developed age sensitivity factors (ASF) to take into account the increased sensitivity to carcinogens during early-in-life exposures. OEHHA recommends that cancer risks be weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to 2 years of age, and by a factor of 3 for exposures from 2 years through 15 years of age. For estimating cancer risks for residential receptors over a 30 year and 70 year lifetime, the incorporation of the ASF results in a cancer risk adjustment factor (CRAF) of 1.7.

Based on OEHHA recommendations, the cancer risk to residential receptors assumes exposure occurs 24 hours per day for 350 days per year while accounting for a percentage of time at home. OEHHA evaluated information from activity pattern databases to estimate the fraction of time at home (FAH) during the day. This information was used to adjust exposure duration and cancer risk based on the assumption that a person is not present at home continuously for 24 hours and therefore exposure to emissions is not occurring when a person is away from their home. In general, the FAH factors are age-specific and are 0.85 for ages less than 2 years, 0.72 for ages 2 to 16 years, and 0.73 for ages 16 to 70 years.

OEHHA has decreased the exposure duration currently being used for estimating cancer risk at the maximum exposed individual resident from 70 years to 30 years. This is based on studies showing that 30 years is a reasonable estimate of the 90th to 95th percentile of residency duration in the population. Additionally, OEHHA recommends using the 9 and 70-year exposure duration to represent the potential impacts over the range of residency periods.

Given the exposure durations of less than 24 hours, sensitive recreational receptors were evaluated for acute impacts only. Based on OEHHA recommendations, for children at school sites, exposure is assumed to occur 10 hours per day for 180 days (or 36 weeks) per year. Cancer risk estimates for children at school sites are calculated based on 9 year exposure duration. School sites also include teachers and other adult staff which are treated as off-site workers.

Risk Characterization

Cancer risk is defined as the lifetime probability of developing cancer from exposure to carcinogenic substances. Cancer risks are expressed as the chance in one million of getting cancer (i.e., number of cancer cases among one million people exposed). The cancer risks are assumed to occur exclusively through the inhalation pathway. The cancer risk can be estimated by using the cancer potency factor (milligrams per kilogram of body weight per day [mg/kg-day]), the 70-year annual average concentration (microgram per cubic meter [$\mu g/m^3$]), and the lifetime exposure adjustment.

Following guidelines established by OEHHA, the incremental cancer risks attributable to the proposed project were calculated by applying exposure parameters to modeled DPM concentrations in order to determine the inhalation dose (mg/kg-day) or the amount of pollutants inhaled per body weight mass per day. The cancer risks occur exclusively through the inhalation pathway; therefore, the cancer risks can be estimated from the following equation:

$$\text{Dose-inh} = \frac{C_{air} * \{DBR\} * A * CRAF * EF * ED * 10^{-6}}{AT}$$

Where:

Dose-inh = Dose of the toxic substance through inhalation in mg/kg-day

10^{-6} = Micrograms to milligrams conversion, Liters to cubic meters conversion

C_{air} = Concentration in air in microgram (μg)/cubic meter (m^3)

{DBR} = Daily breathing rate in liter (L)/kg body weight – day

A = Inhalation absorption factor

CRAF = Cancer Risk Adjustment Factor, Age Sensitivity Factor

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

AT = Averaging time period over which exposure is averaged in days (25,550 days for a 70 year cancer risk)

To determine incremental cancer risk, the estimated inhalation dose attributed to the proposed project was multiplied by the cancer potency slope factor (cancer risk per mg/kg-day). The cancer potency slope factor is the upper bound on the increased cancer risk from a lifetime exposure to a pollutant. These slope factors are based on epidemiological studies and are different values for different pollutants. This allows the estimated inhalation dose to be equated to a cancer risk.

Non-cancer adverse health impacts, acute (short-term) and chronic (long-term), are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental exposure concentration from the project to a published reference exposure level (REL) that could cause adverse health effects as established by OEHHA. The ratio (referred to as the Hazard Quotient [HQ]) of each non-carcinogenic substance that affects a certain organ system is added to

produce an overall HI for that organ system. The overall HI is calculated for each organ system. If the overall HI for the highest-impacted organ system is greater than one, then the impact is considered to be significant.

The HI is an expression used for the potential for non-cancer health effects. The relationship for the non-cancer health effects is given by the annual concentration (in $\mu g/m^3$) and the REL (in $\mu g/m^3$). The acute hazard index was determined using the "simple" concurrent maximum approach, which tends to be conservative (i.e., overpredicts).

The relationship for the non-cancer health effects is given by the following equation:

$$HI = C/REL$$

Where:

HI	= Hazard index; an expression of the potential for non-cancer health effects.
C	= Annual average concentration ($\mu g/m^3$) during the 70 year exposure period.
REL	= Concentration at which no adverse health effects are anticipated.

The chronic REL for DPM was established by the California OEHHA[10] as 5 $\mu g/m^3$. There is no acute REL for DPM. However, diesel exhaust does contain acrolein and other compounds, which do have an acute REL. BAAQMD's DPM speciation table (based on profile 4674 within the USEPA Speciate 4.2)[11] was used to assess the acute impacts. Acrolein emissions are approximately 1.3 percent of the total emissions. The acute REL for acrolein was established by the California OEHHA[12] as 2.5 $\mu g/m^3$.

Cumulative Sources

The BAAQMD's *CEQA Air Quality Guidelines* include standards and methods for determining the significance of cumulative health risk impacts.[13] The method for determining cumulative health risk requires the tallying of health risk from permitted sources and major roadways in the vicinity of a project (i.e., within a 1,000-foot radius of the location of the new project-related receptors), then adding the Project impacts to determine whether the cumulative health risk thresholds are exceeded.

BAAQMD has developed a geo-referenced database of permitted emissions sources throughout the San Francisco Bay Area, and has developed the *Stationary Source Risk & Hazard Analysis Tool* for estimating cumulative health risks from permitted sources. Four permitted sources are located within 1,000 feet of the proposed project impact area. **Table AQ-10** provides the

10 California Office of Environmental Health Hazards Assessment Toxicity Criteria Database, 2010, http://www.oehha.ca.gov//.

11 Provides for a speciation faction of 1.3 percent of acrolein per DPM emission rate, http://www.epa.gov/ttnchie1/software/speciate/

12 California Office of Environmental Health Hazards Assessment Toxicity Criteria Database, 2010, http://www.oehha.ca.gov//.

13 Bay Area Air Quality Management District. CEQA Air Quality Guidelines. May 2012. http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_Final_May%202012.ashx?la=en

estimated screening cancer risk, hazard impacts, and the PM2.5 concentrations for the cumulative permitted source.

Information (cancer risks and chronic index) was adjusted for distance from source to receptor, based on BAAQMD's *Distance Adjustment Multiplier for Diesel Internal Combustion Engine* and the *Distance Adjustment Multiplier for Gasoline Dispensing Facilities*. Sources 19038 and 19049 contain diesel generators and were adjusted accordingly. **Table AQ-11** provides the estimated adjusted cancer risk, hazard impacts, and the PM2.5 concentrations for the cumulative permitted source.

Table AQ-10: Screening Cumulative Health Impacts – Permitted Sources

Facility #	Facility Type	Address	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
G9885	City of Campbell	70 North 1st Street	0.59	<0.01	<0.01
19038	City of Campbell	70 North 1st Street	87.5	0.03	0.02
19049	City of Campbell	77 North Harrison Ave	60.1	0.02	0.01
18459	Orchard Valley Coffee	349 East Campbell Ave	<0.01	<0.01	0.08

SOURCE: Email from Alison Kirk at BAAQMD on August 1, 2016 - Stationary Source Inquiry Form Request – First and Campbell.

Table AQ-11: Adjusted Cumulative Health Impacts – Permitted Sources

Facility #	Facility Type	Address	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
G9885	City of Campbell	70 North 1st Street	0.59	<0.01	<0.01
19038	City of Campbell	70 North 1st Street	5.25	0.03	<0.01
19049	City of Campbell	77 North Harrison Ave	2.40	0.02	<0.01
18459	Orchard Valley Coffee	349 East Campbell Ave	<0.01	<0.01	0.08

SOURCE: Email from Alison Kirk at BAAQMD on August 1, 2016 - Stationary Source Inquiry Form Request – First and Campbell.

BAAQMD has also developed a geo-referenced database of roadways throughout the San Francisco Bay Area and has developed the *Highway Screening Analysis Tool* for estimating cumulative health risks from roadways. **Table AQ-12** displays the health impacts from Highway 17 in association with the existing residences at a height of 6 feet above ground; representing ground floor occupants. **Table AQ-13** display the health impacts from Highway 17 at a height of 20 feet above ground; representing above ground floor occupants. The existing residences are beyond 1,000 feet of Highway 17, and thus, was not included in the cumulative analysis.

BAAQMD *CEQA Air Quality Guidelines* also require the inclusion of surface streets within 1,000 feet of the Project with annual average daily traffic of 10,000 or greater.[14] Upon review of nearby roadways, one roadways meets the criteria: East Campbell Avenue. The existing residences are within 350 feet of East Campbell Avenue.

[14] Bay Area Air Quality Management District County Surface Street Screening Tables, May 2011

Table AQ-12: Highway 17 Health Impacts – 6 Feet Above Ground

Distance from Nearest Travel Lane (feet)	Cancer Risk	Chronic Impact	Acute Impact	PM2.5 Concentration
10	86.8	0.084	0.079	0.654
25	75.0	0.072	0.067	0.562
50	61.9	0.059	0.055	0.463
75	53.4	0.051	0.050	0.398
100	47.3	0.045	0.046	0.351
200	33.7	0.032	0.036	0.248
300	27.0	0.025	0.031	0.198
400	22.6	0.021	0.028	0.165
500	19.5	0.018	0.023	0.142
750	15.1	0.014	0.020	0.109
1000	12.4	0.011	0.018	0.089

SOURCE: BAAQMD *Highway Screening Analysis Tool*, May 2011.

Table AQ-13: Highway 17 Health Impacts – 20 Feet Above Ground

Distance from Nearest Travel Lane (feet)	Cancer Risk	Chronic Impact	Acute Impact	PM2.5 Concentration
10	51.6	0.049	0.070	0.385
25	49.8	0.048	0.061	0.372
50	46.2	0.044	0.051	0.344
75	42.6	0.041	0.046	0.317
100	39.4	0.037	0.043	0.293
200	30.4	0.029	0.035	0.225
300	25.1	0.024	0.031	0.184
400	21.3	0.020	0.027	0.156
500	18.7	0.017	0.023	0.136
750	14.6	0.013	0.019	0.106
1000	12.1	0.011	0.018	0.087

SOURCE: BAAQMD *Highway Screening Analysis Tool*, May 2011.

Health Risk Assessment Assumptions

5	Chronic Reference Exposure Level (ug/m3) for DPM	
2.5	Acute Reference Exposure Level (ug/m3) for Acrolien	
1.1	Cancer Potency Slope Factor (cancer risk per mg/kg-day) for DPM	
350	days per year	
25,550	days per lifetime	
1.3	% Acrolien in Diesel	
1090	95th Percentile Daily Breathing Rates (L/kg-day)	0<2 Years
861	95th Percentile Daily Breathing Rates (L/kg-day)	2<9 Years
745	95th Percentile Daily Breathing Rates (L/kg-day)	2<16 Years
335	95th Percentile Daily Breathing Rates (L/kg-day)	16<30 Years
290	95th Percentile Daily Breathing Rates (L/kg-day)	16<70 Years
0.85	fraction of time at home	0<2 Years
0.72	fraction of time at home	2<16 Years
0.73	fraction of time at home	16<70 Years

Project:	First and Campbell
Date:	August 10, 2016
Condition:	Unmitigated
Receptor:	Existing

Exposure Year	Calender Year	Maximum 1-Hour Acrolien Concentration (ug/m3)	Annual PM2.5 Concentration (ug/m3)	Daily Breathing Rates (L/kg-day)	Exposure Factor	fraction of time at home	Cancer Risk
1	2017	0.90	0.119	1,090	10.0	0.85	16.6
2	2018			1,090	10.0	0.85	-
3	2019			745	4.75	0.72	-
4	2020			745	3.00	0.72	-
5	2021			745	3.00	0.72	-
6	2022			745	3.00	0.72	-
7	2023			745	3.00	0.72	-
8	2024			745	3.00	0.72	-
9	2025			745	3.00	0.72	-
10	2026			745	3.00	0.72	-
11	2027			745	3.00	0.72	-
12	2028			745	3.00	0.72	-
13	2029			745	3.00	0.72	-
14	2030			745	3.00	0.72	-
15	2031			745	3.00	0.72	-
16	2032			745	3.00	0.72	-
17	2033			335	1.70	0.73	-
18	2034			335	1.00	0.73	-
19	2035			335	1.00	0.73	-
20	2036			335	1.00	0.73	-
21	2037			335	1.00	0.73	-
22	2038			335	1.00	0.73	-
23	2039			335	1.00	0.73	-
24	2040			335	1.00	0.73	-
25	2041			335	1.00	0.73	-
26	2042			335	1.00	0.73	-
27	2043			335	1.00	0.73	-
28	2044			335	1.00	0.73	-
29	2045			335	1.00	0.73	-
30	2046			335	1.00	0.73	-

0.12	Maximum Annual PM2.5 Concentration (ug/m3)
0.3	Significance Threshold (ug/m3)
No	Significant?
0.02	Chronic Hazard Impact
1	Significance Threshold
No	Significant?
0.36	Acute Hazard Impact
1	Significance Threshold
No	Significant?
16.6	Cancer Risk (Child)
10	Significance Threshold
Yes	Significant?
0.75	Cancer Risk (Adult)
10	Significance Threshold
No	Significant?
16.6	30-Year Exposure Cancer Risk
10	Significance Threshold
Yes	Significant?

Health Risk Assessment Assumptions

5	Chronic Reference Exposure Level (ug/m3) for DPM	
2.5	Acute Reference Exposure Level (ug/m3) for Acrolien	
1.1	Cancer Potency Slope Factor (cancer risk per mg/kg-day) for DPM	
350	days per year	
25,550	days per lifetime	
1.3	% Acrolien in Diesel	
1090	95th Percentile Daily Breathing Rates (L/kg-day)	0<2 Years
861	95th Percentile Daily Breathing Rates (L/kg-day)	2<9 Years
745	95th Percentile Daily Breathing Rates (L/kg-day)	2<16 Years
335	95th Percentile Daily Breathing Rates (L/kg-day)	16<30 Years
290	95th Percentile Daily Breathing Rates (L/kg-day)	16<70 Years
0.85	fraction of time at home	0<2 Years
0.72	fraction of time at home	2<16 Years
0.73	fraction of time at home	16<70 Years

Project:	First and Campbell
Date:	August 10, 2016
Condition:	Mitigated
Receptor:	Existing

Exposure Year	Calender Year	Maximum 1-Hour Acrolien Concentration (ug/m3)	Annual PM2.5 Concentration (ug/m3)	Daily Breathing Rates (L/kg-day)	Exposure Factor	fraction of time at home	Cancer Risk
1	2016	0.32	0.042	1,090	10.0	0.85	5.82
2	2017			1,090	10.0	0.85	-
3	2018			745	4.75	0.72	-
4	2019			745	3.00	0.72	-
5	2020			745	3.00	0.72	-
6	2021			745	3.00	0.72	-
7	2022			745	3.00	0.72	-
8	2023			745	3.00	0.72	-
9	2024			745	3.00	0.72	-
10	2025			745	3.00	0.72	-
11	2026			745	3.00	0.72	-
12	2027			745	3.00	0.72	-
13	2028			745	3.00	0.72	-
14	2029			745	3.00	0.72	-
15	2030			745	3.00	0.72	-
16	2031			745	3.00	0.72	-
17	2032			335	1.70	0.73	-
18	2033			335	1.00	0.73	-
19	2034			335	1.00	0.73	-
20	2035			335	1.00	0.73	-
21	2036			335	1.00	0.73	-
22	2037			335	1.00	0.73	-
23	2038			335	1.00	0.73	-
24	2039			335	1.00	0.73	-
25	2040			335	1.00	0.73	-
26	2041			335	1.00	0.73	-
27	2042			335	1.00	0.73	-
28	2043			335	1.00	0.73	-
29	2044			335	1.00	0.73	-
30	2045			335	1.00	0.73	-

0.04	Maximum Annual PM2.5 Concentration (ug/m3)
0.3	Significance Threshold (ug/m3)
No	Significant?
0.01	Chronic Hazard Impact
1	Significance Threshold
No	Significant?
0.13	Acute Hazard Impact
1	Significance Threshold
No	Significant?
5.82	Cancer Risk (Child)
10	Significance Threshold
No	Significant?
0.26	Cancer Risk (Adult)
10	Significance Threshold
No	Significant?
5.82	30-Year Exposure Cancer Risk
10	Significance Threshold
No	Significant?

Health Risk Assessment Assumptions

5	Chronic Reference Exposure Level (ug/m3) for DPM	
2.5	Acute Reference Exposure Level (ug/m3) for Acrolien	
1.1	Cancer Potency Slope Factor (cancer risk per mg/kg-day) for DPM	
350	days per year	
25,550	days per lifetime	
1.3	% Acrolien in Diesel	
1090	95th Percentile Daily Breathing Rates (L/kg-day)	0<2 Years
861	95th Percentile Daily Breathing Rates (L/kg-day)	2<9 Years
745	95th Percentile Daily Breathing Rates (L/kg-day)	2<16 Years
335	95th Percentile Daily Breathing Rates (L/kg-day)	16<30 Years
290	95th Percentile Daily Breathing Rates (L/kg-day)	16<70 Years
0.85	fraction of time at home	0<2 Years
0.72	fraction of time at home	2<16 Years
0.73	fraction of time at home	16<70 Years

Project:	First and Campbell
Date:	August 10, 2016
Source:	Rail
Receptor:	Existing

Exposure Year	Calender Year	Maximum 1-Hour Acrolien Concentration (ug/m3)	Annual PM2.5 Concentration (ug/m3)	Daily Breathing Rates (L/kg-day)	Exposure Factor	fraction of time at home	Cancer Risk
1	2017	0.001	0.050	1,090	10.0	0.85	7.02
2	2018	0.001	0.047	1,090	10.0	0.85	6.54
3	2019	0.001	0.043	745	4.75	0.72	1.66
4	2020	0.001	0.040	745	3.00	0.72	0.97
5	2021	0.001	0.038	745	3.00	0.72	0.93
6	2022	0.001	0.035	745	3.00	0.72	0.84
7	2023	0.001	0.033	745	3.00	0.72	0.80
8	2024	0.001	0.029	745	3.00	0.72	0.72
9	2025	0.001	0.028	745	3.00	0.72	0.67
10	2026	0.001	0.026	745	3.00	0.72	0.63
11	2027	0.001	0.024	745	3.00	0.72	0.59
12	2028	0.0005	0.023	745	3.00	0.72	0.55
13	2029	0.0004	0.019	745	3.00	0.72	0.46
14	2030	0.0004	0.017	745	3.00	0.72	0.42
15	2031	0.0004	0.017	745	3.00	0.72	0.42
16	2032	0.0003	0.016	745	3.00	0.72	0.38
17	2033	0.0003	0.014	335	1.70	0.73	0.09
18	2034	0.0003	0.012	335	1.00	0.73	0.04
19	2035	0.0003	0.012	335	1.00	0.73	0.04
20	2036	0.0002	0.010	335	1.00	0.73	0.04
21	2037	0.0002	0.010	335	1.00	0.73	0.04
22	2038	0.0002	0.009	335	1.00	0.73	0.03
23	2039	0.0002	0.009	335	1.00	0.73	0.03
24	2040	0.0001	0.007	335	1.00	0.73	0.03
25	2041	0.0001	0.007	335	1.00	0.73	0.03
26	2042	0.0001	0.007	335	1.00	0.73	0.03
27	2043	0.0001	0.007	335	1.00	0.73	0.03
28	2044	0.0001	0.007	335	1.00	0.73	0.03
29	2045	0.0001	0.007	335	1.00	0.73	0.03
30	2046	0.0001	0.007	335	1.00	0.73	0.03

0.05	Maximum Annual PM2.5 Concentration (ug/m3)	
0.3	Significance Threshold (ug/m3)	
No	Significant?	
0.01	Chronic Hazard Impact	
1	Significance Threshold	
No	Significant?	
0.00	Acute Hazard Impact	
1	Significance Threshold	
No	Significant?	
23.6	Cancer Risk (Child)	
10	Significance Threshold	
Yes	Significant?	
0.32	Cancer Risk (Adult)	
10	Significance Threshold	
No	Significant?	
24.1	30-Year Exposure Cancer Risk	
10	Significance Threshold	
Yes	Significant?	

Locomotive Emission Factors

Description	CO (g/hp-hr)	VOC (g/hp-hr)	NOx (g/hp-hr)	PM10 (g/hp-hr)	PM2.5 (g/hp-hr)
"Switch" duty-cycle, Tier 2	1.83	0.51	7.3	0.19	0.18
"Line-haul" duty-cycle, Tier 2	1.28	0.26	5.0	0.18	0.17

g/hp-hr means grams per horsepower-hour

Operation Assumptions

6	rail switch per day
365	days per year
0.5	idling time in hours
0.1	full load time in hours
3,300	Line Haul Locomotive engine size (hp)
2,500	Switch Locomotive engine size (hp)
5	Idle fuel usage (gal/hr)
0.28	line haul load factor
1	locomotive per line haul
1	locomotive per switch
9	rail haul per day
0.25	switch load factor

Locomotive Emissions - Line Haul duty-cycle

Description	CO (lb/day)	VOC (lb/day)	NOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	PM2.5 (lb/day)
Locomotive (idling)	0.336	0.068	1.300	0.047	0.046	0.018
Locomotive (at full load/horsepower)	2.35	0.48	9.07	0.33	0.32	0.123

Description	CO (tons/year)	VOC (tons/year)	NOx (tons/year)	PM10 (tons/year)	PM2.5 (tons/year)	PM2.5 (tons/year)
Locomotive (idling)	0.061	0.012	0.237	0.009	0.008	0.003
Locomotive (at full load/horsepower)	0.43	0.09	1.66	0.06	0.06	0.02

Locomotive Emissions - Switch duty-cycle

Description	CO (lb/day)	VOC (lb/day)	NOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	PM2.5 (lb/day)
Locomotive (idling)	0.286	0.080	1.141	0.030	0.029	0.014
Locomotive (at full load/horsepower)	1.51	0.42	6.03	0.16	0.15	0.076

Description	CO (tons/year)	VOC (tons/year)	NOx (tons/year)	PM10 (tons/year)	PM2.5 (tons/year)	PM2.5 (tons/year)
Locomotive (idling)	0.052	0.015	0.208	0.005	0.005	0.003
Locomotive (at full load/horsepower)	0.276	0.077	1.101	0.029	0.028	0.014

2.72E-03 2.64E-03 1.11E-03 g/s

Diesel fuel fuel density: 7 lb/gal

Brake Specific Fuel Consumption (BSFC): 0.37 lb/hp-hr (ranges from 0.334 to about 0.370 lb/hp-hr for CAT's 2250 hp 3516B locomotive engine)

Attachment D

Greenhouse Gas Setting and Regulatory Context

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal (IPCC, 2007), with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. GHGs naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHGs occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere are naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur

hexafluoride, and are generated in certain industrial processes. Greenhouse gases are typically reported in "carbon dioxide-equivalent" measures (CO_2e).[1]

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.[2]

Santa Clara County Climate Action Plan

In 2007, the Santa Clara County Board of Supervisors signed the Cool Counties Climate Stabilization Declaration and established a set of aggressive goals for GHG emissions reductions that would reduce the government's GHG emissions by 80 percent before 2050. The Climate Action Plan represents a year-long effort among multiple County agencies, resulting in a set of strategic changes in County operations, facilities and employee behaviors which will facilitate not simply emissions reductions, but water conservation, and decreases in fuel consumption and solid waste volume. [3]

City of Campbell General Plan

The City of Campbell General Plan[4] includes policies that address the reduction of GHG emissions during the planning horizon of the General Plan. Goals and policies that address sustainability are aimed at reducing the City's contribution to GHG emissions. The City's General Plan includes the following goals and policies associated with GHG emissions (and particular applicability to the proposed project):

Policy H-1.2: Green Buildings: Encourage the use of sustainable and green building design in new and existing housing.

Program H-1.2a: Green Buildings: The City is concerned about the continued availability of all resources for the development of affordable housing. The City of Campbell adopted the Green policies recommended by the Santa Clara County Cities Green Building Collaborative (GBC) intended to promote climate protection strategies and regional reductions in GHG emissions including:

- ✓ Recognizing/adopting the LEED and GreenPoint Rated rating systems as a standard for green building evaluation;

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1 Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

2 2006 Final Climate Action Team Report to the Governor and Legislature. March 2006. http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF.

3 County of Santa Clara Climate Action Plan for Operations and Facilities, September 2009, https://www.sccgov.org/sites/osp/Programs/ClimateAction/Pages/Climate-Action-Plan.aspx

4 City of Campbell. *City of Campbell General Plan*. Adopted November 6, 2001. Last amended February 17, 2015. http://www.ci.campbell.ca.us/DocumentCenter/View/2664

- ✓ Completion of the "Green Checklist" as part of development applications, including remodels over 500 square feet; and
- ✓ LEED Silver certification for all new or renovated municipal buildings over 5,000 square feet.

Policy H-1.3: Energy Efficiency: Energy costs can reduce the affordability of housing for lower income households. The City will continue to promote programs and opportunities for improved energy efficiency and weatherization. To address energy conservation in existing buildings, the City of Campbell promotes Pacific Gas and Electric utility assistance programs. These programs primarily serve extremely low and very low income households.

Program H-1.3a: Promote Energy Efficiency: Promote programs and activities that reduce residential energy usage in existing buildings. The City of Campbell promotes Pacific Gas and Electric utility assistance programs, programs offered through non-profit agencies and other related programs.

California Green Building Standards Code

On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. CALGreen is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

CALGreen does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. CALGreen also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard, which buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, CALGreen is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impacts during and after construction.

