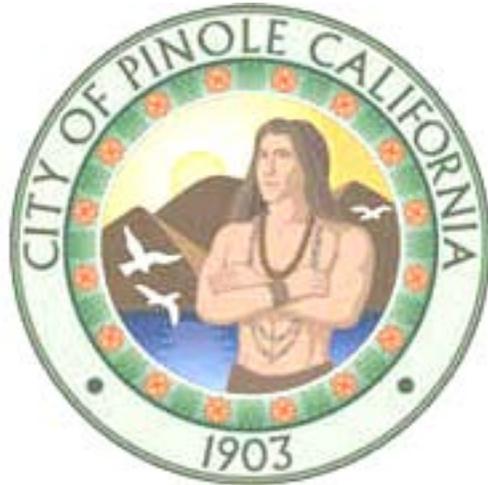


**CITY OF PINOLE  
DEVELOPMENT SERVICES DEPARTMENT**



**CVS/Pharmacy & Wireless  
Communication Facility Relocation  
Initial Study**

**October 2015**



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**APPENDICES**

Appendix A Air Quality and Greenhouse Gas Modeling

Appendix B California Natural Diversity Database Search Results

Appendix C Radio Frequency Study

Appendix D Environmental Noise Assessment

Appendix E Traffic Study

## A. ACRONYMS AND ABBREVIATIONS

### A

AAQS	Ambient Air Quality Standards
ABAG	Association of Bay Area Governments
ACCM	Asbestos-Containing Construction Material
ADA	Americans with Disabilities Act
ADWF	average dry weather flow
APCO	Air Pollution Control Officer
APN	Assessor Parcel Number

### B

BAAQMD	Bay Area Air Quality Management District
BMP	best management practice

### C

CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCR	California Code of Regulations
CCTA	Contra Costa Transportation Authority
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CMU	Commercial Mixed Use
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level <sup>1</sup>
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
Con Fire	Contra Costa County Consolidated Fire Protection District
COW	cellular site on wheels

### D

dB	decibel
dba	A-weighted decibel
DMA	Drainage Management Areas
DPM	diesel particulate matter

### E

EB	Eastbound
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<sup>1</sup> Defined as the 24-hour average noise level with noise occurring during evening hours (7-10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

EBMUD                      East Bay Municipal Utility District  
EIR                            Environmental Impact Report  
EOP                            Emergency Operations Plan

**F**

FCC                            Federal Communications Commission  
FEMA                          Federal Emergency Management Agency  
FHSZ                          Fire Hazard Severity Zone  
FHWA                          Federal Highway Administration  
FIRM                          Flood Insurance Rate Map

**G**

GHG                          greenhouse gas

**H**

HCM                          Highway Capacity Manual  
HVAC                          heating, ventilation, and air conditioning

**I**

I-80                          Interstate 80  
IMP                            integrated management practices  
in/sec                        inches per second  
IS/MND                      Initial Study/Mitigated Negative Declaration  
ITE                            Institute of Transportation Engineers

**K**

kVA                          kilovoltamperes

**L**

lbs/day                      pounds per day  
L<sub>dn</sub>                          Day/Night Average Sound Level<sup>2</sup>  
L<sub>eq</sub>                          Equivalent or energy-averaged sound level  
L<sub>max</sub>                        Maximum Noise Level  
LOS                          Level of Service

**M**

MBTA                        Migratory Bird Treaty Act  
mgd                          million gallons per day  
MMRP                        Mitigation Monitoring Reporting Program  
MTC                          Metropolitan Transportation Commission  
MTCO<sub>2e</sub>/yr                annual metric tons of CO<sub>2</sub> equivalents  
mW/cm<sup>2</sup>                      megawatts per centimeter squared

---

<sup>2</sup> Similar to CNEL but with no evening weighting.

**N**

N <sub>2</sub> O	nitrous oxide
NAHC	Native American Heritage Commission
NHMP	Natural Hazards Mitigation Plan
NOI	Notice of Intent
NO <sub>x</sub>	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System

**O**

OSHA	Federal Occupational Safety and Health Administration
------	---

**P**

PM <sub>2.5</sub>	particulate matter, 2.5 microns in diameter
PM <sub>10</sub>	particulate matter, 10 microns in diameter
ppv	peak-particle velocity
PWWF	peak wet weather flow

**R**

RF	radio frequency
ROG	reactive organic gas
RRS	Routes of Regional Significance
RSD	Rodeo Sanitary District

**S**

sec/veh	seconds per vehicle
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

**T**

TAC	toxic air contaminants
tons/year	tons per year

**U**

USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
UWMP	Urban Water Management Plan

**V**

V/C volume to capacity ratio  
VMT vehicle miles traveled

**W**

WB Westbound  
WPCP Water Pollution Control Plant

***INITIAL STUDY***

***October 2015***

**B. BACKGROUND**

1. Project Title: Pinole CVS/Pharmacy & Wireless Communication Facility Relocation
2. Lead Agency Name and Address: City of Pinole  
Development Services Department  
2131 Pear Street  
Pinole, CA 94564
3. Contact Person and Phone Number: Winston Rhodes  
Planning Manager  
(510) 724-8912
4. Project Location: Southeast corner of Appian Way and Canyon Drive,  
just north of Interstate 80  
Pinole, CA 94564  
APNs 401-273-043, -044, -045, and -046
5. Project Sponsor's Name and Address: Armstrong Development Properties, Inc.  
1375 Exposition Boulevard, Suite 101  
Sacramento, CA 95815
6. Existing General Plan Designation: Service Sub-Area (SSA)
7. Existing Three Corridors Specific Plan Designations: Commercial Mixed Use (CMU)
8. Existing Zoning Designation: Commercial Mixed Use (CMU)
9. Project Description Summary: The proposed project site is located on the southeast corner of the intersection of Appian Way and Canyon Drive, just north of Interstate 80 (I-80), within the Appian Way Corridor of the *Three Corridors Specific Plan*. The proposed project includes the demolition of an existing three-story office building and two single-story accessory buildings totaling approximately 13,340 square feet (sf), relocation of two existing wireless communication facilities within the project site, and development of a new CVS/Pharmacy building totaling approximately 14,806 sf (13,013 sf floor area and a 1,793 sf mezzanine area), a pharmacy drive-through, a 70-foot-high pylon tower structure with cellular antenna facilities, site access, parking, and utility improvements on an approximately 1.9-acre site.

## C. SOURCES

It should be noted that all of the submitted technical reports and modeling results used for the purposes of this analysis are available upon request at the City of Pinole Development Services Department located at 2131 Pear Street, Pinole, California. The following documents are referenced information sources utilized by this analysis:

1. Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis, Pinole CVS Project, City of Pinole*. August 19, 2015.
2. American Association of State Highway and Transportation Officials. *A Policy on Geometric Design of Highways and Streets, Fourth Edition [Exhibit 2-1]*. 2001.
3. Armstrong Development Properties, Inc. *Photosimulations*. May 7, 2015.
4. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2011.
5. Bay Area Air Quality Management District. *Bay Area 2010 Clean Air Plan*. Adopted September 15, 2010.
6. Bay Area Air Quality Management District. *Highway Screening Analysis*. April 29, 2011. Available at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>. Accessed December 2014.
7. Bay Area Air Quality Management District. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012.
8. Bollard Acoustical Consultants. *Environmental Noise Assessment, CVS Project*. October 13, 2015.
9. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
10. California Department of Conservation, Division of Land Resource Protection. *Contra Costa County Important Farmland 2012*. April 2014.
11. California Department of Fish and Wildlife. *California Natural Diversity Database RareFind 5*. Accessed September 30, 2015. Available at: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>.
12. California Department of Transportation. *Outdoor Advertising Act and Regulations, 2014 Edition*. Available at: [http://www.dot.ca.gov/oda/download/ODA\\_Act\\_&\\_Regulations.pdf](http://www.dot.ca.gov/oda/download/ODA_Act_&_Regulations.pdf).
13. California Department of Toxic Substances Control. *EnviroStor*. Available at: <http://www.envirostor.dtsc.ca.gov>. Accessed August 2015.
14. CB&I Environmental & Infrastructure, Inc. *Asbestos & Lead-Based Paint Inspection Report, Proposed CVS Store No. 9299*. May 1, 2014.
15. CB&I Environmental & Infrastructure, Inc. *Geotechnical Evaluation, Proposed CVS Store No. 9299*. May 14, 2014.
16. CB&I Environmental & Infrastructure, Inc. *Phase I Environmental Site Assessment, Proposed CVS Store No. 9299*. May 1, 2014.
17. City of Pinole. *City of Pinole General Plan Update*. November 2010.
18. City of Pinole. *City of Pinole General Plan Update Draft Environmental Impact Report*. July 2010.
19. City of Pinole. *City of Pinole General Plan Update Final Environmental Impact Report*. September 2010.

20. City of Pinole. *Pinole, CA Municipal Code*. December 4, 2012.
21. City of Pinole. *Three Corridors Specific Plan*. May 2010.
22. East Bay Municipal Utility District. *2010 Urban Water Management Plan*. June 2011.
23. Federal Emergency Management Agency. *Contra Costa County, California, Flood Insurance Rate Map Panel 06013C0231F*. June 16, 2009.
24. Foothill Associates. *CVS 9299 Pinole Arborist Report*. November 6, 2014.
25. Hammett & Edison, Inc. *RF Statement*. 2015.
26. Tait & Associates, Inc. *Stormwater Control Plan for CVS Pharmacy Store No. 9299*. July 23, 2015.
27. Tom Origer & Associates. *A Cultural Resources Study for the CVS Pharmacy Project, Pinole, Contra Costa County, California*. May 14, 2015.

#### **D. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is “Less Than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

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

**E. DETERMINATION**

On the basis of this initial study:

- I find that the Proposed Project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the Proposed Project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” 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.
- 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

\_\_\_\_\_  
Signature

Winston Rhodes, Planning Manager  
\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

City of Pinole  
\_\_\_\_\_  
For

## **F. BACKGROUND AND INTRODUCTION**

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies and analyzes the potential environmental impacts of the Pinole CVS/Pharmacy & Wireless Communication Facility Relocation Project (proposed project). The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that should be applied to the project are prescribed.

The City of Pinole is the lead agency for the environmental review of the proposed project evaluated herein and has the principal responsibility for approving the project. As provided in the CEQA Guidelines Section 15021, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social issues. The IS/MND is an informational document that appraises decision-makers and the general public of the potential environmental effects of a proposed project. As required by Section 15071 of the CEQA Guidelines, this IS/MND includes a brief description of the project, a proposed finding that the project would not have a significant effect on the environment, and mitigation measures necessary to avoid potentially adverse effects. The City of Pinole, as lead agency, is required to consider the information in the IS/MND, along with any other available information, in deciding whether to approve the requested entitlements discussed in Section G below.

The City of Pinole's current General Plan and associated General Plan Environmental Impact Report (EIR) was adopted in 2010. The City of Pinole General Plan EIR was prepared as a program-level EIR, pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 *et seq.*). The City of Pinole General Plan EIR analyzed full implementation of the City of Pinole General Plan and identified measures to mitigate the significant adverse project and cumulative impacts associated with the General Plan. The environmental setting and impact discussion for each section of this IS/MND have been based in part on information in the City of Pinole General Plan and General Plan EIR due to the project's consistency with the current General Plan designation for the site.

In addition, the project site is located within the Appian Way Corridor of the City of Pinole's Three Corridors Specific Plan, dated November 2010. While the General Plan is the primary guide for growth and development within the City of Pinole, the Three Corridors Specific Plan is intended to establish a direct connection between the General Plan and economic and revitalization opportunities within the three Specific Plan corridors, which include the Sand Pablo Avenue, Pinole Valley Road, and Appian Way corridors. The Three Corridors Specific Plan was prepared pursuant to Article 8, Section 65450 to 65457 of the California Government Code, and implements the General Plan by further refining the objectives for the three corridor project areas. It should be noted that the City's 2010 General Plan and associated EIR includes the Three Corridors Specific Plan.

This IS/MND is also based upon project-specific technical reports, which include technical impact evaluations (e.g., traffic and noise) and identification of mitigation measures, as

warranted. The mitigation measures prescribed for environmental effects described in this IS/MND will be implemented in conjunction with the project, as required by CEQA. The mitigation measures will be incorporated into the project through project conditions of approval. The City will adopt findings and a Mitigation Monitoring and Reporting Program (MMRP) for the project in conjunction with approval of the project.

## **G. PROJECT DESCRIPTION**

The project description, including project location, project components, existing site conditions, and surrounding land uses, is presented below.

### **Project Location and Surrounding Uses**

The proposed project site is located on the east side of Appian Way, just north of I-80 and south of Canyon Drive, within the City of Pinole, Contra Costa County, California (see Figure 1, Regional Project Location). The approximately 1.9-acre project site is made up of four parcels and is identified by Assessor's Parcel Numbers (APNs) 401-273-043, -044, -045, and -046. The project site is located in a developed area with existing roadways to the north (Canyon Drive) and west (Appian Way), single-family residences to the east, and vacant land to the south, adjacent I-80 (see Figure 2, Project Vicinity Map). The project site is currently accessed by Canyon Drive to the north and the nearest I-80 exit is Appian Way.

### **Existing Site Conditions**

The project site currently contains an approximately 12,000 sf, three-story, multi-tenant building, occupied by an engineering firm and medical use, as well as smaller buildings on the eastern and southern portion of the site, occupied by a landscaping company. The developed site also includes a paved parking lot and cellular equipment areas. The property is leased to two wireless telecommunication companies for use as wireless communication facilities. The wireless carriers include Verizon and T-Mobile, and utilize separate roof-mounted antenna areas on the main building and have separate ground-based equipment compounds located east of the main building. The carriers have 12 building-mounted antennas on four screened rooftop antenna sectors. An emergency power generator is located in one 730-sf equipment compound, which is powered by diesel fuel. A day tank is built in the generator that holds approximately 210 gallons of diesel fuel.

Three existing driveways provide access to the project site from Canyon Drive, with red painted curb between the driveways, precluding on-street parking along the site's Canyon Drive frontage.

**Figure 1**  
**Regional Project Location**



Figure 2  
Project Vicinity Map



The vacant area of the site is along its southern and eastern boundaries and consists of non-native grassland, approximately 20 trees, and ornamental landscaping associated with existing development on the site. The project site is relatively flat up until the eastern portion of the project site, where an approximately 20-foot berm slopes downward toward the existing residences east of the project site. In addition, a sloped berm exists along a portion of the western site boundary, adjacent to Appian Way, though most of this berm is just outside of the project boundaries.

### **Discretionary Actions**

Implementation of the proposed project would require the following discretionary actions by the City of Pinole:

- Adoption of the Initial Study/Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program;
- Approval of site plan and design review;
- Issuance of Conditional Use Permits for a drive-through, and two new relocated wireless communication facilities;
- Approval of a variance to allow pharmacy drive-thru with amplified sound to be located less than 300 feet from the nearest residential property line; and
- Approval of a lot line adjustment.

### **Project Components**

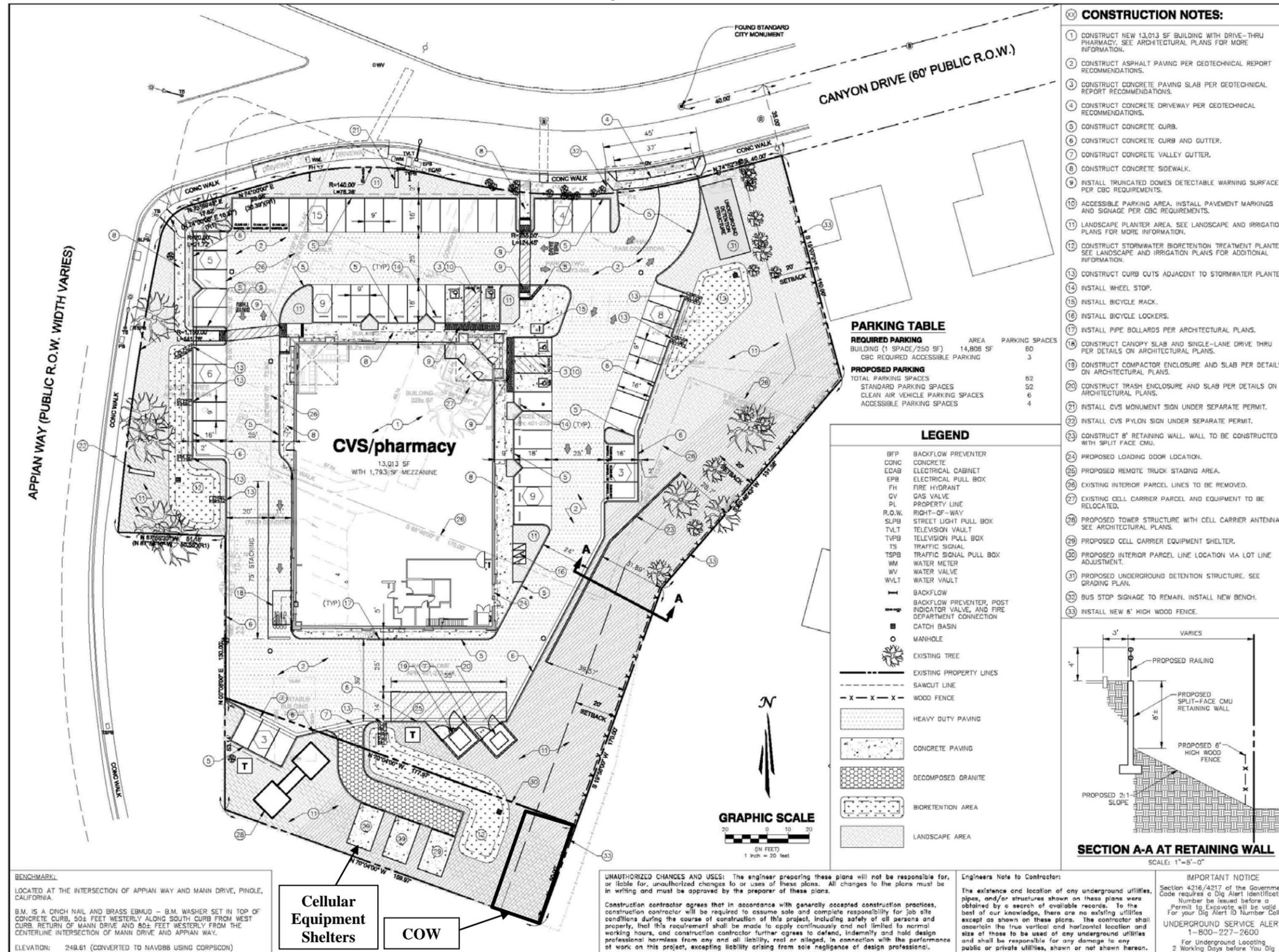
The proposed project would include an approximately 14,806-sf CVS/Pharmacy building with associated drive-thru, parking, site access, and utility improvements. Figure 3 presents the proposed project site plan. The components of the proposed project are discussed in detail in the following sections.

#### CVS/Pharmacy

The proposed CVS/Pharmacy building is anticipated to provide general retail sales, including health and cosmetic aids, personal care items, gift items, common household goods, vitamins, retail pharmaceutical products, beer, wine, and distilled spirits. Initially, the CVS/Pharmacy would operate from approximately 7:00 AM to 10:00 PM, seven days a week. However, if the demand of the neighborhood warrants 24-hour operations, the pharmacy would likely remain open up to 24 hours.

In addition to the everyday services, this location may host a seasonal or annual flu clinic for the benefit of the local consumers, which may include an in-store display or sign to notify consumers of the date and time. If held, this activity would be inside the store. Besides the seasonal clinic, many CVS/Pharmacy facilities also include a wellness center. This center, known as a “Minute Clinic”, is staffed by a registered nurse practitioner who can diagnose and prescribe pharmaceuticals for minor ailments.

Figure 3  
Project Site Plan



A typical CVS/Pharmacy has 25 to 30 employees on payroll, with between four and 12 employees staffed at a given time throughout the day. Most part-time employees would work between 20 and 25 hours per week, while most full-time employees would work approximately 40 hours per week. Typical shifts can range from 6:00 AM to 2:00 PM for first shift and 2:00 PM to 8:00 PM for second shift.

Various finish colors would be utilized for the exterior of the building and the maximum height would be approximately 28 feet and eight inches from the finished ground floor (see Figure 4, Conceptual Building Elevations). A large pylon structure is proposed on-site, along the north side of I-80 and at the southwestern-most portion of the project site, adjacent to the parking area. The applicant is seeking a lot line adjustment, as part of this project, so that the pylon structure can be located on a lot separate from the CVS/Pharmacy. The location of the structure has been selected to provide optimal wireless communication facility coverage. The pylon structure is intended to camouflage the antennas associated with the relocation of new wireless communication facilities. The pylon structure may display the City of Pinole seal and/or a public art feature (to be determined at a later date) to help demarcate a City entry point from I-80 (see Figure 5, Conceptual Pylon Structure for Wireless Communication Antenna Equipment).

#### *Drive-thru*

The proposed CVS/Pharmacy building will include a single-lane drive-thru facility for prescription pharmaceuticals drop-off and pick-up only. The purpose of the drive-thru is to offer a convenient service for all customers, including those who are sick, injured, or frail and may be hindered by an ailment that discourages them from entering the store. The hours of operation for a typical CVS/Pharmacy drive-thru vary but follow the same schedule of the pharmacy hours within the store. As noted above, the proposed CVS/Pharmacy would operate from approximately 7:00 AM to 10:00 PM, seven days a week. However, if the demand of the neighborhood warrants 24-hour operations, the pharmacy would likely remain open up to 24 hours. The proposed drive-thru is anticipated to follow the same schedule of the pharmacy hours within the store.

The CVS/Pharmacy drive-thru is a less intense use than a drive-thru found at a typical fast food restaurant, financial institution, or coffee shop. Specifically, during peak hours of business, the typical CVS/Pharmacy drive-thru window will service only five to seven customers an hour. Based on this data, the proposed site plan layout includes sufficient stacking for the drive-thru lane. In addition, the drive-thru lane is isolated from the primary parking field in order to avoid any potential conflicts between customers utilizing the drive-thru and other motorists or pedestrians.

#### Cellular Antennas

The following section discusses the temporary and permanent cellular antenna facilities and equipment that will be present on the project site.