CALGreen contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. CALGreen provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. CALGreen also requires building commissioning, which is a process for verifying that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency. The following provides examples of CALGreen requirements:

- **Designated parking.** Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles.
- **Recycling by Occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.
- **Construction waste.** A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and-75 percent for new homes and 80-percent for commercial projects. All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.
- **Wastewater reduction.** Each building shall reduce the generation of wastewater by installation of water-conserving fixtures or using nonpotable water systems.
- **Water use savings.** 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40-percent reductions.
- **Water meters.** Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day.
- **Irrigation efficiency.** Moisture-sensing irrigation systems for larger landscaped areas.
- **Materials pollution control.** Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.
- **Building commissioning.** Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses

and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHGs to meet the 1990 emissions cap by 2020.

Climate Change Scoping Plan

In October of 2013, the CARB submitted the First Update to the Climate Change Scoping Plan for public review and comment. The First Update to the Scoping Plan was approved by the CARB on May 22, 2014, and builds upon the initial Scoping Plan with new strategies and recommendations. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB's climate change priorities for the next five years, and also sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use.

In the First Update to the Climate Change Scoping Plan, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural and working lands), along with short-lived climate pollutants, green buildings, and the cap-and-trade program. These key focus areas have overlapping and complementary interests that will require careful coordination in California's future climate and energy policies. These focus areas were selected to address issues that underlie multiple sectors of the economy. As such, each focus area is not contained to a single economic sector, but has far-reaching impacts within many economic sectors.

Greenhouse Gas Regional Emission Estimates

In 2013, the United States emitted about 6.673 billion tons of CO_2e. Of the four major sectors nationwide - residential, commercial, industrial, and transportation – electrical generation accounts for the highest fraction of GHG emissions (approximately 31 percent); these emissions are entirely generated from direct fossil fuel combustion. United States emissions increased by 2.0 percent from 2012 to 2013. Recent trends can be attributed to multiple factors including increased emissions from electricity generation, an increase in miles traveled by on-road vehicles, an increase in industrial production and emissions in multiple sectors, and year-to-year changes in the prevailing weather. Greenhouse gas emissions in 2013 were 9 percent below 2005 levels.[5]

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5 USEPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2013, April 2015,* http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf

The composition of gross GHG emissions in the United States in 2013 (expressed in terms of CO_2e) were as follows:

- CO_2 accounted for 82 percent;
- CH_4 accounted for 10 percent;
- N_2O accounted for 5 percent; and
- Fluorinated gases (HFCs, PFC, and SF_6) accounted for 3 percent.[6]

California's gross emissions of GHG decreased by 1.6 percent from 466.3 million metric tons of CO_2e in 2000 to 458.7 million metric tons in 2012, with a maximum of 492.7 million metric tons in 2004. During the same period, California's population grew by 11 percent from 34 to 37.8 million people. As a result, California's per capita GHG emissions have generally decreased over the last 12 years from 13.7 in 2000 to 12.1 million metric tons of CO_2e per person in 2012.[7] California has one of the lowest per capita GHG emission rates in the country, due to the success of its energy efficiency and renewable energy programs and commitments that have lowered the state's GHG emissions rate of growth by more than half of what it would have been otherwise. Another factor that has reduced California's fuel use and GHG emissions is its mild climate compared to that of many other states.

The transportation sector remains the largest source of GHG emissions in 2012, accounting for 36 percent of California's GHG emission inventory. Contributions from the transportation sector include emissions from on-road and off-road vehicles, aviation, rail and water-borne vehicles, and some other minor sources. Transportation-related GHG emissions have dropped 12 percent since reaching a maximum in 2007. In 2012, emissions from the on-road category decreased by 0.5 percent from the previous year.[8]

In the San Francisco Bay Area, the transportation sector and industrial/commercial sector represent the largest sources of GHG emissions, accounting for 36.4 percent each of the Bay Area's 95.8 million tons of CO_2e in 2007. Electricity/co-generation sources account for about 15.9 percent of the Bay Area's GHG emissions, followed by residential fuel usage at about 7.1 percent. Off-road equipment and agricultural/farming sources currently account for approximately three percent and 1.2 percent of the total Bay Area GHG emissions, respectively.[9]

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6 USEPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2013, April 2015,* http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf

7 CARB, *2014 Edition California Greenhouse Gas Emission Inventory 2000 – 2012*, May, 2014, http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf

8 CARB, *2014 Edition California Greenhouse Gas Emission Inventory 2000 – 2012*, May, 2014, http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf

9 BAAQMD, Source Inventory of Bay Area Greenhouse Gas Emissions, February 2010, http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Emission%20Inventory/regionalinventory2007_2_10.ashx?la=en

Thresholds of Significance

Separate thresholds of significance are established for operational GHG emissions from stationary sources (such as generators, furnaces, and boilers) and non-stationary sources (such as on-road vehicles). As no threshold has been established for construction-related emissions, the operational emissions thresholds apply. The threshold for stationary sources is 10,000 metric tons of CO_2e per year (i.e., emissions above this level may be considered significant). For non-stationary sources, three separate thresholds have been established:

- Compliance with a Qualified Greenhouse Gas Reduction Strategy (i.e., if a project is found to be out of compliance with a Qualified Greenhouse Gas Reduction Strategy, its GHG emissions may be considered significant); or
- 1,100 metric tons of CO_2e per year (i.e., emissions above this level may be considered significant); or
- 4.6 metric tons of CO_2e per service population per year (i.e., emissions above this level may be considered significant). Service population is the sum of residents plus employees expected for a development project.

For quantifying a project's GHG emissions, BAAQMD recommends that all GHG emissions from a project be estimated, including a project's direct and indirect GHG emissions from operations. Direct emissions refer to emissions produced from onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced offsite from energy production and water conveyance due to a project's energy use and water consumption.

ATTACHMENT 3

CAMPBELL DOWNTOWN PARKING ASSESSMENT

CAMPBELL DOWNTOWN
PARKING ASSESSMENT

Prepared by: Planning Division
Version Date: January 20, 2017

CAMPBELL DOWNTOWN

PARKING ASSESSMENT

Cover Photo, City of Campbell, 2017

TABLE OF CONTENTS

I. PURPOSE

This document is intended to provide an overview of parking conditions in the Campbell Downtown by comparing the parking demand (generated by existing land uses) with the parking supply (provided by both public and private parking facilities). This document and the supporting appendices are not to be used to determine the legal floor area, seat count, occupancy, or land use of a certain property.

As this document does not include parking counts based on field observations, it should not be considered as a substitute for a formal parking study. However, the information contained in this document may be used to establish a 'baseline' for the Campbell Downtown, from which further study may be conducted.

Future studies may build on this assessment by accounting for ridership of alternative transportation options (e.g. light-rail, bus, biking, walking, and bus), trip chaining, peak business hours (e.g. office uses peak during daytime, restaurant demand peak at nighttime), or parking counts to prepare a more detailed assessment of parking adequacy in the Campbell Downtown.

II. METHODOLOGY

A. PARKING DEMAND

To determine the 'demand' of a particular land use, the assessment relies on the parking standards established by the Campbell Municipal Code (CMC). For simplicity, the assessment applies the parking ratio established by Section 21.10.060 (C-3 Zoning District) for all properties within the study area[1]. It should be noted that for the purposes of this assessment 'residential' uses and their associated parking supply (e.g. Park Town Place Condos) have been omitted, and no credit has been provided to uses established with a parking supply less than what is required by current code standards (i.e. uses legally established without parking, are still counted). Further, where vacancies occur, a retail parking standard was applied.

B. PARKING SUPPLY

The parking supply includes a count of all public and private parking spaces in the study area, including spaces located on the street. Recognizing that not all parking spaces are available to all uses (e.g. private parking lots), two different scenarios were conducted. The first scenario (i.e. Shared Parking), is intended to evaluate the parking conditions in the Downtown if all uses had equal access to all parking spaces. By contrast, the second scenario (i.e. Public Parking) is focused on evaluating the parking demand generated on public parking facilities by uses without private parking.

C. DATA SOURCES

This document, and the supporting appendices, attempt to combine data from a variety of sources (e.g. building permit records, aerial photography, county assessor data, conditional use permits, outdoor seating permits), compiled over a period of years by Planning, Economic Development, and Redevelopment Agency (RDA) staff. While every effort was made to make this information as accurate as possible, as the information was not verified by field observations a margin of error should be assumed in the underlying data and conclusions.

[1]Government facilities (e.g. City Hall, Library, and the Police Station) are generally parked at a ratio of 1:200 pursuant to Chapter 21.28 (Parking and Loading) whereas a ratio of 1:425 for office uses in the Downtown has been applied. Further, for bars and clubs the parking ratio was based on a parking demand of one parking space for every four occupants, similar to the standard used for restaurants in the downtown.

III. STUDY AREA

A. LIMITS OF STUDY AREA

For the purposes of this assessment, the study area was based on the limits defined by the 'Downtown Parking Study' conducted by Gordon H. Chong & Partners and Walker Parking Consultants (September 1999). The study area is generally bounded by City Hall parking lot to the north, the First Street Parking Garage to the south, the parking lot serving the VTA light rail station to the east, and Heroes Comics (24 E. Campbell Avenue) to the west.

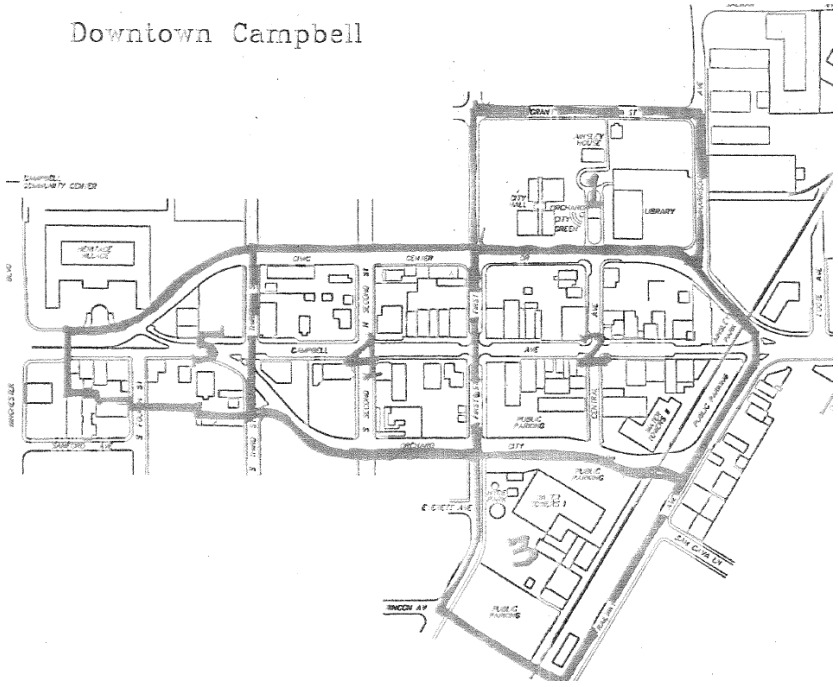


Figure 1 – Downtown Campbell – Gordon H. Chong & Walker; September 1999

B. PARKING MAP

The map on the following page is intended to illustrate the study area, parking categories, and locations included in the parking count. As the map is not to scale, the map should not be used to verify the parking figures. As an example, the number of parking spaces included in the City Hall Parking count is noted as 260 stalls, whereas only ±120 stalls are actually depicted on the map. Further, not all stalls striped on the map, such as those located to the north of Brown Chicken Brown Cow (397 E. Campbell Avenue), have been included in the parking count, nor have parking areas in the downtown (e.g. those located along drive aisles, or used on a temporary basis) that are not formally recognized as 'legal'. As such, only areas illustrated with a color overlay (e.g. green, blue) are included in the count.

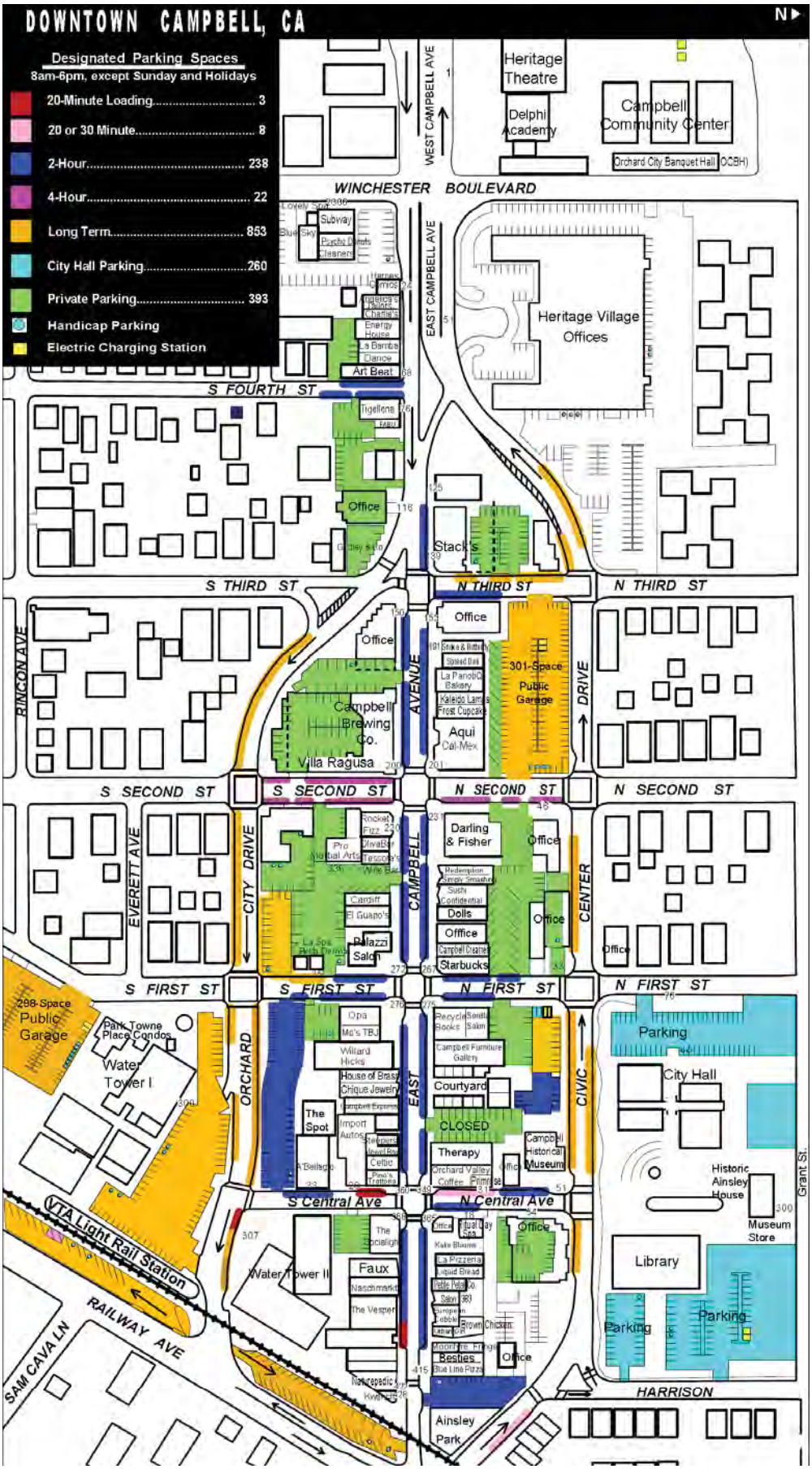


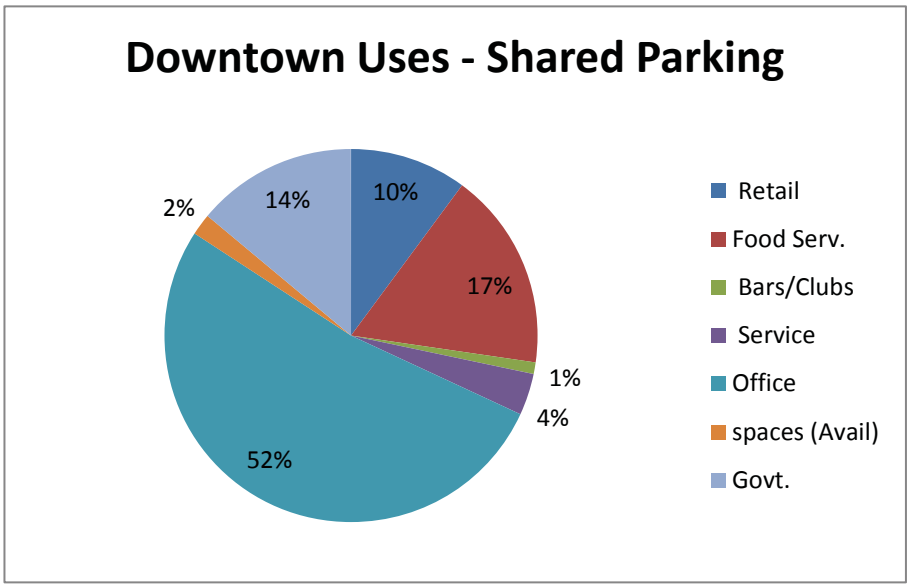
Figure 2 – Parking Map

IV. PARKING SUPPLY/DEMAND ASSESSMENT

A. SHARED PARKING SCENARIO

The following table and chart serve to summarize the shared parking scenario:

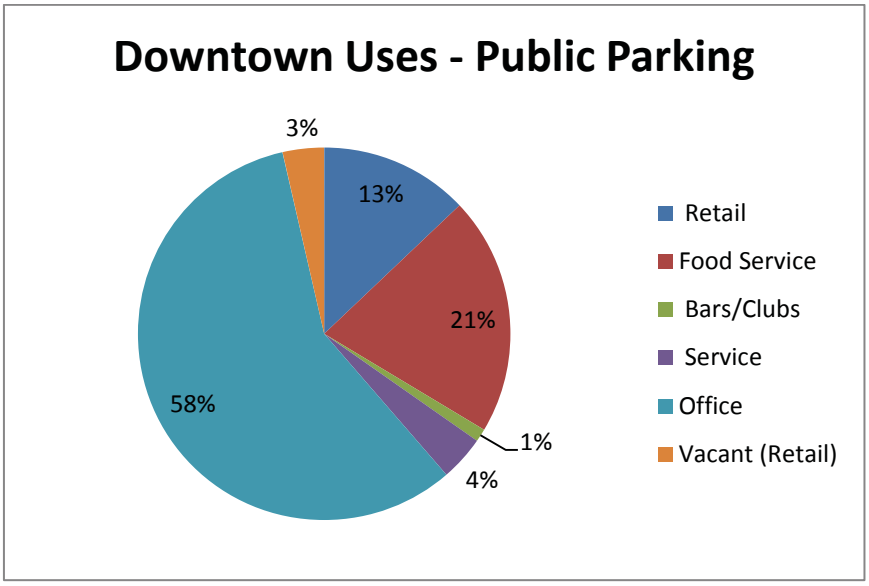
Land Use	Metric (floor area or seat/occupancy)	Percentage	Ratio	Demand
Retail	50,441	**10%**	1 per 345	146.21
Food Service	85,434	**17%**	Seats	
Bars/Clubs	5,019	**1%**	Occupancy	
Service	17,992	**4%**	1 per 345	52.15
Office	260,104	**52%**	1 per 425	612.01
Vacant (Retail)	9,256	**2%**	1 per 345	26.83
Govt.	69,384	**14%**	1 per 425	163.26
Total Floor Area/Use	**497,630**	**100%**		1,000
Seats/Occupancy	**3,193**		4	798.25
Total Parking Demand				1,799
Total Parking Supply				1,782
Deficit/Surplus				**(17)**



B. PUBLIC PARKING SCENARIO

The following table and chart serve to summarize the public parking scenario:

Land Use	Metric (floor area or seat/occupancy)	Percentage	Ratio	Demand
Retail	33,197	**13%**	1 per 345	96.22
Food Service	53,211	**21%**	Seats	
Bars/Clubs	2,887	**1%**	Occupancy	
Service	10,042	**4%**	1 per 345	29.11
Office	148,551	**58%**	1 per 425	349.53
Vacant (Retail)	9,256	**4%**	1 per 345	26.83
Total Floor Area/Use	**257,144**	**100%**		501.69
Seats/Occupancy	**1,797**		1 per 4	449.25
Total Parking Demand				951
Total Parking Supply				1,124
Deficit/**Surplus**				**173**



V. CONCLUSIONS

Under the shared parking scenario, the downtown would be considered deficient by 17 parking stalls. Under the public parking scenario, the downtown has a parking surplus of 173 parking spaces. In that neither scenario provides a 'perfect' assessment of the downtown parking supply or demand, only rough assessments and conclusions from this data may be derived. It is recommended that field counts are performed to verify the outcomes of this assessment.

VI. APPENDICES

List of Appendices

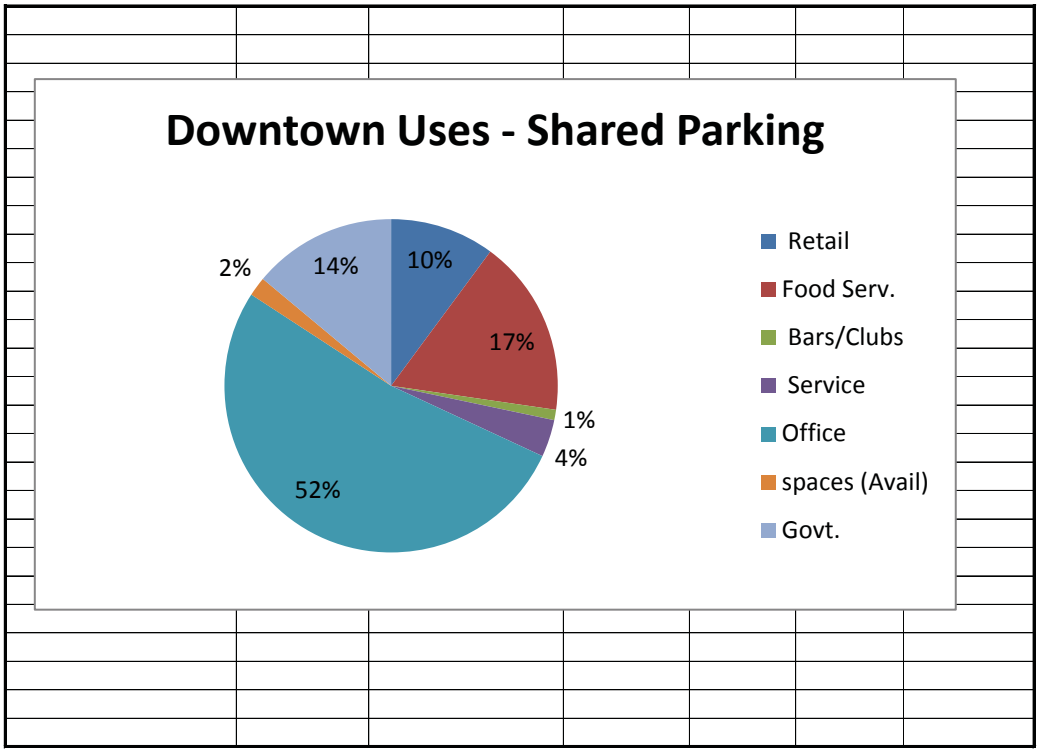
A. BACKGROUND DATA – SHARED PARKING SCENARIO
B. BACKGROUND DATA – PUBLIC PARKING SCENARIO

Background Data - Shared Parking Scenario

Business	Address		Sq. Ft.	Indoor S	Outdoor	Parking
APPAREL						
Besties Boutique	411	E. Campbell	1,470			No
Bombshell Boutique	295	E. Campbell	650			No
Therapy	347	E. Campbell	3,044			No
Redemption	241a	E. Campbell	1,300			No
Simply Smashing	241b	E. Campbell	1,100			Yes
Stripes Boutique	321	E. Campbell	300			No
Urban Girl	395	E. Campbell	550			No
			8,414			
AUTO						
Import Connection	25	S. Central	5,480			No
			5,480			
BARS						
Cardiff Lounge	260	E. Campbell Ave.	2,132	160		Yes
Khartoum	300	Orchard City Dr.	2,887	145		No
			5,019			
FOOD SERVICE						
A 'Bellagio	33	S. Central	5,622	50	25	No
Aqui	201	E. Campbell	4,494	170	60	No
Blue Line Pizza	415	E. Campbell	3,272	79	16	No
Brown Chicken	397	E. Campbell	1,302	36	32	No
Campbell Brewing	200	E. Campbell	7,000	255	44	Yes
Campbell Creamery	267b	E. Campbell	1,008	0	6	Yes
El Guapos w/ patio	266b	E. Campbell	3,619	63	30	Yes
Frost Cupcake	199	E. Campbell	1,042	14	6	No
Vacant / House of	342	E. Campbell	1,791			No
Katie Blooms	369	E. Campbell	2,750	129	40	No
Kwench	428	E. Campbell	525	0	0	No
Komatsu	300	Orchard City Dr.	1,700	50	0	No
La Pizzeria	373	E. Campbell	1,440	44	14	No
La PanotiQ	195	E. Campbell	2,198	38	24	No
Liquid Bread Gastro	379	E. Campbell	1,504	42	8	No
LVL Up	400	E. Campbell	3,200	129	0	No
Mo's TBJ	278	E. Campbell	2,076	59	34	Yes
Naschmarkt	384	E. Campbell	1,381	50	6	No
Opa	276	E. Campbell	2,707	94	66	Yes
Orchard Valley	349	E. Campbell	3,486	60	12	No
Pino's Trattoria	360	E. Campbell	1,508	44	28	No
Snake & Butterfly	191	E. Campbell	974	18	12	No
Socialight	368	E. Campbell	1,730	49	36	Yes
Spread Deli	193	E. Campbell	1,239	25	20	No
Stack's	139	E. Campbell	4,500	90	20	No
Starbucks	267a	E. Campbell	1,800	60	12	Yes
Steepers Tea	346	E. Campbell	750	12	0	No
Sushi Confidential	247	E. Campbell	2,700	92	20	Yes
Tessoras Wine Bar	234	E. Campbell	1,420	49	24	Yes
The Spot	201	Orchard City Dr.	5,622	125	16	No
The Vesper	394	E. Campbell	2,911	101	7	No
Tigelleria	76	E. Campbell	2,763	56	8	Yes
Willard Hicks	280	E. Campbell	5,400	157	22	Yes
			85,434			
BOOKS						
Heroes Comics	24	E. Campbell	600			No
Recycle Books	275	E. Campbell	3,100			Yes
			3,700			
HEALTH & FITNESS						
Dance Effects	58	E. Campbell	1,650			No
Pro Martial Arts	236	E. Campbell	2,030			Yes
			3,680			
HOME & GARDEN						
Campbell Floor	155	E. Campbell	500			Yes