Figure 4  
Conceptual Building Elevations

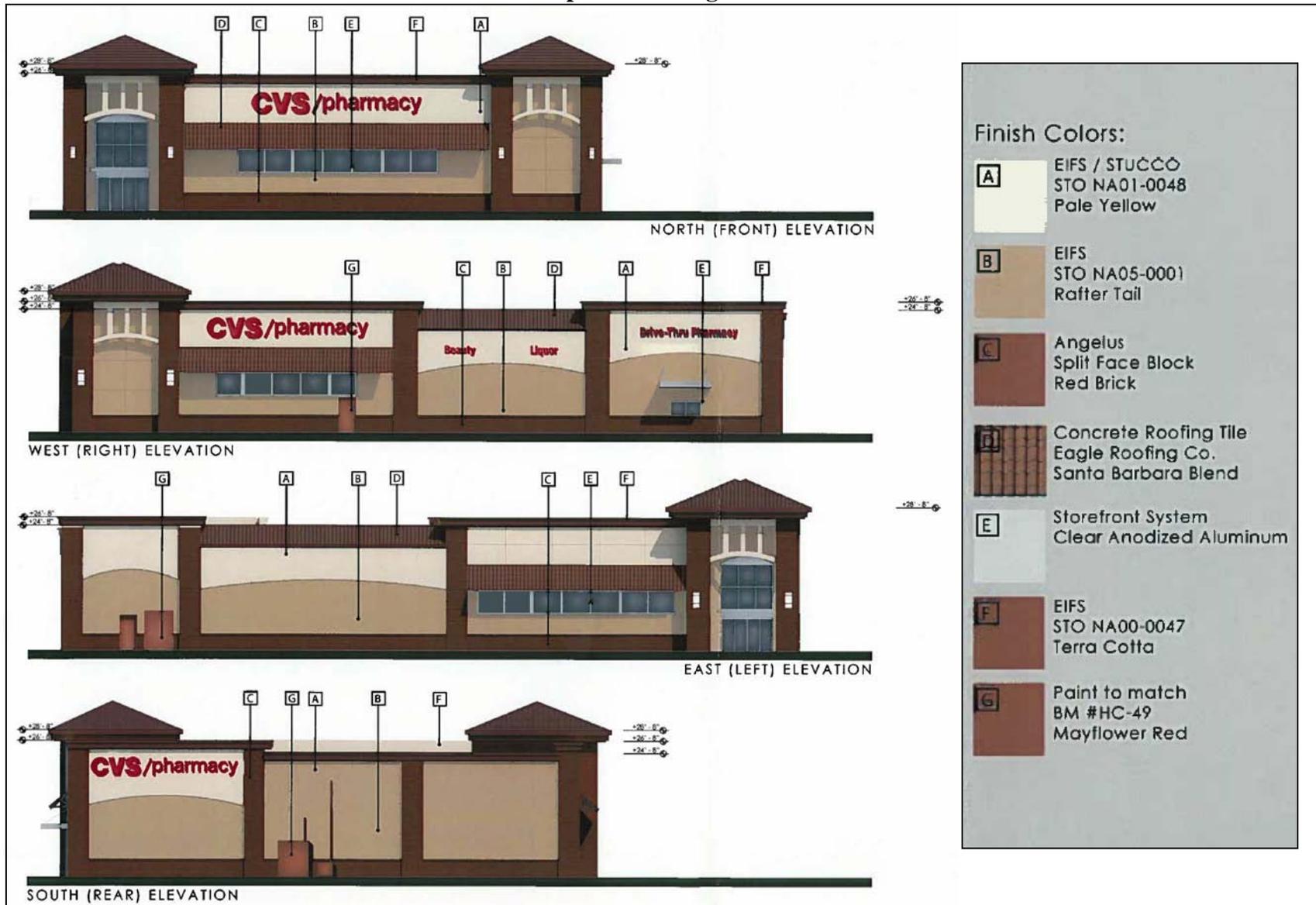
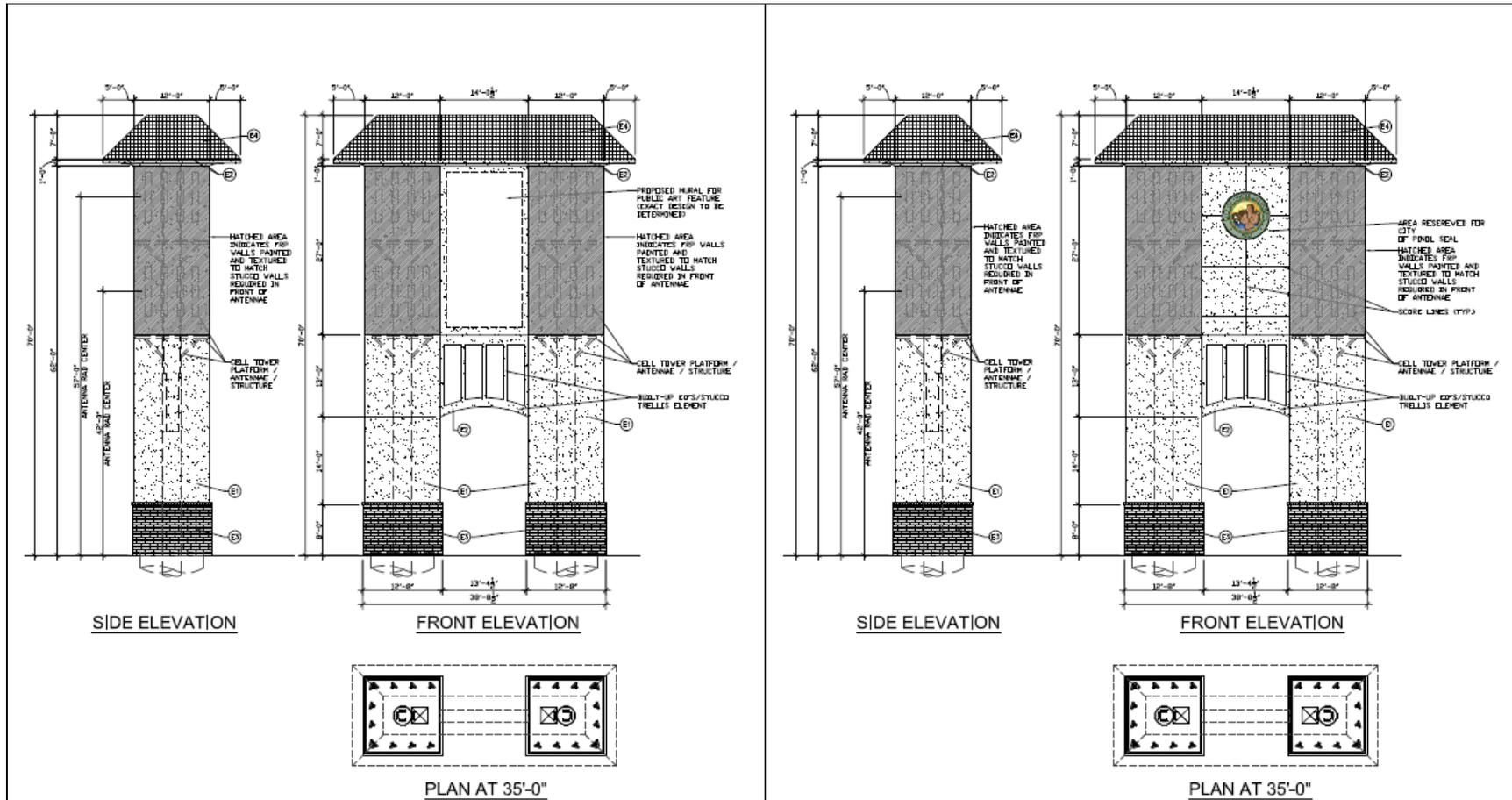


Figure 5  
Conceptual Pylon Structure for Wireless Communication Antenna Equipment



### *Construction Phase (Temporary Facilities)*

The proposed project includes removal of the existing cellular facilities from the multi-tenant, three-story building prior to demolition of the building. Once the cellular facilities are removed from the building, the cellular facilities will be placed on wheels and stored on-site during the construction period. The applicant proposes to locate the “cell-on-wheels” (COW) in the southeastern corner of the project site (see Figure 3). It is anticipated that two COW will be temporarily stored on-site, on portable trailers. The COWs will be utilized on-site for the duration of the construction period, which is anticipated to consist of approximately six months. The COWs will include masts, with heights ranging from approximately 50 to 60 feet, on top of which the antennas would be affixed for broadcasting purposes. A typical COW is shown in Figure 6.

During construction, the possibility exists that the general contractor will provide on-site power that can be used as a power source for the T-Mobile and Verizon cellular antennas and other associated equipment. However, this Initial Study and the project-specific noise analysis have evaluated the worst-case scenario, in which temporary on-site power would not be provided by the contractor, and a portable generator would run 24 hours, seven days a week, to provide the necessary power for the cellular antennas and equipment. The generator would be located on the portable COW trailer. The length of use of the temporary facilities will depend on the construction schedule for the permanent facility.

### *Operational Phase (Permanent Facilities)*

The T-Mobile and Verizon cellular antenna will remain on the COWs until the 70-foot tall pylon structure is constructed and the 12-foot by 20-foot ground-level equipment shelters are in place. At this time, T-Mobile and Verizon will install their antennas within the upper portion of the pylons. The antennas will be enclosed within the pylons and not visible from the outside (see Figure 5).

T-Mobile proposes to install nine directional panel antennas within the northeastern leg of the tower, at an effective height of about 53 feet above ground level. In addition, T-Mobile would install 18 coax lines and 2 fiber power cables. Verizon proposes to install three sector antenna configurations that will be mounted at approximately 45 feet and three inches above ground level. The three Verizon sector antenna configurations would include three Alpha Sector at 85 degrees, three Beta Sector at 185 degrees, and three Gamma Sector at 290 degrees.

The equipment needed for operation of the T-Mobile and Verizon antennas will be located within the equipment shelters, to be located at ground level, proximate to the pylon structure. Each equipment shelter will have two exterior mounted HVAC units, facing in the southwest direction.

Figure 6  
Conceptual COW with Fencing



Both the T-Mobile and Verizon antennas and equipment will be powered by the grid. In the event of a power outage, T-Mobile's equipment will be powered by batteries or a fuel cell within the equipment shelter. Verizon has indicated that they will install a backup generator, adjacent to their equipment shelter, which would provide temporary power in the event of a power outage. The generator would be diesel-fueled; and the fuel would be stored in a 210 gallon base tank, attached to the generator.

As can be seen in Figure 5, a third equipment shelter is planned for the future on-site. At this time, the applicant has not entered into contract with a third cellular carrier for the project site. As a result, while all three equipment shelter areas would be graded as part of this project, the third equipment shelter area will not be utilized until such time that the applicant can secure a third cellular carrier. The third carrier, if interested, would be required to apply for a separate land use approval from the City of Pinole independent of this project.

### Utilities

The proposed project would connect to the City's existing utility lines in the area in order to provide service to the site (see Figure 7, Conceptual Utility Plan). The proposed project's stormwater, sewer, and water connections are discussed in further detail below.

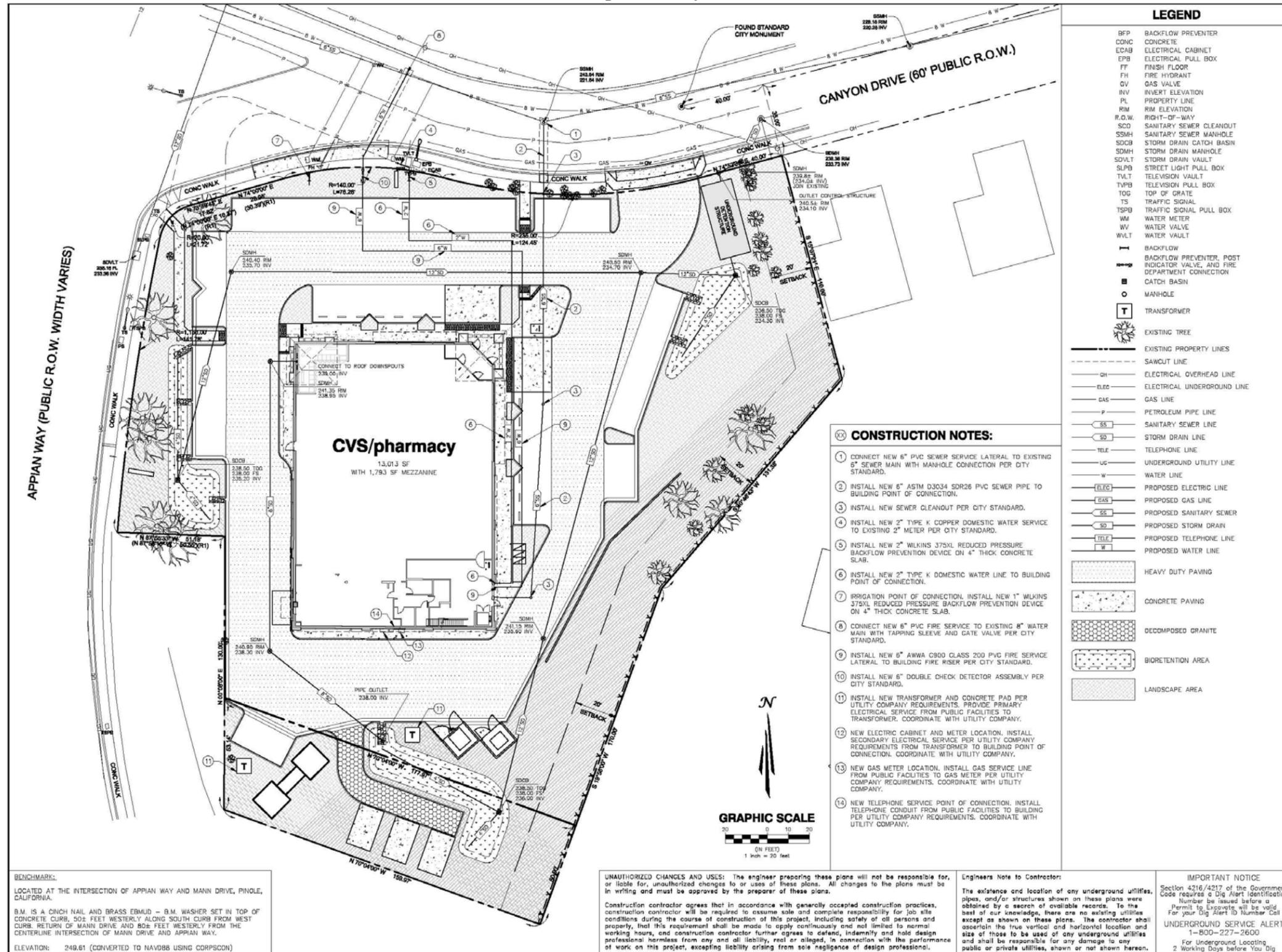
#### *Stormwater*

The proposed project includes installation of bioretention areas in the CVS/Pharmacy parking lot to provide treatment of the stormwater from the parking field prior to discharge into the City storm drain system. In general, bioretention areas will be designed per the latest Contra Costa County C.3 Guidebook. All bioretention areas feature a minimum of 18-inch depth of sandy loam (minimum infiltration rate specified to be 5 inches per hour). The bioretention areas will be under-drained, and the under-drains will be connected to underground storm drains, which will carry the treated runoff to the underground detention structure proposed in the northeastern corner of the CVS/Pharmacy parking lot. Stormwater runoff will be stored in the underground detention system, such that treated stormwater can be metered out of the detention system in a controlled fashion to ensure that the post-project runoff flow rates are less than or equal to the pre-project runoff flow rates, in compliance with the C.3 Guidebook flow control requirements. Treated runoff would be discharged into the existing City storm drain line in Canyon Drive.

#### *Sewer and Water*

The proposed project includes connection to the existing six-inch sewer and water lines located within Canyon Drive. Six-inch and two-inch water lines would be constructed from the existing line to the proposed bathrooms within the CVS/Pharmacy building. A new 6-inch fire service line would be connected to the 8-inch water main located within Canyon Drive.

Figure 7  
Conceptual Utility Plan



### Retaining Wall and Fences

An eight-foot concrete masonry unit (CMU) retaining wall will be installed at the upper portion of the slope along the project's eastern boundary. A new six-foot tall wood fence will be installed along the site's southern and eastern border, where currently, only a chain link fence exists.

### Landscape Plan

In addition to the vegetated bioretention areas, the proposed project design would include a number of ornamental trees and shrubs along the site borders and within parking areas. As shown in Figure 8, the eastern most project boundary, adjacent to the existing single-family residences, would include a minimum 20-foot setback. The eight-foot retaining wall at the top of the slope would be screened with vine plantings and trees, as shown in Figure 8. The existing sloped hillside, trees, and landscape vegetation in the easternmost project corner would be maintained as part of the project.

The applicant intends to have low water use landscaping and irrigation design to comply with the design guidelines outlined in Assembly Bill (AB) 1881. In order to achieve a low water use design, the most up-to date-irrigation technologies available will be utilized. In addition, "drought tolerant" Native and Mediterranean plant species would be used to create a low water use plant palette.

### Trash Enclosures

A trash enclosure and compactor enclosure would be located in the southern portion of the site, behind the truck staging area. The enclosures would have locked doors accessible by CVS/Pharmacy employees only.

### Transportation Improvements

Once complete, the CVS/Pharmacy will receive regular weekly deliveries, typically loading and unloading from a WB-50 delivery truck. WB-50 delivery trucks are considered large semitrailer combination trucks, and are typically approximately 13.5 feet in height, 8.5 feet in width, and 55.0 feet in length.<sup>3</sup> A maximum of three delivery trucks may arrive at different days and times throughout the week to unload product for the store. Deliveries typically take place between the hours of 7 AM and 12 PM, and would be made at the designated loading and unloading areas located on-site only. Deliveries will be made at the designated loading and unloading areas on-site only and will be located away from the flow of traffic.

The proposed project's loading and unloading areas, parking, site access, and alternative transportation improvements are discussed in further detail below.

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<sup>3</sup> American Association of State Highway and Transportation Officials. *A Policy on Geometric Design of Highways and Streets, Fourth Edition [Exhibit 2-1]*. 2001.



### *Loading and Unloading Areas*

A 55-foot by 14-foot remote truck staging area will be located in the southern portion of the site behind the CVS/Pharmacy building. The staging area would be used for delivery truck parking during loading and unloading of product. In addition, the proposed loading door to the CVS/Pharmacy building would be located on the eastern side of the building near the staging area at the rear of the building. The 25-foot wide roadway leading from the project driveway to the truck staging area would be of adequate width for the anticipated delivery trucks.

### *Parking*

The proposed project would include 64 total parking spaces surrounding the CVS/Pharmacy building. Four handicap parking spaces, six clean air vehicle parking spaces, and 54 standard parking spaces would be included.

### *Site Access*

The project includes removal and replacement of the two existing driveway entrances near the Appian Way and Canyon Drive intersection with curb and sidewalk. In addition, the project includes removal and replacement of the eastern driveway entrance with a wider driveway.

### *Alternative Transportation*

The project would include pedestrian connections along the north and west frontages, as well as bicycle racks and lockers within the site. In addition, curbs, gutters, and sidewalks would be constructed and improved along the north and west frontages.

WestCAT provides bus service to the project area. Route 17 has stops on Appian Way just north of Canyon Drive and Route 16 has a bus stop on Canyon Drive, adjacent to the project site. The existing bus stop, directly adjacent to the project, would remain and a new bench will be installed as part of the project.

## H. ENVIRONMENTAL CHECKLIST

This Initial Study is structured in accordance with the environmental checklist form presented in Appendix G of the CEQA Guidelines. The environmental checklist is organized by environmental issue area and sets forth a series of questions relevant to each environmental issue area. The questions within Appendix G of the CEQA Guidelines are intended to inform decision-makers and practitioners about which topics are subject to CEQA review and which topics are not. A brief explanation with adequate supporting information sources is required for all answers. All answers must take into account the whole action involved, including off-site and on-site, indirect and direct, and construction and operational impacts. Based on the discussions provided for each question, the checklist answers must indicate whether the impact would be potentially significant, less than significant with mitigation, or less than significant, or whether the project would have no impact. Included in each discussion are project-specific mitigation measures recommended, as appropriate, as part of the proposed project.

The impact significance determination options for the environmental checklist are defined as follows:

**Potentially Significant Impact:** An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

**Less Than Significant with Mitigation Incorporated:** An impact that requires mitigation to reduce the impact to a less-than-significant level.

**Less-Than-Significant Impact:** Any impact that would not be considered significant under CEQA relative to existing standards.

**No Impact:** The project would not have any impact.

<b>I. AESTHETICS.</b> <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Discussion**

- a. According to the City of Pinole General Plan, officially designated scenic vistas do not exist within the City’s planning area. The General Plan does consider scenic views of the bay and the surrounding city, which can be seen from certain points along the City’s ridgelines, to be important. Figure 10.4, Pinole Visual Resources, of the City’s General Plan shows the sensitive view protection corridors. Policies are included that would reduce impacts to such views through development requirements. The project site is not located in a view protection corridor or along an existing ridgeline, nor would the project block any views of the bay or surrounding city. Therefore, the proposed project’s impact associated with a scenic vista would be considered *less than significant*.
  
- b. According to the City of Pinole General Plan, officially designated State scenic highways or highways that are eligible for such designation by the California Department of Transportation Scenic Highways Program do not exist within the City’s planning area. Therefore, the proposed project’s impacts associated with damage of scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a State scenic highway would be *less than significant*.
  
- c. The project site currently contains a 12,000-square foot three-story building and associated parking lot, a temporary structure occupied by a landscaping business, cellular antennas and associated equipment, and some undeveloped portions inhabited by non-native grasses. The proposed project includes demolition of the existing building and construction of a new 14,806-square foot CVS Pharmacy and relocation of the cellular antennas in a new pylon structure. The proposed CVS/Pharmacy building will have a maximum height of approximately 28 feet, eight inches from the finished ground floor. The pylon structure, which is proposed at the southwestern corner of the project site, would be visible from I-80. The proposed pylon structure would be approximately 70 feet tall, 38 feet, eight inches wide, and 35 feet from ground to bottom of the public art/City entry monument feature. The structure would display public art or the City of Pinole seal or alternate monumentation.

The project site is within the Service Sub-Area of the Appian Way Corridor, identified in the City's Three Corridors Specific Plan. The Three Corridors Specific Plan includes detailed design guidelines for the overall Specific Plan area, as well as the Service Sub-Area in particular. The design guidelines address the following topics: site planning and design, site amenities, architecture, landscape and hardscape, circulation, parking, service and storage, lighting, signage, and green design.

With respect to landscaping, as shown in Figure 8, trees will be planted along the street frontages of the project site to soften the appearance of the project from major travel corridors. In addition, trees will be planted along the eastern slope of the project site to help screen the proposed retaining wall from the residences east of the project site. The primary tree planting is proposed to be Chinese elm, which typically retains its leaves during winter (i.e., semi-evergreen). The retaining wall will be further screened by vine plantings on the face of the wall.

While the proposed project has been designed so as to integrate well with the surrounding Appian Way Corridor, and provide an improvement over the existing developed site, compliance of the proposed project with the Three Corridors Specific Plan design guidelines will ultimately be verified through the City's Design Review process, to which the proposed project is subject.

### Photo Simulations

Photo simulations were prepared in order to aid in evaluating the potential visual impacts of the proposed CVS Pharmacy building and pylon structure to the surrounding areas. Figure 9 provides an overview of the locations from which the photographs were taken for the photo simulations. Figures 10 through Figure 15 include the proposed views from the locations shown in Figure 9, as well as views including the proposed pylon structure, where appropriate.

#### *View Point North of the Project Site*

As shown in Figures 9 through 11, views from the travelers along Appian Way located north of the project site (photo simulation locations 1 through 3) would be modified by development of the proposed pylon structure and building.

As shown in Figure 10 (photo simulation location 1), the proposed views from Appian Way, looking south at the project site, would predominantly consist of Appian Way, utility lines, street poles, existing commercial uses, and trees in the distance. It should be noted that the proposed CVS/Pharmacy building would be expected to block views of the pylon structure. In addition, the proposed building would only slightly encroach into the skyline, which is currently interrupted by existing utility lines and street lights. Thus, the change in views due to the pylon structure and building would not be considered substantial from this viewpoint.

Figure 9  
Photo Locations and View Directions



Figure 10  
Proposed View from Location 1



Figure 11  
Proposed View from Location 2



Figure 12  
Proposed View from Location 3



Figure 13  
**Proposed View from Location 4**



Figure 14  
Proposed View from Location 5



Figure 15  
Proposed View from Location 6



As shown in Figures 11 and 12 (photo simulation locations 2 and 3), as travelers approach the project site from Appian Way looking south, views of the proposed CVS/Pharmacy building become more prominent. Similar to the views from photo simulation location 1, the proposed views of the project site from photo simulation locations 2 and 3 would predominantly consist of Appian Way, utility lines, street poles, and trees in the distance. The proposed CVS/Pharmacy building would be expected to block views of the pylon structure and the building would be consistent with the scale and size of the existing commercial buildings in the project vicinity. Thus, the change in views due to the pylon structure and building would not be considered substantial from these viewpoints.

#### *View Points East of the Project Site*

As shown in Figure 13, views from residences along El Toro Way, located east of the project site (photo simulation location 4), would be modified by development of the proposed project. As shown in Figure 13 (photo simulation location 4), from most vantage points, views of the CVS/Pharmacy building would be fully blocked from view by existing vegetation and residential structures. The pylon sign would be partially visible due to its height. However, the pylon structure would constitute a relatively minor encroachment into the skyline, which is already partially obstructed by a series of power lines. As a result, the modification of views from El Toro Way looking west would not be considered a substantial degradation in the quality or character of the site or surrounding area.

#### *View Points Southeast of the Project Site*

As shown in Figures 14 and 15, views from the travelers along I-80 located southeast of the project site (photo simulation locations 5 and 6) would be modified by development of the proposed pylon structure and building.

As shown in Figure 14 (photo simulation location 5), as travelers approach the project site from the I-80 Appian Way off-ramp looking northwest, views of the pylon structure and CVS/Pharmacy building would be partially blocked from view by existing vegetation. In addition, the building would blend in with the views of existing urban development in the area. It should be noted that the pylon structure and roof of the building would not block any hillside views and would only constitute a relatively minor encroachment into the skyline. As a result, the modification of views from I-80 looking northwest would not be considered a substantial degradation in the quality or character of the site or surrounding area.

As shown in Figure 15 (photo simulation location 6), views from the I-80 Appian Way on-ramp looking northwest at the project site would predominantly consist of I-80, utility lines, street poles, a hillside area adjacent to I-80, and trees in the distance. Views of the proposed CVS/Pharmacy building and pylon structure would be blocked by the existing hillside area adjacent to the I-80 Appian Way off-ramp. Thus, the change in views due to the pylon structure and building would not be considered substantial from this viewpoint.

## Conclusion

As discussed above, buildout of the proposed project is not anticipated to result in a substantial degradation of the existing visual character or quality of the site or surrounding area. Therefore, impacts related to substantial degradation of the existing visual character or quality of the site and its surroundings would be ***less than significant***.

- d. The project site currently includes sources of light and glare associated with the three-story building. The development of the proposed project would introduce additional sources of light and glare as a result of building lighting and signage, security lighting, parking area lighting, and reflective materials such as glass windows and doors. The proposed pylon structure would not be illuminated given that it does not include any commercial signage.

New sources of light and glare associated with the proposed project would be partially screened through proposed landscaping. For example, according to the conceptual landscape plan for the project (see Figure 8), chimes elm trees would be planted along the top of slope near the eastern boundary of the project site. These trees, especially at maturity, would help to screen light and glare associated with the CVS/Pharmacy.

The proposed lighting associated with the CVS/Pharmacy would be required to comply with Chapter 17.46 of the Pinole Municipal Code, particularly Section 17.46.050, which pertains to directing lighting only to areas that are intended to be illuminated. As a result, impacts related to creation of a new source of substantial light or glare that could adversely affect day or nighttime views in the area would be ***less than significant with mitigation***.

### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impacts to a *less-than-significant* level.

- I-1. *Prior to approval of building plans, the project applicant shall show on the plans that the project lighting would be designed and constructed in accordance with Section 17.46.050 of the Pinole Municipal Code, subject to review and approval by the Development Services Department. The lighting requirements include, but are not limited to, the following:*
- *Be designed, located, installed, directed downward or toward structures, fully shielded, and maintained in order to prevent glare, light trespass, and light pollution;*
  - *Illuminate at the minimum level necessary for safety and security and to avoid the harsh contrasts in lighting levels between the project site and adjacent properties. Illumination requirements applicable to the proposed project are as follows:*
    - *Public, civic, and religious buildings are permitted to be fully illuminated during hours of operation. After hours of*

*operation, lighting may be dimmed or turned off such that only lighting essential of security or safety shall be maintained.*

- *In general, parking lots, driveways, trash enclosures/areas, public phones, and group mailboxes shall be illuminated with a minimum maintained one foot-candle of light and an average not to exceed four foot-candles of light. Parking lots for banks, convenience stores, card rooms, check cashing businesses, and emergency shelters shall provide a minimum level of illumination of 1.5 footcandles across the parking lot during operating hours.*
- *Pedestrian walkways intended for use after dark shall be illuminated with a minimum maintained one-half foot-candle of light and an average not to exceed two foot-candles of light.*
- *Entryways and exterior doors of non-residential structures shall be illuminated during the hours of darkness, with a minimum maintained one foot-candle of light, measured within a five-foot radius on each side of the door at ground level.*
- *To minimize light trespass on abutting residential property, illumination measured at the nearest residential structure or rear yard setback line shall not exceed the moon's potential ambient illumination of one-tenth foot-candle.*
- *The maximum height of freestanding outdoor light fixtures abutting residential development shall be 18 feet. Otherwise, the maximum height for freestanding outdoor light structures shall be 24 feet. Height shall be measured from the finish grade, inclusive of the pedestal, to the top of the fixture.*
- *Outdoor lighting shall utilize energy-efficient fixtures and lamps. All new outdoor lighting fixtures shall be energy efficient with a rated average bulb life of not less than 10,000 hours.*

<b>II. AGRICULTURE AND FOREST RESOURCES.</b> <i>Would the project:</i>	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 Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>
e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>

**Discussion**

- a,e. The project site is designated Urban and Built-Up Land on the Contra Costa County Important Farmland 2012 map.<sup>4</sup> Because the site is Urban and Built-Up Land, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, and ***no impact*** would occur.
  