Campbell Furniture	287	E. Campbell	5,200			Yes
Charlie's Home	38	E. Campbell	2,140			No
Energy House	46	E. Campbell	3,200			No
Freshly Worn Furn.	389	E. Campbell	950			No
Kaleido Lamps	197	E. Campbell	1,010			No
Naturepedic	422	E. Campbell	1,500			No
Petite Petal Co.	381	E. Campbell	540			No
Warm Elements	296	E. Campbell	2,423			No
			17,463			
HAIR, NAILS, SKIN						
Couture Tanning	301/305	E. Campbell	750			No
Embelish Hair	311	E. Campbell	350			No
FABU Salon	98	E. Campbell	450			Yes
Faux	378	E. Campbell	3,836			No
Fringe	401b	E. Campbell	800			No
Judy's Nails	309	E. Campbell	350			No
La Bamba	52	E. Campbell	1,143			No
La Spa Bella Derma	35	S. First St.	550			No
Palazzi Salon	274	E. Campbell	4,500			Yes
Ritual Day Spa	14/18	N. Central Ave.	1,260			No
Salon 383	383	E. Campbell	803			No
Sorelle Salon	275a	E. Campbell	3,000			Yes
Wax Bar	35	S. 2nd St.	200			No
			17,992			
PROFESSIONAL						
Angelica's Tailoring	32	E. Campbell	1,320			No
Bay Co. Tech Grp.	155	E. Campbell	400			Yes
Campbell Express	334	E. Campbell	2,160			No
Darling & Fischer	231	E. Campbell	12,000			Yes
Dermatology for	106	E. Campbell	1,889			Yes
Com. Bank of The	45	N. First St.	3,078			Yes
			20,847			
SPECIALTY SHOPS						
Art Beat	68	E. Campbell	2,507			No
Celtic Shoppe	354	E. Campbell	1,113			No
Chique Jewelry	328	E. Campbell	2,500			No
Cruiser Shop	325	E. Campbell	350			No
Geoffrey's Diamonds	350	E. Campbell	1,420			No
House of Product	323	E. Campbell	300			No
Let's Talk Dolls	329	E. Campbell	300			No
Moonfyre	401	E. Campbell	500			No
Nice Twice Doll	253	E. Campbell	1,774			Yes
Radio Daze	313	E. Campbell	350			No
Rocket Fizz	220	E. Campbell	2,800			Yes
The Olive Bar	232	E. Campbell	1,470			Yes
			15,384			
OFFICE						
Office	255	E. Campbell	450			No
Office (former bank)	238	E. Campbell	5,525			Yes
Office Bldg.	116	E. Campbell	5,443			Yes
Office Bldg.	150	E. Campbell	5,628			Yes
Office Bldg.	365	E. Campbell	1,200			No
Litle & Neal Realtors	155	E. Campbell	10,472			Yes
Peninsula Ins.	259	E. Campbell	2,732			Yes
Markey Captial	22	S. Second St.	1,648			Yes
Miracle Painting	45	S. First St.	550			No
Water Tower I Office	300	Orchard City Dr.	82,913			No
Water Tower II Office	307	Orchard City Dr.	53,070			No
Office Bldg.	46	N. Second St.	3,825			Yes
Office Bldg.	33	N. First St.	3,350			Yes
Office Bldg.	63	N. First St.	1,785			Yes
Office Bldg. (SBUX E	267	E. Campbell Ave.	5,442			Yes
Office Bldg.	200	E. Campbell	26,690			Yes

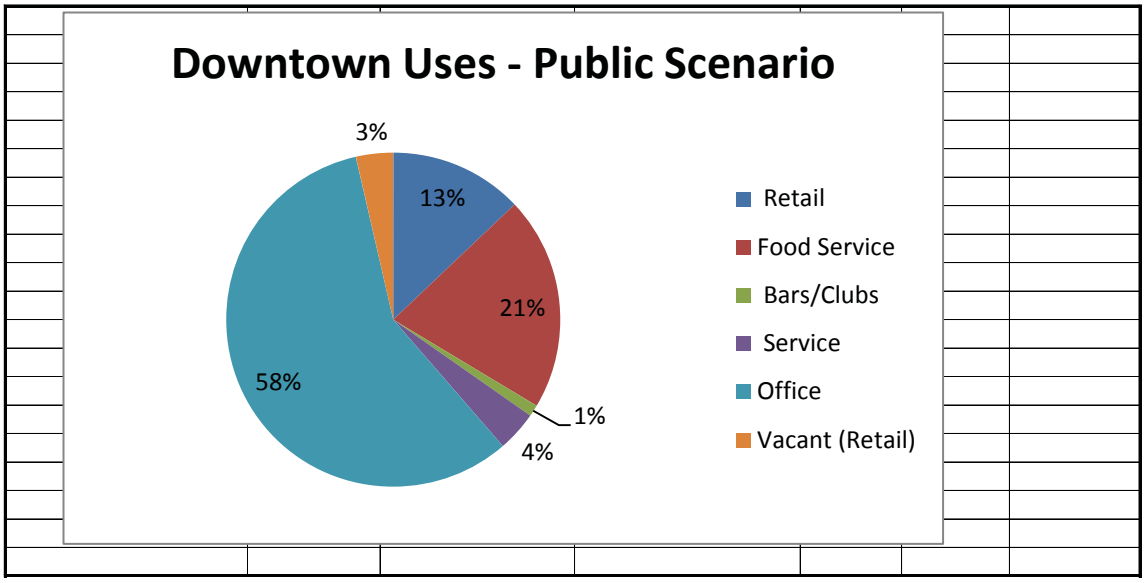
Office (Above Aqui's	201	E. Campbell	4,760			Yes
Office Bldg.	257-259	E. Campbell	2,732			Yes
Office Bldg.	122	Orchard City Dr.	1,320			Yes
Office Bldg.	368	E. Campbell	4,714			Yes
Office Bldg.	415	E. Campbell	6,028			No
Grower's National Ba	400	E. Campbell	860			No
Office Bldg.	55	N. Third St.	5,925			Yes
Office Bldg.	139	E. Campbell Ave.	3,481			Yes
Office Bldg.	54	N. Central Ave.	12,785			Yes
Office Bldg.	34	S. Second St.	6,776			Yes
			260,104			
CITY BUILDINGS						
City Hall	70	N. First St.	30,024			Yes
PD Annex	70	N. First St.	1,440			Yes
Ainsley House & Car	300	Grant St.	10,000			Yes
Historical Museum	51	N Central Ave.	3,320			Yes
Museum Garage	51	N Central Ave.	600			Yes
Library	77	Harrison Ave.	24,000			Yes
			69,384			
AVAILABLE						
URM (Audible Arts)	412	E. Campbell	2,500			No
URM (State Bikes)	416	E. Campbell	2,776			No
Avail.	31	N. Central Ave.	500			No
Avail. Office	400	E. Campbell Ave.	3,480			No
			9,256			
Seats/Occupancy				2545	648	
Land Use	**Metric**	**Percentage**	**Ratio**			
Retail	50,441	**10%**	1 per 345	146.21		
Food Serv.	85,434	**17%**	Seats			
Bars/Clubs	5,019	**1%**	Occupancy			
Service	17,992	**4%**	1 per 345	52.15		
Office	260,104	**52%**	1 per 425	612.01		
spaces (Avail)	9,256	**2%**	1 per 345	26.83		
Govt.	69,384	**14%**	1 per 425	163.26		
Total Floor Area/Use	**497,630**	**100%**		1,000		
Seat/Occupancy	**3,193**		4	798.25		
otal Parking Demand	**1,799**					
Total Parking Supply	**1,782**					
Deficit/Surplus	**(17)**					


Downtown Uses - Shared Parking
10%
17%
1%
4%
52%
2%
14%
Retail
Food Serv.
Bars/Clubs
Service
Office
spaces (Avail)
Govt.

Background Data - Public Parking Scenario

Business	Address		Sq. Ft.	Indoor S	Outdoor	Parking
APPAREL						
Besties Boutique	411	E. Campbell	1,470			No
Bombshell Boutique	295	E. Campbell	650			No
Therapy	347	E. Campbell	3,044			No
Stripes Boutique	321	E. Campbell	300			No
Urban Girl	395	E. Campbell	550			No
			6,014			
AUTO						
Import Connection	25	S. Central	5,480			No
			5,480			
BARS						
Khartoum	300	Orchard City Dr.	2,887	145		No
			2,887			
FOOD SERVICE						
A 'Bellagio	33	S. Central	5,622	50	25	No
Aqui	201	E. Campbell	4,494	170	60	No
Blue Line Pizza	415	E. Campbell	3,272	79	16	No
Brown Chicken	397	E. Campbell	1,302	36	32	No
Frost Cupcake	199	E. Campbell	1,042	14	6	No
Vacant / House of	342	E. Campbell	1,791			No
Katie Blooms	369	E. Campbell	2,750	129	40	No
Kwench	428	E. Campbell	525	0	0	No
Komatsu	300	Orchard City Dr.	1,700	50	0	No
La Pizzeria	373	E. Campbell	1,440	44	14	No
La PanotiQ	195	E. Campbell	2,198	38	24	No
Liquid Bread Gastro	379	E. Campbell	1,504	42	8	No
LVL Up	400	E. Campbell	3,200	129	0	No
Naschmarkt	384	E. Campbell	1,381	50	6	No
Orchard Valley	349	E. Campbell	3,486	60	12	No
Pino's Trattoria	360	E. Campbell	1,508	44	28	No
Snake & Butterfly	191	E. Campbell	974	18	12	No
Spread Deli	193	E. Campbell	1,239	25	20	No
Stack's	139	E. Campbell	4,500	90	20	No
Steepers Tea	346	E. Campbell	750	12	0	No
The Spot	201	Orchard City Dr.	5,622	125	16	No
The Vesper	394	E. Campbell	2,911	101	7	No
			53,211			
BOOKS						
Heroes Comics	24	E. Campbell	600			No
			600			
HEALTH & FITNESS						
Dance Effects	58	E. Campbell	1,650			No
			1,650			
HOME & GARDEN						
Charlie's Home	38	E. Campbell	2,140			No
Energy House	46	E. Campbell	3,200			No
Freshly Worn Furn.	389	E. Campbell	950			No
Kaleido Lamps	197	E. Campbell	1,010			No
Naturepedic	422	E. Campbell	1,500			No
Petite Petal Co.	381	E. Campbell	540			No
Warm Elements	296	E. Campbell	2,423			No
			11,763			
HAIR, NAILS, SKIN						
Couture Tanning	301/305	E. Campbell	750			No
Embelish Hair	311	E. Campbell	350			No
Faux	378	E. Campbell	3,836			No
Fringe	401b	E. Campbell	800			No
Judy's Nails	309	E. Campbell	350			No
La Bamba	52	E. Campbell	1,143			No
La Spa Bella Derma	35	S. First St.	550			No
Ritual Day Spa	14/18	N. Central Ave.	1,260			No
Salon 383	383	E. Campbell	803			No
Wax Bar	35	S. 2nd St.	200			No

			10,042			
PROFESSIONAL						
Angelica's Tailoring	32	E. Campbell	1,320			No
Campbell Express	334	E. Campbell	2,160			No
			3,480			
SPECIALTY SHOPS						
Art Beat	68	E. Campbell	2,507			No
Celtic Shoppe	354	E. Campbell	1,113			No
Chique Jewelry	328	E. Campbell	2,500			No
Cruiser Shop	325	E. Campbell	350			No
Geoffrey's Diamonds	350	E. Campbell	1,420			No
House of Product	323	E. Campbell	300			No
Let's Talk Dolls	329	E. Campbell	300			No
Moonfyre	401	E. Campbell	500			No
Radio Daze	313	E. Campbell	350			No
			9,340			
OFFICE						
Office	255	E. Campbell	450			No
Office Bldg.	365	E. Campbell	1,200			No
Miracle Painting	45	S. First St.	550			No
Water Tower I Office	300	Orchard City Dr.	82,913			No
Water Tower II Office	307	Orchard City Dr.	53,070			No
Office Bldg.	415	E. Campbell	6,028			No
Grower's National Bar	400	E. Campbell	860			No
			145,071			
AVAILABLE						
URM (Audible Arts)	412	E. Campbell	2,500			No
URM (State Bikes)	416	E. Campbell	2,776			No
Avail.	31	N. Central Ave.	500			No
Avail. Office	400	E. Campbell Ave.	3,480			No
			9,256			
Seat/Occ. Totals				1,451	346	
Land Use	**Metric**	**Percentage**	**Ratio**	**Demand**		
Retail	33,197	**13%**	1 per 345	96.22		
Food Service	53,211	**21%**	Seats			
Bars/Clubs	2,887	**1%**	Occupancy			
Service	10,042	**4%**	1 per 345	29.11		
Office	148,551	**58%**	1 per 425	349.53		
Vacant (Retail)	9,256	**4%**	1 per 345	26.83		
	257,144	**100%**		501.69		
Seats/Occupancy	**1,797**		1 per 4	449.25		
Total Parking Demand	**951**			951		
Total Parking Supply	**1,124**					
Deficit/**Surplus**	**173**					


Downtown Uses - Public Scenario
3%
13%
21%
58%
1%
4%
Retail
Food Service
Bars/Clubs
Service
Office
Vacant (Retail)

ATTACHMENT 4

DOWNTOWN CITY OF CAMPBELL PARKING STUDY

Downtown City of Campbell Parking Study

CITY OF CAMPBELL
DOWNTOWN PARKING STUDY

September 1999

Prepared by

GORDON H CHONG
& *Partners*

WALKER
PARKING CONSULTANTS

EXECUTIVE SUMMARY

The City of Campbell retained the consulting/design team of Gordon H. Chong & Partners and Walker Parking Consultants to conduct a parking study of the City's downtown area. The purpose of this study was to determine if the supply of parking in the downtown area is adequate to meet anticipated parking needs, including those associated with future development, and to develop alternatives to address any parking shortfalls identified by the study.

Parking demand projections were prepared for various development scenarios in the downtown area using the Urban Land Institute's shared parking methodology. These scenarios included Existing Land Uses (Existing), Existing Land Uses + Approved Projects (Approved), Existing Land Uses + Approved and Pending Projects (Pending), and Existing Land Uses + Approved, Pending, and Future Projects (Future).

The parking demand analysis showed that the current parking supply is adequate to meet demand projections for the Existing and Approved scenarios, but parking deficits exist for the Pending and Future scenarios. An additional parking capacity for 250 to 300 vehicles is needed to satisfy the projected demand for the Future scenario.

Potential sites within the downtown area were examined for the feasibility of accommodating a parking structure that would provide the additional parking capacity needed. Three suitable sites were identified. Site A is located on the west side of North Second Street between Campbell Avenue and Civic Center Drive and on the south side of Civic Center Drive between North Second and Third Streets. Site B is located on the south side of Civic Center Drive between North First Street and Central Avenue. Site C is located on the east side of South First Street between Campbell Avenue and Orchard City Drive.

Nine concept designs including design variations were developed for potential parking structures on the three candidate sites. The project team and City staff evaluated the concepts and selected five concepts that were judged to have clear advantages over the others. These concepts were presented to City officials and interested members of the general public in a series of meetings for the purpose of seeking feedback and comments.

A consensus regarding the favored concept emerged as a result of comments received during the meetings. This choice was the A4 scheme, which is a three level, two bay structure located south of Civic Center Drive between Second and Third Streets. The significant factors influencing the selection of A4 are its relatively low construction cost, its location which balances the supply of parking in the downtown area, and its relatively low profile on the site.

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1.0 INTRODUCTION

1.1 Background The City of Campbell Redevelopment Agency has implemented measures aimed at encouraging economic revitalization of the City's downtown core area. The downtown core area is centered around Campbell Avenue and First Street as shown in the map contained in Appendix A. As part of this effort, the City initiated an assessment of parking needs in the downtown core, with the objective of assuring that adequate parking will be available to support the anticipated changes brought on by revitalization. The City retained the consulting/design team of Gordon H. Chong & Partners and Walker Parking Consultants to conduct the parking study. Gordon H. Chong & Partners is an architectural design firm that specializes in urban parking structures. Walker Parking Consultants is an engineering consulting firm focused exclusively on parking consulting and parking structure design.

1.2 Purpose of Study The parking study was conducting in two phases. The first phase of the study consisted of assessing current and projected future parking demand over the next 10 to 15 years, and comparing it with the available parking supply. The purpose of this phase of the study is to determine if a parking shortfall exists or is likely to exist in the future, and to quantify the shortfall and identify the areas where it occurs. If the first phase of the study showed that the supply of parking is not be sufficient to handle the parking demand, a second study phase was planned to develop and evaluate alternatives to address parking needs. The purpose of the second phase of the study was to identify suitable alternatives to address projected future parking needs, based on criteria developed in conjunction with the City staff.

1.3 Study Process The study process used involved close coordination between the consultant team and the City staff. The City staff provided background information to the consultant team on the existing parking supply, current land uses in the downtown area, and projected future downtown development scenarios. The consultant team used this information to generate parking demand projections for the identified development scenarios. The City staff also provided data from a parking survey performed during the study period. This data was used to verify the accuracy of the analytical model used in the study to predict parking demand.

For the second phase of the study, the City staff provided information to the consultant team on potential sites for locating a parking structure in the downtown area. The City staff also provided background

information on potential sites including historical and community information that may have an influence on site selection.

The results of each phase of the study were reviewed with various members of the City staff, including the City Manager, Downtown Committee, and the City Council. A community meeting was held on April 7, 1999 during which comments were solicited from interested citizens and business owners in the downtown area.

2.0 PARKING SUPPLY/DEMAND EVALUATION

2.1 *Study Area* For the purpose of comparing parking demand projections with the supply of parking spaces, the downtown area was divided into 5 sub-areas as shown in the map in Appendix A. Demand projections were developed for each individual sub-area, for sub-areas 2 and 4 that make up the core of the downtown area, and for the total of all sub-areas.

2.2 *Methodology* The methodology used in developing the parking demand projections for the downtown Campbell area is similar to that described in the Urban Land Institute (ULI) 1983 publication *Shared Parking*. Shared parking is defined as parking spaces that can serve two or more land uses without conflict or encroachment. The opportunity to implement shared parking results from the variations in the peak accumulation of parked vehicles because of different activity patterns of adjacent or nearby land uses (i.e. – by hour, by day, by season, etc.). For example, an office generates parking demand from 8:00 AM until 5:00 PM, Monday through Friday, while a retail store may generate its highest parking demand on Saturdays.

With shared parking, the actual demand of a mixed-use project can be less than the sum of the peak parking demands. ULI's *Shared Parking* sets forth a methodology for calculating actual demand based on the shared parking concept.

The ULI shared parking study collected parking data from 161 development projects throughout the United States. Using the data gathered from this research, Parking demand projections for individual land uses were developed for time of day, day of the week, and season of the year. Data contained in *Shared Parking* sets forth recommended ratios (i.e., spaces per 1,000 square feet of floor area) for peak parking demand for different land use types. To calculate parking demand for mixed-use developments, these parking demand figures are then adjusted to account for:

- Day of the week
- Season of the year
- Percentage of automobile usage
- Local market factors

Walker Parking Consultants has performed numerous analyses of parking demand for mixed land uses such as are present in downtown Campbell. The downtown Campbell core contains retail stores, service facilities, restaurants, offices, pubic agencies and residential units. The parking analysis reflects the effect of shared parking among these uses on the demand for parking in the core area. The analysis is performed using the Shared Parking Model, which originated with ULI and has since been updated with Walker's extensive experience and database.

Table A-1 in Appendix A defines the parking ratios that were used in developing the demand projections. References are provided for the sources of each of the base ratios used. The capture ratio of 1.0 used in the analysis reflects the assumption that all of the patrons of land uses in the downtown area use the parking facilities located in the downtown area. The non-captive ratios used vary with land use, illustrating the expectation that some of the patrons frequenting the downtown area will visit more than one land use in a single trip. For the purpose of this study, it was assumed that the number of people using forms of transportation other than automobiles is negligible and thus a modal split ratio of 1 was used.

The shared parking model used to predict parking demand was tested to verify its accuracy using data from a survey of parking space usage performed by City staff during the study period. A comparison of the projected parking demand vs. the survey results was prepared for the conditions that existed at the time of the survey. This comparison, which shows reasonable agreement between actual and projected parking usage, is provided in Table A-2 in Appendix A.

2.3 *Land Use Scenarios* Four land use scenarios were considered in developing the parking demand projections. These include:

- Existing Land Uses
- Existing Land Uses + Approved Projects
- Existing Land Uses + Approved and Pending Projects
- Existing Land Uses + Approved, Pending, and Future Projects

For each scenario, the square footages of retail, service, restaurant, general office, and public facility use in each sub-area were established

based on input provided by City staff. The numbers of residential units and parking spaces in each sub-area were also determined for each scenario. Summaries of the square footages by land use type, the number of residential units and the number of parking spaces are presented in Tables A-3 through A-6 in Appendix A for each of the four scenarios.

The predominant land use in the downtown area is general office space, which takes up approximately 50% of the total square footage available. Retail and public facility space occupy the next largest amounts of space, followed by restaurants and service facilities. A minor number of residential units are located within the downtown area. The space breakdown among land uses varies somewhat with each scenario as is illustrated in Appendix A.

2.4 *Demand Projections* The demand projections for each scenario are provided in Appendix A. For each scenario, demand projections were developed for each sub-area, for all sub-areas together, and for sub-areas 2 and 4 together. Demand projections are generated for each hour of a typical weekend day and a typical weekday for each month of the year.

The projected peak parking demand for the various scenarios occurs on weekdays around noon to early afternoon. This results from the fact that the peak demand for most of the large parking generators, including general office, retail, service, and public facilities, occurs around this time. The peak months of the year for parking demand are June, July and December. Parking demand on weekends is fairly light, since there is little parking demand generated on weekends by general office use, which is the largest land use in the downtown area.

2.4.1 Existing Land Uses (Existing) For the existing scenario, the supply of parking spaces is generally sufficient to meet the projected demand. For sub-area 2, a small parking deficit is projected for the peak hour of the day during the peak months of the year. However, the supply of parking in adjacent sub-areas is more than sufficient to cover this small deficit.

2.4.2 Existing Land Uses + Approved Projects (Approved) For the approved scenario, there are minor parking deficits projected for peak hours in sub-area 1, sub-area 2, and sub-areas 2 and 4 combined. The largest deficit is approximately 50 spaces. The deficits are small enough that they can be filled by available parking in adjacent sub-areas.

2.4.3 Existing Land Uses + Approved and Pending Projects (Pending) For the pending scenario, there are parking deficits projected for peak hours in sub-area 1, sub-area 2, and sub-areas 2 and 4 combined. The largest deficit is approximately 120 spaces. These deficits are beginning to be large enough to consider the need for additional parking to address them.

2.4.4 Existing Land Uses + Approved, Pending, and Future Projects (Future) For the future scenario, there are parking deficits projected for peak hours in sub-area 1, sub-area 2, sub-area 4, and sub-areas 2 and 4 combined. There is also a minor parking deficit projected for the peak hours of peak months for the total of all sub-areas. The largest deficit is approximately 250 spaces, which occurs in sub-areas 2 and 4 combined. Additional parking capacity would be required to address this deficit.

2.5 Conclusion from Supply/Demand Evaluation The current parking supply is adequate to meet demand projections for the Existing and Approved scenarios. In order to meet the projected parking demand for the Pending and Future scenarios, additional parking capacity is needed. The projected deficit is approximately 250 spaces for the Future scenario. Some additional spaces above the projected deficit should be provided. As parking demand nears capacity, patrons begin to perceive that sufficient parking is not available, even though there may still be a few unused spaces. Additional parking capacity for 250 to 300 vehicles is needed to satisfy the projected demand for the Future scenario.

3.0 IDENTIFICATION OF ALTERNATIVE PARKING STRUCTURE SITES

3.1 Criteria for Site Consideration Given the projected need for additional parking capacity of 250 to 300 vehicles, an effort was initiated to examine potential sites within the downtown area for the feasibility of accommodating a parking facility. The criteria for evaluating and selecting candidate sites is as follows:

a. Potential sites must be large enough to accommodate a parking structure that can provide 250 to 300 net new parking spaces in a reasonably efficient space configuration. Typical minimum dimensions for a two bay parking structure are 120 feet wide by 250 feet long.

b. Site locations must be such that traffic on adjacent streets does not inhibit access to a parking structure, and conversely, that traffic to

and from a parking structure does not adversely affect traffic flow on surrounding streets.

c. The current land use(s) for potential sites must be such that there are no restrictions (e.g. presence of historical buildings) on use of the site preventing its use for a parking structure.

d. They City must be able to acquire the land for potential parking structure sites at a reasonable cost.

3.2 Sites Studied Candidate sites within the downtown area were evaluated using the criteria defined above. The following sites were identified that meet the criteria.

Site A Site A is located on the west side of North Second Street between Campbell Avenue and Civic Center Drive and on the south side of Civic Center Drive between North Second and Third Streets. This entire area is considered to be potentially available for a parking structure, except for the lot occupied by the existing building on the corner of Third and Campbell.

Site B Site B is located on the south side of Civic Center Drive between North First Street and Central Avenue. Site B is somewhat narrow in width for the purpose of configuring a parking structure on it. However, additional width could be obtained by encroaching on the rear of the existing buildings along Campbell Avenue adjacent to the site.

Site C Site C is located on the east side of South First Street between Campbell Avenue and Orchard City Drive. This site currently contains a surface parking lot, so the loss of these spaces would have to be considered in determining the net gain in spaces that would result from construction of a parking structure on the site.