- b. The project area is not under any Williamson Act contract and the area is zoned Commercial Mixed-Use. The site is not zoned for agricultural uses. Therefore, because buildout of the proposed project would not conflict with a Williamson Act contract or existing zoning for agriculture, the project would result in ***no impact***.
  
- c,d. The project site is not considered forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

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<sup>4</sup> California Department of Conservation, Division of Land Resource Protection. *Contra Costa County Important Farmland 2012*. April 2014.

<b>III. AIR QUALITY.</b> <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

- a. The City of Pinole is located in the San Francisco Bay Area Air Basin (SFBAAB) and is within the jurisdictional area of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. The SFBAAB is currently designated as a nonattainment area for State and federal ozone, State and federal particulate matter 2.5 microns in diameter (PM<sub>2.5</sub>), and State particulate matter 10 microns in diameter (PM<sub>10</sub>) standards. The applicable air quality plan for the SFBAAB is the 2010 Multi-Pollutant Clean Air Plan (CAP), adopted on September 15, 2010.<sup>5</sup> The 2010 CAP was developed, in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). The 2010 CAP is a roadmap depicting how the Bay Area will achieve compliance with the State and federal air quality standard for ozone as expeditiously as practicable and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The CAP also considers the impacts of ozone control measures on PM emissions, air toxics, and GHGs in a single, integrated plan, and establishes emission control measures to be adopted or implemented in the region.

The aforementioned applicable air quality plan and incorporated emission controls are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process. The project would be considered to conflict with, or obstruct implementation of, an applicable air quality plan if the project would be inconsistent with the plan’s growth assumptions, in terms of population, employment, or regional growth in Vehicle Miles Traveled (VMT), which are based on

<sup>5</sup> Bay Area Air Quality Management District. *Current Plans*. Available at: <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>. Accessed September 8, 2015.

ABAG projections that are, in turn, based on the City's General Plan. The proposed project is consistent with the current land use and zoning designations for the site, and a General Plan amendment or zone change is not proposed as part of the project. In addition, the project site is currently developed, is surrounded by existing development, and is located within an area planned for commercial mixed-use development. Overall, the project would be considered consistent with assumptions of the applicable air quality plan.

In addition, according to the BAAQMD CEQA Guidelines, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the air quality plans. In addition, BAAQMD recommends that projects incorporate all feasible air quality plan control measures, which include traditional stationary, area, mobile source and transportation control measures, as well as control measures that promote mixed use, compact development, and reduce vehicle emissions and exposure to pollutants from stationary and mobile sources. If approval of a project would not cause the disruption, delay, or otherwise hinder the implementation of any air quality plan control measure, the project may be considered consistent with the air quality plans. As presented in the sections below, the project would not exceed the applicable thresholds of significance for any pollutant and would not result in emissions that substantially contribute to the region's nonattainment status for PM or ozone. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, and a *less-than-significant* impact would result.

- b,c According to the CEQA Guidelines, an air quality impact may be considered significant if the proposed project's implementation would result in, or potentially result in, conditions, which violate any existing local, State or federal air quality regulations. In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants designated as nonattainment in the area, the BAAQMD has established significance thresholds associated with development projects for emissions of reactive organic gases (ROG), nitrogen oxide (NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub>. The BAAQMD's significance thresholds, expressed in pounds per day (lbs/day) for project-level and tons per year (tons/yr) for cumulative, listed in Table 1, are recommended for use in the evaluation of air quality impacts associated with proposed development projects.

The City, as lead agency, determines on a case-by-case basis the thresholds to be used in order to determine a project's potential impacts. For this project, the City has chosen to utilize the BAAQMD's thresholds of significance, because the information and calculations supporting the updated BAAQMD CEQA Guidelines and thresholds provide the most up-to-date and reasonable information available for the region. In addition, assessing impacts in accordance with methodologies recommended by the BAAQMD and in comparison to the recommended BAAQMD significance thresholds is consistent with the methodology utilized in the City's General Plan Update EIR.

<b>Table 1</b>			
<b>BAAQMD Thresholds of Significance</b>			
<b>Pollutant</b>	<b>Construction (lbs/day)</b>	<b>Operational (lbs/day)</b>	<b>Cumulative (tons/year)</b>
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82	82	15
PM <sub>2.5</sub>	54	54	10

*Source: BAAQMD, CEQA Air Quality Guidelines, June 2010.*

The proposed project would result in emissions of criteria air pollutants during construction and operation. The proposed project’s construction-related and operational air pollutant emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2013.2.2 - a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific information was available, such information was utilized in the model.

For this analysis, construction was assumed to commence in March 2016 and would be accomplished within an approximately six-month period. Construction of the project would include demolition of the existing structures. A single portable generator could be used during the construction period to supply power for the cellular antennas, if the contractor cannot provide temporary on-site power from the grid. In order to evaluate the worst-case scenario, the generator has been assumed to run 24 hours per day for seven days a week during the construction period. Use of the generator has been included in CalEEMod. The model was also adjusted to reflect the project-specific trip generation rate, and the project’s mandatory compliance with the 2013 California Building Energy Efficiency Standards Code. In addition, during operations, a single backup emergency generator for the Verizon cellular antennas and associated equipment would be expected to run once a week for a 30-minute period for maintenance purposes only, which was included in CalEEMod. Results of the CalEEMod modeling are expressed in lbs/day for construction and operational emissions, and in tons per year for cumulative emissions, which allows for comparison between the model results and the BAAQMD significance thresholds.

Construction

Construction of the proposed project would generate air pollutants intermittently within the site, and the vicinity of the site, until all construction has been completed. Construction-related activities result in the generation of criteria air pollutants from sources such as on-road haul trucks, delivery trucks, worker commute motor vehicles, off-road heavy-duty equipment, soil disturbance, grading, material hauling, asphalt paving, and the application of architectural coatings. Although construction-related activities are short-term and temporary in duration, emissions related to construction

vehicles and equipment could contribute to regional air quality. It should be noted that all projects are required to comply with all applicable BAAQMD rules and regulations.

The proposed project’s short-term construction-related emissions, including the portable generator, were estimated using CalEEMod. The estimated daily construction-generated emissions attributable to the proposed project are presented in Table 2. As shown in the table, the maximum unmitigated construction-related emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> attributable to the proposed project would not exceed the BAAQMD significance thresholds.

<b>Table 2</b>				
<b>Unmitigated Maximum Project Construction-Related Emissions (lbs/day)</b>				
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Project Construction Emissions	8.08	44.08	6.85	4.27
BAAQMD Significance Threshold	54	54	82	54
<b>Exceeds Threshold?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<i>Source: CalEEMod, September 2015 (see Appendix A).</i>				

Operation

Operational emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would be generated by the proposed project from both mobile and stationary sources. Day-to-day activities such as future employee and patron vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would also occur from area sources such as architectural coatings, landscape maintenance equipment exhaust (i.e., maintenance of emergency generator), and consumer products (e.g., deodorants, detergents, hair spray, cleaning products, spray paint, insecticides, floor finishes, polishes, etc.).

The proposed project’s maximum unmitigated operational emissions, including emissions associated with maintenance of the emergency backup generator, are presented in Table 3 below. As shown in the table, the proposed project’s operational emissions would be well below the BAAQMD thresholds of significance.

<b>Table 3</b>				
<b>Unmitigated Maximum Project Operational Emissions (lbs/day)</b>				
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Project Operational Emissions	6.33	8.41	3.98	1.14
BAAQMD Significance Threshold	54	54	82	54
<b>Exceeds Threshold?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<i>Source: CalEEMod, September 2015 (see Appendix A).</i>				

Cumulative

The long-term emissions associated with operation of the proposed project in, conjunction with other existing or planned development in the area, would incrementally contribute to the region’s air quality. The BAAQMD has established cumulative thresholds for emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, as discussed and presented

above. The proposed project’s contribution to cumulative emissions of criteria air pollutants are presented in Table 4. As shown in the table, the proposed project’s cumulative emissions, including emissions associated with maintenance of the emergency backup generator, would be well below the BAAQMD cumulative thresholds of significance.

<b>Table 4</b>				
<b>Unmitigated Cumulative Project Emissions (tons/yr)</b>				
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Project Cumulative Emissions	1.06	1.43	0.69	0.20
BAAQMD Significance Threshold	10	10	15	10
<b>Exceeds Threshold?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<i>Source: CalEEMod, September 2015 (see Appendix A).</i>				

Conclusion

As presented above, the proposed project’s construction-related, operational, and cumulative emissions would be well below the applicable BAAQMD thresholds of significance. Therefore, the project would not violate air quality standards or contribute to the region’s nonattainment status of ozone or PM, and impacts would be considered *less than significant*.

- d. The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and TAC emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. The statewide CO Protocol document<sup>6</sup> identifies signalized intersections operating at Level of Service (LOS) E or F, or projects that would result in the worsening of signalized intersections to LOS E or F, as having the potential to result in localized CO concentrations in excess of the State or federal Ambient Air Quality Standards (AAQS), as a result of large numbers of cars idling at stop lights.

In accordance with the State CO Protocol, the BAAQMD has established preliminary screening criteria for determining whether the effect that a project would have on any given intersection would cause a potential CO hotspot. If the proposed project would comply with the following criteria at all affected intersections, the proposed project would not be expected to result in a CO hotspot:

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<sup>6</sup> University of California, Davis. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

According to the Transportation Impact Analysis prepared for the proposed project by Abrams Associates, and discussed in further detail in the Transportation and Circulation section of this IS/MND, the proposed project would not cause any intersections in the study area to operate unacceptably (i.e., exceed City, County, or Caltrans standards). In addition, the project would not increase traffic volumes at any intersection to more than 44,000 vehicles per hour or 24,000 vehicles per hour, where vertical and/or horizontal mixing is substantially limited. Because the proposed project would comply with all of the screening criteria established by the BAAQMD, the proposed project would not result in substantial levels of localized CO at any intersection or generate localized concentrations of CO that would exceed standards.

### TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. The BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics.

Due to the commercial nature of the project, the proposed uses are not considered sensitive receptors. Existing sensitive receptors in the vicinity of the project area include Pinole Middle School and the residences located to the east of the project. Pinole Middle School is located north of Tara Hills Drive and west of Appian Way, with the nearest classroom building on the school site located approximately 7,325 feet (approximately 1.39 miles) from the boundary of the proposed building. The nearest residence to the proposed project site is located adjacent to the northeastern project boundary, approximately 170 feet east of the proposed CVS/Pharmacy building.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The BAAQMD reviews the potential for TAC emissions from new and modified stationary sources through their permitting process. Facilities and equipment that require permits from the BAAQMD are screened for risks from TACs and are required by BAAQMD to install Toxic Best Available Control Technology (T-BACT) to reduce any risks to below significance. The project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. A generator would be used on site temporarily during construction in order to supply power to the cellular antenna. The generator is assumed (for a worst-case scenario) to run 24 hours per day, seven days a week until the project is built out and the antenna is able to connect to grid power. A permit to operate the generator would be required to be obtained from BAAQMD and regulated, if necessary, through the BAAQMD's permitting program. Compliance with the permit would ensure that the generator would be operated appropriately and any associated emissions are within regulated limits. Upon buildout of the proposed project, a backup generator for the Verizon cellular antennas would be located on the site for emergency purposes only. The generator would run once a month for a 30-minute period for maintenance purposes only. In addition, similar to the generator required during construction, the operational emergency backup generator would require the applicant to obtain a permit to operate from the BAAQMD. Thus, the backup generator would not cause permanent or substantial emissions concentrations.

The CARB's Handbook includes facilities (distribution centers) with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions. The project is not a distribution center, and is not located near any existing distribution centers. The proposed project could involve truck trips associated with the delivery of retail goods, but is not anticipated to receive 100 deliveries per day or more. The project is not a distribution center and is not anticipated to receive 100 deliveries per day or more. The proposed CVS/Pharmacy would receive regular weekly deliveries; however, only approximately three trucks would arrive at different days and times throughout the week to unload product for the store. It should be noted that heavy-duty diesel vehicles are prohibited from idling for more than five minutes per the CARB's In-Use Off-Road Diesel Vehicle Regulation. In addition, relatively few vehicle trips associated with the proposed uses, which would be comprised of future employee and patron trips, would be expected to be composed of diesel-fueled vehicles. Accordingly, the proposed project would not involve diesel truck trips in excess of 100 per day.

Overall, the proposed project would not expose any existing sensitive receptors (i.e., Pinole Middle School or nearby residences) to any new permanent or substantial TAC emissions.

Construction-related activities have the potential to generate short-term concentrations of TACs, specifically DPM, related to the number and types of equipment typically associated with construction. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Methodologies for conducting health risk assessments are associated with long-term exposure periods (e.g., typically over a 70-year lifetime). The proposed project is anticipated to be built over a six-month period. In addition, the site is currently developed and heavy site preparation and grading is not required for the site. Only portions of the site would be disturbed at a time during buildout of the proposed project, with operation of construction equipment regulated per the In-Use Off-Road Diesel Vehicle Regulation and by BAAQMD rules and regulations, restricted to certain hours per the City's Municipal Code Section 15.02.070, and occurring intermittently throughout the course of a day. Considering the intermittent nature of construction equipment operating on the site, the duration of construction activities in comparison to the operational lifetime of the project, the typical long-term exposure periods associated with health risks, and compliance with regulations, the likelihood that any one nearby sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be very low. Thus, construction of the proposed project would not expose any nearby existing sensitive receptors to any substantial adverse concentrations of TACs.

### Conclusion

Based on the above analysis, the activities associated with the proposed project would not result in exposure of any nearby sensitive receptors to substantial pollutant concentrations. Therefore, impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be *less than significant*.

- e. Odors are generally regarded as an annoyance rather than a health hazard. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. Certain land uses such as wastewater treatment facilities, landfills, confined animal facilities, composting operations, food manufacturing plants, refineries, and chemical plants have the potential to generate considerable odors. The proposed project would not introduce any such land uses.

Commercial uses are not typically associated with the creation of objectionable odors. The proposed project would provide waste receptacles throughout the facilities and would utilize outdoor trash dumpsters with lids, which would be picked up regularly during normal solid waste collection operating hours within the City. The dumpster lids are intended to contain odors emanating from the dumpsters. The dumpsters would be stored in screened areas for further protection from potential objectionable odors. The

garbage collected on-site and stored in the outdoor dumpsters would not be on-site long enough to cause substantial odors. Thus, the outdoor, enclosed, and covered trash dumpsters, which would be picked up regularly, would provide proper containment and handling of the trash generated on-site.

It should be noted that BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitation on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the proposed project is developed, the BAAQMD would ensure that such odors are addressed and any potential odor effects reduced to less than significant.

For the aforementioned reasons, construction and operation of the proposed project would not create objectionable odors, and potential impacts related to objectionable odors would be *less than significant*.

**IV. BIOLOGICAL RESOURCES.**

*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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

- a. The 1.9-acre site is made up of non-native grasses, scattered trees, and two buildings with an associated paved parking lot. The patches of grasslands are highly disturbed and are characterized by ruderal vegetation. In addition, ornamental trees and bushes exist within the developed parking lot areas. The total amount of impervious surface area on the 1.9-acre project site currently consists of 36,076 square feet.

The California Department of Fish and Wildlife’s (CDFW) California Natural Diversity Database (CNDDDB) was utilized to determine the special-status or sensitive plant and wildlife species known to occur within or in the immediate vicinity of the project site, based on a review of the U.S. Geologic Survey (USGS) 7.5-minute quadrangles for Richmond, San Quentin, Petaluma Point, Mare Island, Benicia, Briones Valley, Oakland East, Oakland West, and San Francisco North. The results of the CNDDDB query indicate

that 67 special-status or sensitive plant species and 17 special-status or sensitive wildlife species have been recorded within the Richmond, San Quentin, Petaluma Point, Mare Island, Benicia, Briones Valley, Oakland East, Oakland West, and San Francisco North 7.5-minute quadrangles (see Appendix B).

The special-status species associated with the project site and/or extended area are discussed in further detail below. The term special-status species, when it refers to wildlife, refers to animals that meet at least one of the following conditions:

- Listed as or proposed for listing under the State and/or Federal Endangered Species Acts; or
- Considered by the CDFW to be a Fully Protected species or Species of Special Concern.

The special-status plants included in this analysis were based on the California Rare Plant Ranks (CRPR) species, which according to CNPS, meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and either are listed, or are eligible for state listing (i.e. CRPR List 1A, 1B, 2, and 3). According to CNPS, these species must be analyzed during the preparation of environmental documents relating to CEQA because they meet the definition of rare or endangered under CEQA Guidelines §15125 (c) and/or §15380.

### Special-Status Plans

Based on the habitat and elevation range of the project area, 67 special-status plants have at least some potential to be present within the project vicinity, defined as the Richmond, San Quentin, Petaluma Point, Mare Island, Benicia, Briones Valley, Oakland East, Oakland West, and San Francisco North USGS 7.5-minute quadrangles (see Appendix B for details).

All of the special-status plant species recorded within the aforementioned quadrangles occur in specialized habitats that do not occur on the project site, such as chaparral (e.g., Loma Prieta hoita), coastal habitats (e.g., bent-flowered fiddleneck, fragrant fritillary, coastal triquetrella), forests (e.g., western leatherwood), vernal pools (e.g., Contra Costa goldfields), mountains or hills (e.g., pallid manzanita), grasslands (e.g., adobe sanicle), or other habitats. Only one of the 67 special-status plant species has been recorded in close proximity to the project site. The species, Santa Cruz tarplant (*Holocarpha macradenia*), prefers coastal prairie, coastal scrub, and valley and foothill grassland habitats. The most recent CNDDDB occurrence for Santa Cruz tarplant was in 1982, in an area south of I-80, which has since been disturbed, paved, and developed. The presence of Santa Cruz tarplant on the previously-developed and disturbed CVS project site is highly unlikely.

As the project site does not represent suitable habitat (i.e., wetlands, marshes, chaparral or scrub, coastal dunes, woodland, etc.) for the special-status plant species recorded within the project vicinity, nor contain soil types to which the special-status plant species

are endemic, the special-status plant species are presumed absent from the development footprint and proposed project activities would not impact the plant species.

### Special-Status Wildlife

Seventeen (17) special-status wildlife species have been recorded within the Richmond, San Quentin, Petaluma Point, Mare Island, Benicia, Briones Valley, Oakland East, Oakland West, and San Francisco North 7.5-minute quadrangles (see Appendix B for CNDDDB outputs). None of the 17 special-status wildlife species recorded within the region are expected to occur due to the developed nature of the project site and lack of native habitats within the undeveloped portions of the project site along its western and southern boundaries.

### *Migratory Birds*

While suitable habitat does not occur on-site for special-status wildlife species known to occur within the vicinity of the project site, marginal habitat does exist to support raptors and migratory birds, which are protected under the federal Migratory Bird Treaty Act. This habitat exists in the form of on-site trees and non-native grassland areas. Approximately 20 trees are located on the project site.

Raptors and other migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations (CFR) is unlawful. Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. Some trees on-site provide potential nesting habitat for raptors and other migratory birds. In addition, the on-site ruderal grassland areas could support ground-nesting migratory birds. If migratory birds were to nest on-site in the future prior to construction, such activities could result in the abandonment of active nests or direct mortality to these birds, which would be in violation of both State (Fish and Game Code 3503.5) and federal law (Migratory Bird Treaty Act).

### Conclusion

As stated above, the proposed project site is primarily made up of non-native grasses, scattered trees, and two buildings with an associated paved parking lot. The site has been previously disturbed, graded, and contains paved parking areas and a building. Due to the on-going disturbance on the site and lack of on-site suitable habitat, the likelihood for special-status plant and animal species to occur on-site is very low. However, development of the proposed project does have the potential to impact raptors and/or migratory birds. Accordingly, the proposed project could 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 CDFW or USFWS. Therefore, impacts related to species identified

as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS, would be ***less than significant with mitigation***.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impacts to a *less-than-significant* level.

*IV-1. If project construction-related activities would take place during the nesting season (February 1 through August 31), preconstruction surveys for nesting passerine birds and raptors (birds of prey) within the project site shall be conducted by a qualified biologist 14 days prior to the commencement of the tree removal or site grading activities. If any bird listed under the Migratory Bird Treaty Act is found to be nesting within the project site, an adequate protective buffer zone shall be established by a qualified biologist to protect the nesting site. The buffer shall be a minimum of 75 feet from the project activities for passerine birds, and a minimum of 200 feet for raptors. The distance shall be determined by a qualified biologist based on the site conditions (topography, if the nest is in a line of sight of construction activities, and the sensitivity of the birds nesting). The nest site(s) shall be monitored by a qualified biologist periodically to see if the birds are stressed by the construction activities and if the protective buffer needs to be increased. Once the young have fledged and are flying well enough to avoid project construction zones (typically by August), the project can proceed without further regard to the nest site(s).*

- b. Riparian vegetation is considered sensitive. Riparian vegetation functions to control water temperature, regulate nutrient supply, bank stabilization, rate of runoff, wildlife habitat, the release of organic material into streams from surrounding land, release of woody debris which functions as habitat and slow nutrient release, and protection for aquatic organisms. Riparian habitat does not exist on the proposed project site. Consequently, the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS, and impacts would be ***less than significant***.
- c. Wetlands or seasonal wetlands generally denote areas where the soil is seasonally saturated and/or inundated by fresh water for a significant portion of the wet season, and then seasonally dry during the dry season. To be classified as "wetland," the duration of saturation and/or inundation must be long enough to cause the soils and vegetation to become altered and adapted to the wetland conditions. Varying degrees of pooling or ponding, and saturation produce different soil and vegetative responses. Such soil and vegetative clues, as well as hydrological features, are used to define the wetland type. Seasonal wetlands typically take the form of shallow depressions and swales that may be intermixed with a variety of upland habitat types. Seasonal wetlands fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE).

Wetlands, seasonal wetlands, or vernal pools do not exist on the proposed project site. Further discussion regarding erosion control and water quality is included in Section IX, Hydrology and Water Quality, of this IS/MND. Therefore, the proposed project would not 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, and impacts would be *less than significant*.

- d. Migratory corridors are natural areas interspersed with developed areas and are important for animal movement, increasing genetic variation in plant and animal populations, reduction of population fluctuations, and retention of predators of agricultural pests, and for movement of wildlife and plant populations. Wildlife corridors have been demonstrated not only to increase the range of vertebrates, including avifauna between patches of habitat, but also facilitate two key plant-animal interactions: pollination and seed dispersal. Corridors also preserve watershed connectivity. Corridor users could be grouped into two types: passage species and corridor dwellers.

The project site provides limited opportunities for native, resident, or migratory wildlife to use the site as a movement corridor. The project site is located in a developed area and is surrounded by urban development on all sides. Although the vacant area to the south of the project site provides limited opportunities for movement of wildlife, this area would be preserved as part of the proposed project. Native habitat, plant, or animal populations would not be significantly reduced with implementation of the project. Therefore, the project would not 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, and impacts would be *less than significant*.

- e. An Arborist Report was completed for the proposed project by Foothill Associates on November 6, 2014. According to the report, 20 trees were inventoried on-site. Each of the 20 trees were tagged and assessed for various qualities and the health and structure of each tree was rated on a five-point scale from “poor” to “good.”

Seven protected and 13 non-protected tree species are located on-site. The protected trees include one Coastal Live Oak, one Redwood, and five Italian Stone Pine. The tree data is shown in Table 5 and the approximate tree locations are shown in Figure 16. All of the living trees are in fair-good to good health. Several additional unidentified cultivar trees were dead and were not recorded. Only the apple tree showed less than fair structure as the tree was shaded by other trees. None of the live trees are recommended for removal, although a number of trees would benefit from crown-cleaning pruning. All of the dead trees should be removed.