Site locations for the three candidate sites are shown on the Site Plan in Appendix B.

4.0 DEVELOPMENT OF CONCEPT DESIGNS FOR CANDIDATE SITES

The process followed in developing and evaluating concept designs consisted of initially developing many concepts and then refining and narrowing the number of concepts until a preferred concept emerged. Nine concept designs including design variations were developed for potential parking structures on the candidate sites. The concept designs consisted of floor plans for each level, showing parking stall layout, ramping, vehicle

entry/exit, and pedestrian access provisions. Concept-level construction cost estimates were prepared for each concept. A description of each concept that was considered is provided below.

A1 Two-way drive aisles, 90° parking, three levels, two bays, east of Second Street between Civic Center Drive and Campbell Avenue.

A2 Same as A1 with four levels.

A3 Two-way drive aisles, 90° parking, three levels, three bays, on the corner of Campbell Avenue and Second Street.

A4 Two-way drive aisles, 90° parking, three levels, two bays, south of Civic Center Drive between Second and Third Streets.

B1 One way drive aisles, 60° parking, four levels, two bays, south of Civic Center Drive between First and Second Streets.

B2 Two-way drive aisles, 90° parking, three levels, two bays, south of Civic Center Drive between First and Second Streets.

B3 Similar to B2 except 4 levels and structure does not extend all the way to First Street (stops short of Museum).

C1 Two-way drive aisles, 90° parking, three levels, two bays, east of South First Street between Campbell Avenue and Orchard City Drive.

C2 Same as C1 with four levels.

Floor plans for the concepts considered are provided in Appendix C. Key characteristics and parameters for each concept are summarized in Table C-1.

5.0 EVALUATION OF CONCEPTS/SITES

The next step in the concept development and evaluation process consisted of evaluating the concepts that had initially been developed, with the objective of reducing the number of concepts to be further considered. This evaluation was performed by the design team and by City staff. The evaluation considered such factors as the number of net parking spaces provided, the estimated construction cost of the concepts including both total cost and cost per net parking space, the location of the site and its proximity to areas of greatest parking need, the estimated cost of acquiring the necessary land, the relationship of the parking structure to the surrounding

neighborhood, and the height of the parking structure. As a result of this evaluation, five concepts were eliminated from consideration. The four remaining concepts were judged to have clear advantages over the concepts that were eliminated.

Input was solicited from City officials and from interested members of general public to further evaluate the remaining concepts. The concepts were further refined and developed and the pros and cons associated with each concept were identified. A meeting was held with the City of Campbell Downtown Committee on February 25, 1999 to present and discuss the concepts. Based on comments received during this meeting, one concept was eliminated and another was added (A4).

A community meeting open to the general public was held on April 7, 1999 to present the preliminary results of the study, including the potential locations and configurations for parking facilities. The meeting was well attended and comments received during this meeting were generally supportive of the need for an additional parking facility in the downtown area, although opinions differed on where this facility should be located.

On May 18, 1999, the results of the study were present to the City Manager, City Council members, and the Mayor in a City Council study session. There was general agreement on the information presented.

Information presented and discussed in these meetings is provided in Appendix C, including concept floor plans, perspective views, and three dimensional site plans showing massing.

6.0 RECOMMENDATIONS

A consensus regarding the favored concept emerged as a result of comments received during the meetings described above. This choice was the A4 scheme. The significant factors influencing the selection of A4 are summarized below.

- The location of Site A is such that it balances the parking supply within the downtown area. The existing parking garage is located on the southeast side and Site A is located on the northwest side of downtown.

- This concept has the lowest total construction cost and the lowest net cost per space.

- This concept provides the required number of spaces using only two elevated levels.

APPENDIX A

PARKING STRUCTURE SUPPLY/DEMAND STUDY DATA AND RESULTS

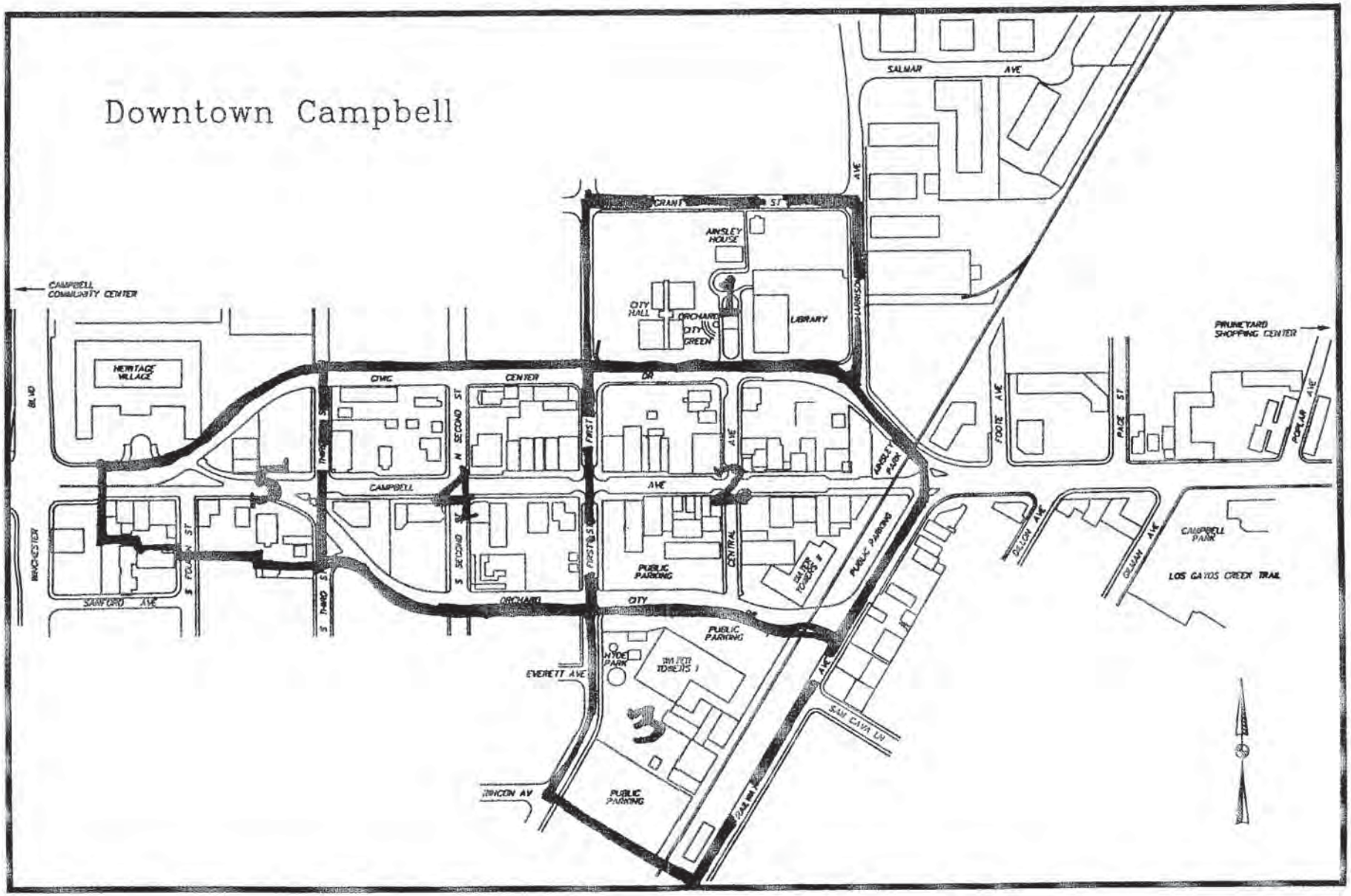

Downtown Campbell
SALMAR AVE
GRANT ST
AINSLEY HOUSE
CITY HALL
ORCHARD CITY GREEN
LIBRARY
HARRISON
CAMPBELL COMMUNITY CENTER
HERITAGE VILLAGE
CIVIC CENTER DR
FOOTE AVE
PAGE ST
PRUNEYARD SHOPPING CENTER
POPLAR AVE
BLVD
N SECOND ST
FIRST
AINSLEY PARK
CAMPBELL AVE
WINCHESTER
S FOURTH ST
S THIRD ST
S SECOND ST
CENTRAL
PUBLIC PARKING
DILLON AVE
CAMPBELL PARK
LOS GATOS CREEK TRAIL
SANFORD AVE
ORCHARD CITY
HYDE PARK
EVERETT AVE
SAM CAVA LN
ALMADEN AV
PUBLIC PARKING

TABLE A-1
City of Campbell Parking Supply/Demand Study
Parking Ratios

	Land Use	Basic Ratios			Project Ratios		
		Base Ratio	Unit	Primary Source	Capture Ratio	Non-Captive Ratio	Modal Split Ratio
Weekend Use	Retail	3.85	/1000 sf	ULI Shopping Ctr	1.00	0.75	1.00
		0.65	/1000 sf		1.00	0.75	1.00
	Service	3.40	/1000 sf	ULI Shopping Ctr	1.00	0.75	1.00
		0.60	/1000 sf		1.00	0.75	1.00
	Restaurants	11.00	/1000 sf	ITE Parking Generation	1.00	0.50	1.00
		5.00	/1000 sf	Walker Database	1.00	0.50	1.00
	Office	0.02	/1000 sf	ULI Shared Parking	1.00	1.00	1.00
		0.48	/1000 sf		1.00	1.00	1.00
	Public	0.02	/1000 sf	ULI Shared Parking	1.00	1.00	1.00
		0.48	/1000 sf		1.00	1.00	1.00
	Residential	1.50	/unit	ULI Shared Parking	1.00	1.00	1.00
		0.10	/unit		1.00	1.00	1.00

	Land Use	Basic Ratios			Project Ratios		
		Base Ratio	Unit	Primary Source	Capture Ratio	Non-Captive Ratio	Modal Split Ratio
Weekday Use	Retail	3.00	/1000 sf	ULI Shopping Ctr	1.00	0.75	1.00
		0.50	/1000 sf		1.00	0.75	1.00
	Service	2.75	/1000 sf	ULI Shopping Ctr	1.00	0.75	1.00
		0.50	/1000 sf		1.00	0.75	1.00
	Restaurants	8.00	/1000 sf	ITE Parking Generation	1.00	0.50	1.00
		4.00	/1000 sf	Walker Database	1.00	0.50	1.00
	Office	0.15	/1000 sf	ULI Shared Parking	1.00	1.00	1.00
		2.85	/1000 sf		1.00	1.00	1.00
	Public	0.15	/1000 sf	ULI Shared Parking	1.00	1.00	1.00
		2.85	/1000 sf		1.00	1.00	1.00
	Residential	1.50	/unit	ULI Shared Parking	1.00	1.00	1.00
		0.10	/unit		1.00	1.00	1.00

REFERENCES:

Urban Land Institute (ULI), "Shared Parking", 1983.

Walker's proprietary database

Urban Land Institute (ULI), "Parking Requirements for Shopping Centers", 1982

Institute of Transportation Engineers (ITE), "Parking Generation", 1987.

TABLE A-2
City of Campbell Parking Supply/Demand Study
Comparison of Projected Parking Demand vs. Survey Results

Sub-Area		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Sub-Area 1	Projected	4	29	87	142	151	150	134	142	146	143	113	67	37	14	7
	Survey		51	82	89	103	104	101								
	Difference		(22)	5	53	48	46	33								
Sub-Area 2	Projected	9	52	126	211	254	297	330	352	346	324	287	252	201	176	164
	Survey		69	97	137	273	272	287								
	Difference		(17)	29	74	(19)	25	43								
Sub-Area 3	Projected	6	42	126	205	221	221	205	219	224	217	174	110	68	37	27
	Survey		100	141	201	242	272	259	285	275	200	122	75	82	71	
	Difference		(58)	(15)	4	(21)	(51)	(54)	(66)	(51)	17	52	35	(14)	(34)	
Sub-Area 4	Projected	11	40	90	147	169	187	185	193	195	188	162	126	88	66	58
	Survey		28	63	107	151	133	153	181	182	194	181	152	95	64	
	Difference		12	27	40	18	54	32	12	13	(6)	(19)	(26)	(7)	2	
Sub-Area 5	Projected	25	38	53	76	85	95	93	96	97	95	86	73	57	51	48
	Survey		13	30	29	39	42	42	53	51	50	57	45	34	42	
	Difference		25	23	47	46	53	51	43	46	45	29	28	23	9	
Sub-Areas 2 & 4	Projected	14	87	215	361	426	487	518	548	545	515	450	376	285	236	215
	Survey		97	160	244	424	405	440								
	Difference		(10)	55	117	2	82	78								
All Sub-Areas	Projected	56	196	485	787	887	957	953	1,009	1,014	973	828	630	453	346	306
	Survey		261	413	563	808	823	842								
	Difference		(65)	72	224	79	134	111								

TABLE A-3
City of Campbell Parking Supply/Demand Study
Existing Land Uses

Land Use	Sub-Area 1	Sub-Area 2	Sub-Area 3	Sub-Area 4	Sub-Area 5	Sub-Areas 2 and 4	All Sub-Areas
Retail	0 sf	44,321 sf	0 sf	14,375 sf	16,452 sf	58,696 sf	75,148 sf
Service	0 sf	12,800 sf	0 sf	22,383 sf	4,520 sf	35,183 sf	39,703 sf
Restaurants	0 sf	30,136 sf	5,000 sf	3,500 sf	0 sf	33,636 sf	38,636 sf
Office	0 sf	63,075 sf	84,794 sf	47,482 sf	19,614 sf	110,557 sf	214,965 sf
Public	63,000 sf	2,700 sf	0 sf	0 sf	0 sf	2,700 sf	65,700 sf
Residential	0 units	3 units	0 units	6 units	21 units	3 units	30 units
Number of Spaces	164	411	455	345	136	756	1,511

TABLE A-4
City of Campbell Parking Supply/Demand Study
Approved Land Uses

Land Use	Sub-Area 1	Sub-Area 2	Sub-Area 3	Sub-Area 4	Sub-Area 5	Sub-Areas 2 and 4	All Sub-Areas
Retail	0 sf	44,321 sf	0 sf	11,375 sf	16,452 sf	55,696 sf	72,148 sf
Service	0 sf	12,800 sf	0 sf	18,383 sf	4,520 sf	31,183 sf	35,703 sf
Restaurants	0 sf	30,136 sf	5,000 sf	35,550 sf	0 sf	65,686 sf	70,686 sf
Office	0 sf	63,075 sf	84,794 sf	47,482 sf	19,614 sf	110,557 sf	214,965 sf
Public	63,000 sf	2,700 sf	0 sf	0 sf	0 sf	2,700 sf	65,700 sf
Residential	0 units	3 units	0 units	6 units	21 units	3 units	30 units
Number of Spaces	174	412	449	404	136	816	1,575

TABLE A-5
City of Campbell Parking Supply/Demand Study
Pending Land Uses

Land Use	Sub-Area 1	Sub-Area 2	Sub-Area 3	Sub-Area 4	Sub-Area 5	Sub-Areas 2 and 4	All Sub-Areas
Retail	0 sf	45,880 sf	0 sf	11,375 sf	16,452 sf	57,255 sf	73,707 sf
Service	0 sf	11,000 sf	0 sf	18,383 sf	4,520 sf	29,383 sf	33,903 sf
Restaurants	0 sf	30,136 sf	5,000 sf	35,550 sf	0 sf	65,686 sf	70,686 sf
Office	0 sf	86,350 sf	84,794 sf	47,482 sf	19,614 sf	133,832 sf	238,240 sf
Public	63,000 sf	2,700 sf	0 sf	0 sf	0 sf	2,700 sf	65,700 sf
Residential	0 units	3 units	0 units	6 units	21 units	3 units	30 units
Number of Spaces	174	412	449	404	136	816	1,575

TABLE A-6
City of Campbell Parking Supply/Demand Study
Future Land Uses

Land Use	Sub-Area 1	Sub-Area 2	Sub-Area 3	Sub-Area 4	Sub-Area 5	Sub-Areas 2 and 4	All Sub-Areas
Retail	0 sf	55,844 sf	0 sf	28,475 sf	16,452 sf	84,319 sf	100,771 sf
Service	0 sf	6,500 sf	0 sf	6,383 sf	4,520 sf	12,883 sf	17,403 sf
Restaurants	0 sf	32,886 sf	5,000 sf	37,500 sf	0 sf	70,386 sf	75,386 sf
Office	0 sf	92,886 sf	84,794 sf	83,618 sf	21,114 sf	176,504 sf	282,412 sf
Public	63,000 sf	2,700 sf	0 sf	0 sf	0 sf	2,700 sf	65,700 sf
Residential	0 units	2 units	0 units	1 units	21 units	2 units	24 units
Number of Spaces	174	412	449	404	136	816	1,575

PARKING SUPPLY/DEMAND STUDY RESULTS

EXISTING SCENARIO

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Existing - All Sub-Areas

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	57	203	509	826	930	1,002	1,004	1,066	1,069	1,024	870	664	483	372	330
		Surplus/(Deficit)	1,454	1,308	1,002	685	581	509	507	445	442	487	641	847	1,028	1,139	1,181
	February	Peak Demand	57	203	508	825	927	997	996	1,056	1,061	1,017	863	655	474	363	321
		Surplus/(Deficit)	1,454	1,308	1,003	686	584	514	515	455	450	494	648	856	1,037	1,148	1,190
	March	Peak Demand	57	206	514	835	943	1,022	1,034	1,098	1,100	1,051	897	693	510	399	357
		Surplus/(Deficit)	1,454	1,305	997	676	568	489	477	413	411	460	614	818	1,001	1,112	1,154
	April	Peak Demand	57	206	514	835	943	1,022	1,034	1,098	1,100	1,051	897	693	510	399	357
		Surplus/(Deficit)	1,454	1,305	997	676	568	489	477	413	411	460	614	818	1,001	1,112	1,154
	May	Peak Demand	57	206	514	837	946	1,026	1,042	1,108	1,108	1,058	904	701	519	409	367
		Surplus/(Deficit)	1,454	1,305	997	674	565	485	469	403	403	453	607	810	992	1,102	1,144
	June	Peak Demand	57	207	515	838	949	1,031	1,050	1,117	1,117	1,065	911	710	528	419	376
		Surplus/(Deficit)	1,454	1,304	996	673	562	480	461	394	394	446	600	801	983	1,092	1,135
	July	Peak Demand	57	207	515	838	949	1,031	1,050	1,117	1,117	1,065	911	710	528	419	376
		Surplus/(Deficit)	1,454	1,304	996	673	562	480	461	394	394	446	600	801	983	1,092	1,135
	August	Peak Demand	57	207	515	837	946	1,026	1,034	1,097	1,100	1,052	898	692	506	394	351
		Surplus/(Deficit)	1,454	1,304	996	674	565	485	477	414	411	459	613	819	1,005	1,117	1,160
	September	Peak Demand	57	207	515	838	947	1,026	1,030	1,092	1,096	1,049	894	687	500	387	344
		Surplus/(Deficit)	1,454	1,304	996	673	564	485	481	419	415	462	617	824	1,011	1,124	1,167
	October	Peak Demand	57	207	515	838	947	1,026	1,030	1,092	1,096	1,049	894	687	500	387	344
		Surplus/(Deficit)	1,454	1,304	996	673	564	485	481	419	415	462	617	824	1,011	1,124	1,167
	November	Peak Demand	57	209	517	842	952	1,034	1,039	1,101	1,105	1,058	903	695	505	392	348
		Surplus/(Deficit)	1,454	1,302	994	669	559	477	472	410	406	453	608	816	1,006	1,119	1,163
	December	Peak Demand	58	215	527	860	980	1,074	1,091	1,155	1,157	1,106	949	744	546	431	386
		Surplus/(Deficit)	1,453	1,296	984	651	531	437	420	356	354	405	562	767	965	1,080	1,125
	Average Month	Peak Demand	57	207	515	837	947	1,026	1,036	1,100	1,102	1,054	899	694	509	398	355
		Surplus/(Deficit)	1,454	1,304	996	674	564	485	475	411	409	457	612	817	1,002	1,113	1,156

City Of Campbell Parking Study
Comparison of Parking Demand vs. Supply
Existing - Sub-Areas 2 and 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	14	90	225	377	445	508	545	580	574	542	473	398	306	258	236
		Surplus/(Deficit)	742	666	531	379	311	248	211	176	182	214	283	358	450	498	520
	February	Peak Demand	14	89	225	376	442	504	538	572	567	536	467	390	298	249	228
		Surplus/(Deficit)	742	667	531	380	314	252	218	184	189	220	289	366	458	507	528
	March	Peak Demand	14	92	229	384	456	525	570	608	600	565	495	422	329	281	259
		Surplus/(Deficit)	742	664	527	372	300	231	186	148	156	191	261	334	427	475	497
	April	Peak Demand	14	92	229	384	456	525	570	608	600	565	495	422	329	281	259
		Surplus/(Deficit)	742	664	527	372	300	231	186	148	156	191	261	334	427	475	497
	May	Peak Demand	14	92	230	385	458	529	577	616	608	571	501	429	337	289	268
		Surplus/(Deficit)	742	664	526	371	298	227	179	140	148	185	255	327	419	467	488
	June	Peak Demand	14	92	230	387	461	532	584	624	615	577	507	437	345	298	276
		Surplus/(Deficit)	742	664	526	369	295	224	172	132	141	179	249	319	411	458	480
	July	Peak Demand	14	92	230	387	461	532	584	624	615	577	507	437	345	298	276
		Surplus/(Deficit)	742	664	526	369	295	224	172	132	141	179	249	319	411	458	480
	August	Peak Demand	15	93	230	386	458	527	570	606	600	565	495	421	326	276	254
		Surplus/(Deficit)	741	663	526	370	298	229	186	150	156	191	261	335	430	480	502
	September	Peak Demand	15	93	230	386	458	527	567	602	596	562	493	417	320	269	247
		Surplus/(Deficit)	741	663	526	370	298	229	189	154	160	194	263	339	436	487	509
	October	Peak Demand	15	93	230	386	458	527	567	602	596	562	493	417	320	269	247
		Surplus/(Deficit)	741	663	526	370	298	229	189	154	160	194	263	339	436	487	509
	November	Peak Demand	15	94	232	389	463	533	574	609	603	569	499	423	325	273	251
		Surplus/(Deficit)	741	662	524	367	293	223	182	147	153	187	257	333	431	483	505
	December	Peak Demand	15	99	240	404	486	567	616	654	646	609	537	463	359	306	283
		Surplus/(Deficit)	741	657	516	352	270	189	140	102	110	147	219	293	397	450	473
	Average Month	Peak Demand	15	93	230	386	459	528	572	609	602	567	497	423	328	279	257
		Surplus/(Deficit)	741	663	526	370	297	228	184	147	154	189	259	333	428	477	499

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Existing - Sub-Area 1

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	February	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	March	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	April	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	May	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	June	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	July	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	August	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	September	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	October	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	November	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	December	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156
	Average Month	Peak Demand	5	31	92	151	161	159	142	151	155	152	120	71	39	15	8
		Surplus/(Deficit)	159	133	72	13	3	5	22	13	9	12	44	93	125	149	156

City Of Campbell Parking Study
Comparison of Parking Demand vs. Supply
Existing - Sub-Area 2

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	10	55	136	227	273	317	357	383	375	350	310	272	222	196	184
		Surplus/(Deficit)	401	356	275	184	138	94	54	28	36	61	101	139	189	215	227
	February	Peak Demand	9	53	131	220	264	307	344	369	362	338	299	263	213	188	176
		Surplus/(Deficit)	402	358	280	191	147	104	67	42	49	73	112	148	198	223	235
	March	Peak Demand	10	55	135	226	274	323	370	398	388	361	321	289	239	215	202
		Surplus/(Deficit)	401	356	276	185	137	88	41	13	23	50	90	122	172	196	209
	April	Peak Demand	10	55	135	226	274	323	370	398	388	361	321	289	239	215	202
		Surplus/(Deficit)	401	356	276	185	137	88	41	13	23	50	90	122	172	196	209
	May	Peak Demand	10	55	135	227	276	326	376	405	395	367	327	295	246	222	210
		Surplus/(Deficit)	401	356	276	184	135	85	35	6	16	44	84	116	165	189	201
	June	Peak Demand	10	56	136	228	278	330	383	413	402	373	332	302	253	230	218
		Surplus/(Deficit)	401	355	275	183	133	81	28	(2)	9	38	79	109	158	181	193
	July	Peak Demand	10	56	136	228	278	330	383	413	402	373	332	302	253	230	218
		Surplus/(Deficit)	401	355	275	183	133	81	28	(2)	9	38	79	109	158	181	193
	August	Peak Demand	10	56	135	227	275	325	369	396	387	361	321	287	235	210	197
		Surplus/(Deficit)	401	355	276	184	136	86	42	15	24	50	90	124	176	201	214
	September	Peak Demand	10	55	135	227	274	322	364	390	382	356	316	281	229	203	190
		Surplus/(Deficit)	401	356	276	184	137	89	47	21	29	55	95	130	182	208	221
	October	Peak Demand	10	55	135	227	274	322	364	390	382	356	316	281	229	203	190
		Surplus/(Deficit)	401	356	276	184	137	89	47	21	29	55	95	130	182	208	221
	November	Peak Demand	10	56	136	229	277	327	369	395	387	361	321	286	232	206	193
		Surplus/(Deficit)	401	355	275	182	134	84	42	16	24	50	90	125	179	205	218
	December	Peak Demand	10	60	142	239	293	351	400	428	419	390	349	316	258	231	218
		Surplus/(Deficit)	401	351	269	172	118	60	11	(17)	(8)	21	62	95	153	180	193
	Average Month	Peak Demand	10	56	136	228	276	325	371	398	389	362	322	289	237	212	200
		Surplus/(Deficit)	401	355	275	183	135	86	40	13	22	49	89	122	174	199	211

City Of Campbell Parking Study
Comparison of Parking Demand vs. Supply
Existing - Sub-Area 3

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	7	44	133	218	234	235	220	235	239	231	186	118	75	42	31
		Surplus/(Deficit)	448	411	322	237	221	220	235	220	216	224	269	337	380	413	424
	February	Peak Demand	7	44	133	218	234	235	219	234	238	230	185	117	73	41	30
		Surplus/(Deficit)	448	411	322	237	221	220	236	221	217	225	270	338	382	414	425
	March	Peak Demand	7	44	133	218	235	237	222	237	241	233	188	121	77	45	34
		Surplus/(Deficit)	448	411	322	237	220	218	233	218	214	222	267	334	378	410	421
	April	Peak Demand	7	44	133	218	235	237	222	237	241	233	188	121	77	45	34
		Surplus/(Deficit)	448	411	322	237	220	218	233	218	214	222	267	334	378	410	421
	May	Peak Demand	7	44	134	218	235	237	223	239	242	234	189	122	78	46	35
		Surplus/(Deficit)	448	411	321	237	220	218	232	216	213	221	266	333	377	409	420
	June	Peak Demand	7	44	134	218	236	238	224	240	243	235	190	123	79	47	36
		Surplus/(Deficit)	448	411	321	237	219	217	231	215	212	220	265	332	376	408	419
	July	Peak Demand	7	44	134	218	236	238	224	240	243	235	190	123	79	47	36
		Surplus/(Deficit)	448	411	321	237	219	217	231	215	212	220	265	332	376	408	419
	August	Peak Demand	7	44	133	218	235	236	221	236	240	232	187	120	76	43	33
		Surplus/(Deficit)	448	411	322	237	220	219	234	219	215	223	268	335	379	412	422
	September	Peak Demand	7	44	133	218	234	235	220	235	239	231	186	118	75	42	31
		Surplus/(Deficit)	448	411	322	237	221	220	235	220	216	224	269	337	380	413	424
	October	Peak Demand	7	44	133	218	234	235	220	235	239	231	186	118	75	42	31
		Surplus/(Deficit)	448	411	322	237	221	220	235	220	216	224	269	337	380	413	424
	November	Peak Demand	7	44	133	218	234	235	220	235	239	231	186	118	75	42	31
		Surplus/(Deficit)	448	411	322	237	221	220	235	220	216	224	269	337	380	413	424
	December	Peak Demand	7	44	133	218	235	237	222	237	241	233	188	121	77	45	34
		Surplus/(Deficit)	448	411	322	237	220	218	233	218	214	222	267	334	378	410	421
	Average Month	Peak Demand	7	44	133	218	235	236	221	237	241	233	188	120	76	44	33
		Surplus/(Deficit)	448	411	322	237	220	219	234	218	214	222	267	335	379	411	422

City Of Campbell Parking Study
Comparison of Parking Demand vs. Supply
Existing - Sub-Area 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	11	41	94	153	175	194	192	201	202	195	168	130	91	69	60
		Surplus/(Deficit)	334	304	251	192	170	151	153	144	143	150	177	215	254	276	285
	February	Peak Demand	11	41	94	153	175	193	191	200	202	194	167	129	90	68	59
		Surplus/(Deficit)	334	304	251	192	170	152	154	145	143	151	178	216	255	277	286
	March	Peak Demand	11	42	95	155	179	198	197	207	208	200	173	135	95	73	64
		Surplus/(Deficit)	334	303	250	190	166	147	148	138	137	145	172	210	250	272	281
	April	Peak Demand	11	42	95	155	179	198	197	207	208	200	173	135	95	73	64
		Surplus/(Deficit)	334	303	250	190	166	147	148	138	137	145	172	210	250	272	281
	May	Peak Demand	11	42	95	155	179	199	198	207	209	201	173	136	96	74	65
		Surplus/(Deficit)	334	303	250	190	166	146	147	138	136	144	172	209	249	271	280
	June	Peak Demand	11	42	95	155	179	199	199	208	210	202	174	137	97	74	66
		Surplus/(Deficit)	334	303	250	190	166	146	146	137	135	143	171	208	248	271	279
	July	Peak Demand	11	42	95	155	179	199	199	208	210	202	174	137	97	74	66
		Surplus/(Deficit)	334	303	250	190	166	146	146	137	135	143	171	208	248	271	279
	August	Peak Demand	11	42	95	156	179	199	198	207	209	201	174	136	95	73	64
		Surplus/(Deficit)	334	303	250	189	166	146	147	138	136	144	171	209	250	272	281
	September	Peak Demand	11	42	96	157	181	201	200	209	211	203	175	137	96	73	64
		Surplus/(Deficit)	334	303	249	188	164	144	145	136	134	142	170	208	249	272	281
	October	Peak Demand	11	42	96	157	181	201	200	209	211	203	175	137	96	73	64
		Surplus/(Deficit)	334	303	249	188	164	144	145	136	134	142	170	208	249	272	281
	November	Peak Demand	11	42	96	157	182	203	202	211	213	204	177	139	97	74	65
		Surplus/(Deficit)	334	303	249	188	163	142	143	134	132	141	168	206	248	271	280
	December	Peak Demand	11	44	98	162	189	213	213	222	224	215	187	149	105	81	72
		Surplus/(Deficit)	334	301	247	183	156	132	132	123	121	130	158	196	240	264	273
	Average Month	Peak Demand	11	42	95	156	180	200	199	208	210	202	174	137	96	73	65
		Surplus/(Deficit)	334	303	250	189	165	145	146	137	135	143	171	208	249	272	280

City Of Campbell Parking Study
Comparison of Parking Demand vs. Supply
Existing - Sub-Area 5

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	25	38	54	78	87	96	94	96	97	96	86	72	57	50	47
		Surplus/(Deficit)	111	98	82	58	49	40	42	40	39	40	50	64	79	86	89
	February	Peak Demand	25	38	54	78	87	96	94	96	97	96	86	72	57	50	47
		Surplus/(Deficit)	111	98	82	58	49	40	42	40	39	40	50	64	79	86	89
	March	Peak Demand	25	39	54	79	88	98	96	99	100	98	89	74	58	51	49
		Surplus/(Deficit)	111	97	82	57	48	38	40	37	36	38	47	62	78	85	87
	April	Peak Demand	25	39	54	79	88	98	96	99	100	98	89	74	58	51	49
		Surplus/(Deficit)	111	97	82	57	48	38	40	37	36	38	47	62	78	85	87
	May	Peak Demand	25	39	54	79	88	98	96	99	100	98	89	74	58	51	49
		Surplus/(Deficit)	111	97	82	57	48	38	40	37	36	38	47	62	78	85	87
	June	Peak Demand	25	39	54	79	88	98	96	99	100	98	89	74	58	51	49
		Surplus/(Deficit)	111	97	82	57	48	38	40	37	36	38	47	62	78	85	87
	July	Peak Demand	25	39	54	79	88	98	96	99	100	98	89	74	58	51	49
		Surplus/(Deficit)	111	97	82	57	48	38	40	37	36	38	47	62	78	85	87
	August	Peak Demand	25	39	55	79	90	100	98	101	102	100	90	76	60	53	50
		Surplus/(Deficit)	111	97	81	57	46	36	38	35	34	36	46	60	76	83	86
	September	Peak Demand	25	39	55	80	90	101	99	101	102	100	91	76	60	53	50
		Surplus/(Deficit)	111	97	81	56	46	35	37	35	34	36	45	60	76	83	86
	October	Peak Demand	25	39	55	80	90	101	99	101	102	100	91	76	60	53	50
		Surplus/(Deficit)	111	97	81	56	46	35	37	35	34	36	45	60	76	83	86
	November	Peak Demand	25	39	55	81	91	102	100	103	104	102	93	78	61	54	51
		Surplus/(Deficit)	111	97	81	55	45	34	36	33	32	34	43	58	75	82	85
	December	Peak Demand	25	40	57	83	95	108	107	110	111	108	99	84	65	58	54
		Surplus/(Deficit)	111	96	79	53	41	28	29	26	25	28	37	52	71	78	82
	Average Month	Peak Demand	25	39	55	79	89	100	98	100	101	99	90	76	59	52	49
		Surplus/(Deficit)	111	97	81	57	47	36	38	36	35	37	46	60	77	84	87

PARKING SUPPLY/DEMAND STUDY RESULTS

APPROVED SCENARIO

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Approved - All Sub-Areas

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	60	220	553	900	1,025	1,124	1,186	1,273	1,261	1,193	1,026	829	650	543	499
		Surplus/(Deficit)	1,515	1,355	1,022	675	550	451	389	302	314	382	549	746	925	1,032	1,076
	February	Peak Demand	60	219	551	897	1,020	1,115	1,169	1,253	1,244	1,178	1,012	812	631	523	479
		Surplus/(Deficit)	1,515	1,356	1,024	678	555	460	406	322	331	397	563	763	944	1,052	1,096
	March	Peak Demand	60	223	559	912	1,044	1,153	1,233	1,325	1,309	1,235	1,067	876	696	591	546
		Surplus/(Deficit)	1,515	1,352	1,016	663	531	422	342	250	266	340	508	699	879	984	1,029
	April	Peak Demand	60	223	559	912	1,044	1,153	1,233	1,325	1,309	1,235	1,067	876	696	591	546
		Surplus/(Deficit)	1,515	1,352	1,016	663	531	422	342	250	266	340	508	699	879	984	1,029
	May	Peak Demand	60	224	561	915	1,050	1,162	1,250	1,344	1,327	1,250	1,081	893	714	611	566
		Surplus/(Deficit)	1,515	1,351	1,014	660	525	413	325	231	248	325	494	682	861	964	1,009
	June	Peak Demand	60	225	562	918	1,055	1,170	1,266	1,364	1,344	1,265	1,096	911	733	631	586
		Surplus/(Deficit)	1,515	1,350	1,013	657	520	405	309	211	231	310	479	664	842	944	989
	July	Peak Demand	60	225	562	918	1,055	1,170	1,266	1,364	1,344	1,265	1,096	911	733	631	586
		Surplus/(Deficit)	1,515	1,350	1,013	657	520	405	309	211	231	310	479	664	842	944	989
	August	Peak Demand	60	224	560	913	1,045	1,152	1,225	1,314	1,301	1,229	1,061	866	682	575	530
		Surplus/(Deficit)	1,515	1,351	1,015	662	530	423	350	261	274	346	514	709	893	1,000	1,045
	September	Peak Demand	60	224	559	911	1,042	1,147	1,212	1,299	1,287	1,218	1,050	852	666	557	512
		Surplus/(Deficit)	1,515	1,351	1,016	664	533	428	363	276	288	357	525	723	909	1,018	1,063
	October	Peak Demand	60	224	559	911	1,042	1,147	1,212	1,299	1,287	1,218	1,050	852	666	557	512
		Surplus/(Deficit)	1,515	1,351	1,016	664	533	428	363	276	288	357	525	723	909	1,018	1,063
	November	Peak Demand	60	225	561	915	1,048	1,156	1,221	1,308	1,296	1,226	1,058	860	672	562	517
		Surplus/(Deficit)	1,515	1,350	1,014	660	527	419	354	267	279	349	517	715	903	1,013	1,058
	December	Peak Demand	61	232	572	936	1,081	1,205	1,290	1,382	1,367	1,290	1,119	927	732	622	575
		Surplus/(Deficit)	1,514	1,343	1,003	639	494	370	285	193	208	285	456	648	843	953	1,000
	Average Month	Peak Demand	60	224	560	913	1,046	1,155	1,230	1,321	1,306	1,233	1,065	872	689	583	538
		Surplus/(Deficit)	1,515	1,351	1,015	662	529	420	345	254	269	342	510	703	886	992	1,037

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Approved - Sub-Areas 2 and 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	15	97	247	416	503	592	692	750	728	674	599	543	460	420	398
		Surplus/(Deficit)	801	719	569	400	313	224	124	66	88	142	217	273	356	396	418
	February	Peak Demand	15	97	246	413	498	584	676	732	712	660	585	526	442	401	379
		Surplus/(Deficit)	801	719	570	403	318	232	140	84	104	156	231	290	374	415	437
	March	Peak Demand	15	100	253	426	520	618	734	796	771	711	635	584	501	463	441
		Surplus/(Deficit)	801	716	563	390	296	198	82	20	45	105	181	232	315	353	375
	April	Peak Demand	15	100	253	426	520	618	734	796	771	711	635	584	501	463	441
		Surplus/(Deficit)	801	716	563	390	296	198	82	20	45	105	181	232	315	353	375
	May	Peak Demand	15	101	254	429	525	626	749	815	787	725	648	601	519	482	459
		Surplus/(Deficit)	801	715	562	387	291	190	67	1	29	91	168	215	297	334	357
	June	Peak Demand	15	101	256	432	530	634	765	833	804	739	662	617	536	500	478
		Surplus/(Deficit)	801	715	560	384	286	182	51	(17)	12	77	154	199	280	316	338
	July	Peak Demand	15	101	256	432	530	634	765	833	804	739	662	617	536	500	478
		Surplus/(Deficit)	801	715	560	384	286	182	51	(17)	12	77	154	199	280	316	338
	August	Peak Demand	15	101	253	426	519	616	725	785	762	704	628	574	488	448	425
		Surplus/(Deficit)	801	715	563	390	297	200	91	31	54	112	188	242	328	368	391
	September	Peak Demand	15	101	252	425	517	611	713	771	749	694	618	561	473	431	409
		Surplus/(Deficit)	801	715	564	391	299	205	103	45	67	122	198	255	343	385	407
	October	Peak Demand	15	101	252	425	517	611	713	771	749	694	618	561	473	431	409
		Surplus/(Deficit)	801	715	564	391	299	205	103	45	67	122	198	255	343	385	407
	November	Peak Demand	15	102	254	428	521	617	720	778	756	700	624	568	478	435	412
		Surplus/(Deficit)	801	714	562	388	295	199	96	38	60	116	192	248	338	381	404
	December	Peak Demand	16	107	263	446	549	659	779	842	817	755	676	625	530	488	464
		Surplus/(Deficit)	800	709	553	370	267	157	37	(26)	(1)	61	140	191	286	328	352
	Average Month	Peak Demand	15	101	253	427	521	618	731	792	768	709	632	580	495	455	433
		Surplus/(Deficit)	801	715	563	389	295	198	85	24	48	107	184	236	321	361	383

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Approved - Sub-Area 1

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	February	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	March	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	April	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	May	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	June	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	July	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	August	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	September	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	October	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	November	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	December	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	Average Month	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Approved - Sub-Area 2

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	10	58	144	242	290	339	383	412	403	376	333	294	241	215	202
		Surplus/(Deficit)	402	354	268	170	122	73	29	0	9	36	79	118	171	197	210
	February	Peak Demand	10	58	144	240	288	335	376	404	396	369	326	287	233	206	193
		Surplus/(Deficit)	402	354	268	172	124	77	36	8	16	43	86	125	179	206	219
	March	Peak Demand	10	60	147	247	299	352	405	435	425	395	351	316	262	236	222
		Surplus/(Deficit)	402	352	265	165	113	60	7	(23)	(13)	17	61	96	150	176	190
	April	Peak Demand	10	60	147	247	299	352	405	435	425	395	351	316	262	236	222
		Surplus/(Deficit)	402	352	265	165	113	60	7	(23)	(13)	17	61	96	150	176	190
	May	Peak Demand	10	60	148	249	301	356	412	444	432	401	357	323	270	244	231
		Surplus/(Deficit)	402	352	264	163	111	56	0	(32)	(20)	11	55	89	142	168	181
	June	Peak Demand	10	60	149	250	304	360	419	452	440	408	363	330	278	253	240
		Surplus/(Deficit)	402	352	263	162	108	52	(7)	(40)	(28)	4	49	82	134	159	172
	July	Peak Demand	10	60	149	250	304	360	419	452	440	408	363	330	278	253	240
		Surplus/(Deficit)	402	352	263	162	108	52	(7)	(40)	(28)	4	49	82	134	159	172
	August	Peak Demand	10	60	148	248	300	354	403	433	423	394	350	313	257	230	217
		Surplus/(Deficit)	402	352	264	164	112	58	9	(21)	(11)	18	62	99	155	182	195
	September	Peak Demand	10	60	147	248	299	351	397	426	417	389	345	307	250	223	209
		Surplus/(Deficit)	402	352	265	164	113	61	15	(14)	(5)	23	67	105	162	189	203
	October	Peak Demand	10	60	147	248	299	351	397	426	417	389	345	307	250	223	209
		Surplus/(Deficit)	402	352	265	164	113	61	15	(14)	(5)	23	67	105	162	189	203
	November	Peak Demand	11	61	149	250	303	356	403	431	423	394	350	312	254	226	212
		Surplus/(Deficit)	401	351	263	162	109	56	9	(19)	(11)	18	62	100	158	186	200
	December	Peak Demand	11	65	155	261	320	382	437	468	457	426	380	344	282	253	239
		Surplus/(Deficit)	401	347	257	151	92	30	(25)	(56)	(45)	(14)	32	68	130	159	173
	Average Month	Peak Demand	10	60	148	248	301	354	405	435	425	395	351	315	260	233	220
		Surplus/(Deficit)	402	352	264	164	111	58	7	(23)	(13)	17	61	97	152	179	192

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Approved - Sub-Area 3

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	February	Peak Demand	7	47	141	230	247	249	232	248	252	244	196	125	79	44	33
		Surplus/(Deficit)	442	402	308	219	202	200	217	201	197	205	253	324	370	405	416
	March	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	April	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	May	Peak Demand	7	47	141	231	249	251	236	253	257	248	201	130	84	50	39
		Surplus/(Deficit)	442	402	308	218	200	198	213	196	192	201	248	319	365	399	410
	June	Peak Demand	7	47	141	231	249	252	238	255	258	249	202	131	85	51	40
		Surplus/(Deficit)	442	402	308	218	200	197	211	194	191	200	247	318	364	398	409
	July	Peak Demand	7	47	141	231	249	252	238	255	258	249	202	131	85	51	40
		Surplus/(Deficit)	442	402	308	218	200	197	211	194	191	200	247	318	364	398	409
	August	Peak Demand	7	47	141	230	248	250	234	251	255	246	199	127	81	47	36
		Surplus/(Deficit)	442	402	308	219	201	199	215	198	194	203	250	322	368	402	413
	September	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	October	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	November	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	December	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	Average Month	Peak Demand	7	47	141	230	248	250	235	251	255	247	199	128	82	48	36
		Surplus/(Deficit)	442	402	308	219	201	199	214	198	194	202	250	321	367	401	413

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Approved - Sub-Area 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	12	45	108	178	216	257	312	341	329	302	270	253	225	212	204
		Surplus/(Deficit)	392	359	296	226	188	147	92	63	75	102	134	151	179	192	200
	February	Peak Demand	12	45	107	177	214	252	304	331	320	294	263	245	216	202	194
		Surplus/(Deficit)	392	359	297	227	190	152	100	73	84	110	141	159	188	202	210
	March	Peak Demand	12	46	110	183	224	269	333	364	350	320	288	274	246	235	226
		Surplus/(Deficit)	392	358	294	221	180	135	71	40	54	84	116	130	158	169	178
	April	Peak Demand	12	46	110	183	224	269	333	364	350	320	288	274	246	235	226
		Surplus/(Deficit)	392	358	294	221	180	135	71	40	54	84	116	130	158	169	178
	May	Peak Demand	12	46	111	184	227	273	341	374	358	327	295	283	256	245	236
		Surplus/(Deficit)	392	358	293	220	177	131	63	30	46	77	109	121	148	159	168
	June	Peak Demand	12	47	112	186	229	277	350	384	367	335	303	292	265	255	246
		Surplus/(Deficit)	392	357	292	218	175	127	54	20	37	69	101	112	139	149	158
	July	Peak Demand	12	47	112	186	229	277	350	384	367	335	303	292	265	255	246
		Surplus/(Deficit)	392	357	292	218	175	127	54	20	37	69	101	112	139	149	158
	August	Peak Demand	12	46	110	182	222	266	326	356	342	314	282	267	238	225	217
		Surplus/(Deficit)	392	358	294	222	182	138	78	48	62	90	122	137	166	179	187
	September	Peak Demand	12	46	109	181	221	263	319	348	336	308	277	260	230	216	208
		Surplus/(Deficit)	392	358	295	223	183	141	85	56	68	96	127	144	174	188	196
	October	Peak Demand	12	46	109	181	221	263	319	348	336	308	277	260	230	216	208
		Surplus/(Deficit)	392	358	295	223	183	141	85	56	68	96	127	144	174	188	196
	November	Peak Demand	12	46	110	182	222	264	321	350	337	310	278	261	230	217	208
		Surplus/(Deficit)	392	358	294	222	182	140	83	54	67	94	126	143	174	187	196
	December	Peak Demand	12	48	113	189	233	281	346	378	363	333	300	286	255	242	233
		Surplus/(Deficit)	392	356	291	215	171	123	58	26	41	71	104	118	149	162	171
	Average Month	Peak Demand	12	46	110	183	224	268	329	360	346	317	285	270	242	230	221
		Surplus/(Deficit)	392	358	294	221	180	136	75	44	58	87	119	134	162	174	183

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Approved - Sub-Area 5

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	26	36	57	82	92	101	99	102	103	101	91	76	60	53	50
		Surplus/(Deficit)	110	100	79	54	44	35	37	34	33	35	45	60	76	83	86
	February	Peak Demand	26	36	57	82	92	101	99	102	103	101	91	76	60	53	50
		Surplus/(Deficit)	110	100	79	54	44	35	37	34	33	35	45	60	76	83	86
	March	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	April	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	May	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	June	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	July	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	August	Peak Demand	26	37	58	84	95	106	103	106	107	105	95	80	63	55	52
		Surplus/(Deficit)	110	99	78	52	41	30	33	30	29	31	41	56	73	81	84
	September	Peak Demand	26	37	58	84	95	106	104	107	108	106	96	81	63	56	53
		Surplus/(Deficit)	110	99	78	52	41	30	32	29	28	30	40	55	73	80	83
	October	Peak Demand	26	37	58	84	95	106	104	107	108	106	96	81	63	56	53
		Surplus/(Deficit)	110	99	78	52	41	30	32	29	28	30	40	55	73	80	83
	November	Peak Demand	26	37	58	85	96	108	106	109	110	108	98	82	64	57	54
		Surplus/(Deficit)	110	99	78	51	40	28	30	27	26	28	38	54	72	79	82
	December	Peak Demand	26	38	60	88	101	115	113	116	117	115	104	89	69	61	57
		Surplus/(Deficit)	110	98	76	48	35	21	23	20	19	21	32	47	67	75	79
	Average Month	Peak Demand	26	37	58	84	94	105	103	106	107	105	95	80	63	55	52
		Surplus/(Deficit)	110	99	78	52	42	31	33	30	29	31	41	56	73	81	84

PARKING SUPPLY/DEMAND STUDY RESULTS

PENDING SCENARIO

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Pending - All Sub-Areas

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	62	232	591	962	1,091	1,189	1,244	1,335	1,325	1,255	1,076	858	665	549	502
		Surplus/(Deficit)	1,513	1,343	984	613	484	386	331	240	250	320	499	717	910	1,026	1,073
	February	Peak Demand	62	232	589	959	1,086	1,180	1,227	1,315	1,307	1,240	1,061	840	646	529	481
		Surplus/(Deficit)	1,513	1,343	986	616	489	395	348	260	268	335	514	735	929	1,046	1,094
	March	Peak Demand	62	236	597	974	1,110	1,218	1,291	1,387	1,373	1,297	1,116	904	711	596	548
		Surplus/(Deficit)	1,513	1,339	978	601	465	357	284	188	202	278	459	671	864	979	1,027
	April	Peak Demand	62	236	597	974	1,110	1,218	1,291	1,387	1,373	1,297	1,116	904	711	596	548
		Surplus/(Deficit)	1,513	1,339	978	601	465	357	284	188	202	278	459	671	864	979	1,027
	May	Peak Demand	62	236	599	977	1,116	1,227	1,308	1,406	1,390	1,312	1,131	922	730	617	569
		Surplus/(Deficit)	1,513	1,339	976	598	459	348	267	169	185	263	444	653	845	958	1,006
	June	Peak Demand	62	237	600	980	1,121	1,236	1,324	1,426	1,408	1,327	1,145	939	749	637	589
		Surplus/(Deficit)	1,513	1,338	975	595	454	339	251	149	167	248	430	636	826	938	986
	July	Peak Demand	62	237	600	980	1,121	1,236	1,324	1,426	1,408	1,327	1,145	939	749	637	589
		Surplus/(Deficit)	1,513	1,338	975	595	454	339	251	149	167	248	430	636	826	938	986
	August	Peak Demand	62	236	598	975	1,111	1,218	1,283	1,376	1,364	1,291	1,110	895	698	581	533
		Surplus/(Deficit)	1,513	1,339	977	600	464	357	292	199	211	284	465	680	877	994	1,042
	September	Peak Demand	62	236	597	973	1,108	1,213	1,270	1,361	1,351	1,280	1,099	881	682	563	515
		Surplus/(Deficit)	1,513	1,339	978	602	467	362	305	214	224	295	476	694	893	1,012	1,060
	October	Peak Demand	62	236	597	973	1,108	1,213	1,270	1,361	1,351	1,280	1,099	881	682	563	515
		Surplus/(Deficit)	1,513	1,339	978	602	467	362	305	214	224	295	476	694	893	1,012	1,060
	November	Peak Demand	62	238	599	977	1,114	1,221	1,280	1,370	1,360	1,289	1,108	889	688	568	520
		Surplus/(Deficit)	1,513	1,337	976	598	461	354	295	205	215	286	467	686	887	1,007	1,055
	December	Peak Demand	63	244	610	998	1,147	1,271	1,349	1,444	1,430	1,352	1,169	956	748	628	578
		Surplus/(Deficit)	1,512	1,331	965	577	428	304	226	131	145	223	406	619	827	947	997
	Average Month	Peak Demand	62	236	598	975	1,112	1,220	1,289	1,383	1,370	1,296	1,115	901	705	589	541
		Surplus/(Deficit)	1,513	1,339	977	600	463	355	286	192	205	279	460	674	870	986	1,034