**Table 5  
On-Site Tree Data**

#	Species	DBH	DLR	Health	Structure	Notes
10	Unidentified Cultivar	4,6,7,7,8	10	Good	Good	Remove
11	Unidentified Cultivar	5,8,8,8	10	Fair-Good	Fair-Good	Remove
12	Unidentified Cultivar	4,4,5,5	8	Fair-Good	Fair	Removed
13	Unidentified Cultivar	6,8,8,8	10	Good	Fair	3 dead trunks Remove
14	Unidentified Cultivar	5,7,7,8,9	10	Good	Good	Remove
15	Unidentified Cultivar	9	5	Good	Fair	Remove
16*	Interior Live Oak	7	8	Fair-Good	Fair	Minor impacts from bioswale grading
17*	Coast Redwood	18	10	Good	Good	Minor impacts from bioswale grading
18	Apple	9	8	Good	Poor-Fair	
19	Pepper Tree	11,14	15	Good	Fair	
20	Deodar Cedar	9,11	9	Good	Good	
21	Eucalyptus	15,17	12	Good	Good	Remove
22	Sweetgum	8	10	Good	Good	Remove
23	Sweetgum	4	6	Good	Fair-Good	Remove
24*	Italian Pine Stone	19	12	Fair-Good	Fair	
25	Italian Pine Stone	16	10	Good	Fair	Minor impacts from bioswale grading
26*	Italian Pine Stone	21	10	Good	Fair-Good	Remove
27*	Italian Pine Stone	21	12	Good	Fair-Good	Minor impacts from bioswale grading
28*	Italian Pine Stone	24	12	Good	Fair-Good	Minor impacts from bioswale grading
29*	Italian Pine Stone	22	10	Good	Fair-Good	

Notes:

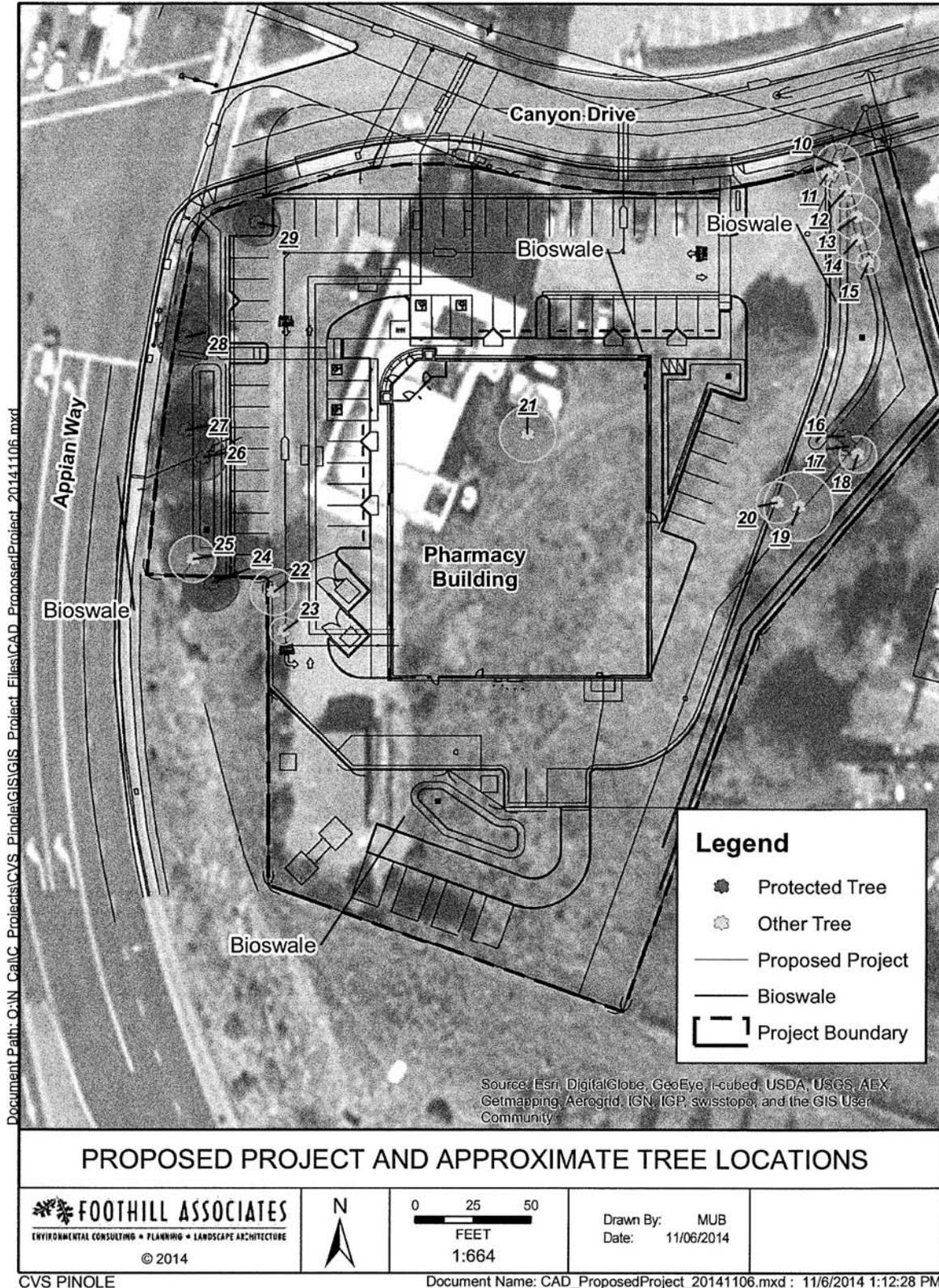
\* = Protected under City Municipal Code Requirements

DBH = diameter at breast height, measured in inches

DLR = dripline radius, measures in feet

Source: Foothill Associates, November 6, 2014.

Figure 16  
Approximate Tree Locations



According to the City Municipal Code Ordinance 2014-01, Tree Protection 17.96.070, protected trees are defined as select trees with a single perennial stem of 12 inches or larger in circumference measured four and a half feet above the natural grade. The list of protected trees includes: Coastal Live Oak, Madrone, Buckeye, Black Walnut, Redwood, Big Leafed Maple, Redbud, California Bay, and Toyon. In addition, protected trees include any other tree with a single perennial stem greater than fifty-six (56) inches or larger in circumference measured four and a half (4 1/2) feet above the natural grade.

As shown in Figure 24, the proposed CVS/Pharmacy building would require removal of tree #21 and trees #10, #11, #13 to 15, #22, #23, and #26 in order to construct the parking lot and other site improvements. Only tree #26 is protected by the City Tree Ordinance. All of the remaining trees to be preserved would be located in landscape areas. A number of trees may be impacted by grading for the bioswale in the northwest and northeast sides of the site, including protected trees #24, #27, #28, #16, and #17. In the long-term, water retention in the bioswales may increase the moisture regime in the root zone. While increased moisture in the root zones is a concern for native oak trees, given that the moisture can promote the growth of a number of detrimental microorganisms, the bioswales are not expected to create standing water immediately adjacent to the trunk of a tree. Thus, impacts to tree #16, an interior live oak, are not expected to be significant.

A tree removal permit would be required for the removal of tree #26 and any other protected trees. In addition, various tree protection measures shall be integrated into the construction documents to minimize the potential impacts to tree root systems. Accordingly, the proposed project could conflict with the City's Tree Protection Ordinance through protected tree removal and/or damage of protected trees during construction, and impacts to such would be *less than significant with mitigation*.

#### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the potential impacts to a *less-than-significant* level.

- IV-2. *In conjunction with submittal of a grading plan, a detailed arborist report shall be completed for review and approval by the Development Services Department. The arborist report shall identify protected trees within the development area which require removal upon development. In addition, the report shall identify protected trees which shall be retained by the project. Should protected trees be removed, the removal shall comply with the tree removal permit requirements outlined in Section 17.96.060 of the Pinole Municipal Code, as follows:*

#### *Protected Trees Proposed for Removal*

- 1. If any protected trees within the development area require removal, the applicant shall file an application for a tree removal permit with the Development Services Department. The applicant shall file the application concurrently with submittal of construction drawings. The*

*applicant is strongly encouraged to review the proposed development with the Planning Manager to determine which protected trees could be preserved before design drawings are begun.*

- 2. The application shall contain the precise number, species, size and location of the protected tree(s) to be cut down, destroyed, or removed and a statement of the reason for removal, the signature of the property owner authorizing such removal, the signature of the person actually performing the work if different than the property owner and if known at the time of the application, as well as any other pertinent information the Development Services Department may require. The applicant shall submit five copies of drawing and a fee prescribed by City Council resolution to cover the cost of investigation and processing.*
- 3. Any tree removed shall be replaced in accordance with Section 17.44.070 of the City's Zoning Ordinance.*
- 4. The applicant shall provide a tree survey plan specifying the precise location and dripline of all existing trees (protected trees and non-protected trees) on the property.*
- 5. Unless the reason for the proposed removal of the protected tree(s) is evident, (i.e. the protected tree is clearly dying) the applicant shall also submit a certified or consulting arborist's report, which shall include an evaluation of the protected tree(s) to be removed as well as any appropriate recommendations concerning the preservation of any surviving protected tree(s) on the property. The arborist's report shall be done at the applicant's sole expense, and the arborist's report shall be subject to the City's approval, which approval it shall not unreasonably withhold.*

#### *Protected Trees Proposed for Retention*

*For protected trees to be retained, the maintenance shall comply with the tree preservation requirements outlined in Section 17.96.070 of the Pinole Municipal Code, as follows:*

#### *Tree Protection Measures*

- 1. Prior to and during any demolition, grading or construction, all protected trees within a development area shall be protected by a six (6) foot high chain link (or other material approved by the Development Services Department) fence installed around the outside of the dripline of each tree.*
- 2. No oils, gas, chemicals, liquid waste, solid waste, heavy construction machinery or other construction materials shall be stored or allowed to stand within the dripline of any tree.*
- 3. No equipment washout will be allowed to occur within the dripline of any tree.*

4. *No signs or wires, except those needed for support of the tree, shall be attached to any tree.*

*Should protected trees be damaged, the developer, contractor, or any agent thereof shall comply with the requirements outlined in Section 17.96.090 of the Pinole Municipal Code, as follows:*

*Damage to a Protected Tree*

1. *If any damage occurs to a protected tree during construction, the developer, contractor, or any agent thereof shall immediately notify the Development Services Department so that professional methods of treatment accepted by the Development Services Department may be administered. The repair of the damage shall be at the expense of the responsible party and shall be by professional standards, approved by the Development Services Department. Failure to comply will result in a stop work order.*
- IV-3. *In accordance with Section 17.96.030 of the Pinole Municipal Code, the pruning of any protected tree shall be performed only when it enhances its structural strength, health, general appearance or for safety reasons. Any pruning must be completed by a certified/consulting arborist.*
- IV-4. *Prior to the issuance of any grading or building permits, all arborist tree protection measures shall be included on the project construction plans for review and approval by the Development Services Department.*
- f. According to the City's General Plan EIR, the City is within the boundaries of the Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area (USFWS, 1998). However, the City does not contain habitat for species listed in the recovery plan. The City, including the proposed project site, is not within the boundaries of any Habitat Conservation Plan/Natural Community Conservation Plan. Therefore, implementation of the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, and ***no impact*** would occur.

<b>V. CULTURAL RESOURCES.</b> <i>Would the project:</i>	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 Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Discussion**

a-d. A Cultural Resources Study was performed for the proposed project site by Tom Origer & Associates.<sup>7</sup> As part of the Cultural Resources Study, the State of California’s Native American Heritage Commission (NAHC) was contacted. The NAHC subsequently provided a list of Native American groups and individuals to contact. The groups and individuals, including the Ohlone Tribe, were contacted in writing by Tom Origer & Associates. To date, responses have not been received from the tribes that were contacted.

Archival research was also completed, including review of archaeological site base maps and records, survey reports, and other materials on file at the Northwest Information Center. Historical maps were also examined to gain insight into the nature and extent of historical development in the project vicinity. In addition, ethnographic literature describing appropriate Native American groups and county histories was reviewed. According to the archival research, the building at 1617 Canyon Drive had been examined as a proposed location for a cell phone tower in 2013. At that time, the building was evaluated and found not eligible for inclusion on the National Register of Historic Places or the California Register of Historical Resources. Nearby surveys for the I-80/Appian Way off-ramp and for I-80 did not find cultural resources that could extend into the study area. Buildings or structures are not shown on any maps or atlases until the late 20<sup>th</sup> century. The study area had been a part of two homesteads, one belonging to a Catharine Reis and one belonging to a Joseph Pfister.

As part of the Cultural Resources Study, a field survey was completed on May 11, 2015. The approximately 1.9-acre study area was examined intensively by walking in a zigzag pattern within 15 meter wide corridors. Archaeological sites or resources were not found within the study area.

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<sup>7</sup> Tom Origer & Associates. *A Cultural Resources Study for the CVS Pharmacy Project, Pinole, Contra Costa County, California*. May 14, 2015.

Based on the distribution of known cultural resources, the environmental setting, and knowledge that the area once was marshland and consists partially of fill, a small chance exists that previously undiscovered prehistoric archaeological sites could be found within the study area during construction activities. Prehistoric archaeological site indicators that could be found in the region include but are not limited to: obsidian and chert flakes; chipped stone tools; grinding and mashing implements such as slabs and handstones; mortars and pestles; bedrock outcrops and boulders with mortar cups; and locally darkened midden soils containing some of the previously listed items plus fragments of bone, shellfish, and fire-affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps).

Therefore, with implementation of the recommendations identified in the Cultural Resources Study, impacts would be *less than significant with mitigation*.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the potential impacts to a *less-than-significant* level.

- V-1. *Prior to the issuance of a grading permit for any construction activities, construction plans shall include a requirement (via notation) indicating that if buried archaeological or historical site indicators are encountered during site grading or other site work, all such work shall be halted immediately within the area of discovery and the contractor shall immediately notify the City of the discovery. Prehistoric archaeological site indicators expected within the general area include the following: chipped chert and obsidian tools and tool manufacture waste flakes; grinding and hammering implements; and for some sites, locally darkened soil that generally contains abundant archaeological specimens. Historic remains expected in the general area commonly include items of ceramic, glass, and metal. Features that might be present include structure remains (e.g., cabins or their foundations) and pits containing historic artifacts. If any of the aforementioned site indicators are encountered, the applicant shall halt work and retain the services of a qualified archaeologist for the purpose of evaluating the find(s) pursuant to Section 106 of the National Historic Preservation Act, as well as for recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the qualified archaeologist, shall not be allowed until the preceding steps have been taken.*

- V-2. *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction activities within the project area, all work shall stop in the vicinity of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. Additional work is not to take place in the immediate vicinity of the find, which shall be identified, at a cost to the applicant, by the qualified archaeologist, until the identified appropriate actions have been implemented.*

**VI. GEOLOGY AND SOILS.**

*Would the project:*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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 based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

The following discussion is based on the Geotechnical Engineering Investigation prepared for the proposed project by Salem Engineering Group, Inc.<sup>8</sup>

ai-aiv,

- c. The proposed project site is located within a region of California characterized by active faulting; however, active faults are not known to cross the project site area and the site is not within a current Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone). The closest active fault mapped by the California Geological Survey is the Hayward Fault, located approximately 2.5 miles from the site. According to the City’s General Plan Update EIR, the maximum level of ground motion potentially experienced in the City’s planning area would occur as a result of a 7.25 magnitude earthquake on the Hayward Fault zone.<sup>9</sup>

<sup>8</sup> Salem Engineering Group, Inc. *Geotechnical Engineering Investigation, Proposed CVS/Pharmacy*. May 14, 2014.

<sup>9</sup> City of Pinole. *City of Pinole General Plan Update Draft Environmental Impact Report* [page 4.8-8]. July 2010.

### Groundshaking

Losses from groundshaking can occur where tall structures are built on thick, soft sediments. The amount of damage from shaking is also influenced by the structural integrity of buildings before an earthquake. According to the City's General Plan Update EIR, areas within the City's planning area that are highly susceptible to damages resulting from ground shaking are located between San Pablo Avenue and the San Pablo Bay shoreline, in the western portions of the City.<sup>10</sup> The proposed project is not located in the aforementioned area. In addition, the City utilizes the California Building Standards Code (CBSC) for all development within the City limits. The CBSC standards address foundation design, shear wall strength, and other structural-related conditions. All development projects are subject to the CBSC, which requires a seismic evaluation and particular seismic design criteria to reduce ground shaking effects.

### Liquefaction

Liquefaction is the loss of soil strength due to seismic forces generating various types of ground failure. The potential for liquefaction must account for soil types and density, the groundwater table, and the duration and intensity of ground shaking. The on-site soils encountered within a depth of 50 feet predominately consisted of sandy clayey silt, clayey silt/silty clay, silty clay, and silty sand/sandy silt (suspected fill materials), underlain by silty sand/sandy silt, silty sand/sand, clayey sand, silty clayey sand, clayey silt/silty clay, sandy clay, silty clay, and sandy clayey silt. The aforementioned soils have low to high cohesion strength. Free groundwater was not encountered as part of the geotechnical investigation. The liquefaction analysis performed as part of the geotechnical report indicated that the site soils had a low potential for liquefaction under seismic conditions and the total liquefaction-induced settlements were calculated to be 0.1 to 0.27 inch. The differential settlement is estimated to be less than 0.2 inch. For the aforementioned reasons, the proposed project would not be expected to be affected by liquefaction.

### Landslides

Seismically induced landslides are likely to occur along steep to intermediate hillside areas, as well as areas where previous land sliding or soil creeping has occurred, areas where non-engineered grading and uncontrolled drainage on slopes has occurred, or areas with deep colluvial deposits. Slope stability hazards could result in loose debris flows and landslides. The proposed project site is relatively flat and has been previously graded and developed. In addition, known landslides do not exist on the site or in the immediate area. Therefore, typical conditions for landslides do not occur on the project site and the potential for landslides on the project site would be considered low.

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<sup>10</sup> City of Pinole. *City of Pinole General Plan Update Draft Environmental Impact Report* [page 4.8-12]. July 2010.

### Compliance with State Law Requirements

The State regulates development in California through a variety of tools that reduce hazards from earthquakes and other geologic hazards. The CBSC contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The proposed project would be required to adhere to the provisions of the CBSC, which would reduce hazards from strong seismic ground shaking and other seismic-related effects. Accordingly, the likelihood for the project to expose people to risks, including loss, injury, or death involving earthquakes and related effects would be very low.

### Conclusion

The primary geotechnical constraints identified by the site-specific geotechnical investigation are the presence of moderately compressible undocumented fill soils and moderately expansive near surface soils at the site, the latter of which is discussed under Question 'd' below. Implementation of Mitigation Measure VI-1 would ensure that the impact of undocumented fill soils to project structures would be *less than significant with mitigation*.

### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impacts to a *less-than-significant* level.

*VI-1. Prior to the approval of improvement plans, the plans shall be designed to incorporate the recommendations of the Geotechnical Engineering Investigation prepared for the proposed CVS Pharmacy by Salem Engineering Group, Inc. Recommendations are set forth in Section 9 of the Geotechnical Report and provide engineering practices for the undocumented fill and expansive soils encountered on-site to ensure that these types of soils do not result in adverse impacts to structures. Engineering practices include but are not limited to removal and recompaction of moisture-sensitive soils,*

*All building plans shall be reviewed and approved by the City Engineer within the Development Services Department prior to issuance of building permits to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in the design.*

- b. During construction within the proposed project area, topsoil would be moved and graded, leading to disturbed soils that do not have as much connectivity to the ground as undisturbed soils. Such disturbed soils are likely to suffer from erosion from a variety of sources, such as wind, rainfall, and construction equipment. The City's Erosion and Sediment Control Plan Ordinance (Title 15, Chapter 15.36.190 of the City Code) requires that an erosion and sediment control plan, prepared by a registered civil engineer, be submitted to the City for review for any building or construction activities over 0.25-acre.

According to the Stormwater Control Plan prepared for the project, the project will create approximately 22,457 square feet of new impervious surface area and replace approximately 29,274 square feet of impervious surface area. As a result, the project is subject to the City's Erosion and Sediment Control Plan Ordinance, including preparation and submittal of an erosion and sediment control plan for review and approval by the City. With compliance with the City's Erosion and Sediment Control Plan Ordinance requirements, impacts related to substantial soil erosion or loss of topsoil would be *less than significant with mitigation*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

VI-1. *Prior to the issuance of a grading permit, the project applicant shall hire a registered civil engineer to prepare an Erosion and Sediment Control Plan for submittal to the City Engineer for review and approval. The Erosion and Sediment Control Plan shall include provisions to effectively minimize soil erosion and sedimentation from the completed project site and provide for the control of runoff from the site in accordance with Title 15, Chapter 15.36.190, of the City Municipal Code. Provisions should include, but are not limited to, the following:*

- *Hydro-seeding;*
- *Placement of erosion control measures within drainage ways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with "filter fabric";*
- *The placement of straw wattles along slope contours;*
- *Use of a designated equipment and vehicle "wash-out" location;*
- *Use of siltation fences;*
- *Use of on-site rock/gravel road at construction access points; and*
- *Use of sediment basins and dust palliatives.*

- d. Expansive soils are soils that have a potential for shrinking and swelling under changing moisture conditions. Expansive soils could cause lifting of a building or other structure during periods of high moisture. Conversely, during periods of low moisture, expansive soil will collapse and could result in building settlement. Accordingly, damage due to expansive soils occurs when the amount of moisture contained in the foundation soils fluctuates.

The on-site soils encountered within a depth of 50 feet predominately consisted of sandy clayey silt, clayey silt/silty clay, silty clay, and silty sand/sandy silt (suspected fill materials), underlain by silty sand/sandy silt, silty sand/sand, clayey sand, silty clayey sand, clayey silt/silty clay, sandy clay, silty clay, and sandy clayey silt. The apparent density of granular materials found on-site generally ranges from loose to very dense. The consistency of cohesive materials on-site is generally considered very stiff.

Laboratory consolidation potential testing of near surface soil samples indicated low collapse potential and moderate compressibility. Laboratory expansion index testing of a near surface soil sample resulted in an expansion index of 68, indicating moderate expansion potential.

The proposed project would include development of a CVS/Pharmacy building, pylon structure, and cellular facilities, which would require demolition of the on-site structures, excavation, and grading of the site. Due to the potential expansive soils on the project site, measures should be taken to reduce the effects of such on the proposed building. Proper treatment and preparation of the site in accordance with recommendations from a qualified geotechnical professional would be necessary to ensure stability of the proposed on-site structure and sign. Depending upon the specific conditions of the on-site soil, removal or proper treatment of the non-engineered fill may be required during grading of the site to ensure stability of the proposed building.

As discussed above, the proposed project would be required to comply with the CBSC, as well as all other applicable federal, State, and local building codes, regulations, and practices including standards related to expansive soils. Due to the presence of soils with moderate expansion potential on-site, mitigation regarding expansive soils would be necessary to ensure impacts related to such from buildout of the proposed project are minimized. Therefore, the proposed project may be located on or be affected by expansive soils, and impacts would be considered *less than significant with mitigation*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impact to a *less-than-significant* level.

VI-2.            *Implement Mitigation Measure VI-1.*

- e. The project includes infrastructure connections to the City of Pinole's sewer system. Because the project would not involve use of a septic system or any type of wastewater treatment, *no impact* would occur.

<b>VII. GREENHOUSE GAS EMISSIONS.</b> <i>Would the project:</i>	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 impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

- a,b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. An individual project’s GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO<sub>2</sub>) and, to a lesser extent, other GHG pollutants, such as methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO<sub>2</sub> equivalents (MTCO<sub>2</sub>e/yr).

The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100 MTCO<sub>2</sub>e/yr or 4.6 MTCO<sub>2</sub>e/yr per service populations (population + employees). The City of Pinole has determined that the BAAQMD thresholds of significance are the best available option for evaluation of GHG impacts for the project and, thus, are used in this analysis. Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAQMD has an adopted threshold of significance for construction-related GHG requiring quantification. Nonetheless, to provide a conservative estimate of the project’s total GHG emissions, the proposed project’s construction GHG emissions have been amortized over the anticipated operational lifetime of the project, which was

assumed to be 25 years, and included in the annual operational GHG emissions for disclosure purposes.<sup>11</sup>

Using the CalEEMod modeling software, the total annual construction-related GHG emissions, including emissions associated with the generator, were estimated to be 463.66 MTCO<sub>2e</sub>, or 18.55 MTCO<sub>2e</sub> per year over the operational lifetime of the proposed project. Using CalEEMod and taking into account the amortized construction-related emissions, the proposed project’s total GHG emissions were estimated, including regular maintenance runs of Verizon’s backup emergency generator, and are presented in Table 6. The model was adjusted to reflect the project-specific trip generation rate, and the project’s mandatory compliance with the 2013 California Building Energy Efficiency Standards Code.

<b>Table 6</b>	
<b>Unmitigated Project GHG Emissions</b>	
	<b>Annual GHG Emissions (MTCO<sub>2e</sub>/yr)</b>
Operational GHG Emissions	894.24
Construction-Related GHG Emissions <sup>1</sup>	18.55
<b>Total Annual GHG Emissions</b>	<b>912.79</b>
BAAQMD Threshold	1,100
<b>Exceeds Threshold?</b>	<b>NO</b>
<sup>1</sup> Total annual construction-related GHG emissions of 463.66 MTCO <sub>2e</sub> /yr amortized over the anticipated 25-year operational lifetime of the proposed project.	
<i>Source: CalEEMod, September 2015.</i>	

As shown in the above table, the project’s total unmitigated annual GHG emissions, including construction-related emissions, would be below the BAAQMD threshold of significance for GHG emissions. It should be noted that the actual annual GHG emissions of the proposed project would be less than presented in Table 6 due to the one-time release of construction-related GHG emissions. Because the project’s unmitigated annual GHG emissions would be below the 1,100 MTCO<sub>2e</sub> per year threshold utilized by the City, the proposed project would be considered to result in a *less-than-significant* cumulative impact related to GHG emissions and global climate change.

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<sup>11</sup> The BAAQMD does not recommend any specific operational lifetimes for use in amortizing construction-related GHG emissions; however, the SMAQMD, per its *Guide to Air Quality Assessment in Sacramento County*, suggests an operational lifetime for a new conventional commercial building of 25 years. The estimates are derived from the State of California Executive Order D-16-00 and US Green Building Council’s October 2003 report on *The Costs and Financial Benefits of Green Buildings*.