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Pending - Sub-Areas 2 and 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	17	110	285	478	569	657	750	811	792	736	648	571	475	425	401
		Surplus/(Deficit)	799	706	531	338	247	159	66	5	24	80	168	245	341	391	415
	February	Peak Demand	17	109	284	475	564	649	735	793	775	722	634	555	458	407	382
		Surplus/(Deficit)	799	707	532	341	252	167	81	23	41	94	182	261	358	409	434
	March	Peak Demand	17	113	291	488	586	683	792	858	835	773	684	613	517	469	443
		Surplus/(Deficit)	799	703	525	328	230	133	24	(42)	(19)	43	132	203	299	347	373
	April	Peak Demand	17	113	291	488	586	683	792	858	835	773	684	613	517	469	443
		Surplus/(Deficit)	799	703	525	328	230	133	24	(42)	(19)	43	132	203	299	347	373
	May	Peak Demand	17	113	292	491	591	691	807	876	851	787	697	629	535	487	462
		Surplus/(Deficit)	799	703	524	325	225	125	9	(60)	(35)	29	119	187	281	329	354
	June	Peak Demand	17	114	294	494	596	699	823	894	867	801	711	646	552	506	481
		Surplus/(Deficit)	799	702	522	322	220	117	(7)	(78)	(51)	15	105	170	264	310	335
	July	Peak Demand	17	114	294	494	596	699	823	894	867	801	711	646	552	506	481
		Surplus/(Deficit)	799	702	522	322	220	117	(7)	(78)	(51)	15	105	170	264	310	335
	August	Peak Demand	17	113	291	488	585	681	783	847	826	766	677	603	504	454	428
		Surplus/(Deficit)	799	703	525	328	231	135	33	(31)	(10)	50	139	213	312	362	388
	September	Peak Demand	17	113	290	487	582	676	771	832	813	756	667	590	489	437	411
		Surplus/(Deficit)	799	703	526	329	234	140	45	(16)	3	60	149	226	327	379	405
	October	Peak Demand	17	113	290	487	582	676	771	832	813	756	667	590	489	437	411
		Surplus/(Deficit)	799	703	526	329	234	140	45	(16)	3	60	149	226	327	379	405
	November	Peak Demand	17	114	292	490	587	682	778	840	820	763	673	596	493	441	415
		Surplus/(Deficit)	799	702	524	326	229	134	38	(24)	(4)	53	143	220	323	375	401
	December	Peak Demand	18	120	301	508	615	724	838	904	881	817	726	654	546	494	467
		Surplus/(Deficit)	798	696	515	308	201	92	(22)	(88)	(65)	(1)	90	162	270	322	349
	Average Month	Peak Demand	17	113	291	489	587	683	789	853	831	771	682	609	511	461	435
		Surplus/(Deficit)	799	703	525	327	229	133	27	(37)	(15)	45	134	207	305	355	381

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Pending - Sub-Area 1

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	February	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	March	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	April	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	May	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	June	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	July	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	August	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	September	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	October	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	November	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	December	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	Average Month	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Pending - Sub-Area 2

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	12	71	182	304	356	404	441	474	467	438	382	323	257	221	205
		Surplus/(Deficit)	400	341	230	108	56	8	(29)	(62)	(55)	(26)	30	89	155	191	207
	February	Peak Demand	12	70	182	302	354	400	434	465	459	432	376	316	249	212	196
		Surplus/(Deficit)	400	342	230	110	58	12	(22)	(53)	(47)	(20)	36	96	163	200	216
	March	Peak Demand	12	72	185	309	365	418	463	497	488	457	400	344	277	242	225
		Surplus/(Deficit)	400	340	227	103	47	(6)	(51)	(85)	(76)	(45)	12	68	135	170	187
	April	Peak Demand	12	72	185	309	365	418	463	497	488	457	400	344	277	242	225
		Surplus/(Deficit)	400	340	227	103	47	(6)	(51)	(85)	(76)	(45)	12	68	135	170	187
	May	Peak Demand	12	73	186	310	367	421	470	505	496	463	406	352	285	250	234
		Surplus/(Deficit)	400	339	226	102	45	(9)	(58)	(93)	(84)	(51)	6	60	127	162	178
	June	Peak Demand	12	73	187	312	370	425	477	514	503	470	413	359	293	259	242
		Surplus/(Deficit)	400	339	225	100	42	(13)	(65)	(102)	(91)	(58)	(1)	53	119	153	170
	July	Peak Demand	12	73	187	312	370	425	477	514	503	470	413	359	293	259	242
		Surplus/(Deficit)	400	339	225	100	42	(13)	(65)	(102)	(91)	(58)	(1)	53	119	153	170
	August	Peak Demand	12	73	186	310	366	419	461	495	487	456	399	342	273	236	220
		Surplus/(Deficit)	400	339	226	102	46	(7)	(49)	(83)	(75)	(44)	13	70	139	176	192
	September	Peak Demand	12	73	185	310	365	416	455	488	481	451	394	336	266	228	212
		Surplus/(Deficit)	400	339	227	102	47	(4)	(43)	(76)	(69)	(39)	18	76	146	184	200
	October	Peak Demand	12	73	185	310	365	416	455	488	481	451	394	336	266	228	212
		Surplus/(Deficit)	400	339	227	102	47	(4)	(43)	(76)	(69)	(39)	18	76	146	184	200
	November	Peak Demand	12	74	187	312	369	422	461	493	486	457	400	341	270	232	215
		Surplus/(Deficit)	400	338	225	100	43	(10)	(49)	(81)	(74)	(45)	12	71	142	180	197
	December	Peak Demand	13	77	193	323	386	447	495	530	521	488	430	373	298	260	242
		Surplus/(Deficit)	399	335	219	89	26	(35)	(83)	(118)	(109)	(76)	(18)	39	114	152	170
	Average Month	Peak Demand	12	73	186	310	366	419	463	497	488	457	401	344	275	239	222
		Surplus/(Deficit)	400	339	226	102	46	(7)	(51)	(85)	(76)	(45)	11	68	137	173	190

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Pending - Sub-Area 3

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	February	Peak Demand	7	47	141	230	247	249	232	248	252	244	196	125	79	44	33
		Surplus/(Deficit)	442	402	308	219	202	200	217	201	197	205	253	324	370	405	416
	March	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	April	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	May	Peak Demand	7	47	141	231	249	251	236	253	257	248	201	130	84	50	39
		Surplus/(Deficit)	442	402	308	218	200	198	213	196	192	201	248	319	365	399	410
	June	Peak Demand	7	47	141	231	249	252	238	255	258	249	202	131	85	51	40
		Surplus/(Deficit)	442	402	308	218	200	197	211	194	191	200	247	318	364	398	409
	July	Peak Demand	7	47	141	231	249	252	238	255	258	249	202	131	85	51	40
		Surplus/(Deficit)	442	402	308	218	200	197	211	194	191	200	247	318	364	398	409
	August	Peak Demand	7	47	141	230	248	250	234	251	255	246	199	127	81	47	36
		Surplus/(Deficit)	442	402	308	219	201	199	215	198	194	203	250	322	368	402	413
	September	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	October	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	November	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	December	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	Average Month	Peak Demand	7	47	141	230	248	250	235	251	255	247	199	128	82	48	36
		Surplus/(Deficit)	442	402	308	219	201	199	214	198	194	202	250	321	367	401	413

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Pending - Sub-Area 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	12	45	108	178	216	257	312	341	329	302	270	253	225	212	204
		Surplus/(Deficit)	392	359	296	226	188	147	92	63	75	102	134	151	179	192	200
	February	Peak Demand	12	45	107	177	214	252	304	331	320	294	263	245	216	202	194
		Surplus/(Deficit)	392	359	297	227	190	152	100	73	84	110	141	159	188	202	210
	March	Peak Demand	12	46	110	183	224	269	333	364	350	320	288	274	246	235	226
		Surplus/(Deficit)	392	358	294	221	180	135	71	40	54	84	116	130	158	169	178
	April	Peak Demand	12	46	110	183	224	269	333	364	350	320	288	274	246	235	226
		Surplus/(Deficit)	392	358	294	221	180	135	71	40	54	84	116	130	158	169	178
	May	Peak Demand	12	46	111	184	227	273	341	374	358	327	295	283	256	245	236
		Surplus/(Deficit)	392	358	293	220	177	131	63	30	46	77	109	121	148	159	168
	June	Peak Demand	12	47	112	186	229	277	350	384	367	335	303	292	265	255	246
		Surplus/(Deficit)	392	357	292	218	175	127	54	20	37	69	101	112	139	149	158
	July	Peak Demand	12	47	112	186	229	277	350	384	367	335	303	292	265	255	246
		Surplus/(Deficit)	392	357	292	218	175	127	54	20	37	69	101	112	139	149	158
	August	Peak Demand	12	46	110	182	222	266	326	356	342	314	282	267	238	225	217
		Surplus/(Deficit)	392	358	294	222	182	138	78	48	62	90	122	137	166	179	187
	September	Peak Demand	12	46	109	181	221	263	319	348	336	308	277	260	230	216	208
		Surplus/(Deficit)	392	358	295	223	183	141	85	56	68	96	127	144	174	188	196
	October	Peak Demand	12	46	109	181	221	263	319	348	336	308	277	260	230	216	208
		Surplus/(Deficit)	392	358	295	223	183	141	85	56	68	96	127	144	174	188	196
	November	Peak Demand	12	46	110	182	222	264	321	350	337	310	278	261	230	217	208
		Surplus/(Deficit)	392	358	294	222	182	140	83	54	67	94	126	143	174	187	196
	December	Peak Demand	12	48	113	189	233	281	346	378	363	333	300	286	255	242	233
		Surplus/(Deficit)	392	356	291	215	171	123	58	26	41	71	104	118	149	162	171
	Average Month	Peak Demand	12	46	110	183	224	268	329	360	346	317	285	270	242	230	221
		Surplus/(Deficit)	392	358	294	221	180	136	75	44	58	87	119	134	162	174	183

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Pending - Sub-Area 5

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	26	36	57	82	92	101	99	102	103	101	91	76	60	53	50
		Surplus/(Deficit)	110	100	79	54	44	35	37	34	33	35	45	60	76	83	86
	February	Peak Demand	26	36	57	82	92	101	99	102	103	101	91	76	60	53	50
		Surplus/(Deficit)	110	100	79	54	44	35	37	34	33	35	45	60	76	83	86
	March	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	April	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	May	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	June	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	July	Peak Demand	26	36	57	83	93	104	101	104	105	103	93	78	62	54	51
		Surplus/(Deficit)	110	100	79	53	43	32	35	32	31	33	43	58	74	82	85
	August	Peak Demand	26	37	58	84	95	106	103	106	107	105	95	80	63	55	52
		Surplus/(Deficit)	110	99	78	52	41	30	33	30	29	31	41	56	73	81	84
	September	Peak Demand	26	37	58	84	95	106	104	107	108	106	96	81	63	56	53
		Surplus/(Deficit)	110	99	78	52	41	30	32	29	28	30	40	55	73	80	83
	October	Peak Demand	26	37	58	84	95	106	104	107	108	106	96	81	63	56	53
		Surplus/(Deficit)	110	99	78	52	41	30	32	29	28	30	40	55	73	80	83
	November	Peak Demand	26	37	58	85	96	108	106	109	110	108	98	82	64	57	54
		Surplus/(Deficit)	110	99	78	51	40	28	30	27	26	28	38	54	72	79	82
	December	Peak Demand	26	38	60	88	101	115	113	116	117	115	104	89	69	61	57
		Surplus/(Deficit)	110	98	76	48	35	21	23	20	19	21	32	47	67	75	79
	Average Month	Peak Demand	26	37	58	84	94	105	103	106	107	105	95	80	63	55	52
		Surplus/(Deficit)	110	99	78	52	42	31	33	30	29	31	41	56	73	81	84

PARKING SUPPLY/DEMAND STUDY RESULTS

FUTURE SCENARIO

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Future - All Sub-Areas

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	59	254	664	1,086	1,230	1,334	1,387	1,487	1,478	1,402	1,196	941	720	584	529
		Surplus/(Deficit)	1,516	1,321	911	489	345	241	188	88	97	173	379	634	855	991	1,046
	February	Peak Demand	59	253	662	1,083	1,224	1,325	1,369	1,466	1,460	1,386	1,181	923	700	562	508
		Surplus/(Deficit)	1,516	1,322	913	492	351	250	206	109	115	189	394	652	875	1,013	1,067
	March	Peak Demand	59	257	671	1,099	1,251	1,366	1,437	1,543	1,530	1,447	1,240	992	769	635	579
		Surplus/(Deficit)	1,516	1,318	904	476	324	209	138	32	45	128	335	583	806	940	996
	April	Peak Demand	59	257	671	1,099	1,251	1,366	1,437	1,543	1,530	1,447	1,240	992	769	635	579
		Surplus/(Deficit)	1,516	1,318	904	476	324	209	138	32	45	128	335	583	806	940	996
	May	Peak Demand	59	258	673	1,102	1,256	1,375	1,455	1,564	1,549	1,463	1,255	1,010	789	656	601
		Surplus/(Deficit)	1,516	1,317	902	473	319	200	120	11	26	112	320	565	786	919	974
	June	Peak Demand	59	259	674	1,106	1,262	1,385	1,473	1,584	1,567	1,479	1,270	1,029	809	678	622
		Surplus/(Deficit)	1,516	1,316	901	469	313	190	102	(9)	8	96	305	546	766	897	953
	July	Peak Demand	59	259	674	1,106	1,262	1,385	1,473	1,584	1,567	1,479	1,270	1,029	809	678	622
		Surplus/(Deficit)	1,516	1,316	901	469	313	190	102	(9)	8	96	305	546	766	897	953
	August	Peak Demand	59	259	672	1,101	1,253	1,368	1,432	1,535	1,524	1,444	1,236	984	757	620	564
		Surplus/(Deficit)	1,516	1,316	903	474	322	207	143	40	51	131	339	591	818	955	1,011
	September	Peak Demand	59	258	671	1,099	1,249	1,361	1,416	1,516	1,507	1,430	1,222	967	738	600	544
		Surplus/(Deficit)	1,516	1,317	904	476	326	214	159	59	68	145	353	608	837	975	1,031
	October	Peak Demand	59	258	671	1,099	1,249	1,361	1,416	1,516	1,507	1,430	1,222	967	738	600	544
		Surplus/(Deficit)	1,516	1,317	904	476	326	214	159	59	68	145	353	608	837	975	1,031
	November	Peak Demand	59	260	674	1,104	1,257	1,372	1,428	1,529	1,520	1,442	1,234	979	746	607	550
		Surplus/(Deficit)	1,516	1,315	901	471	318	203	147	46	55	133	341	596	829	968	1,025
	December	Peak Demand	60	268	687	1,129	1,295	1,429	1,506	1,612	1,599	1,513	1,302	1,053	813	673	614
		Surplus/(Deficit)	1,515	1,307	888	446	280	146	69	(37)	(24)	62	273	522	762	902	961
	Average Month	Peak Demand	59	258	672	1,101	1,253	1,369	1,436	1,540	1,528	1,447	1,239	989	763	627	572
		Surplus/(Deficit)	1,516	1,317	903	474	322	206	139	35	47	128	336	586	812	948	1,003

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Future - Sub-Areas 2 and 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	19	135	360	602	706	801	892	963	944	882	769	657	534	466	435
		Surplus/(Deficit)	797	681	456	214	110	15	(76)	(147)	(128)	(66)	47	159	282	350	381
	February	Peak Demand	19	135	358	599	701	792	875	943	927	867	754	640	516	446	415
		Surplus/(Deficit)	797	681	458	217	115	24	(59)	(127)	(111)	(51)	62	176	300	370	401
	March	Peak Demand	19	138	366	613	725	829	937	1,013	991	923	808	703	579	513	481
		Surplus/(Deficit)	797	678	450	203	91	(13)	(121)	(197)	(175)	(107)	8	113	237	303	335
	April	Peak Demand	19	138	366	613	725	829	937	1,013	991	923	808	703	579	513	481
		Surplus/(Deficit)	797	678	450	203	91	(13)	(121)	(197)	(175)	(107)	8	113	237	303	335
	May	Peak Demand	19	139	368	616	730	838	954	1,033	1,008	937	822	720	598	533	501
		Surplus/(Deficit)	797	677	448	200	86	(22)	(138)	(217)	(192)	(121)	(6)	96	218	283	315
	June	Peak Demand	19	140	369	619	735	847	971	1,052	1,026	952	837	738	617	553	521
		Surplus/(Deficit)	797	676	447	197	81	(31)	(155)	(236)	(210)	(136)	(21)	78	199	263	295
	July	Peak Demand	19	140	369	619	735	847	971	1,052	1,026	952	837	738	617	553	521
		Surplus/(Deficit)	797	676	447	197	81	(31)	(155)	(236)	(210)	(136)	(21)	78	199	263	295
	August	Peak Demand	20	139	367	614	726	830	931	1,004	984	918	803	695	567	499	466
		Surplus/(Deficit)	796	677	449	202	90	(14)	(115)	(188)	(168)	(102)	13	121	249	317	350
	September	Peak Demand	20	139	366	612	722	823	916	987	968	905	790	679	550	479	447
		Surplus/(Deficit)	796	677	450	204	94	(7)	(100)	(171)	(152)	(89)	26	137	266	337	369
	October	Peak Demand	20	139	366	612	722	823	916	987	968	905	790	679	550	479	447
		Surplus/(Deficit)	796	677	450	204	94	(7)	(100)	(171)	(152)	(89)	26	137	266	337	369
	November	Peak Demand	20	140	368	616	728	832	926	997	978	915	800	688	556	485	452
		Surplus/(Deficit)	796	676	448	200	88	(16)	(110)	(181)	(162)	(99)	16	128	260	331	364
	December	Peak Demand	20	147	379	637	761	881	994	1,070	1,048	977	860	754	616	544	510
		Surplus/(Deficit)	796	669	437	179	55	(65)	(178)	(254)	(232)	(161)	(44)	62	200	272	306
	Average Month	Peak Demand	20	139	367	614	726	831	935	1,010	988	921	807	699	573	505	473
		Surplus/(Deficit)	796	677	449	202	90	(15)	(119)	(194)	(172)	(105)	9	117	243	311	343

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Future - Sub-Area 1

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	February	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	March	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	April	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	May	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	June	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	July	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	August	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	September	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	October	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	November	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	December	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165
	Average Month	Peak Demand	5	34	103	168	180	178	159	169	174	170	135	79	44	17	9
		Surplus/(Deficit)	169	140	71	6	(6)	(4)	15	5	0	4	39	95	130	157	165

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Future - Sub-Area 2

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	12	75	195	326	383	435	477	512	504	473	412	349	278	239	221
		Surplus/(Deficit)	400	337	217	86	29	(23)	(65)	(100)	(92)	(61)	(0)	63	134	173	191
	February	Peak Demand	12	75	194	325	381	431	469	503	496	466	405	341	269	229	212
		Surplus/(Deficit)	400	337	218	87	31	(19)	(57)	(91)	(84)	(54)	7	71	143	183	200
	March	Peak Demand	12	77	199	332	393	450	500	538	528	494	433	372	300	262	244
		Surplus/(Deficit)	400	335	213	80	19	(38)	(88)	(126)	(116)	(82)	(21)	40	112	150	168
	April	Peak Demand	12	77	199	332	393	450	500	538	528	494	433	372	300	262	244
		Surplus/(Deficit)	400	335	213	80	19	(38)	(88)	(126)	(116)	(82)	(21)	40	112	150	168
	May	Peak Demand	12	77	199	334	396	454	508	547	536	501	439	381	309	271	253
		Surplus/(Deficit)	400	335	213	78	16	(42)	(96)	(135)	(124)	(89)	(27)	31	103	141	159
	June	Peak Demand	12	77	200	335	398	458	516	556	544	507	446	389	318	280	263
		Surplus/(Deficit)	400	335	212	77	14	(46)	(104)	(144)	(132)	(95)	(34)	23	94	132	149
	July	Peak Demand	12	77	200	335	398	458	516	556	544	507	446	389	318	280	263
		Surplus/(Deficit)	400	335	212	77	14	(46)	(104)	(144)	(132)	(95)	(34)	23	94	132	149
	August	Peak Demand	12	78	199	334	395	453	499	535	527	493	432	371	296	256	238
		Surplus/(Deficit)	400	334	213	78	17	(41)	(87)	(123)	(115)	(81)	(20)	41	116	156	174
	September	Peak Demand	12	77	199	333	393	449	492	527	519	487	426	363	288	247	229
		Surplus/(Deficit)	400	335	213	79	19	(37)	(80)	(115)	(107)	(75)	(14)	49	124	165	183
	October	Peak Demand	12	77	199	333	393	449	492	527	519	487	426	363	288	247	229
		Surplus/(Deficit)	400	335	213	79	19	(37)	(80)	(115)	(107)	(75)	(14)	49	124	165	183
	November	Peak Demand	12	78	200	336	397	456	499	534	526	494	432	369	292	251	233
		Surplus/(Deficit)	400	334	212	76	15	(44)	(87)	(122)	(114)	(82)	(20)	43	120	161	179
	December	Peak Demand	12	82	207	348	417	484	537	575	565	529	466	406	324	282	263
		Surplus/(Deficit)	400	330	205	64	(5)	(72)	(125)	(163)	(153)	(117)	(54)	6	88	130	149
	Average Month	Peak Demand	12	77	199	334	395	452	500	537	528	494	433	372	298	259	241
		Surplus/(Deficit)	400	335	213	78	17	(40)	(88)	(125)	(116)	(82)	(21)	40	114	153	171

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Future - Sub-Area 3

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	February	Peak Demand	7	47	141	230	247	249	232	248	252	244	196	125	79	44	33
		Surplus/(Deficit)	442	402	308	219	202	200	217	201	197	205	253	324	370	405	416
	March	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	April	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	May	Peak Demand	7	47	141	231	249	251	236	253	257	248	201	130	84	50	39
		Surplus/(Deficit)	442	402	308	218	200	198	213	196	192	201	248	319	365	399	410
	June	Peak Demand	7	47	141	231	249	252	238	255	258	249	202	131	85	51	40
		Surplus/(Deficit)	442	402	308	218	200	197	211	194	191	200	247	318	364	398	409
	July	Peak Demand	7	47	141	231	249	252	238	255	258	249	202	131	85	51	40
		Surplus/(Deficit)	442	402	308	218	200	197	211	194	191	200	247	318	364	398	409
	August	Peak Demand	7	47	141	230	248	250	234	251	255	246	199	127	81	47	36
		Surplus/(Deficit)	442	402	308	219	201	199	215	198	194	203	250	322	368	402	413
	September	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	October	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	November	Peak Demand	7	47	141	230	248	249	233	249	253	245	198	126	80	46	34
		Surplus/(Deficit)	442	402	308	219	201	200	216	200	196	204	251	323	369	403	415
	December	Peak Demand	7	47	141	230	249	250	235	252	256	247	200	129	83	49	37
		Surplus/(Deficit)	442	402	308	219	200	199	214	197	193	202	249	320	366	400	412
	Average Month	Peak Demand	7	47	141	230	248	250	235	251	255	247	199	128	82	48	36
		Surplus/(Deficit)	442	402	308	219	201	199	214	198	194	202	250	321	367	401	413

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Future - Sub-Area 4

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	9	61	166	276	324	366	416	451	441	410	357	309	258	229	215
		Surplus/(Deficit)	395	343	238	128	80	38	(12)	(47)	(37)	(6)	47	95	146	175	189
	February	Peak Demand	9	61	165	275	321	362	407	441	431	402	350	300	248	218	204
		Surplus/(Deficit)	395	343	239	129	83	42	(3)	(37)	(27)	2	54	104	156	186	200
	March	Peak Demand	9	63	168	281	332	380	438	476	463	429	376	331	280	253	238
		Surplus/(Deficit)	395	341	236	123	72	24	(34)	(72)	(59)	(25)	28	73	124	151	166
	April	Peak Demand	9	63	168	281	332	380	438	476	463	429	376	331	280	253	238
		Surplus/(Deficit)	395	341	236	123	72	24	(34)	(72)	(59)	(25)	28	73	124	151	166
	May	Peak Demand	9	63	169	283	335	384	447	487	473	437	384	340	290	263	249
		Surplus/(Deficit)	395	341	235	121	69	20	(43)	(83)	(69)	(33)	20	64	114	141	155
	June	Peak Demand	9	63	170	284	338	389	455	497	482	445	392	350	300	274	260
		Surplus/(Deficit)	395	341	234	120	66	15	(51)	(93)	(78)	(41)	12	54	104	130	144
	July	Peak Demand	9	63	170	284	338	389	455	497	482	445	392	350	300	274	260
		Surplus/(Deficit)	395	341	234	120	66	15	(51)	(93)	(78)	(41)	12	54	104	130	144
	August	Peak Demand	9	63	168	281	331	378	432	470	458	425	372	325	273	244	230
		Surplus/(Deficit)	395	341	236	123	73	26	(28)	(66)	(54)	(21)	32	79	131	160	174
	September	Peak Demand	9	62	168	280	329	374	424	460	449	418	365	317	263	234	219
		Surplus/(Deficit)	395	342	236	124	75	30	(20)	(56)	(45)	(14)	39	87	141	170	185
	October	Peak Demand	9	62	168	280	329	374	424	460	449	418	365	317	263	234	219
		Surplus/(Deficit)	395	342	236	124	75	30	(20)	(56)	(45)	(14)	39	87	141	170	185
	November	Peak Demand	9	63	168	281	331	377	428	464	453	421	368	320	265	235	221
		Surplus/(Deficit)	395	341	236	123	73	27	(24)	(60)	(49)	(17)	36	84	139	169	183
	December	Peak Demand	9	66	173	290	345	398	458	496	483	448	395	349	293	264	249
		Surplus/(Deficit)	395	338	231	114	59	6	(54)	(92)	(79)	(44)	9	55	111	140	155
	Average Month	Peak Demand	9	63	168	281	332	379	435	473	461	427	374	328	276	248	234
		Surplus/(Deficit)	395	341	236	123	72	25	(31)	(69)	(57)	(23)	30	76	128	156	170

City Of Campbell Parking Study
Comparison of Projected Parking Demand vs. Supply
Future - Sub-Area 5