**VIII. HAZARDS AND HAZARDOUS MATERIALS.**

*Would the project:*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

a,b. Proposed Uses

The proposed project consists of the construction of a pharmacy building and associated parking lot and pylon structure. The proposed commercial uses would not involve the routine transport, use, or disposal of hazardous materials. Only small quantities of cleaning agents would be used and stored on-site. However, the transport of hazardous materials is regulated by the California Highway Patrol and Caltrans, and use of hazardous materials is regulated by the Department of Toxic Substances Control (Title 22 of the California Code of Regulations [CCR]). The project applicant, builders,

contractors, business owners, and others would be required to use, store, and transport hazardous materials in compliance with local, State, and federal regulations during project construction and operation. The proposed 14,806-square-foot building would be used for pharmaceutical purposes. In addition to the everyday services, the proposed location may host a seasonal or annual flu clinic for the benefit of the local consumers. If held, this activity would be inside the store. Besides the seasonal clinic, many CVS/Pharmacy facilities also include a wellness center. The center, known as a “Minute Clinic”, is staffed by a registered nurse practitioner who can diagnose and prescribe pharmaceuticals for minor ailments. As such, blood tests or other bodily fluid testing may occur on-site. The remaining uses would not involve the transport, use, or disposal of hazardous materials.

Blood and bodily fluids are considered hazardous and are covered under a Federal Occupational Safety and Health Administration (OSHA) standard known as Bloodborne Pathogens (Standard 1910.1030). As the seasonal clinic or wellness center operations may involve blood, the proposed CVS/Pharmacy building would involve regulated medical waste treatment, storage, containment, transport, and disposal. Operations would be required to comply with all requirements of OSHA Standard 1910.1030, including, but not limited to, establishing an Exposure Control Plan, implementing engineering and work practice controls, use of personal protective equipment, and proper storage, labeling, containment, and disposal of potential hazardous substances and materials. Full “red-bag” containment and disposal operations would be required for all hazardous material and fluid disposal, including needles, gowns, and fluid clean-up. It should be noted that all hazardous materials protocol would be provided under tenant controlled procedures.

The project also includes cellular antennas and associated equipment. While some of this equipment is already located on the existing, three-story building, new facilities would be provided as part of the project, including three new equipment shelters located at the southern portion of the project site, and the pylon structure, which would provide internal mounting spaces for the new T-Mobile and Verizon antennas. Verizon has indicated that they will install an emergency backup generator, adjacent to their equipment shelter. The generator would be diesel-fueled; and the fuel would be stored in a 210-gallon base tank, attached to the generator. While, the storage and use of diesel fuel at the site could represent a potential hazard, this would be not be a new use, as there is a diesel-powered emergency power generator currently located in the on-site equipment compound. A day tank is built in the generator that holds approximately 210 gallons of diesel fuel. Furthermore, the base tank for the proposed generator would include several safety mechanisms to prevent an inadvertent fuel spill, including double-walled construction, 125 percent engine fluid containment and alarms of all generator liquids, rupture basin alarm, and emergency vents.

T-Mobile has indicated that they will utilize a fuel cell or batteries to provide temporary power in the event of a power outage.

## Previous Uses

A Phase I Environmental Site Assessment was completed for the proposed project site in May 2014. The project site currently contains a three-story, multi-tenant building, occupied by an engineering firm and medical use, as well as a smaller building currently occupied by a landscaping company.. Cellular equipment is also located on-site. According to the Phase I Environmental Site Assessment, previous uses of the project site include undeveloped land between 1895 and 1965. The existing main building was constructed in 1922 and has been occupied primarily by doctors and other commercial tenants up to the present. The smaller building appears to have been constructed between 1980 and 1993 based on a review of available photographs. According to the owner, the smaller building was initially used for record/supply storage for the building tenants that have occupied the main building. The smaller building has been recently used/leased to a landscaping company for supply storage.

Due to the age of the existing buildings, an *Asbestos & Lead-Based Paint Inspection Report* was prepared for the project site. As part of the *Asbestos & Lead-Based Paint Inspection Report* prepared for the proposed project, 51 bulk samples of suspect Asbestos-Containing Materials (ACMs) and 12 samples of suspect Lead-Based Paint (LBP) were collected from the subject building. The collected samples were then delivered to AmeriSci to be analyzed for asbestos using Polarized Light Microscopy (PLM) in accordance with United States Environmental Protection Agency (USEPA) method EPA-600/R-93/116 (asbestos) and for lead using Atomic Absorption Spectroscopy - Flame in accordance with EPA method 3050/7420 (lead).

In addition, due to the proposed cellular antennas and associated facilities, analysis of potential impacts related to human exposure to radio frequency (RF) electromagnetic fields was completed by Hammett & Edison, Inc. Consulting Engineers. As part of the analysis prepared for the project, computer modeling was used to estimate the exposure resulting from the antennas. The results were then compared to the applicable Federal Communications Commission (FCC) limits for RF exposure.

### *Asbestos-Containing Material (ACM)*

Any material that contains greater than one percent asbestos is considered an ACM and must be handled according to federal and State Occupational Safety and Health Administration (OSHA) guidelines, EPA regulations, and applicable State and local regulations. In California, materials that contain greater than 0.1 percent asbestos must also be considered as Asbestos-Containing Construction Material (ACCM) and handled in accordance with Cal/OSHA and local guidelines, where applicable.

Results of the site-specific assessment indicate that asbestos was detected at a concentration of greater than one percent in the following sampled materials: joint compound and associated drywall walls and ceilings, beige 9-inch by 9-inch floor tile, black mastic under tan mosaic sheet flooring, beige 12-inch by 12-foot peel and stick floor tile, and roofing mastic.

In addition, materials in the medical office building that were deemed inaccessible under new roofing, or materials that were in occupied tenant spaces on the 1<sup>st</sup> ES-2 and 2<sup>nd</sup> floors (Suites 101, 103, 201, 203 and 204), are assumed to contain asbestos greater than one percent. The inaccessible materials are identified as follows: rolled roofing material, roof flashing, roofing mastic, joint compound and associated drywall walls and ceilings, beige 12-inch by 12-inch floor tile and mastic, heating, ventilation, and air conditioning (HVAC) flex connector, and white pattern sheet flooring and mastic.

*Lead-Based Paint (LBP)*

LBP is defined as being greater than or equal to 0.5 percent by weight or 5,000 parts per million. Laboratory analysis detected lead greater than or equal to 0.5 percent by weight or 5,000 parts per million in one of the paint chip samples collected as follows: white metal HVAC unit roof mechanical area (medical office building).

The U.S. Consumer Products Safety Commission established the level of 0.06 percent by weight as the recommended maximum level of lead in most paints. If detected, these materials would be considered Lead-Containing Materials (LCMs). Results of three paint chip samples contained lead concentrations greater than 0.06 percent by weight (thereby considered LCM) at the following locations: red wood door, red metal door casing, and red metal stair railing (exterior of the medical office building).

*Radio Frequency (RF)*

In addition, the proposed wireless communications systems would emit a radio frequency (RF) electromagnetic field. The proposed project’s compliance with the guidelines outlined by the FCC limiting human exposure to RF electromagnetic fields was evaluated by Hammett & Edison, Inc (see Appendix C). The FCC sets exposure limits for continuous exposures that are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The exposure limits are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
BRS (Broadband Radio)	2,600	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

Base stations, such as is proposed for the project, typically consist of two distinct parts: the electronic transceivers (also called “radios” or “channels”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers

are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well, and so are installed at some height above ground – in the case of this project, approximately 24 feet above grade line. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

According to the RF exposure study, for a person anywhere at ground near the site, the maximum RF exposure level due to the proposed T-Mobile and Verizon operations was calculated to be 0.018 milliwatt per square-centimeter (mW/cm<sup>2</sup>), which is 2.4 percent of the applicable public exposure limit.<sup>12</sup> The maximum calculated cumulative level at the second-floor elevation of any nearby building, which is located approximately 60 feet from the proposed pylon structure/antennas, was 3.7 percent of the public exposure limit. The maximum calculated cumulative level at the second-floor elevation of any nearby residence, which is located approximately 250 feet from the proposed pylon structure/antennas, was 3.6 percent of the public exposure limit. It should be noted that the evaluation included several worst-case assumptions, including a conservative value for the reflection coefficient, the assumption that the carrier would be operating at full power at all times, and the assumption that a line-of-sight exists from the antennas to inhabited areas. Due to the use of worst-case assumptions, Hammett & Edison's professional opinion is that the results of the evaluation are likely overstated.

Due to their mounting locations, the T-Mobile and Verizon antennas would not be accessible to the general public, and so mitigation measures are not necessary to comply with the FCC public exposure guidelines.<sup>13</sup> As shown above, the highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

It should also be considered that the project site already emits RF due to the cellular antennas mounted to the third-story building's rooftop. The property is already leased to Verizon and T-Mobile. The carriers have 12 building-mounted antennas on four screened rooftop antenna sectors. In a site in an urban setting, such as the proposed project site, there are many other existing sources of electromagnetic fields. Under CEQA, the existing environmental conditions as they exist at the time the environmental analysis is commenced will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant (see CEQA Guidelines Section 15125). Because there are many existing sources of electromagnetic fields in the vicinity,

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<sup>12</sup> Hammett & Edison, Inc. *Statement* (regarding radio frequency electromagnetic fields) [pg. 2]. November 21, 2014.

<sup>13</sup> Hammett & Edison, Inc. *Statement* (regarding radio frequency electromagnetic fields) [pg. 3]. November 21, 2014.

it is speculative whether or not an affect from the project's RF electromagnetic fields could be extracted from the considerable exposure of existing electromagnetic fields.

Based on the results of the RF exposure study, the proposed project would not cause exposure to RF electromagnetic fields in excess of the identified health risk exposure limits. Therefore, the cellular facilities, as proposed, would not create a significant hazard to the public or the environment associated with the RF electromagnet field.

Notwithstanding this, the proposed project includes the potential for a third future wireless communication facility and related equipment shelter. At this time, the applicant has not entered into contract with a third cellular carrier for the project site. As a result, while all three equipment shelters would be graded as part of this project, the third potential equipment shelter area will not be utilized until such time that the applicant can secure a third cellular carrier and obtain required City land use approval. The third carrier would be required to apply for the appropriate permits from the City of Pinole, independent of this project, and the RF from the third carrier would need to be evaluated at that time to ensure that adverse impacts would not result to nearby receptors.

RF will also be emitted during the construction phase of the project, when the T-Mobile and Verizon antennas are temporarily located on the COWs. The COWs will be utilized for approximately six months (e.g., the construction period). Similar to the findings of Hammett & Edison for the T-Mobile and Verizon antennas during the operational phase of the project, when the antennas will be permanently located in the pylon structure, RF exposure levels from the COW antennas are anticipated to be well below the applicable FCC public exposure limit at the nearest residences. This will require confirmation at such time the COW facilities are in place.

### Conclusion

In summary, operation of the proposed project would not create a significant hazard. Due to the presence of ACM and LBP, and the potential for a third carrier to construct antennas on-site, the proposed project's impacts associated with the creation of a significant hazard to the public or the environment associated with hazardous materials would be *less than significant with mitigation*.

### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the potential impacts to a *less-than-significant* level.

- VIII-1. *Prior to demolition and/or removal of the on-site structures or building remains, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos- and lead-containing materials shall be removed in accordance with current Cal-OSHA regulations and disposed of in accordance with all Cal-EPA regulations, as identified in the Asbestos and Lead Survey conducted for the proposed project. The plan shall include the requirement that work shall be conducted by a Cal-OSHA*

*registered asbestos and lead abatement contractor in accordance with Title 8 CCR 1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the City Development Services Department and the Contra Costa County Department of Conservation and Development for review and approval.*

- VIII-2. *Materials containing more than one (1) percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.*
- VIII-3. *If a third cellular carrier submits an application to the City of Pinole Development Services Department to construct and operate cellular antennas and equipment on the CVS Pharmacy site, the application shall include an updated cumulative radio frequency (RF) electromagnetic field exposure study. The updated RF study shall evaluate the potential future exposure as a result of all on-site antennas, existing and proposed, and compare the results to the applicable FCC exposure limits for cellular uses. Should the RF study conclude that the resulting exposure would exceed the public exposure limit at the nearest receptor, the application shall be denied. Should the RF study conclude that the resulting exposure would not exceed the public exposure limit at the nearest receptor, the application shall be reviewed and approved, subject to approval by the City Development Services Department.*
- VIII-4. *Prior to issuance of a construction permit, the applicant shall submit an updated RF exposure study to verify the RF exposure levels that will result from the cellular antennas located on the temporary cell on wheels (COW). The calculations shall be performed using site-specific data, including proposed equipment specifications and distance from the proposed COW site in the southeastern corner of the project site to the nearest residences. If the operation of the COW antennas will result in RF exposure levels below the applicable FCC public exposure limit at the nearest residences, no further mitigation shall be necessary. If, however, operation of the COW antennas will result in RF exposure levels above the applicable FCC public exposure limit at the nearest residences, the study shall include recommendations to reduce the public exposure limit at or below the FCC limits. Measures could include, but are not necessarily limited to, locating the COWs further away from the nearest residences, changing orientation of antennas, increase antenna height, and/or reducing power. Proof of compliance with measures recommended in the updated RF exposure study shall be provided to the Development Services Department.*

- c. The nearest school is Pinole Middle School located to the northwest of the project site, with the closest classroom building located approximately 7,325 feet (approximately 1.39 miles) from the boundary of the proposed pharmacy site. As discussed above, the proposed retail use would not involve the routine transport, use, or disposal of hazardous materials. Therefore, the project would have a *less-than-significant* impact related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- d. The proposed project site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.<sup>14</sup> As a result, the proposed project would not create a significant hazard to the public or the environment. Therefore, *no impact* would occur.
- e,f. The project site is not located within an airport land use plan, two miles of a public airport, or the vicinity of a private airstrip. The nearest airport is the Buchanan Field Airport located approximately 13.0 miles east of the project site. In addition, the project does not involve any proposed uses that would directly result in an increase in populations in the area. Therefore, the project would not result in a safety hazard for people residing or working in the project area related to air traffic, and *no impact* would occur.
- g. The proposed project would not physically interfere with any existing emergency plans, because the project would not alter the existing street system, which may be utilized by emergency vehicles in the event of an emergency. In 2006, the City of Pinole updated and adopted an Emergency Operations Plan (EOP). The goal of the EOP is to effectively and efficiently organize and coordinate the City's response to major emergencies. The EOP is designed to be implemented and exercised prior to an emergency. The plan identifies four phases of emergency management: preparedness, mitigation, response, and recovery. The City's EOP is consistent with the Emergency Operation Plans of Contra Costa County and the State of California's Disaster and Civil Defense Master Mutual Aid Agreement. In addition to the EOP, the City of Pinole participated with Contra Costa County, neighboring cities and special districts to prepare and adopt a Natural Hazards Mitigation Plan (NHMP) to address regional emergency preparedness. Therefore, the project's impact would be *less than significant*.
- h. The project site is located in an urban area surrounded by existing development. The project site has been previously disturbed during development of the two on-site buildings and parking lot. According to the City's General Plan, the project site is not located within a Fire Hazard Severity Zone (FHSZ), which means that the site is not in an area that is prone to wildfire. It should be noted that the proposed project would remove some drought-stressed trees and other dry ruderal vegetation, which would be replaced with impervious surfaces and green landscaping; thus, the amount of flammable vegetation on the site would be reduced from existing levels with implementation of the proposed project. Compliance with the applicable building codes and any applicable Fire

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<sup>14</sup> California Department of Toxic Substances Control. *EnviroStor*. Available at: <http://www.envirostor.dtsc.ca.gov>. Accessed August 2015.

Department requirements would help to ensure the project would not be subject to wildland fires. In addition, the proposed project would be required to implement any precautionary fire safety standards such as providing on-site fire hydrants, fire sprinklers, and fire extinguishers.

Accordingly, the likelihood for the project to expose people to risks, including loss, injury, or death involving wildland fires would be very low. Therefore, the project's impact would be *less than significant*.

**IX. HYDROLOGY AND WATER QUALITY.**

*Would the project:*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. 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 (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Place within a 100-year floodplain structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

- a,f. During the early stages of construction activities, topsoil would be exposed due to grading and partial leveling of the site. After grading and leveling and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which would adversely affect water quality. In addition, during construction, runoff from

the property could adversely affect aquatic life within adjacent water features. Surface water runoff could remove particles of fill or excavated soil from site, or could erode soil down-gradient, if the flow were not controlled. Deposition of eroded material in adjacent water features could increase turbidity, thereby adversely affecting any aquatic life, and reducing wildlife habitat.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. The proposed project site consists of approximately 1.9 acres of land. Performance Standard NDCC-13 of the City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes best management practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts. The City of Pinole requires all development projects to use BMPs to treat runoff.

In summary, disturbance of the on-site soils during construction activities could result in impacts to water quality should adequate BMPs not be incorporated during construction in accordance with SWRCB regulations. Therefore, impacts related to such would be *less than significant with mitigation*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impacts to a *less-than-significant* level.

- IX-1. Prior to issuance of a grading permit, the project contractor shall prepare a SWPPP. The project applicant shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The SWPPP shall be submitted to the City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and monitoring of improvements to reduce pollutants in stormwater discharges to the maximum extent practicable.*
- b. According to the Stormwater Control Plan prepared for the project, approximately 36,076 square feet of impervious surface area exists on-site, and the project would create and/or replace approximately 51,731 square feet of impervious surface area, resulting in a net new increase in impervious surface area of approximately 15,655 square feet. This amount of impervious surfaces proposed for the project is relatively minimal. In addition,

open, vegetated areas along the southern and western boundaries of the project site would remain undeveloped after the project is built. As such, the minimal addition of impervious surfaces would not substantially interfere with groundwater recharge. Because the project would not deplete groundwater supplies or interfere with groundwater recharge, a *less-than-significant* impact would occur.

- c-e. The project site is located within the Pinole Creek watershed, which encompasses approximately 12 square miles of urbanized and undeveloped land, most of which lies upstream of the project site. Pinole Creek discharges to San Pablo Bay about one mile northwest of the project site.

The existing site is comprised of 0.83-acre of impervious area and 1.07 acres of pervious vegetated area. The majority of the existing on-site storm drain system is directly connected to the City storm drain system in Canyon Drive, while one storm drain line is connected to an under sidewalk drain on Appian Way. A large portion of the site (approximately 0.45 acres) runoff is not collected in the on-site storm drain and flows easterly down the steep hillside toward the adjacent residential lots. In addition, the project frontage area along Appian Way is not collected in the on-site storm drain system due to the steep hillside. The project frontage area slopes westerly toward the back of sidewalk on Appian Way. All on-site stormwater runoff eventually drains downstream into Pinole Creek where it is then transported into the San Pablo Bay and San Francisco Bay.

All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. Known as the “C.3 Standards,” new development and redevelopment projects that create or replace 10,000 or more square feet of impervious surface area must contain and treat stormwater runoff from the site. The proposed project consists of approximately 1.9 acres of developed land, and development of the site would create or replace approximately 51,731 square feet of impervious surfaces. As such, the proposed project is a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures.

A Stormwater Control Plan (dated July 23, 2015) has been prepared for the project site by Tait & Associates, Inc. According to the Stormwater Control Plan, the project site has been divided into six Drainage Management Areas (DMAs), three of which will collect stormwater runoff via storm drain pipes, and convey the stormwater to on-site bioretention facilities. In general, bioretention areas will be designed per the C.3. Guidebook. All bioretention areas will feature a minimum 18-inch depth of sandy loam (minimum infiltration rate specified to be 5 inches per hour). The bioretention areas will be under-drained, and the under-drains will be connected to underground storm drains, which will carry the treated runoff to the underground detention structure proposed in the northeastern corner of the CVS/Pharmacy parking lot.

Using the C.3. integrated management practices (IMP) sizing calculator, the bioretention facilities have been adequately sized to treat the stormwater runoff for each of the three impervious drainage management areas, as follows:<sup>15</sup>

- Area A: square feet IMP required (982 sf); square feet IMP provided (1,009 sf)
- Area B: square feet IMP required (512 sf); square feet IMP provided (572 sf)
- Area C: square feet IMP required (616 sf); square feet IMP provided (658 sf)

Treated stormwater runoff will be conveyed from the IMP/bioretention facilities to the underground detention system in the CVS parking lot, where it will be stored and metered out of the detention system in a controlled fashion to ensure that the post-project runoff flow rates are less than or equal to the pre-project runoff flow rates, in compliance with the C.3 Guidebook flow control requirements. Treated runoff would be discharged into the existing City storm drain line in Canyon Drive.

The on-site bioretention areas will need to be maintained properly so that the on-site treatment system of the site functions properly. A long-term maintenance plan is needed to ensure that all proposed stormwater treatment BMPs function properly.

Therefore, without proper maintenance of the storm drain system, an adverse impact could occur with respect to creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff. Impacts would be *less than significant with mitigation*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

*IX-2. Prior to the completion of construction the applicant shall prepare and submit, for the City's review, an acceptable Stormwater Control Operation and Maintenance Plan. In addition, prior to the sale, transfer, or permanent occupancy of the site the applicant shall be responsible for paying for the long-term maintenance of treatment facilities, and executing a Stormwater Management Facilities Operation and Maintenance Agreement and Right of Entry in the form provided by the City of Pinole. The applicant shall accept the responsibility for maintenance of stormwater management facilities until such responsibility is transferred to another entity.*

g-i. According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Panel Number 06013C0231F, the project site is located in Flood Zone X,<sup>16</sup>

<sup>15</sup> Tait & Associates, Inc. *Stormwater Control Plan for CVS Pharmacy Store No. 9299* [pg. 9]. July 23, 2015.

<sup>16</sup> Federal Emergency Management Agency. *Contra Costa County, California, Flood Insurance Rate Map Panel 06013C0231F*. June 16, 2009.

which is defined as an area of minimal flood hazard from the principal source of flood in the area and determined to be outside of the 0.2 percent annual chance floodplain. Therefore, the project site is not located within a FEMA 100-year floodplain. In addition, the project does not involve the placement of housing, nor would the project increase population in the area. Because buildout of the proposed project would not place within the 100-year floodplain structures that would impede or redirect flood flows, and would not expose people or structures to a significant risk of loss, injury, or death involving flooding, the project would result in *no impact* related to development within the 100-year floodplain.

- j. Tsunamis are defined as sea waves created by undersea fault movement. A tsunami poses little danger away from shorelines; however, when tsunamis reach the shoreline, high swells of water break and wash inland with great force. According to the City's General Plan EIR, the potential for a significant tsunami event to occur within the City's planning area and cause any significant damage is considered low, as the San Francisco Bay would significantly attenuate the effect of tsunamis that might reach Pinole. Possible effects of a tsunami would likely occur in areas near the shores of the San Pablo Bay, which is located approximately 1.05-miles north of the project site. Due to the site's elevated topography (at least 242 feet above mean sea level), the project site would not be at risk of inundation by waters from a tsunami.

A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir, with destructive capacity that is not as great as that of a tsunami. The project is not located near a closed body of water large enough for a seiche to occur; therefore, the proposed project is not anticipated to be impacted by seiches. Mudflows typically occur at the base of mountainous or hilly terrain. Because the project site is not located at the base of any significant slopes, the project site would not be expected to be susceptible to mudflow inundation. Overall, the project area would not be threatened by a seiche, tsunami, or mudflow, and *no impact* would occur.

<b>X. LAND USE AND PLANNING.</b> <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plans, policies, or regulations 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 on environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

- a. The proposed project site is located in a developed area near residential land uses, commercial development, and associated parking lots. Development of the proposed project would consist of the construction of a pharmacy building and associated parking, a pylon structure, and cellular facilities. The project is consistent with the planned uses for the project site and would serve as an infill project. Therefore, implementation of the proposed project would not physically divide an established community, and ***no impact*** would occur.
  
- b. The proposed project site is located within an area that is designated in the General Plan as Service Sub-Area and in the Three Corridors Specific Plan as Commercial Mixed Use. The site is also zoned Commercial Mixed Use. The proposed project is consistent with the site’s existing CMU designations. In addition, the project site is identified as an Underutilized/Opportunity Site in the Three Corridors Specific Plan. Underutilized/Opportunity Sites identified in the Specific Plan provide opportunities to revitalize land use, improve the character of the corridors, and are considered prime candidates for economic development. Land Use Policy 6 of the Plan states the following: “Actively promote the “revitalization” of underutilized land.” The proposed project would accomplish this Specific Plan land use policy.

The proposed project does include components that are not permitted by right, including 24-hour operations, proposed drive-thru, and relocated cellular facilities. Therefore, the applicant is seeking Conditional Use Permits for these operations, which are discretionary permits issued by the City of Pinole. This IS/MND evaluates the potential environmental impacts resulting from these conditional uses, including impacts related to noise, safety, lighting, etc.

In addition, the applicant is seeking a variance for the proposed drive-thru given that the drive-thru is located closer than 300-feet to the nearest residential property line (see PMC Section 17.40.040(D)). This requirement is based upon noise concerns; and the noise

levels resulting from the proposed drive-thru lane and speakers are addressed in detail in Section XII of this IS/MND.

In conclusion, the proposed project is consistent with the currently adopted land use and zoning designations for the project site. The project applicant is seeking approval for conditional uses and a variance to the City's drive-thru standards; however, the potential environmental effects from these approvals are evaluated throughout this IS/MND, and the ultimate approval of these discretionary entitlements is subject to the City of Pinole, who will review the potential effects from these requested entitlements when considering whether to approve or deny the entitlement requests. Therefore, the proposed project would result in a *less-than-significant* impact with respect to conflicting with any applicable land use plans, policies, or regulations.

- c. According to the City's General Plan EIR, the City is within the boundaries of the Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area (USFWS, 1998). However, the City does not contain habitat for species listed in the recovery plan. The City, including the proposed project site, is not within the boundaries of any Habitat Conservation Plan/Natural Community Conservation Plan. Therefore, implementation of the proposed project would not conflict with any applicable Habitat Conservation Plan, Natural Community Conservation Plan, and *no impact* would occur.