	Month	User Group	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	Noon	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Weekday	January	Peak Demand	26	37	59	86	96	106	103	106	107	105	94	78	61	53	50
		Surplus/(Deficit)	110	99	77	50	40	30	33	30	29	31	42	58	75	83	86
	February	Peak Demand	26	37	59	86	96	106	103	106	107	105	94	78	61	53	50
		Surplus/(Deficit)	110	99	77	50	40	30	33	30	29	31	42	58	75	83	86
	March	Peak Demand	26	37	60	87	97	108	105	108	109	107	97	80	63	55	51
		Surplus/(Deficit)	110	99	76	49	39	28	31	28	27	29	39	56	73	81	85
	April	Peak Demand	26	37	60	87	97	108	105	108	109	107	97	80	63	55	51
		Surplus/(Deficit)	110	99	76	49	39	28	31	28	27	29	39	56	73	81	85
	May	Peak Demand	26	37	60	87	97	108	105	108	109	107	97	80	63	55	51
		Surplus/(Deficit)	110	99	76	49	39	28	31	28	27	29	39	56	73	81	85
	June	Peak Demand	26	37	60	87	97	108	105	108	109	107	97	80	63	55	51
		Surplus/(Deficit)	110	99	76	49	39	28	31	28	27	29	39	56	73	81	85
	July	Peak Demand	26	37	60	87	97	108	105	108	109	107	97	80	63	55	51
		Surplus/(Deficit)	110	99	76	49	39	28	31	28	27	29	39	56	73	81	85
	August	Peak Demand	26	38	60	88	99	110	107	110	112	109	99	82	64	56	53
		Surplus/(Deficit)	110	98	76	48	37	26	29	26	24	27	37	54	72	80	83
	September	Peak Demand	26	38	60	88	99	110	108	111	112	110	99	83	64	56	53
		Surplus/(Deficit)	110	98	76	48	37	26	28	25	24	26	37	53	72	80	83
	October	Peak Demand	26	38	60	88	99	110	108	111	112	110	99	83	64	56	53
		Surplus/(Deficit)	110	98	76	48	37	26	28	25	24	26	37	53	72	80	83
	November	Peak Demand	26	38	61	89	100	112	110	113	114	112	101	84	66	57	54
		Surplus/(Deficit)	110	98	75	47	36	24	26	23	22	24	35	52	70	79	82
	December	Peak Demand	26	39	63	92	105	119	117	120	121	119	107	91	70	61	57
		Surplus/(Deficit)	110	97	73	44	31	17	19	16	15	17	29	45	66	75	79
	Average Month	Peak Demand	26	37	60	88	98	109	107	110	111	109	98	82	64	56	52
		Surplus/(Deficit)	110	99	76	48	38	27	29	26	25	27	38	54	72	80	84

APPENDIX B

PARKING STRUCTURE SITES

SITE PLAN
DOWNTOWN CAMPBELL PARKING STRUCTURE

GORDON H CHONG & Partners

APRIL 7, 1999

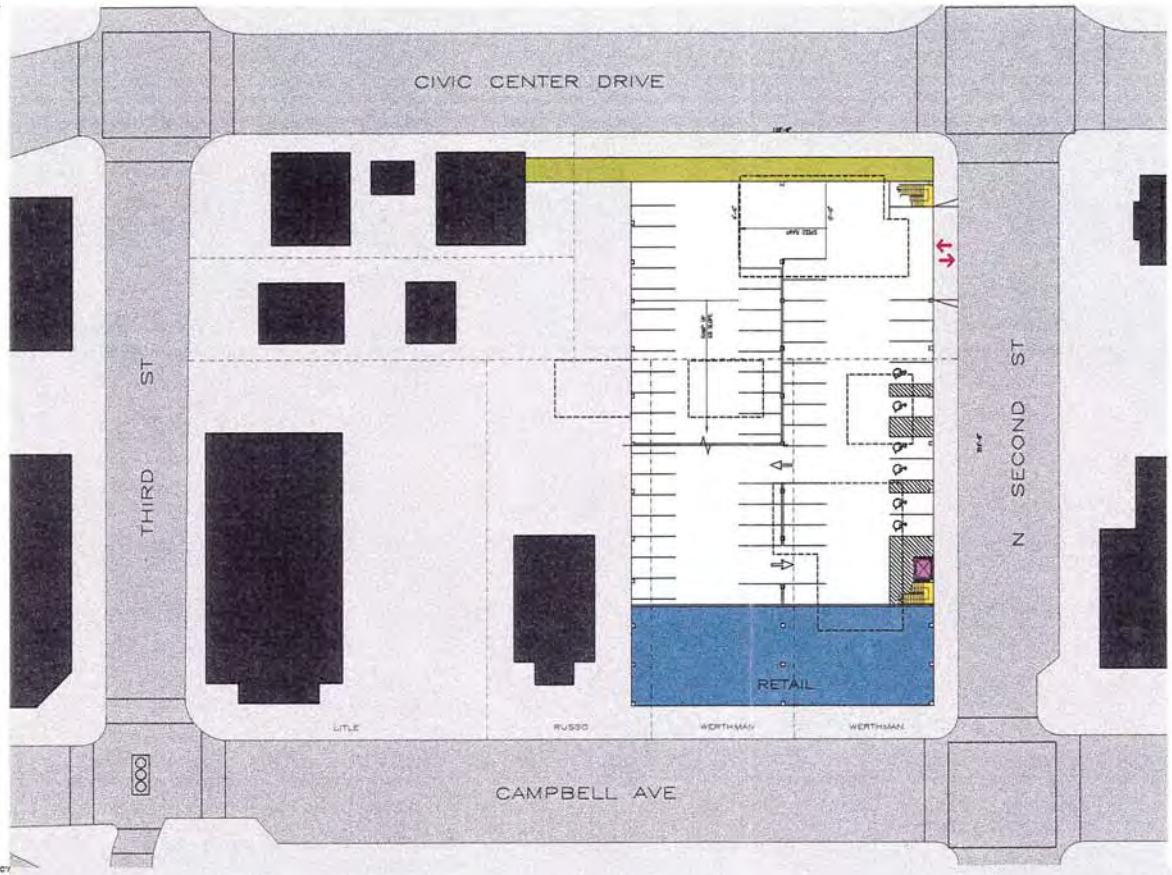
APPENDIX C

PARKING STRUCTURE CONCEPT DESIGNS

City of Campbell Parking Concept Parameters and Characteristics

Concept	A1	A2	A3	A4	B1	B2	B3	C1	C2
Site Dimensions	182' x 237'	182' x 237'	210' x 237'	127' x 300'	122' x 317'	127' x 311'	127' x 214'	162' x 220'	162' x 220'
Structure Footprint Dimensions	127' x 216'	127' x 216'	210' x 187'	127' x 300'	108' x 298'	127' x 311"	127' x 214'	127" x 199'	127' x 199'
No. of Levels	3	4	3	3	4	3	4	3	4
No. of Parking Bays	2	2	3	2	2	2	2	2	2
Circulation/Ramping System	Single Thread - Long Span	Single Thread - Long Span	Single Thread - Long Span	Single Thread - Long Span	One Way Double Thread	Single Thread - Long Span	Single Thread - Long Span	Single Thread - Long Span	Single Thread - Long Span
Circulation	2 Way - 90°	2 Way - 90°	2 Way - 90°	2 Way - 90°	1 Way - 60°	2 Way - 90°	2 Way - 90°	2 Way - 90°	2 Way - 90°
Capacity									
Standard	207	277	333	301	340	311	284	222	307
Compact			12	10	0	6	12		5
Accessible	6	6	7	7	7	7	6	6	7
Total	213	283	352	318	347	324	302	228	319
No. of Existing Spaces Displaced	0	0	24	6	36	36	36	53	53
Net Gain in Parking Spaces	213	283	328	312	311	288	266	175	266
Area Available for Retail Space					None				
Length	127'	127'	187'	0	N/A	127'	127'	127'	127'
Depth	40'	40'	40'	0	N/A	40'	40'	40'	40'
Clear Height	11'	11'	No Limit	0	N/A	11'	11'	11'	11'
No. of Open Sides	4	4	3	3	3	3	2	4	3
Sprinklers Included?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mechanical Ventilation Required?	No	No	No	No	No	No	No	No	No
Height of Top Deck (ft)	24.5	35	24.5	24.5	38	24.5	35	24.5	35
No. of Entry Lanes	1	1	1	1	1	1	1	1	1
No. of Exit Lanes	1	1	1	1	1	1	1	1	1
No. of Elevators	1	1	1	1	1	1	1	1	1
No. of Stairs	2	2	2	2	2	2	2	2	2
Floor Area (sf)									
Retail	5,020	5,020	0	0	0	0	0	5,020	5,020
Parking	69,088	96,008	112,047	98,385	116,795	103,052	98,372	77,810	107,491
Total Floor Area (sf)	74,108	101,028	112,047	98,385	116,795	103,052	98,372	82,830	112,511
Efficiency (Sq. Ft./Stall)	324	339	318	309	337	318	326	341	337
Estimated Construction Cost									
Amount	$3,139,000	$4,342,000	$4,015,000	$3,627,000	$4,961,000	$3,879,000	$4,084,000	$3,469,000	$4,809,000
$/Constructed Stall	$14,737	$15,343	$11,406	$11,406	$14,297	$11,972	$13,523	$15,215	$15,075
$/Net Stall	$14,737	$15,343	$12,241	$11,625	$15,952	$13,469	$15,353	$19,823	$18,079
$/Sq. Ft.	$42.36	$42.98	$35.83	$36.87	$42.48	$37.64	$41.52	$41.88	$42.74

GROUND FLOOR PLAN

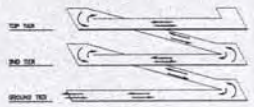


CAMPBELL REDEVELOPMENT AGENCY
HISTORIC DOWNTOWN CAMPBELL

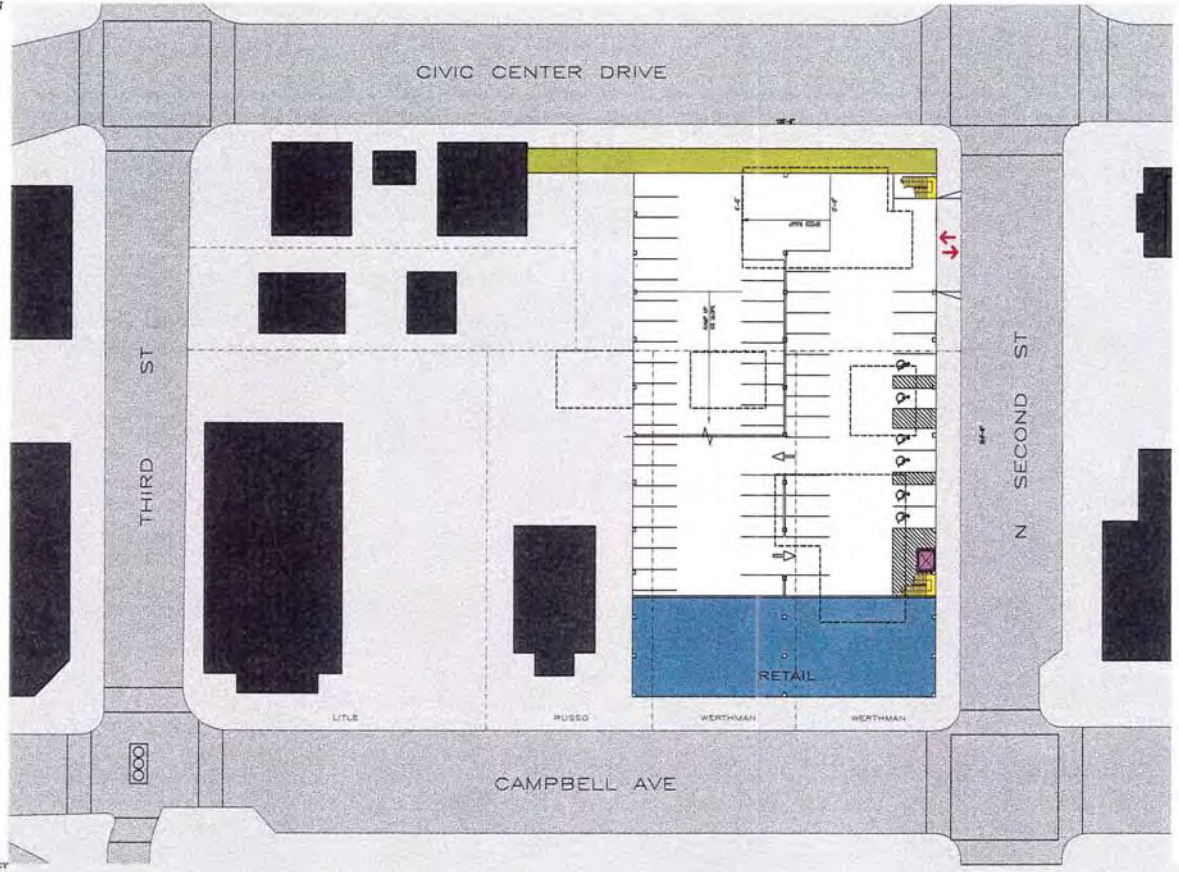
GORDON H CHONG & Partners

WALKER PARKING CONSULTANTS

PLAN: SCHEME A-1



GROUND FLOOR PLAN



2

CAMPBELL REDEVELOPMENT AGENCY
HISTORIC DOWNTOWN CAMPBELL

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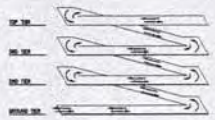
PLAN : SCHEME A -2



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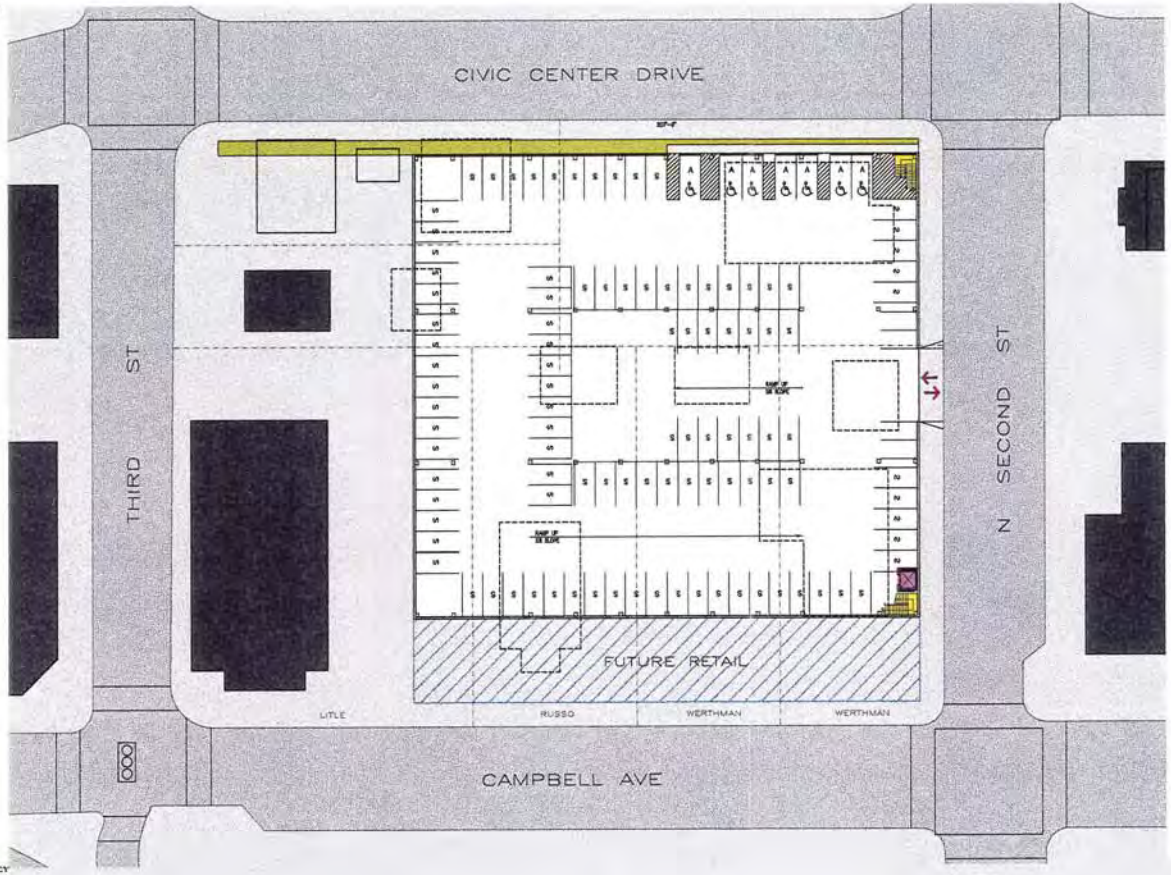

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CAMPBELL REDEVELOPMENT AGENCY
HISTORIC DOWNTOWN CAMPBELL

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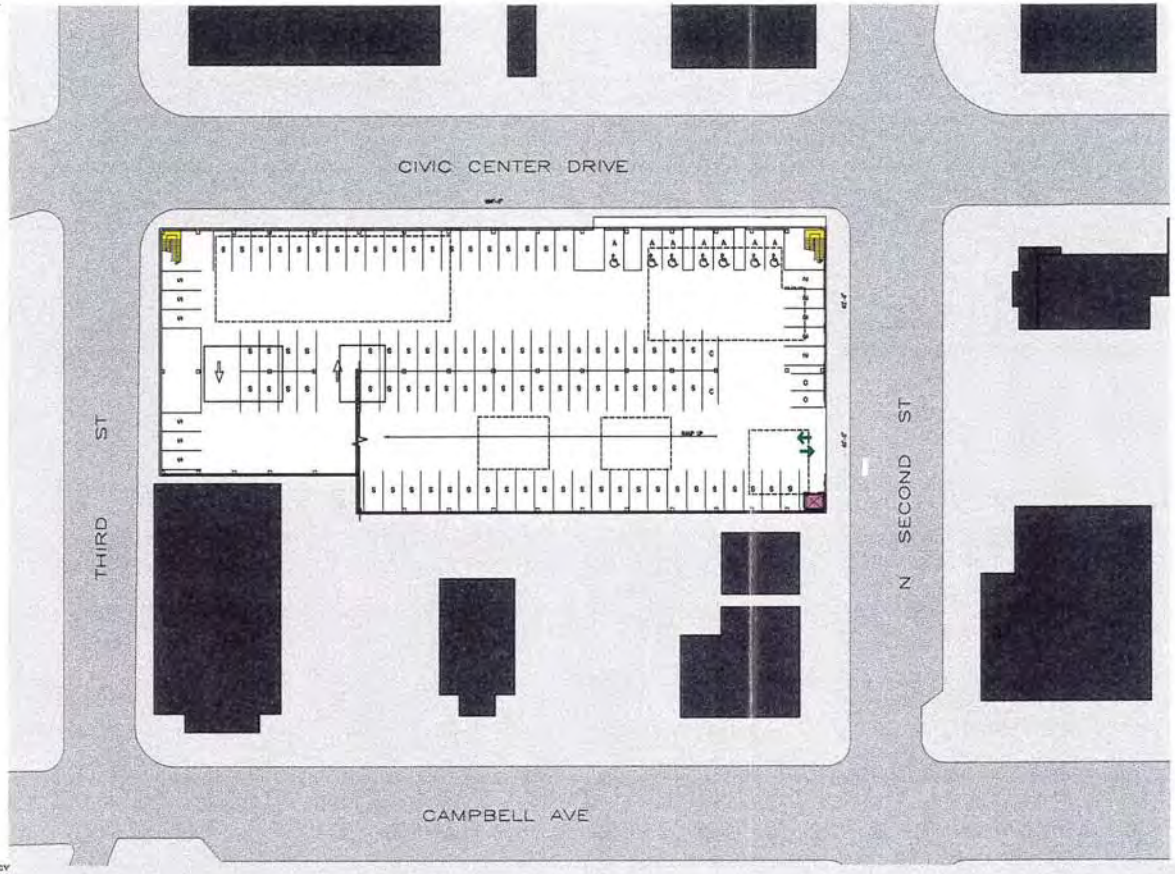
PLAN: SCHEME A -3

GROUND FLOOR PLAN



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CAMPBELL REDEVELOPMENT AGENCY
HISTORIC DOWNTOWN CAMPBELL

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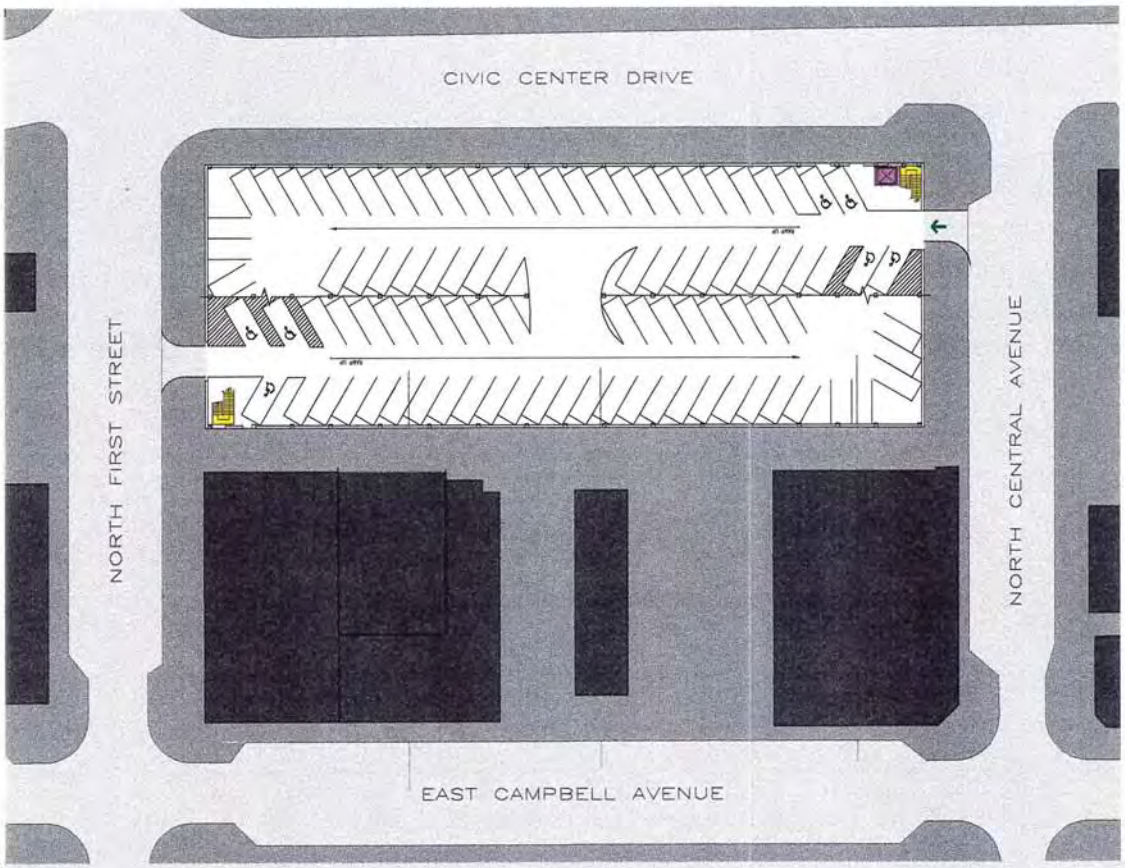
PLAN : SCHEME A-4

GROUND FLOOR PLAN



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CITY OF CAMPBELL
DOWNTOWN PARKING STRUCTURE STUDY

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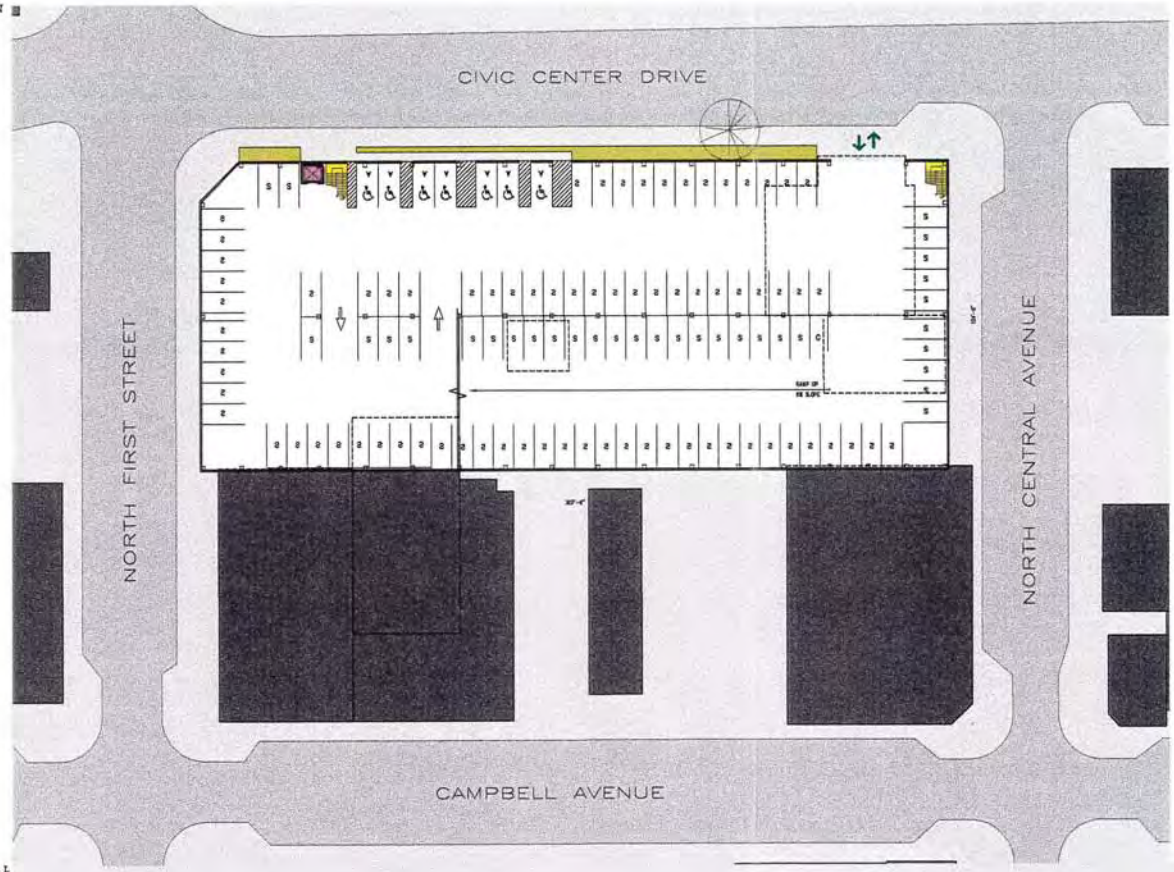
PLAN: SCHEME B-1