<b>XI. MINERAL RESOURCES.</b> <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>

**Discussion**

a,b. The City of Pinole General Plan does not identify any regionally or locally important mineral resources within the City. In addition, known mineral resources of value to the region, residents of the State, or locally have not been identified on-site or during development of any adjacent uses. Therefore, the proposed project would not have an adverse effect on known mineral resources or recovery sites and ***no impact*** would occur.

<b>XII. NOISE.</b> <i>Would the project result in:</i>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

The following discussion is based on the Environmental Noise Assessment prepared for the proposed project by Bollard Acoustical Consultants, Inc. (see Appendix D).

a.c. The project site currently contains a three-story office building, occupied by an engineering firm and medical use. The rear of the site is currently being used for storage. The site is bordered to the north by Canyon Drive, beyond which is a parking area. There is an existing gas station on the northwest corner of Appian Way and Tara Hills Drive, and a professional building at the southwest corner of this intersection, opposite the project site. No noise-sensitive outdoor areas were identified for the existing professional building to the west. The nearest residential land uses to the project site consist of single-family residences to the immediate east of the project site. One of the adjacent residences is located on Canyon Drive and two additional residences, at the end of El Toro Way, border the eastern project site boundary. The residence on Canyon Drive is depressed relative to the project site by approximately eight (8) feet, whereas the El Toro Way residences are depressed approximately 40 feet relative to the project site. This elevation change results in substantial shielding of the project site from view of the El Toro Way residences.

For the purposes of this impact assessment, this analysis focuses on the noise sensitive residential uses to the immediate east of the project site. No exterior noise-sensitivity was identified for any other existing land uses in the immediate project vicinity.

Existing Ambient Noise Levels

The existing ambient noise environment in the immediate project vicinity is defined almost exclusively by traffic on I-80, Appian Way, and Canyon Drive. Therefore, the discussion of ambient noise levels in the project vicinity focuses primarily on traffic noise.

To quantify the existing overall ambient noise environment in the project vicinity, short-term (15-minute) and long-term (three-day) ambient noise level measurement surveys were conducted. The short-term monitoring was conducted at three locations on April 24, 2015 and the long-term monitoring at one location covered the 72-hour period from April 25 through 27, 2015. The noise measurement locations are shown on Figure 17. A summary of the long-term ambient noise surveys is provided in Table 7. In addition, a summary of the short-term ambient noise surveys is provided in Table 8.

<b>Table 7</b>						
<b>Long-Term Ambient Noise Level Measurement Results</b>						
<b>Noise Level Metric</b>	<b>Average Hourly Noise Level (Range), dB</b>					
	<b>April 25, 2015</b>		<b>April 26, 2015</b>		<b>April 27, 2015</b>	
	<b>Daytime</b>	<b>Nighttime</b>	<b>Daytime</b>	<b>Nighttime</b>	<b>Daytime</b>	<b>Nighttime</b>
$L_{eq}$	65 (61-66)	60 (58-63)	60 (57-62)	58 (56-61)	60 (57-61)	60 (56-63)
$L_{max}$	77 (71-82)	67 (63-70)	73 (65-81)	67 (62-80)	72 (66-78)	70 (64-79)
$L_{dn}$	68		65		67	

*Source: Bollard Acoustical Consultants, Inc., October, 2015 (see Appendix C).*

<b>Table 8</b>				
<b>Short-Term Ambient Noise Level Measurement Results</b>				
<b>Site</b>	<b>Time</b>	<b><math>L_{eq}</math> (dB)</b>	<b><math>L_{max}</math> (dB)</b>	<b>Notes</b>
1	12:27 PM	60.8	68.8	Traffic on Canyon Drive is the primary source
2	12:55 PM	66.6	80.4	Appian Way / Canyon Drive traffic
3	1:11 PM	63.0	72.0	I-80 is the dominant noise source

*Source: Bollard Acoustical Consultants, Inc., October, 2015 (see Appendix C).*

Both the long-term and short-term ambient noise survey results indicate that the project area noise environment is elevated. Average daytime noise levels were determined to be approximately 60 dB  $L_{eq}$  at the nearest residential property line to the east, and maximum noise levels were determined to be between 70 and 80 dB  $L_{max}$ . Due to the presence of I-80, nighttime average ambient conditions were not substantially lower than measured daytime noise levels.

Figure 17  
Noise Measurement Locations



Source: Bollard Acoustical Consultants, Inc. October, 2015.

To predict existing and projected noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The FHWA Model is based on the Calveno reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the project site. The FHWA Model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions.

Traffic volumes for existing conditions were obtained from Abrams Associates Traffic Engineering, Inc. Table 9 shows the existing traffic noise levels in terms of  $L_{dn}$  at a reference distance of 50 feet from the centerlines of existing project-area roadways. Table 9 also shows the distances to the existing 60, 65 and 70 dB  $L_{dn}$  traffic noise contours for the local roadway network.

Intersection	Direction	$L_{dn}$ @ 50 feet	Distance to Traffic Noise Contours (feet)		
			70 dB	65 dB	60 dB
Appian Way / Canyon Drive	North	67	33	70	151
	South	70	48	103	223
	East	57	6	14	29
	West	67	29	63	136
Appian Way / WB Ramp	North	70	51	109	236
	South	70	49	106	229
	East	67	34	73	158
	West	65	25	53	115
Appian Way / EB Ramp	North	70	50	109	234
	South	70	53	114	245
	East	66	26	56	121
	West	68	34	74	160
Entrance / Canyon Drive	South	--	--	--	--
	East	57	6	14	29
	West	57	6	14	29
Ridgecrest Drive / Canyon Drive	North	55	5	11	23
	East	51	3	5	12
	West	56	6	12	27

*Source: FHWA RD-77-108 with Calveno vehicle emission curves and inputs from Abrams Associates Traffic Engineering, Inc.; Caltrans; BAC; and Bollard Acoustical Consultants, Inc.*

Relevant Noise Standards

The City of Pinole Health and Safety Element establishes land use compatibility criteria for a variety of land uses in terms of the  $L_{dn}$  (or CNEL). The Land Use Compatibility Chart included in the General Plan indicates that commercial uses, such as the proposed CVS Project, would be normally acceptable in an exterior noise environment up to 60 dB  $L_{dn}$ , but conditionally acceptable in an exterior noise environment up to 80 dB  $L_{dn}$ .

According to Policy HS 9.1 of the General Plan, noise created by commercial or industrial sources associated with new projects or developments should be controlled so as not to exceed the noise level standards set forth in Table 10:

<b>Table 10</b>		
<b>City of Pinole Maximum Allowable Noise Exposure from Stationary Sources<sup>1</sup></b>		
	<b>Daytime<sup>5</sup></b> <b>(7 AM to 10 PM)</b>	<b>Nighttime<sup>2,5</sup></b> <b>(10 PM to 7 AM)</b>
Hourly Leq, dB <sup>3</sup>	55	45
Maximum Level, dB <sup>3</sup>	70	65
Maximum Level, dB – Impulsive Noise <sup>4</sup>	65	60
<p><sup>1</sup> As determined at the property line of the receiving land use. When determining effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.</p> <p><sup>2</sup> Applies only where the receiving land use operates or is occupied during nighttime hours.</p> <p><sup>3</sup> Sound level measurements shall be made with “slow” meter response.</p> <p><sup>4</sup> Sound level measurement shall be made with “fast” meter response.</p> <p><sup>5</sup> Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly Leq is at least 10 dB lower than the allowable level.</p> <p><i>Source: City of Pinole General Plan Update Draft EIR, July 2010.</i></p>		

Footnote 5 of this table indicates that allowable noise levels shall be increased to the ambient noise level where ambient noise levels exceed the standards shown above. Based on the ambient noise measurement results shown in Tables 7 and 8, daytime and nighttime ambient noise conditions at the nearest residential property line to the east averaged approximately 60 dB Leq. As a result, this analysis applies a property line noise level standard of 60 dB Leq to the eastern project site boundary.

Table 7 also indicates that measured maximum noise levels at the eastern residential property line were generally between 65 to 70 dBA during nighttime hours. As a result, no modifications to the City’s 65 dB Lmax nighttime noise level standard appear to be warranted for this project. However, Tables 7 and 8 indicate that measured daytime maximum noise levels frequently exceeded 70 dB Lmax at the eastern residential property line. As a result, this analysis applies a property line noise level standard of 75 dB Lmax to the eastern project site boundary for daytime hours.

Existing and Future Noise Levels Associated with Project-Related Traffic

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels were predicted at a representative distance for both the project and no-project scenario under existing (baseline) and future (cumulative) conditions. Noise impacts are identified at existing noise-sensitive areas if the noise level increases, which result from the project, exceed the three dB significance criteria of the City of Pinole. As noted previously, the FHWA Model was used to predict the existing noise levels due to traffic. To predict traffic noise levels in terms of L<sub>dn</sub>, the input volume must be adjusted to account for the day/night distribution of traffic.

Table 11 and Table 12 show the predicted increases in traffic noise levels on the local roadway network for existing (baseline) and future (cumulative) conditions, respectively, which would result from the project. The tables are provided in terms of  $L_{dn}$  at a standard distance of 50 feet from the centerlines of the project-area roadways. The 50-foot distance was selected because the distance represents the approximate distances from the roadway centerlines to the nearest existing residences to those roadways.

<b>Table 11</b>				
<b>Predicted Baseline and Baseline Plus Project Traffic Noise Levels</b>				
<b>Intersection</b>	<b>Direction</b>	<b>Noise Levels (<math>L_{dn}</math>, dBA)</b>		
		<b>Baseline</b>	<b>Baseline Plus Project</b>	<b>Increase</b>
Appian Way / Canyon Drive	North	67.3	67.4	0.0
	South	69.9	69.9	0.1
	East	56.7	57.6	1.0
	West	66.7	66.7	0.0
Appian Way / WB Ramp	North	70.2	70.3	0.1
	South	70.0	70.1	0.1
	East	67.6	67.6	0.0
	West	65.6	65.6	0.0
Appian Way / EB Ramp	North	70.2	70.2	0.0
	South	70.5	70.5	0.0
	East	65.9	65.9	0.0
	West	67.7	67.7	0.0
Entrance / Canyon Drive	South	--	43.1	N/A
	East	56.7	56.7	0.0
	West	56.7	57.6	1.0
Ridgecrest Drive / Canyon Drive	North	55.0	55.0	0.0
	East	50.7	50.7	0.0
	West	56.1	56.1	0.0

*Source: FHWA RD-77-108 with inputs from Abrams Associates Traffic Engineering, Inc and Bollard Acoustical Consultants, Inc., 2015.*

The intent of Table 11 and Table 12 is to determine project-related noise level increases along surrounding roadways. Many factors could cause actual traffic noise levels to differ from those provided in Table 11 and Table 12, including shielding by existing noise barriers, buildings, or topography, variations in vehicle speeds, truck percentages, day/night distribution of traffic, etc. Accounting for every such variation is neither feasible nor necessary to satisfy the intent of the analysis. By holding such variables constant, and only varying the traffic volumes to reflect the additional traffic generated by the proposed project, the project-related increase in noise levels can be isolated.

Evaluation of the Table 11 and Table 12 data indicate that the project-related increase in both existing (baseline) and future (cumulative) traffic noise levels would be 1.0 dB  $L_{dn}$  or less on all project area roadways. The range of traffic noise level increases is below the City's three dB threshold. Consequently, the proposed project would not result in exposure of persons to transportation noise levels in excess of standards established in the City's General Plan.

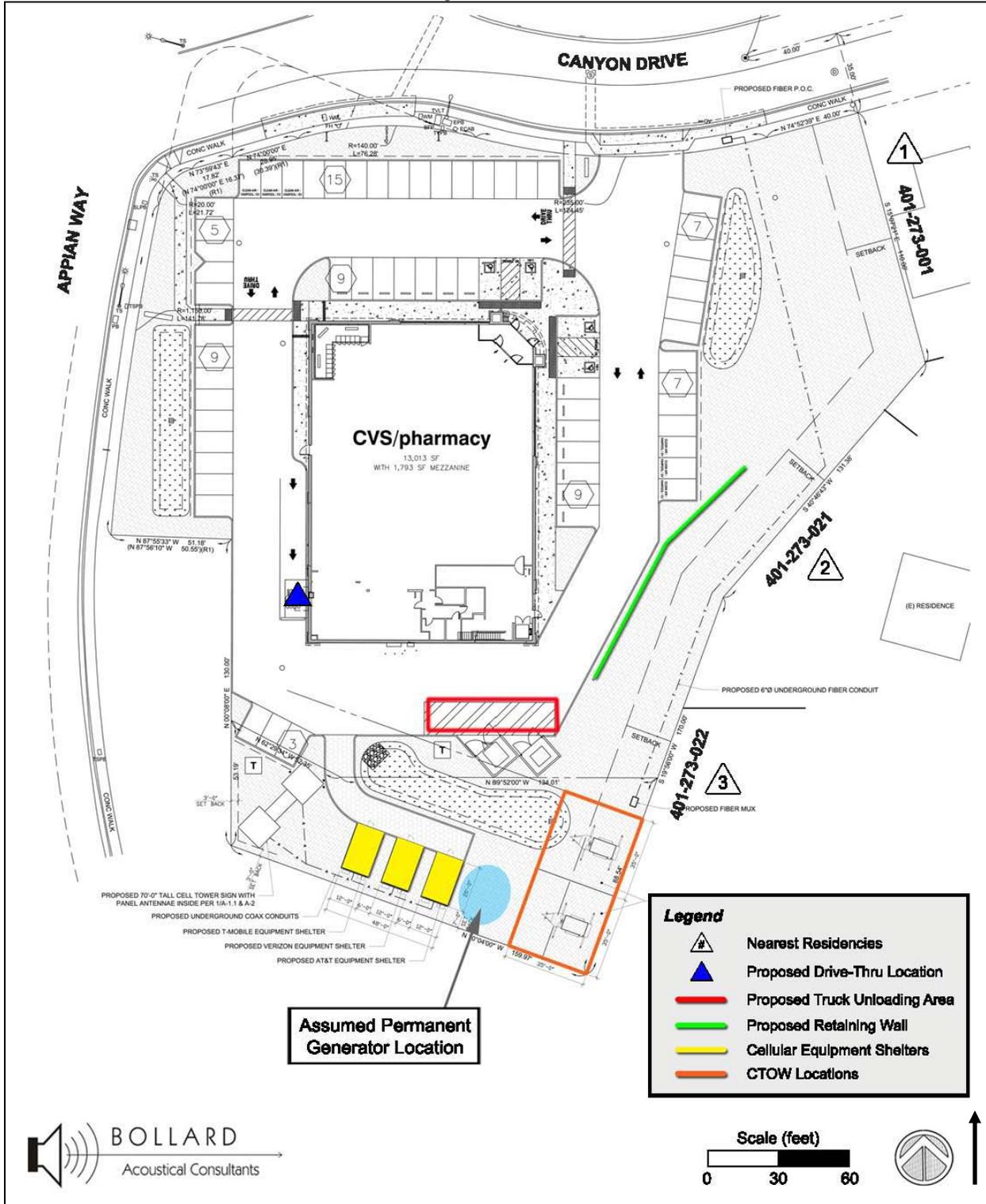
Intersection	Direction	Noise Levels ( $L_{dn}$ , dBA)		
		Future	Future Plus Project	Increase
Appian Way / Canyon Drive	North	67.8	67.8	0.0
	South	70.3	70.4	0.1
	East	57.1	58.0	1.0
	West	67.1	67.2	0.0
Appian Way / WB Ramp	North	70.7	70.8	0.1
	South	70.4	70.6	0.1
	East	68.1	68.1	0.0
	West	65.8	66.1	0.0
Appian Way / EB Ramp	North	70.6	70.7	0.0
	South	70.9	71.0	0.0
	East	66.4	66.4	0.0
	West	68.2	68.2	0.0
Entrance / Canyon Drive	South	--	43.1	N/A
	East	57.1	57.2	0.0
	West	57.1	58.0	1.0
Ridgecrest Drive / Canyon Drive	North	55.5	55.5	0.0
	East	51.2	51.2	0.0
	West	56.6	56.6	0.0

*Source: FHWA RD-77-108 with inputs from Abrams Associates Traffic Engineering, Inc and Bollard Acoustical Consultants, Inc., 2015.*

Noise Levels Associated with Project Operation

Operation of the proposed CVS/Pharmacy would require truck deliveries and commercial unloading at the project site. In addition, the proposed pharmacy includes a drive-thru lane on the west side of the building. Furthermore, HVAC requirements for the commercial buildings within the project area will likely be met using packaged roof-top systems. Lastly, the project includes installation of three permanent cellular equipment shelters in the southern portion of the site, each intended for a different cellular carrier, though only two cellular carriers (T-Mobile and Verizon) will be approved as part of this project. The project site plans indicate that each equipment shelter will have two exterior mounted HVAC units, all facing in the southwest direction. The permanent cellular equipment for Verizon would also require a generator in case of power outages. See Figure 18 for the location of the proposed unloading area, drive-thru location, and cellular equipment shelters. The following discussion outlines the project-generated operational noise levels associated with truck deliveries, truck loading, the drive-thru lane, HVAC equipment, and the cellular equipment generator.

Figure 18  
Project Site Plan



Source: Bollard Acoustical Consultants, Inc. October, 2015.

### *Truck Deliveries and Unloading*

The primary noise source associated with loading dock areas are the heavy trucks stopping (air brakes), backing into the loading docks (back-up alarms), and pulling out of the loading docks (revving engines). Once the trucks have backed into the loading dock, the trucks are unloaded from the inside of the store using a fork lift or hand cart, and most of the unloading noise is contained within the building and truck trailer. In addition to truck arrivals, unloading and departures, the loading dock area would include a trash compactor, which also generates noise.

The truck unloading area will be largely shielded from view of the nearby residential property line and nearest residences to the east due to the dramatic elevation difference between the project site and those receptors. Specifically, the nearest residential property line to the east is depressed approximately 20 feet relative to the proposed project site elevation, with the nearest residences on El Toro Way depressed an additional 20 feet at the residential building pad elevation, for a total depression of 40 feet relative to the project site. Because noise generated during truck unloading activities would be substantially attenuated by this elevation difference, the loudest component of truck deliveries associated with project operations is expected to be truck passbys near the eastern site boundary.

CVS/Pharmacies typically generate light heavy truck activity once initial store stocking has been completed. According to project representatives, the CVS/Pharmacy store will receive up to three regular weekly heavy truck deliveries to provide product for the store. The deliveries would occur on different days and times throughout the week. Heavy truck unloading would occur at the unloading area. In addition to occasional heavy truck deliveries, medium-duty vendor trucks and side-step vans will also deliver products to the store.

For a conservative assessment of daily truck delivery noise levels at this location, the noise assessment assumed that one heavy truck and four medium duty trucks/vans would deliver products to the store on a typical busy day. For the purposes of predicting hourly average noise levels for comparison against the City's noise standards, the noise assessment assumed that one heavy truck and two medium duty trucks could have store deliveries during the same worst-case hour.

According to the project site plans, one site access is proposed on Canyon Drive. The nearest residential property line to the east (El Toro Way Residences) is approximately 50 feet from the center of the truck passby area, and approximately 80 feet from the center of the truck unloading area.

Truck deliveries are expected to be relatively brief, and would likely occur primarily during normal business (daytime) hours. According to the noise assessment, heavy truck passbys produce an average Sound Exposure Level (SEL) of approximately 90 dB at a distance of 50 feet, with medium duty trucks (including side step vans) producing a SEL of approximately 76 dB. Based on these levels and assuming one semi-trailer delivery

and two medium duty truck deliveries would occur during any given hour, the resulting average noise level at the nearest residential property line to the east would be approximately 50 dB  $L_{eq}$  during the worst-case hour of truck deliveries, including shielding provided by the elevation differential between the property line and project site. The aforementioned noise level would satisfy the adjusted 60 dB  $L_{eq}$  property line noise level standard of the City of Pinole during both daytime and nighttime hours.

After consideration of the shielding resulting from the depressed position of the property line relative to the project site, maximum ( $L_{max}$ ) noise levels generated by heavy truck passbys are predicted to range from 70 to 75 dB  $L_{max}$  at the nearest residential property line to the east, with medium duty truck predicted to range from 60 to 65 dB  $L_{max}$ . The range of predicted heavy truck maximum noise levels would be satisfactory relative to the City's adjusted 75 dB  $L_{max}$  noise standard during daytime hours, but would exceed the City's 65 dB  $L_{max}$  noise standard during nighttime hours. The predicted range of medium duty truck maximum noise levels would be satisfactory with both daytime and nighttime noise level standards of the City of Pinole. Because nighttime heavy truck deliveries could result in exceedance of the City's noise standards at the nearest residential property boundary, operational noise impacts as a result of truck deliveries would be potentially significant without mitigation.

#### *Drive-Thru Lane*

The proposed project includes a single lane pharmacy drive-thru on the west side of the building. The distance from the drive-thru to the nearest residential property line is approximately 175 feet to the east, which would require a Variance from the City of Pinole, pursuant to PMC Section 17.40.040(D), which requires a drive-thru to be setback 300 feet from the nearest residential property line. The proposed drive-thru area would be completely shielded from view of the nearest residences to the east by the proposed CVS/Pharmacy building. Although extensive drive-thru activity is not anticipated during nighttime hours, for convenience to the CVS/Pharmacy customers, the drive-thru pharmacy operations could be available 24-hours per day.

To quantify the noise levels of proposed drive-thru vehicle passages and speaker usage, noise level measurements of CVS/Pharmacy drive-thru operations at the Calvin/Bradshaw store in Elk Grove, California, were conducted. The measurements indicated that drive-thru speaker and vehicle idling noise levels are approximately 50 dB  $L_{eq}$  and 55 dB  $L_{max}$  at a reference distance of 50 feet from the drive-thru speaker. At a distance of 175 feet to the nearest residential property line to the east, average and maximum noise levels associated with continuous drive-thru lane usage would be 24 dB  $L_{eq}$  and 29 dB  $L_{max}$ , including a conservative estimate of 15 dB shielding provided by intervening topography and the proposed CVS/Pharmacy building. The predicted drive-thru noise levels at the nearest residential property lines to the east would be well below the City's noise standards during both daytime and nighttime hours. As a result, operational noise impacts resulting from the proposed drive-thru lane would be less than significant.

### *Rooftop Mechanical Equipment*

HVAC requirements for the commercial building will be met using packaged roof-top systems. The units would be shielded from view of neighboring residential uses by the rooftop parapet. According to the noise assessment, packaged rooftop air conditioning systems are typically inaudible at ground-level receptors due to the elevated position of the equipment and shielding provided by the rooftop parapets. Given the substantial elevation change between the project site and nearest residential property line, HVAC equipment noise levels are predicted to be approximately 45 dB  $L_{eq}$  at that nearest property line.

Because the predicted worst-case HVAC equipment noise level of 45 dB  $L_{eq}$  would satisfy both the City's daytime and nighttime noise level standards, and would generate noise levels well below measured existing ambient noise levels in the project vicinity, operational noise impacts related to the HVAC equipment would be less than significant.

### *Permanent Cellular Equipment – HVAC*

The proposed project includes installation of three permanent cellular equipment shelters, each for a different cellular carrier, in the southern portion of the site behind the proposed CVS/Pharmacy store. It is anticipated that each equipment shelter will have two exterior mounted HVAC units, all facing in the southwest direction. Based on BAC's extensive experience with performing hundreds of noise analyses for cellular equipment facilities, the HVAC units will likely be Bard WA3S1 Wall-Mount Step Capacity Air Conditioners. Noise exposure from each of the HVAC units is approximately 67 dB ( $L_{eq}$ ) at a distance of 10 feet from the equipment. Because the HVAC units will not directly face the residential property line to the east and have a sideline exposure, predicted noise levels were conservatively adjusted by 5 dB to account for the noise-generation directionality of the HVAC units.

The combined noise level of up to six HVAC units at the nearest residential property line to the east would be 51 dB  $L_{eq}$ . The aforementioned noise level would satisfy both the adjusted City daytime and nighttime noise level standards, and would generate noise levels well below measured existing ambient noise levels in the project vicinity. As a result, noise generated by the cellular equipment shelter HVAC units would be less than significant.

### *Permanent Cellular Equipment –Generator*

Emergency generators are commonly installed at cellular equipment sites to provide ongoing cellular communication capabilities during power outages. A Generac Industrial Power Systems Model SD048, equipped with a level 2 acoustic enclosure, will be provided for backup power for the proposed Verizon Wireless equipment shelter. The generator will be located just east of Verizon's equipment shelter. With a level 2 acoustic enclosure, noise generation from this generator is reported to be 66 dB at a distance of 23 feet from the equipment while the generator is operating. T-Mobile will either utilize a

fuel cell or batteries, rather than a generator, to provide temporary power in the event of an outage.

Verizon’s cellular facility emergency generator will be tested during daytime hours, once per week, for a duration of approximately 30 minutes. As a result, the City’s adjusted daytime average noise level standard of 60 dB L<sub>eq</sub> would be applied to the routine daytime testing operations of the generator.

The nearest residential property line is approximately 50 feet from the generator location. At a distance of 50 feet, the predicted hourly average noise levels for the routine generator testing during daytime hours would be approximately 56 dB L<sub>eq</sub> without applying any offset for shielding by the intervening grade differential. Because the predicted generator noise emissions satisfy the City’s adjusted 60 dB L<sub>eq</sub> noise criteria at the nearest residential property line, operational noise impacts related to the emergency generator would be less than significant.

Cumulative Noise from all Operational Sources

Combined noise levels for each source individually, as well as the cumulative noise exposure from all sources operating concurrently, are shown below. It should be noted that project construction noise would not occur simultaneously with operational noise. Because the cumulative noise generation of all sources would be less than the City of Pinole exterior noise criteria applied at the property line of residential land uses, this impact is considered less than significant.