GROUND FLOOR PLAN



CITY OF CAMPBELL
DOWNTOWN PARKING STRUCTURE STUDY

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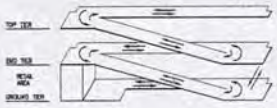
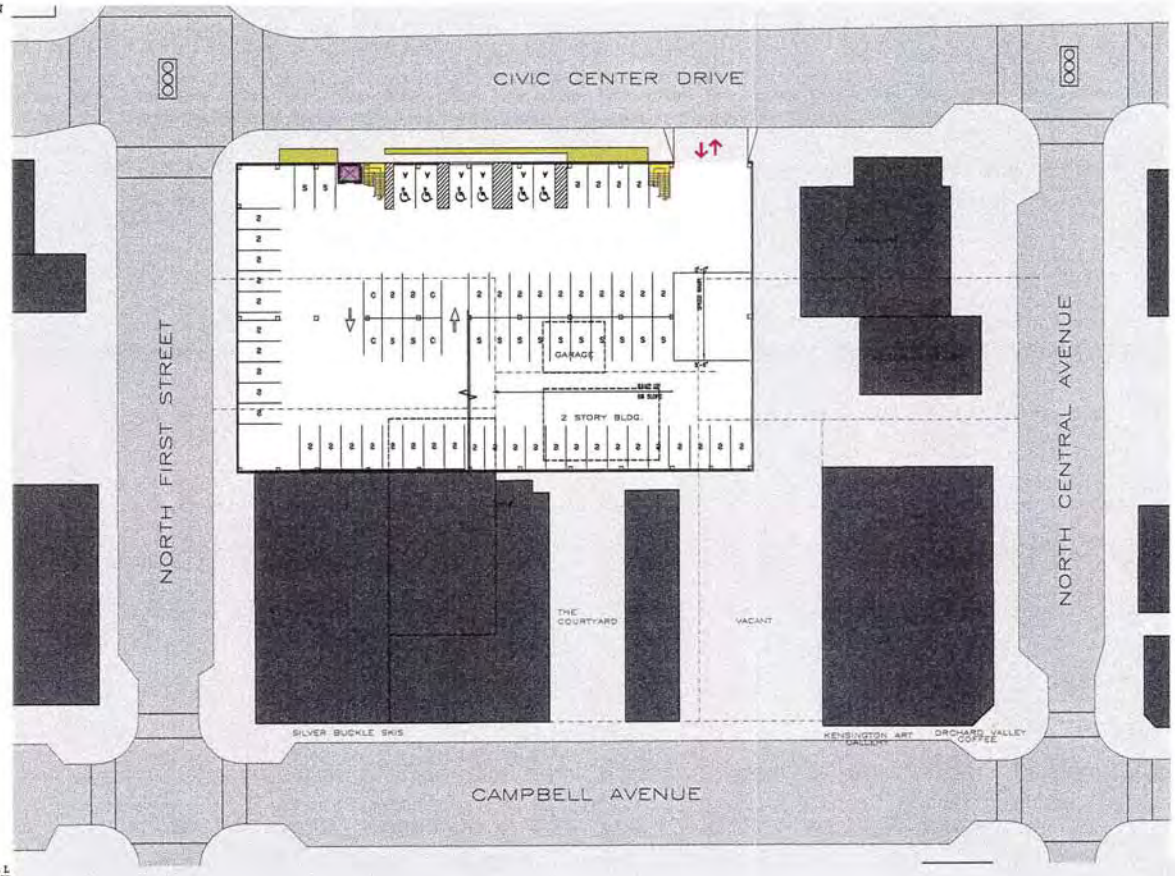
PLAN: SCHEME B-2



GROUND FLOOR PLAN



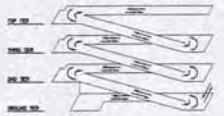
7

CITY OF CAMPBELL
DOWNTOWN PARKING STRUCTURES STUDY

GORDON H CHONG & Partners

WALKER PARKING CONSULTANTS

PLAN: SCHEME B-3



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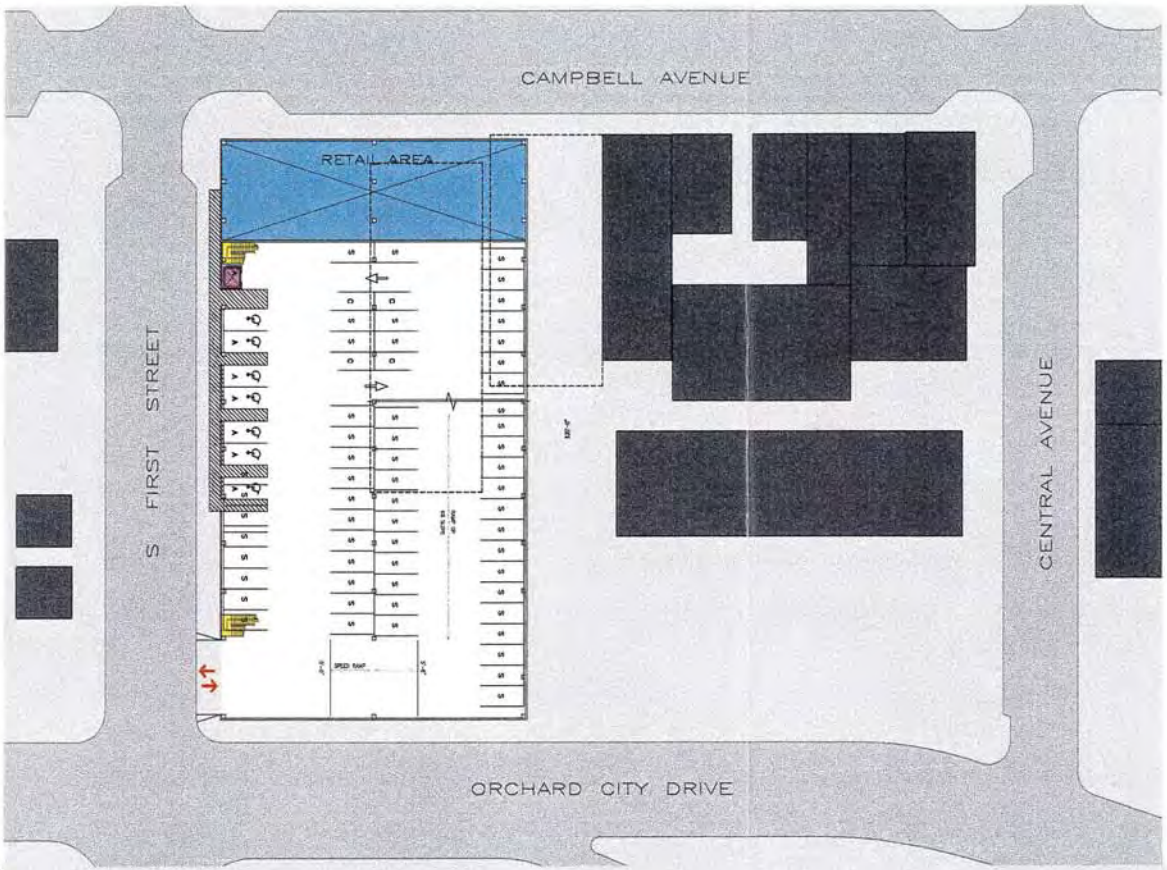

CITY OF CAMPBELL
DOWNTOWN PARKING STRUCTURE STUDY

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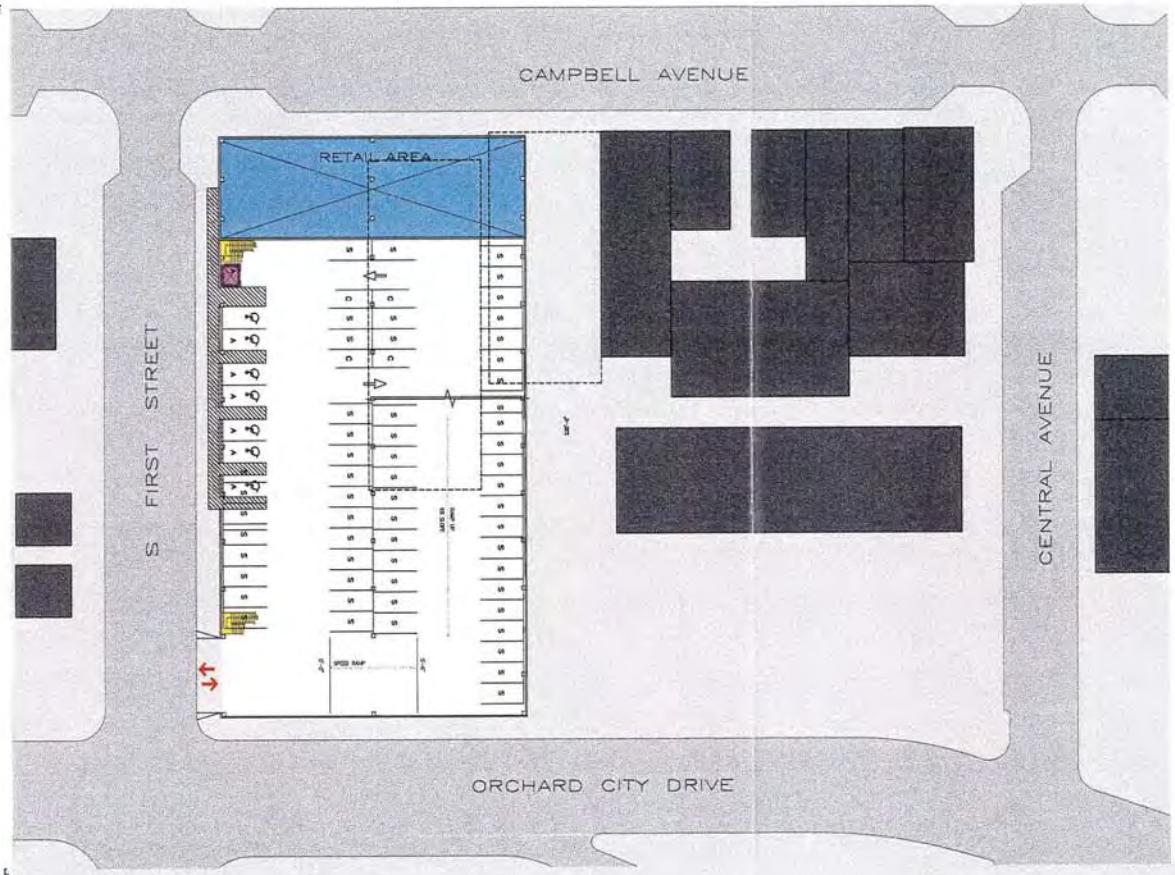
PLAN: SCHEME C-1

GROUND FLOOR PLAN



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DOWNTOWN PARKING STRUCTURE STUDY

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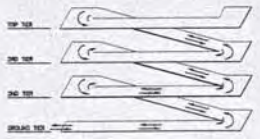
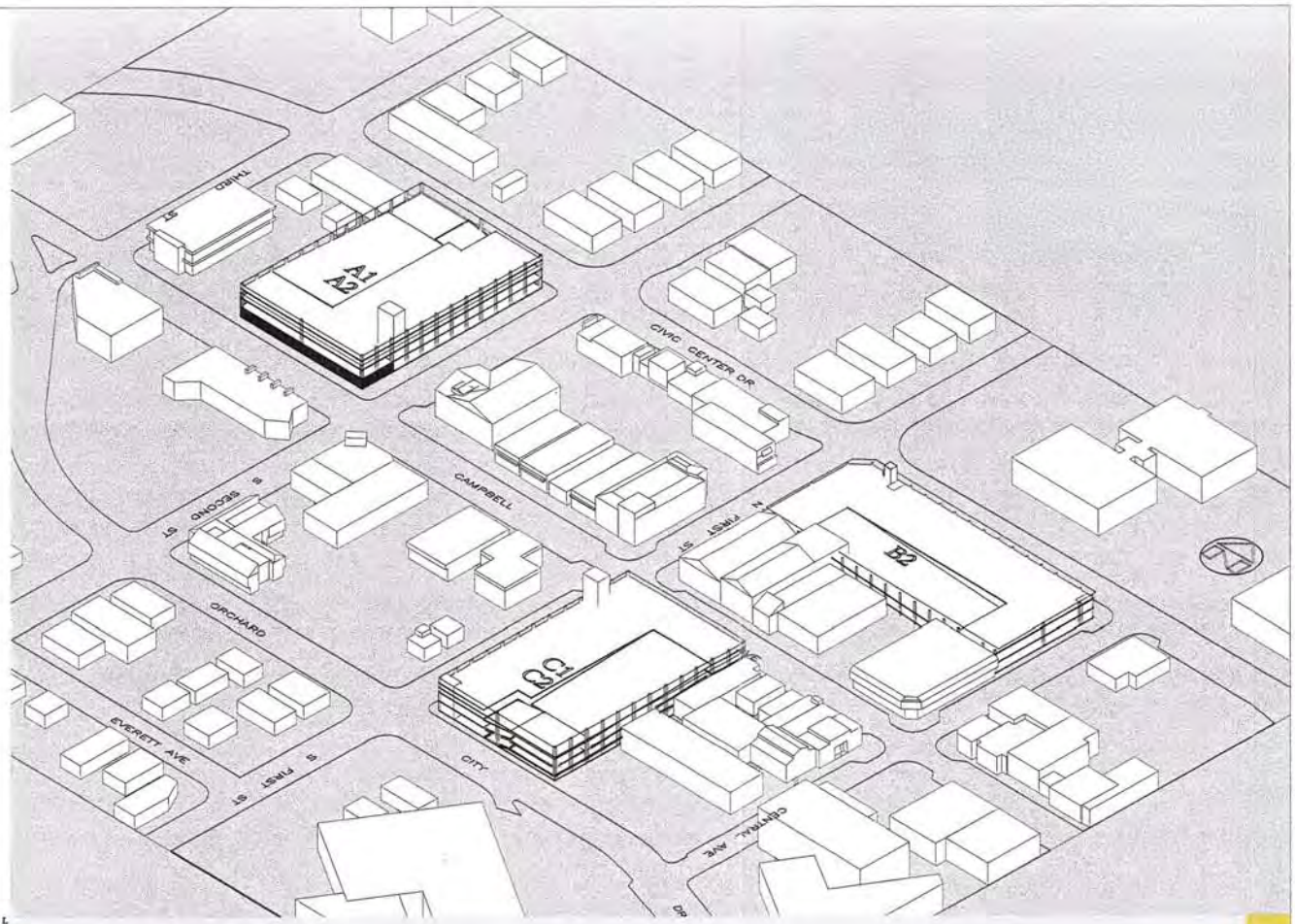
PLAN: SCHEME C-2





CITY OF CAMPBELL
DOWNTOWN PARKING STRUCTURE STUDY

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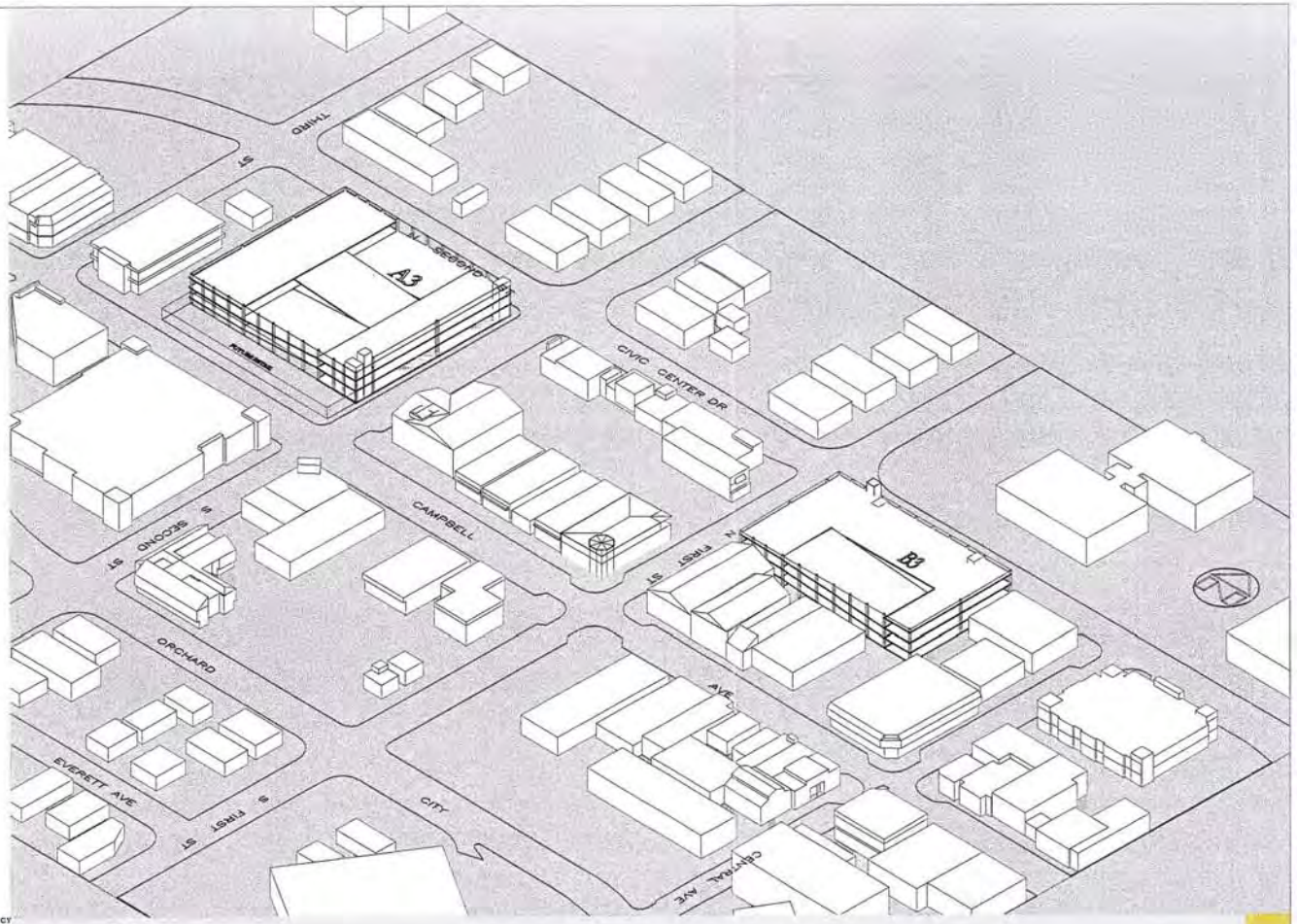
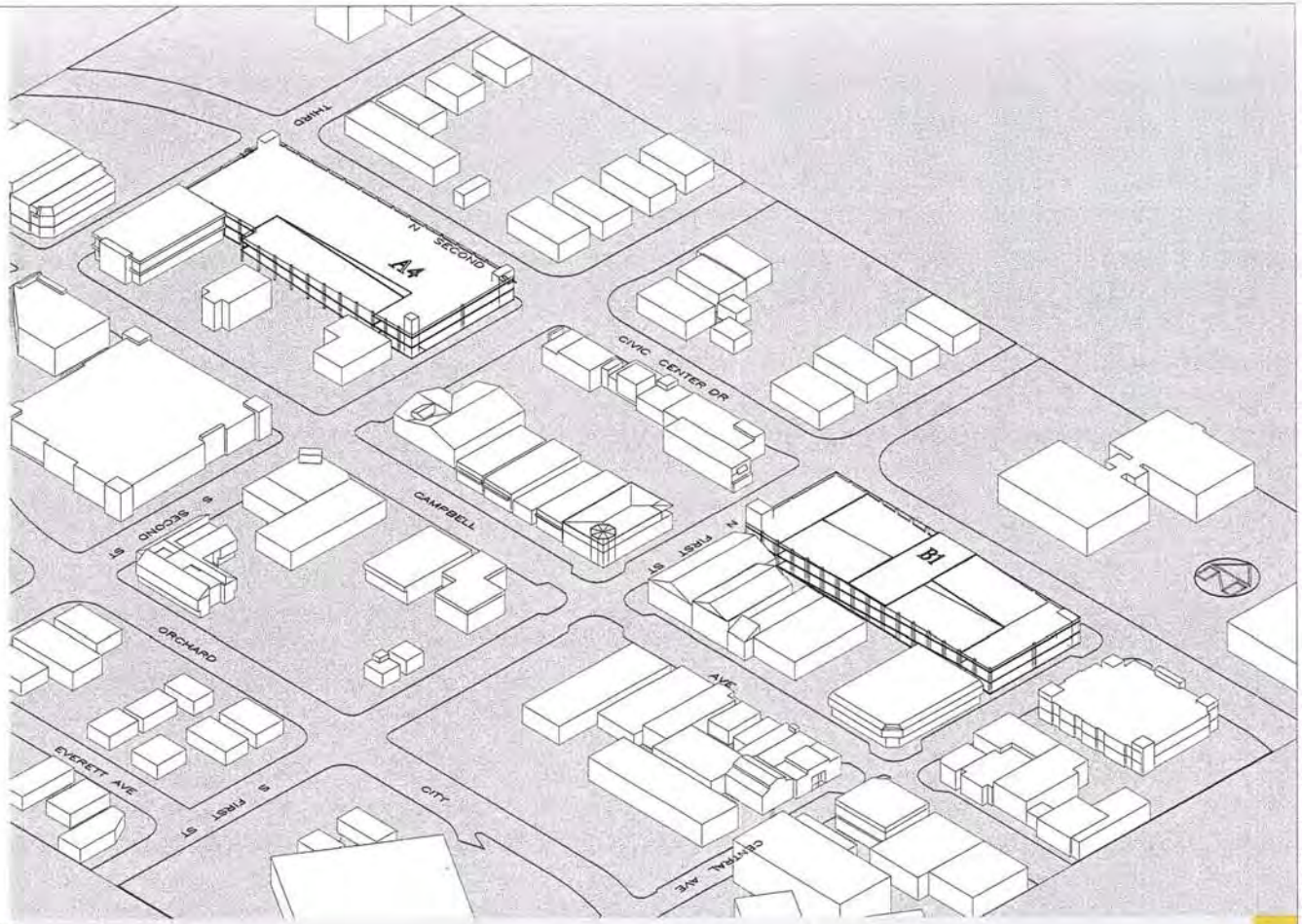
SITE AXONOMETRIC



CAMPBELL REDEVELOPMENT AGENCY
HISTORIC DOWNTOWN CAMPBELL

GORDON H CHONG & Partners

WALKER PARKING CONSULTANTS



CAMPBELL REDEVELOPMENT
HISTORIC DOWNTOWN CAMPBELL

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WALKER PARKING CONSULTANTS

SITE AXONOMETRIC

CITY OF CAMPBELL
Community Development Department

DRAFT MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
Air Quality - AIR							
Mitigation Measure AQ-1: BAAQMD Required Dust Control Measures: The contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures, including: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • A publically visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.	Site Preparation and Construction	City of Campbell	Public Works Department and Building Division	Periodic Compliance Report			

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
Mitigation Measure AQ-2: BAAQMD Required Basic Exhaust Emissions Reduction Measures. The contractor shall implement the following measures during excavation to reduce construction-related exhaust emissions: • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for workers at all access points. • All off-road equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.	Site Preparation and Construction	City of Campbell	Public Works Department and Building Division	Periodic Compliance Report			
Mitigation Measure AQ-3: BAAQMD Regulation 8, Rule 3 for Architectural Coatings. Emissions of VOC due to the use of architectural coatings are regulated by the limits contained in Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was revised on January 1, 2011 to include more stringent VOC limit requirements. The revised VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.	Plan Check and Construction	City of Campbell	Planning and Building Division	Compliance Statement			
Mitigation Measure AQ-4: Implement Enhanced Exhaust Emissions Reduction Measures. The construction contractor shall implement the following measures during construction to further reduce construction-related exhaust emissions: All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements: 1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and 2. All off-road equipment shall have: a. Engines that meet or exceed either USEPA or CARB Tier 2 off-road emission standards, and b. Engines that are retrofitted with a CARB Level 2 Verified Diesel Emissions Control Strategy (VDECS). Acceptable options for reducing emissions include the use of late model engines,	Site Preparation and Construction	City of Campbell	Public Works Department and Building Division	Periodic Compliance Report			

Mitigation Measure	Monitoring Phase	Enforcement Agency	Monitoring Agency	Action Indicating Compliance	Verification of Compliance		
					Initials	Date	Remarks
low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such are available.							
Transportation and Traffic – TT							
Mitigation Measure TT-1: Parking Impact Fee: The project shall pay the City of Campbell at least $6,000 per parking space the project is deficient. The number of 'deficient' parking spaces shall be based on the number of stalls the project is required to provide by the City of Campbell Municipal Code prior to approval of a Parking Modification Permit. These fees shall be used toward improving parking facilities in the Campbell Downtown and may be used toward the preparation of a Parking Demand Study, Parking Management Plan, the installation of LED signs indicating number of available parking spaces in public parking garages (or green/red lights indicating the availability of parking spaces overhead stalls), the soft or hard costs of developing new public parking spaces, or the development of a plan to realign Orchard City Drive to accommodate more parking spaces in the Water Tower Plaza parking lot. As a minimum, any additional fees or requirements imposed by the City Council and agreed to by the project proponent as conditions of approval on the Parking Modification Permit, shall thereafter be considered as Mitigation Measures of the project.	Building Permit Issuance and as Defined	City of Campbell	Planning Division	Compliance Statement / Collection of Payment			