<b>Summary of Predicted Noise levels at Nearest Residences CVS Project – Pinole, California</b>		
<b>Source</b>	<b>Noise Level at Residential Property Line, Leq</b>	<b>Daytime / Nighttime Noise Standard, Leq</b>
Truck Circulation & Unloading	50	
Drive-Through	24	
Rooftop Mechanical Equipment	45	
Cellular Equipment Cabinets	42	60 /60 <sup>1</sup>
Cellular Emergency Generator	50	
Project-Generated Off-Site Traffic	43	
<b>Combined Sources</b>	<b>54</b>	
<ol style="list-style-type: none"> <li>1. See Regulatory Setting Section. City’s 55 dB Leq daytime and 45 dB Leq nighttime average noise level standards were increased to account for high measured ambient conditions at the project site.</li> <li>2. Source: Bollard Acoustical Consultants, Inc.</li> </ol>		

## Conclusion

As stated previously, the traffic noise level increases resulting from the proposed project would be below the City's three dB threshold. Noise generated by the drive-thru lane, HVAC equipment, and the cellular equipment HVAC units and emergency generator are all predicted to comply with City of Pinole noise standards. However, in order to ensure that noise levels at the nearest residences as a result of truck deliveries and unloading are minimized, the following mitigation is required. Therefore, impacts would be considered ***less than significant with mitigation***.

### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impacts to a *less-than-significant* level.

- XII-1. Prior to the issuance of an occupancy permit, the project applicant shall ensure that all vendor contracts include the stipulation that heavy truck deliveries shall be limited to daytime hours (7:00 AM – 7:00 PM). In addition, signage shall be posted within the loading dock area, in a clearly visible location, which includes allowable delivery hours for heavy duty trucks.*
- b. Federal, state, or local regulatory standards for vibration do not exist; however, various criteria have been established to assist in the evaluation of vibration impacts, including vibration criteria based on human perception and structural damage risks developed by Caltrans. For most structures, Caltrans considers a peak-particle velocity (ppv) threshold of 0.2 inches per second (in/sec) at a distance of approximately 50 feet to be the level at which architectural damage (i.e., minor cracking of plaster walls and ceilings) to normal structures may occur. The nearest structures subject to damage from vibration are located greater than 50 feet from the areas on-site where any vibratory construction equipment may be used. Therefore, consistent with the conclusions of the project-specific noise report, the project does not propose any appreciable sources of vibration; and a ***less than significant*** impact would occur.
- d. Temporary or periodic increases in ambient noise levels in the project vicinity may occur as a result of construction of the proposed CVS/Pharmacy building and as a result of the temporary cellular facility.

### Project Construction

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in typical construction would generate maximum noise levels, as indicated in Table 13, ranging from 70 to 90 dB at a distance of 50 feet. Construction activities are expected to occur during normal daytime working hours.

When demolition, ground clearing, excavation, and foundation work occur near the adjacent residences, daytime noise levels can be expected to exceed existing noise levels at those locations. As a result, construction activities associated with the proposed project have the potential to result in temporary noise levels that could impact nearby residences. Construction related noise impacts are typically only occasionally intrusive and cease once construction is complete. Nonetheless, because project construction could result in substantial short-term increases in ambient noise levels at the nearby residential land uses, the impact is considered potentially significant without mitigation.

<b>Equipment Description</b>	<b>Maximum Noise Level at 50 feet (dBA)</b>
Auger drill rig	85
Backhoe	80
Bar bender	80
Boring jack power unit	80
Chain saw	80
Compactor (ground)	85
Compressor (air)	80
Concrete batch plant	80
Concrete mixer truck	83
Concrete pump truck	85
Concrete saw	82
Crane (mobile or stationary)	90
Dozer	85
Dump truck	85
Excavator	84
Flat bed truck	85
Front end loader	80
Generator (25 kilovoltamperes [kVA] or less)	70
Generator (more than 25 kVA)	82
Grader	85
Hydra break ram	90
Jackhammer	85
Mounted impact hammer (hoe ram)	90
Paver	85
Pneumatic tools	85
Pumps	77
Rock drill	85
Scraper	85
Soil mix drill rig	80
Tractor	84
Vacuum street sweeper	80
Vibratory concrete mixer	80

*Source: Federal Highway Administration, 2006.*

### Temporary Cellular Facility Noise

During construction of the CVS/Pharmacy building, Verizon Wireless will utilize a COW that may require a single generator if temporary power from the grid cannot be provided by the contractor. COW is a mobile cell site that consists of a cellular antenna tower, electronic radio transceiver equipment, and a backup power generator on a trailer. The following worst-case analysis assumes that the generator provides power to the COW during all hours of the day. T-Mobile has assumed, based upon discussions with the project applicant, that their COW can receive temporary power from the grid.

The project site plans indicate that the COW will have two exterior mounted HVAC units, both facing away from the residential property line to the east. The HVAC units are expected to have similar noise generation to those assumed for the permanent equipment shelter installation, which is 67 dB at a reference distance of 10 feet. Because the HVAC units are proposed to face away from the residential property line to the east, predicted noise levels were conservatively adjusted by 10 dB to account for the noise-generation directionality of the HVAC units. The combined noise level of the two HVAC units at the nearest residential property line to the east, 18 feet away, would be 54 dB  $L_{eq}$ .

A Generac Industrial Power Systems Mobile Generator, MMG100, will be provided for power for the proposed COW. The generator will be located adjacent to the COW. Noise generation from this generator is reported to be 68 dB at a distance of 23 feet from the equipment, while the generator is operating. The nearest residential property line is approximately 20 feet from the temporary generator location. At this distance, the predicted hourly average noise levels for generator operation would be approximately 69 dB  $L_{eq}$ .

The combined noise exposure from the COW and generator would be 69 dB  $L_{eq}$  at the nearest residential property line to the east and would exceed the City of Pinole adjusted nighttime noise level criteria of 60 dB  $L_{eq}$ . Because nighttime operation of the temporary generator during construction could result in exceedance of the City's noise standards at the nearest residential property boundary, this impact is considered significant. However, Verizon has indicated that they are flexible with respect to the ultimate location of the temporary COW. With implementation of the following mitigation measure, requiring relocation of the COW, the associated noise impact would be less than significant.

### Conclusion

Construction of the proposed project could result in substantial temporary or periodic increases in ambient noise levels. Impacts would be considered *less than significant with mitigation*.

### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the potential impacts to a *less-than-significant* level.

*XII-2. Prior to the issuance of a grading permit, the grading plan shall indicate that the following measures will be complied with during construction of the project, subject to review and approval by the Development Services Department:*

- 1. Construction activities shall be limited to the hours between 7:00 AM and 5:00 PM on non-federal holidays. No construction activities should occur on Saturdays or federal holidays (Consistent with Pinole Municipal Code Section 15.02.070).*
- 2. Construction Equipment Mufflers and Maintenance: All construction equipment powered by internal combustion engines shall be properly muffled and maintained.*
- 3. Idling Prohibitions: All equipment and vehicles shall be turned off when not in use. Unnecessary idling of internal combustion engines is prohibited.*
- 4. Equipment Location and Shielding: All stationary noise-generating construction equipment, such as air compressors, shall be located as far as practical from the adjacent homes. Acoustically shield such equipment when it must be located near adjacent residences.*
- 5. Quiet Equipment Selection: Select quiet equipment, particularly air compressors, whenever possible. Motorized equipment shall be outfitted with proper mufflers in good working order.*
- 6. Staging and Equipment Storage: The equipment storage location shall be sited as far as possible from nearby sensitive receptors.*
- 7. Noise Disturbance Coordinator: Developer shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. This individual would most likely be the contractor or a contractor's representative. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented. The telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*

*XII-3. Prior to the approval of improvement plans, the plans shall indicate that the Cellular Towers on Wheels (COWs) and generator shall be located a minimum of 50 feet away from the residential property line to the east. Maintaining a 50-foot buffer from the residential property line would*

*result in predicted facility noise levels of less than 60 dB  $L_{eq}$ , satisfying the City of Pinole daytime and nighttime noise level standards.*

- e.f. The project site is not located within an airport land use plan, two miles of a public airport, or the vicinity of a private airstrip. The nearest airport is the Buchanan Field Airport located approximately 13.0 miles east of the project site. Therefore, the project would not expose people to excessive noise levels associated with air traffic, and ***no impact*** would occur.

**XIII. POPULATION AND HOUSING.**

*Would the project:*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

- a. The proposed project does not involve the creation of housing and would not introduce any new residents to the area. Housing does not currently exist on the project site and existing housing would not be demolished as part of the proposed project. Accordingly, displacement of housing or people would not occur as a result of the proposed project. The proposed project would, however, provide employment opportunities within the City. The proposed project is intended to serve the existing residential areas located in the vicinity of the project site by providing a retail store and pharmacy.

While Contra Costa County has historically maintained a jobs-to-housing ratio over one job per household, the City of Pinole has historically had an excess of housing units compared to available jobs. For example, Contra Costa County had a jobs-to-housing ratio of 1.03 in 2005. In contrast, the 2005 jobs-to-housing ratio in the City of Pinole was 0.84. See Table 14 below for the City of Pinole jobs projections.

Year	Jobs	Jobs-to-Housing Ratio
2015	6,500	0.88
2020	6,850	0.91
2025	7,210	0.93
2030	7,560	0.94

*Source: City of Pinole. City of Pinole General Plan Update Draft Environmental Impact Report. July 2010*

A typical CVS/Pharmacy generally has 25 to 30 employees on payroll. The proposed project would contribute jobs to an area which currently has an excess of housing. With implementation of the proposed project, the City's jobs-to-housing ratio would increase. Therefore, although the proposed project could induce population growth in the area by introducing new businesses and employment opportunities, the increase in employees to the area would help balance the City's current jobs to housing ratio.

Overall, implementation of the project would not induce substantial population growth in the area nor displace housing or people, and a *less-than-significant* impact would occur related to population and housing.

- b,c. The project is currently developed with a three-story office building, associated parking lot, temporary storage building, and cellular facilities. Housing is not located on-site. Therefore, redevelopment of the project site with a CVS Pharmacy would not displace people or housing, such that the construction of replacement housing would be necessary elsewhere. The project would have *no impact* under these categories.

**XIV. PUBLIC SERVICES.**

*Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion**

- a. The City shares responsibility for fire and emergency medical services with Contra Costa County Consolidated Fire Protection District (Con Fire) and Rodeo/Hercules as part of a regional group called Battalion 7. In response to a 9-1-1 call, the Battalion 7 fire engine closest to the emergency is dispatched, regardless of jurisdictional boundaries. The program has reduced response times and assures that adequate numbers of engines automatically respond to each emergency without additional requests for aid.

The City of Pinole Fire Department provides full fire and rescue services, fire suppression, medical advanced life support, rescue and hazardous materials response. The Fire Department promotes disaster preparedness, fire prevention and safety in the City by providing free services and safety devices, public outreach (schools, businesses) and public education and/or training courses (safety demonstrations including child car seat safety and earthquake preparedness), maintenance (station upgrades, etc.) and biannual commercial inspections. According to Figure 8.1 of the City’s General Plan, the project site is located within the Pinole Fire Department Service Area.

The City of Pinole Fire Department maintains Station 73, a station located in the Public Safety Building adjacent to City Hall in Old Town. The closest fire station to the project site, Station 73, is located approximately 0.83-mile to the northeast. The proposed project is consistent with what has been anticipated for the site per the City’s General Plan land use designation, Three Corridors Specific Plan, as well as the City’s zoning designation. Accordingly, the increase in demand for fire protection services due to buildout of the site has already been anticipated in the General Plan. The General Plan EIR concluded that impacts related to the increased demand for fire protection and emergency medical services due to buildout of the General Plan would be less than significant.<sup>17</sup> Furthermore, the site is currently developed with a three-story office building and appurtenant features, which creates a potential demand for fire protection services under existing conditions. Therefore, consistent with the conclusion of the City’s General Plan

<sup>17</sup> City of Pinole. *City of Pinole General Plan Update Draft Environmental Impact Report [pg. 4.12-6]*. July 2010.

EIR, the proposed project would result in a *less-than-significant* impact associated with fire protection services.

- b. The Pinole Police Department shares the Public Safety Building with the Pinole Fire Department. From the base of operations, the Police Department patrols all areas within the city limits of Pinole, responds to and investigates crime, responds to all calls on school property and assists with animal control problems. Pinole Police regularly provide emergency “first in” response to East Bay Regional Parks areas and are also responsible for responding to criminal activity on I-80 along with the California Highway Patrol.

The Pinole Police Department is located approximately 0.83-mile to the northeast of the project site. According to the City’s General Plan Update Draft EIR, the population of the City is projected to increase from a population of about 20,100 in 2010 to an ultimate General Plan buildout population of 23,875 in 2030. Although the population increase would result in an increase in demand for law enforcement services, such an increase would not result in any significant impacts to the department, and new or expanded facilities, equipment, or staff would not be needed to maintain current service levels. Department funding would be increased as development occurs through the generation of additional sales, property, and other local taxes. The proposed project is consistent with what has been anticipated for the site per the City’s General Plan land use designation, as well as the City’s zoning designation. Accordingly, the increase in demand for police protection services due to buildout of the site has already been anticipated in the General Plan. Therefore, the proposed project would have a *less-than-significant* impact regarding police protection.

- c-e. The proposed project does not involve housing and would not be expected to introduce new residents to the area. As such, the project would neither directly nor indirectly result in an increased demand for schools, parks, or other public facilities such as library services. Therefore, overall the proposed project would have *no impact* regarding the provision of new or physically altered schools, park, or other services and facilities.

**XV. RECREATION.**  
*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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>

**Discussion**

- a,b. The proposed project does not involve housing and would not directly induce population growth in the area. Thus, an increase in the use of existing neighborhood and regional parks would not be expected to occur as a result of the proposed project. Construction of new or expansion of existing recreational facilities would not be necessary due to the proposed project. Therefore, the project would have *no impact* related to recreation facilities.

**XVI. TRANSPORTATION AND CIRCULATION.**  
*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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

a,b. A Transportation Impact Analysis was prepared for the proposed project by Abrams Associates Traffic Engineering, Inc. (dated August 19, 2015). The Traffic Analysis evaluated the following five (5) study intersections:

1. Appian Way at Canyon Drive/Tara Hills Drive;
2. Appian Way at the I-80 Westbound Ramps;
3. Appian Way at the I-80 Eastbound Ramps;
4. Canyon Drive at the Proposed Project Entrance; and
5. Canyon Drive at Ridgecrest Drive.

Please note the above list includes all intersections for which over 50 peak hour trips could be added as a result of the project, in accordance with the Contra Costa Transportation Authority (CCTA) technical procedures.<sup>18</sup> The study intersections were evaluated for the following six (6) scenarios:

1. Existing Conditions – The Existing scenario Level of Service (LOS) is based on the existing peak hour volumes and existing intersection configurations.

<sup>18</sup> *Final Technical Procedures*, Contra Costa Transportation Authority, Walnut Creek, CA, January 16, 2013.

2. Existing Plus Project – The Existing Plus Project scenario is based on the Existing Conditions traffic volumes plus trips from the proposed project.
3. Baseline (No Project) Conditions – The Baseline scenario is based on the existing volumes plus growth in background traffic (for three years) plus the traffic from all reasonably foreseeable developments that could substantially affect the volumes at the project study intersections. The developments include the Pinole Gateway Project and a proposed 10,000 sf medical office building at the corner of Henry Avenue and Pinole Valley Road.
4. Baseline Plus Project Conditions – The Baseline Plus Project scenario is based on the Baseline traffic volumes plus the trips from the proposed project.
5. Cumulative Conditions – The Year 2040 cumulative volumes are based on planned and approved projects and the most recent (March 2013) release of the Countywide Travel Demand Model.
6. Cumulative Plus Project Conditions – The Year 2040 cumulative volumes are based on the most recent release of the Countywide Travel Demand Model plus the trips from the proposed project.

See Figure 19 for the location of the study intersections.

#### Existing Roadway Network

Routes of Regional Significance (RRS) are major roadway and freeway corridors that serve regional traffic. The RRS are identified in Action Plans adopted by the CCTA under the countywide Measure J program. Within the project study area, the I-80 freeway and Appian Way are identified as RRS in the West County Action Plan. The following are RRS that could be affected by the project:

- I-80: I-80 is the primary regional east-west freeway in the project area. I-80 is eight lanes (three lanes plus a high occupancy vehicle [HOV] lane in each direction) and travels in a generally north/south direction in the project vicinity through the Cities of Pinole, Richmond, San Pablo and El Cerrito. The freeway is the primary route for regional traffic between San Francisco and Sacramento. The proposed project is located just north of the I-80 interchange with Appian Way.
- Appian Way: In the project study area, Appian Way provides the primary access to I-80, as well as the shopping areas along Tara Hills Drive and Fitzgerald Drive. Appian Way is designated as an arterial RRS and serves both local and regional traffic and within the study area. Appian Way is a four-lane roadway with a raised median.

Figure 19  
Study Intersections



Source: Abrams Associates, 2015.

The following local roadways were included in the analysis:

- **Appian Way:** In the project study area, Appian Way provides the primary access to I-80 as well as the shopping areas along Tara Hills Drive and Fitzgerald Drive. Appian Way is designated as a collector street in the City's General Plan. In the vicinity of the proposed project, Appian Way is a two-lane roadway that provides access to residential areas to the east of the project site.
- **Canyon Drive:** Canyon Drive is generally an east-west local roadway that extends east from Appian Way. Canyon Drive provides access to commercial uses and residential areas and is designated as a collector street in the City's General Plan. All access driveways for the proposed project would be located on Canyon Drive.
- **Tara Hills Drive:** Tara Hills Drive is an east-west local roadway that extends west from Appian Way and terminates at Montara Bay Park. Tara Hills Drive provides access to commercial and residential areas and is designated as an arterial in the City's General Plan.
- **Ridgecrest Drive:** Ridgecrest Drive is a two-lane roadway that provides access to residential areas and a connection to Henry Avenue and Pinole Valley Road. Ridgecrest Drive is designated as a local street in the City's General Plan.

#### Intersection Analysis Methodology

Existing operational conditions at the five (5) study intersections were evaluated according to the requirements set forth by the CCTA using the methodology in the Final Technical Procedures Update (dated July 19, 2006). Analysis of traffic operations was conducted using the 2010 Highway Capacity Manual (HCM) LOS methodology with Synchro software.<sup>19</sup> LOS is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through it at any given time. The LOS scale describes traffic flow with six ratings ranging from A to F, with "A" indicating relatively free flow of traffic and "F" indicating stop-and-go traffic and traffic jams.

Table 15 summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections.

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<sup>19</sup> 2010 *Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2011

<b>Table 15 Intersection LOS Criteria</b>			
Level of Service	Description	Average Delay (sec/veh)	Volume to Capacity Ratio
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	≤ 10	< 0.60
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	> 10 to 20	> 0.61 to 0.70
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	> 20 to 35	> 0.71 to 0.80
D	Represents high-density, but stable flow.	> 35 to 55	> 0.81 to 0.90
E	Represents operating conditions at or near the capacity level.	> 55 to 80	> 0.91 to 1.00
F	Represents forced or breakdown flow.	> 80	> 1.00
<i>Source: 2010 Highway Capacity Manual, Transportation Research Board, 2011. Technical Procedures Update, Contra Costa Transportation Authority, January 16, 2013.</i>			

For unsignalized (all-way stop controlled and two-way stop controlled) intersections, the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. In general, the operating conditions for unsignalized intersections are presented for the worst approach. Table 16 summarizes the relationship between LOS and average control delay at unsignalized intersections.

<b>Table 16 Intersection LOS Criteria</b>		
Level of Service	Description	Average Delay (sec/veh)
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	0 to 10
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	> 10 to 15
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	> 15 to 25
D	Represents high-density, but stable flow.	> 25 to 35
E	Represents operating conditions at or near the capacity level.	> 35 to 50
F	Represents forced or breakdown flow.	> 50
<i>Source: 2010 Highway Capacity Manual, Transportation Research Board, 2011.</i>		

### Significance Criteria

The significance criteria for the proposed project are based on City of Pinole goals, as well as Contra Costa County and Caltrans standards. Please note that for the Caltrans freeway facilities being studied, the operational standards and significance criteria are established by the Contra Costa Transportation Authority (CCTA), acting as the

designated Congestion Management Agency (CMA) representing the jurisdictions of Contra Costa County.

Project-related operational impacts on the signalized study intersections in the City of Pinole are considered significant if project-related traffic causes the LOS rating to deteriorate beyond LOS E+ during the peak commute hours (i.e. beyond a volume to capacity [V/C] of 0.94). The aforementioned threshold applies to the Appian Way study intersections on the north side of I-80 (Intersections #1 and #2).

At the one study intersection located to the south of I-80 (Intersection #3), the project would be considered to have a significant impact if the project-related traffic causes the intersection LOS to deteriorate beyond LOS D- during the peak commute hours (i.e. beyond a V/C of 0.89).

For intersections on Canyon Drive (Intersections #4 and #5), the project would be considered to have a significant impact if the project-related traffic causes the intersection LOS to deteriorate beyond LOS D+ during the peak commute hours (i.e. beyond a V/C of 0.84).

For the I-80 freeway operations, impacts would be considered significant if the delay index exceeds 3.0. It should be noted that the West County Action Plan establishes a goal of increasing HOV lane usage by at least 10 percent over 2013 levels.

### Existing Conditions

Traffic counts at the study intersections were conducted in May 2015 at times when local schools were in session. Table 17 summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions. As shown in Table 17, all of the signalized study intersections currently have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

### Existing Plus Project Conditions

#### *Project Trip Generation*

The trip generation calculations are based on rates from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9th Edition. The total trip generation reflects all vehicle trips that would be counted at the project driveways, both inbound and outbound. As shown in Table 18, the total trip generation for the retail space has been reduced by 34 percent to account for the fact that approximately one third of the retail trips would be forecast to be pass-by trips from existing local traffic as determined from data contained in the Trip Generation Handbook. Pass-by trips are vehicle trips that are already in the traffic stream passing by the site and are not counted as new trips. The 34 percent reduction was based the ITE pass-by rate for shopping centers (ITE Land Use 820).

<b>Table 17</b>				
<b>Intersection Level of Service – Existing Conditions</b>				
Intersection	Control	Peak Hour	Existing	
			Delay	LOS
1. Appian Way/Tara Hills Dr.	Signalized	AM	34.9	C
		PM	18.6	B
2. I-80 WB Ramps/Appian Way	Signalized	AM	29.5	C
		PM	21.0	C
3. I-80 EB Ramps/Appian Way	Signalized	AM	8.1	A
		PM	16.2	B
4. Project Entrance/Canyon Rd.	Two-Way Stop	AM	N/A	N/A
		PM	N/A	N/A
5. Ridgecrest Dr./Canyon Dr.	All-Way Stop	AM	7.1	A
		PM	7.6	A
Notes: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stopped controlled intersections, the results for the worst side street approach are presented. WB = westbound EB = eastbound  <i>Source: Abrams Associates, 2015.</i>				

<b>Table 18</b>									
<b>Project Trip Generation Calculations</b>									
Land Use/Category	ITE Code	Size (square feet)	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Pharmacy with Drive-Through Trip Rates	881		96.91	1.79	1.66	3.45	4.96	4.96	9.91
Pharmacy Trip Generation		14,806	1,435	26	25	51	74	73	147
Reduction for Pass-By/Non-Auto Trips (34%)			703	13	12	25	36	36	72
<i>Net New Trip Generation</i>			<i>732</i>	<i>13</i>	<i>13</i>	<i>26</i>	<i>38</i>	<i>37</i>	<i>75</i>
<i>Source: Abrams Associates, 2015.</i>									

After accounting for the pass-by trips, the trip generation added to the surrounding street system is conservatively estimated to be 26 trips during the AM peak hour and 75 trips during the PM peak hour. It should be noted that although an existing three-story office building exists on the site, the building was only partially occupied at the time of the intersection traffic counts. Therefore, to be conservative, credit was not given for reduced traffic due to the planned removal of the existing building.

For purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from a proposed project, the trips generated by the proposed project are estimated for the peak commute hours of 7:30 AM and 8:30 AM and 4:30 PM and 5:30 PM, which represent the peak of “adjacent street traffic”. During the peak

commute time periods, the project traffic would generally contribute to the greatest amount of congestion.

*Trip Distribution*

The trip distribution assumptions have been based on the project’s proximity to freeway interchanges, the existing directional split at nearby intersections, and the overall land use patterns in the area based on the most recent (January 2013) update to the Countywide Travel Demand Model. The resulting distribution indicated approximately 28% of the project traffic would be to and from the west on I-80 and about 18% would be to and from the east.

*Existing Plus Project LOS Computations*

For the Existing Plus Project scenario, project traffic was added to the existing volumes at the study intersections. The capacity calculations for the Existing Plus Project scenario are shown in Table 19. As shown in Table 19, all of the project study intersections would have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

<b>Table 19</b>						
<b>Intersection Level of Service – Existing Plus Project Conditions</b>						
<b>Intersection</b>	<b>Control</b>	<b>Peak Hour</b>	<b>Existing</b>		<b>Existing Plus Project</b>	
			<b>Delay</b>	<b>LOS</b>	<b>Delay</b>	<b>LOS</b>
1. Appian Way/Tara Hills Dr.	Signalized	AM	34.9	C	35.6	D
		PM	18.6	B	20.2	C
2. I-80 WB Ramps/Appian Way	Signalized	AM	29.5	C	29.6	C
		PM	21.0	C	21.5	C
3. I-80 EB Ramps/Appian Way	Signalized	AM	8.1	A	8.2	A
		PM	16.2	B	16.5	B
4. Project Entrance/Canyon Rd.	Two-Way Stop	AM	N/A	N/A	9.6	A
		PM	N/A	N/A	10.1	B
5. Ridgecrest Dr./Canyon Dr.	All-Way Stop	AM	7.1	A	7.1	A
		PM	7.6	A	7.6	A
<p>Notes: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stopped controlled intersections, the results for the worst side street approach are presented.</p> <p><i>Source: Abrams Associates, 2015.</i></p>						

Baseline Conditions

The Baseline scenario evaluates the existing conditions with the addition of traffic from reasonably foreseeable projects in the area. Projects in the area include the Pinole Gateway Project and a planned approximately 10,000 sf medical office building at the southeast corner of Henry Avenue and Pinole Valley Road. In addition, the general baseline growth in traffic was developed based on the assumption that the project completion date would be 2017.

Table 20 summarizes the associated LOS computation results for the Baseline weekday AM and PM peak hour conditions. As shown in Table 20, all study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours in the Baseline No Project scenario.

<b>Table 20</b>						
<b>Intersection Level of Service – Baseline and Baseline Plus Project Conditions</b>						
Intersection	Control	Peak Hour	Baseline		Baseline Plus Project	
			Delay	LOS	Delay	LOS
1. Appian Way/Tara Hills Dr.	Signalized	AM	37.9	D	38.7	D
		PM	19.4	B	21.0	C
2. I-80 WB Ramps/Appian Way	Signalized	AM	32.9	C	33.0	C
		PM	22.2	C	22.3	C
3. I-80 EB Ramps/Appian Way	Signalized	AM	8.4	A	8.4	A
		PM	17.3	B	17.6	B
4. Project Entrance/Canyon Rd.	Two-Way Stop	AM	N/A	N/A	9.6	A
		PM	N/A	N/A	10.2	B
5. Ridgecrest Dr./Canyon Dr.	All-Way Stop	AM	7.1	A	7.1	A
		PM	7.6	A	7.6	A
Notes: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stopped controlled intersections, the results for the worst side street approach are presented.						
<i>Source: Abrams Associates, 2015.</i>						

Baseline Plus Project Conditions

The Baseline Plus Project traffic forecasts were developed by adding project-related traffic to the baseline traffic volumes. Table 20 summarizes the LOS results for the Baseline and Baseline Plus Project weekday AM and PM peak hour conditions. As shown in Table 20, all of the project study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours in the Baseline Plus Project scenario.

Cumulative Conditions

For the cumulative conditions, the intersection traffic volumes were based on the existing turning movements with the addition of traffic from all planned and approved projects,

plus the addition of incremental growth in background traffic estimated by the County’s traffic model for the area, which equates to one half percent per year to the year 2040. Table 21 summarizes the LOS results for the Cumulative (Year 2040) traffic conditions at each of the project study intersections. As shown in Table 21, all of the signalized study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours of the Cumulative No-Project scenario.

Cumulative Plus Project Conditions

Table 21 summarizes the LOS results for the Cumulative Plus Project (Year 2040) traffic conditions at each of the project study intersections. As shown in Table 21, all of the signalized study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours with the addition of traffic from the proposed project in the Cumulative Plus Project scenario.

<b>Table 21 Intersection Level of Service – Cumulative Plus Project Conditions</b>						
Intersection	Control	Peak Hour	Cumulative		Cumulative Plus Project	
			Delay	LOS	Delay	LOS
1. Appian Way/Tara Hills Dr.	Signalized	AM	47.0	D	48.1	D
		PM	22.7	C	24.5	C
2. I-80 WB Ramps/Appian Way	Signalized	AM	46.0	D	46.2	D
		PM	28.1	C	28.4	C
3. I-80 EB Ramps/Appian Way	Signalized	AM	9.5	A	9.6	A
		PM	23.6	C	24.1	C
4. Project Entrance/Canyon Rd.	Two-Way Stop	AM	N/A	N/A	9.8	A
		PM	N/A	N/A	10.4	B
5. Ridgecrest Dr./Canyon Dr.	All-Way Stop	AM	7.2	A	7.2	A
		PM	7.7	A	7.7	A
Notes: HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stopped controlled intersections, the results for the worst side street approach are presented.  <i>Source: Abrams Associates, 2015.</i>						

Conclusion

The project would not cause any of the study intersections to exceed City, County, or Caltrans standards; and vehicular traffic mitigations would not be required. In addition, the proposed project is consistent with what has been anticipated for the site by the City. As such, buildout of the site has already been assumed in all cumulative build-out traffic forecasts that have been used in the design of freeway facilities in the area. Accordingly, the proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system or that would exceed an established LOS standard; and impacts would be considered *less than significant*.

- c. The nearest airport is the Buchanan Field Airport located approximately 13.0 miles east of the project site. Therefore, the project would not result in a change in air traffic patterns, including an increase in traffic levels or change in location, and *no impact* would occur.
- d,e. Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The site plan for the proposed project would include one access along Canyon Drive, but the Canyon Drive and Appian Way front the site, thereby meeting required access by the Fire Department. Modifications to the existing roadway network would not occur with implementation of the proposed project. All lane widths within the project would meet the minimum width that can accommodate an emergency vehicle. The project would not result in any sharp curves, dangerous intersections, or incompatible uses that would substantially increase hazards on the site or immediate vicinity.

Construction activities associated with the proposed project would result in an increase in traffic to and from the site and may lead to unsafe conditions near the project site. The increase in traffic as a result of construction activities associated with the proposed project has been quantified assuming a worst-case single phase construction period of 12 months.

#### Heavy Equipment

Approximately eight pieces of heavy equipment are estimated to be transported on and off the site each month throughout the construction of the proposed project. Eight loads of heavy equipment being hauled to and from the site each month would be short-term and temporary. Heavy equipment transport to and from the site could cause traffic impacts in the vicinity of the project site during construction. Prior to issuance of grading and building permits, the project applicant would be required to submit a Traffic Control Plan.

#### Employees

The weekday work is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. The peak hours are slightly before the citywide commute peaks. It should be noted that the number of trips generated during construction would not only be temporary, but would also be substantially less than the proposed project at buildout. Based on past construction of similar projects, construction workers could require parking for up to 30 vehicles during the peak construction period. Additionally, deliveries, visits, and other activities may generate peak non-worker parking demand of five to 10 trucks and automobiles per day. Therefore, up to 40 vehicle parking spaces may be required during the peak construction period just for the construction employees. The Traffic Control Plan will require construction employee parking to be provided on the project site to eliminate conflicts with nearby residential areas. The construction of the project can be staggered so that employee parking demand is met by using on-site parking in order to alleviate the impacts of construction-related employee traffic and parking.

### Construction Material Import and Export

The project would require the importation of construction material, including raw materials for the building pads, the buildings, the parking areas, and landscaping. In addition, according to the project engineer, and as assumed in the air quality modeling for the project, the overall length of construction would be approximately six months occurring in one phase. In addition, material import or export would not be required during site preparation, although material import would be required during grading operations. The Traffic Control Plan will need to identify the haul routes for the trucks and any necessary signage, as well as whether these trips should be restricted to off-peak hours.

### Conclusion

During construction, heavy equipment would be transported on- and off-site, which could lead to traffic impacts on nearby roadways. In addition, up to 40 vehicle parking spaces may be required for the peak construction period, which may conflict with nearby residential parking. With implementation of a Traffic Control Plan, impacts would be *less than significant with mitigation*.

### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the potential impacts to a *less-than-significant* level.

*XVI-1. Prior to issuance of grading and building permits, the applicant shall prepare a Traffic Control Plan and submit the Plan to the Development Services Department for review and approval. The Traffic Control Plan shall include, but not necessarily be limited to, the following:*

- *identification of the truck route(s) for soil import hauling purposes;*
- *restriction of soil off-haul truck trips to off-peak traffic hours, unless otherwise approved by the City Engineer;*
- *specified locations of haul truck route directional signs and other signage, including warning signs indicating frequent truck entry and exit;*
- *specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress;*
- *all site ingress and egress would occur only at the main driveways to the project site and construction activities may require installation of temporary (or ultimate) traffic signals, as determined by the City Engineer;*
- *locations of designated construction parking and assurance that construction vehicle parking needs will not disrupt existing on-street parking in the vicinity; and*

- *any debris and mud on nearby streets caused by trucks would be monitored daily and may require instituting a street cleaning program.*

f. The proposed project would include pedestrian connections along the north and west frontages, as well as bicycle racks and lockers within the site. In addition, curbs, gutters, and sidewalks would be constructed and improved along the north and west frontages. While Appian Way does not currently have dedicated bicycle lanes, the Three Corridors Specific Plan indicates a planned bike route along Appian Way adjacent to the project site.

WestCAT provides bus service the Cities of Pinole and Hercules and the unincorporated areas of Montalvin Manor, Bayview, Tara Hills, Rodeo, Crockett, and Port Costa. WestCAT operates 8 local fixed routes, 2 regional routes, and 4 express routes. The WestCAT routes that run closest to the proposed project are routes 16 and 17. Route 17 has stops on Appian Way just north of Canyon Drive and Route 16 has a bus stop on Canyon Drive, adjacent to the project site. The existing bus stop, directly adjacent to the project, would remain and a new bench would be installed as part of the project.

As a result, implementation of the proposed project would not conflict with any adopted policies supporting alternative transportation, and a *less-than-significant* impact would occur.

<b>XVII. UTILITIES AND SERVICE SYSTEMS.</b> <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>	<input type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>	<input type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<b>✘</b>	<input type="checkbox"/>

**Discussion**

The proposed project would connect to the City's existing utility lines located within Canyon Drive and Appian Way, including water, sewer, and storm drainage.

a,b,e. The following discussion addresses available wastewater treatment capacity and wastewater infrastructure to serve the project site.

Water Pollution Control Plant Capacity

The City of Pinole is responsible for the collection and treatment of wastewater flows to their lift stations and treatment plant, the Pinole-Hercules Water Pollution Control Plant (WPCP). The Pinole-Hercules WPCP is jointly-owned and cooperatively operated by the cities of Pinole and Hercules. The facility treats wastewater from both cities to secondary standards prior to discharge to San Pablo Bay.

In 1985, the WPCP was upgraded to the capacity of 4.06 million gallons per day (mgd) average dry weather flow (ADWF) and peak wet weather flow (PWWF) of 10.3 mgd. Of the 4.06 mgd capacity, 1.79 mgd is allocated to Pinole and 2.27 mgd is allocated to Hercules. However, the improvements that were made in the 1980s significantly underestimated solids loading, resulting in an actual capacity of 3.2 mgd. The plant process (activated sludge) removes approximately 97 percent of the waste from the water. The water is then disinfected with hypochlorite. Secondary effluent is conveyed to the Rodeo Sanitary District (RSD) Water Pollution Control Plant where it is combined with RSD effluent and discharged from a deep water outfall in Rodeo that discharges into San Pablo Bay. When the combined flow of the WPCP and RSD exceed the capacity of the deep water outfall or when wet weather flows exceed the 10 mgd capacity of the WPCP, effluent is discharged from a shallow water outfall located at the WPCP. In August 2012, the RWQCB issued the WPCP a revised NPDES permit. That 2012 permit requires the WPCP to:

- provide full secondary treatment for influent flows up to 20 mgd;
- discharge treated effluent of up to 14.6 mgd to the Deep Water Outfall; and
- limit use of the Emergency Outfall to flows in excess of 14.6 mgd.

The compliance schedule in the 2012 NPDES permit requires upgrades to be operational by June 1, 2017. The City is in the process of completing the design work associated with upgrading the WPCP to accomplish the above requirements. In addition, the City is in the process of securing a Revolving Loan Fund from the State Water Resources Control Board for the upgrades.

According to the City of Pinole WPCP staff, average dry weather flows at the WPCP are 2.8 mgd.<sup>20</sup> With an average dry weather capacity of 3.2 mgd, the WPCP has an available capacity of approximately 0.4 mgd. In addition, the WPCP upgrade project includes improvements to increase the average dry weather capacity of the WPCP to the originally designed 4.06 mgd.

The project site currently contains a 12,000 sf, three-story, multi-tenant building, occupied by an engineering firm and medical use, as well as a smaller storage building on the southern portion of the site, occupied by a landscaping company. Wastewater service for the two buildings is currently served by the City's WPCP. The wastewater resulting from the proposed 14,806 sf CVS/Pharmacy building is not anticipated to greatly exceed the demand of the existing multi-tenant building and landscaping company building. In addition, because the project is consistent with the General Plan and zoning designations for the site, the anticipated wastewater demand for the proposed project would be consistent with the overall demand anticipated for the project site in the City's future wastewater projections.

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<sup>20</sup> Personal communication with Ron Tobey, Plant Manager for the Pinole-Hercules Water Pollution Control Plant, December 9, 2014.

### Wastewater Infrastructure

The City's wastewater collection system includes 46.5 miles of sewer pipelines and two lift stations. The City provides preventive maintenance on the system, including hydroflushing and mechanical cleaning and inspecting for root intrusion, pipe integrity, and removal of foreign objects. The wastewater generated by the proposed CVS/Pharmacy building would be collected by a new 6-inch lateral that would connect to the existing six-inch sewer line in Canyon Drive.

### Conclusion

The proposed project's uses are consistent with the types of uses anticipated for the site in the General Plan; and the Pinole-Hercules WPCP has adequate capacity to treat the project's wastewater. As a result, buildout of the proposed project would have a *less-than-significant* impact related to wastewater facilities.

- c. As discussed in Questions 'c-e' of Section IX, Hydrology and Water Quality, a SWCP for the project site has been prepared, which shows the means (bioretention areas) by which the project's drainage system would comply with the applicable C.3 stormwater infiltration requirements. As shown in the project-specific Stormwater Control Plan, the project will include the construction of an underground detention system. Stormwater runoff will be collected and stored in the underground detention system in order to ensure the post-project runoff flow rates are less than or equal to the pre-project runoff flow rates, as required by the C.3 Guidebook flow control requirements. The selection, sizing, and preliminary design of stormwater treatment and other control measures included on the project site meet the requirements of the RWQCB.<sup>21</sup> Therefore, new stormwater drainage facilities or expansion of existing facilities would not be required for the project, the construction of which could cause a significant environmental effect, and a *less-than-significant* impact associated with stormwater drainage facilities would occur.
- d. The following discussion addresses the water supply system and water supply infrastructure to serve the project site.

### Water Supply System

The East Bay Municipal Utility District (EBMUD) provides water service to the entire City of Pinole planning area. The EBMUD water supply system consists of a network of raw water reservoirs, aqueducts, water treatment plants, pumping plants, and distribution pipelines. Since the late 1920s, the EBMUD's primary source of water has been the Mokelumne River. The Mokelumne River serves a variety of uses, including agriculture, fisheries, hydropower, recreation, and municipal and industrial use. Approximately 90 percent of the water used by EBMUD comes from the Mokelumne River watershed. EBMUD has water rights that allow for delivery of up to a maximum of 325 mgd from the Mokelumne River, subject to the availability of Mokelumne River runoff and to the

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<sup>21</sup> Tait & Associates, Inc. *Stormwater Control Plan for CVS Pharmacy Store No. 9299 [pg. 9]*. March 5, 2015.

senior water rights of other users, downstream fishery flow requirements, and other Mokelumne River water uses.

In 2011, the EBMUD prepared an Urban Water Management Plan (UWMP) that predicts the water supply available to the EBMUD's service area in normal, single-dry, and multiple-dry years out to 2040. The projections in the UWMP are based upon local land use data. Because the proposed project is consistent with the existing General Plan designation for the site, the water demand associated with the proposed project would have been accounted for in the UWMP water demand projections. According to the EBMUD UWMP, EBMUD would meet customer demands through the year 2040 during normal year conditions; therefore, the available supply is considered equal to or greater than demand. However, the frequency of dry years that require customer rationing is expected to increase.<sup>22</sup> As a result, the EBMUD implemented the Interim Drought Management Program Guidelines, which would remain in effect until the post-drought consumption rebounds to 2040 Demand Study planning levels. Based on past consumption trends for previous droughts in the 1970s and 1980s, the suppressed demand is expected to rebound and return to anticipated planning levels as projected in the 2040 Demand Study by 2020. While the Interim Drought Management Program Guidelines are being implemented the existing water supply would be sufficient, which defers the need for any supplemental drought year water supply.<sup>23</sup>

As noted above, the project site currently contains a 12,000 sf, three-story, multi-tenant building, occupied by an engineering firm and medical use, as well as a smaller building on the southern portion of the site, occupied by a landscaping company. Water service for the two buildings is currently served by the EBMUD. The water demand resulting from the proposed 14,806 sf CVS/Pharmacy building is not anticipated to greatly exceed the demand of the existing multi-tenant building and landscaping company building.

With respect to irrigation water, the proposed low water use landscaping and irrigation design complies with the design guidelines outlined in Assembly Bill (AB) 1881. In order to achieve a low water use design, the most up-to date-irrigation technologies available will be utilized. In addition, "drought tolerant" Native and Mediterranean plant species would be used to create a low water use plant palette.

### Water Supply Infrastructure

The project would involve the construction of the necessary water infrastructure to serve the proposed project. The project includes connection to the existing six-inch water line located within Canyon Drive north of the project site. Six-inch and two-inch water lines would be constructed from the existing line to the proposed bathrooms within the CVS/Pharmacy building.

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<sup>22</sup> East Bay Municipal Utility District. *2010 Urban Water Management Plan [pg. 4-9]*. June 2011.

<sup>23</sup> East Bay Municipal Utility District. *2010 Urban Water Management Plan [pg. 4-11]*. June 2011.

## Conclusion

The proposed project's uses are consistent with the types of uses anticipated for the site in the General Plan; therefore, the proposed project's future water demand was considered in the UWMP. As a result, because adequate long-term water supply is available to serve full buildout of the proposed project, the project would have a *less-than-significant* impact related to water supply.

- f.g. The solid waste from the City of Pinole is disposed of at Keller Canyon County landfill. The Keller Canyon Landfill is located at 901 Bailey Road in Pittsburg in Contra Costa County. The landfill is operated under Permit Number 07-AA-0032, with a disposal area of 244 acres, and is classified as a Class II landfill accepting agricultural, construction/demolition, and industrial wastes as well as sludge (biosolids) in addition to mixed municipal waste. According to the City of Pinole's General Plan Update Draft Environmental Impact Report, the landfill is permitted to accept a maximum of 3,500 tons per day and has a total permitted capacity of 75,018,280 cubic yards. As of November 2004, the Keller Canyon Landfill had 63,408,410 cubic yards of remaining capacity and is estimated to cease operation in December 2030.<sup>24</sup> Because the Pinole General Plan Update Draft Environmental Impact Report determined that solid waste capacity is adequate to serve the demand resulting from General Plan buildout and the proposed project's use is consistent with the General Plan designation for the project site; the project's impact to solid waste would be *less than significant*.

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<sup>24</sup> City of Pinole. *City of Pinole General Plan Update Draft Environmental Impact Report* [pg. 4.12-73]. July 2010.

<b>XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.</b>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

- a. Given the location and former disturbance of the proposed project site, the proposed project would have a low potential to substantially 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. Where a potentially significant impact could occur (i.e., impacts related to aesthetics, biological resources, cultural resources, geology and soils, hazardous materials, noise, transportation, and water quality), mitigation measures have been included in this IS/MND that would reduce such impacts to less-than-significant levels. Therefore, the proposed project would have *less-than-significant* impacts to fish or wildlife species and habitats, important examples of California history or prehistory, and the overall quality of the environment.
- b,c. This IS/MND demonstrates that the proposed project would not be expected to result in adverse impacts to human beings, either directly or indirectly. All impacts identified in this IS/MND were determined to be less than significant, or reduced to less than significant with implementation of the required mitigation measures, such as noise levels generated by construction of the project. The project's incremental contribution to potential cumulative impacts would not be cumulatively considerable. Therefore, the project's impact would be considered *less than significant*.

# **APPENDIX A**

## **Air Quality and Greenhouse Gas Modeling**

**Pinole CVS - AQ**  
**Bay Area AQMD Air District, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Pharmacy/Drugstore with Drive Thru	16.50	1000sqft	1.90	16,500.00	0
Parking Lot	64.00	Space	0.00	25,600.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2016
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - per project description

Construction Phase - based on info from applicant

Demolition -

Grading - based on info from applicant

Vehicle Trips - based on traffic report

Area Mitigation -

Energy Mitigation -

Off-road Equipment - project requires one generator for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Operational Off-Road Equipment - an emergency backup generator would be on-site during operations for the cell antenna

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	111.00
tblConstructionPhase	NumDays	200.00	111.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	4.00	12.00
tblConstructionPhase	NumDays	10.00	2.00

tblConstructionPhase	PhaseEndDate	2/3/2017	9/15/2016
tblConstructionPhase	PhaseStartDate	9/2/2016	4/14/2016
tblGrading	AcresOfGrading	4.50	1.70
tblGrading	MaterialImported	0.00	1,768.00
tblLandUse	LotAcreage	0.38	1.90
tblLandUse	LotAcreage	0.58	0.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	64.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	88.16	96.91
tblVehicleTrips	SU_TR	88.16	96.91
tblVehicleTrips	WD_TR	88.16	96.91

## 2.0 Emissions Summary



**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	0.9511	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Energy	2.3400e-003	0.0213	0.0179	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003						
Mobile	5.0571	7.3739	35.7846	0.0585	3.8665	0.0922	3.9586	1.0343	0.0846	1.1189						
Offroad	0.0304	0.2302	0.1811	3.1000e-004		0.0161	0.0161		0.0161	0.0161						
<b>Total</b>	<b>6.0410</b>	<b>7.6255</b>	<b>35.9920</b>	<b>0.0590</b>	<b>3.8665</b>	<b>0.1099</b>	<b>3.9764</b>	<b>1.0343</b>	<b>0.1024</b>	<b>1.1367</b>						

## 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	lb/day										lb/day					
Area	0.8837	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Energy	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003						
Mobile	5.0571	7.3739	35.7846	0.0585	3.8665	0.0922	3.9586	1.0343	0.0846	1.1189						
Offroad	0.0304	0.2302	0.1811	3.1000e-004		0.0161	0.0161		0.0161	0.0161						
<b>Total</b>	<b>5.9730</b>	<b>7.6200</b>	<b>35.9874</b>	<b>0.0589</b>	<b>3.8665</b>	<b>0.1095</b>	<b>3.9760</b>	<b>1.0343</b>	<b>0.1020</b>	<b>1.1363</b>						

	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
<b>Percent Reduction</b>	<b>1.63</b>	<b>3.09</b>	<b>0.52</b>	<b>0.59</b>	<b>0.00</b>	<b>15.05</b>	<b>0.42</b>	<b>0.00</b>	<b>16.16</b>	<b>1.46</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 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	3/1/2016	3/10/2016	5	8	
2	Grading	Grading	3/11/2016	3/28/2016	5	12	
3	Paving	Paving	3/29/2016	3/30/2016	5	2	
4	Building Construction	Building Construction	3/31/2016	9/1/2016	5	111	
5	Architectural Coating	Architectural Coating	4/14/2016	9/15/2016	5	111	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.7**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 25,902; Non-Residential Outdoor: 8,634 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Generator Sets	1	24.00	122	0.74
Grading	Generator Sets	1	24.00	122	0.74
Paving	Generator Sets	1	24.00	122	0.74
Building Construction	Generator Sets	1	24.00	122	0.74
Architectural Coating	Generator Sets	1	24.00	122	0.74

**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	6	15.00	0.00	28.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	221.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	16.00	7.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	3.00	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

Clean Paved Roads

### 3.2 Demolition - 2016

#### 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					0.7506	0.0000	0.7506	0.1136	0.0000	0.1136						
Off-Road	4.7982	46.0801	35.5131	0.0531		2.5566	2.5566		2.4448	2.4448						
<b>Total</b>	<b>4.7982</b>	<b>46.0801</b>	<b>35.5131</b>	<b>0.0531</b>	<b>0.7506</b>	<b>2.5566</b>	<b>3.3072</b>	<b>0.1136</b>	<b>2.4448</b>	<b>2.5585</b>						

### 3.2 Demolition - 2016

#### 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	0.0756	1.0093	0.7406	2.6300e-003	0.0610	0.0136	0.0746	0.0167	0.0125	0.0292						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0609	0.0729	0.8514	1.7400e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.1364</b>	<b>1.0822</b>	<b>1.5920</b>	<b>4.3700e-003</b>	<b>0.2024</b>	<b>0.0148</b>	<b>0.2172</b>	<b>0.0542</b>	<b>0.0136</b>	<b>0.0678</b>						

#### 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					0.7506	0.0000	0.7506	0.1136	0.0000	0.1136						
Off-Road	3.4798	39.3401	39.1722	0.0531		2.2795	2.2795		2.1678	2.1678						
<b>Total</b>	<b>3.4798</b>	<b>39.3401</b>	<b>39.1722</b>	<b>0.0531</b>	<b>0.7506</b>	<b>2.2795</b>	<b>3.0301</b>	<b>0.1136</b>	<b>2.1678</b>	<b>2.2814</b>						

### 3.2 Demolition - 2016

#### 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	0.0756	1.0093	0.7406	2.6300e-003	0.0610	0.0136	0.0746	0.0167	0.0125	0.0292						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0609	0.0729	0.8514	1.7400e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.1364</b>	<b>1.0822</b>	<b>1.5920</b>	<b>4.3700e-003</b>	<b>0.2024</b>	<b>0.0148</b>	<b>0.2172</b>	<b>0.0542</b>	<b>0.0136</b>	<b>0.0678</b>						

### 3.3 Grading - 2016

#### 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					4.6835	0.0000	4.6835	2.5014	0.0000	2.5014						
Off-Road	3.8824	38.8584	27.6855	0.0427		1.9527	1.9527		1.8615	1.8615						
<b>Total</b>	<b>3.8824</b>	<b>38.8584</b>	<b>27.6855</b>	<b>0.0427</b>	<b>4.6835</b>	<b>1.9527</b>	<b>6.6362</b>	<b>2.5014</b>	<b>1.8615</b>	<b>4.3629</b>						

### 3.3 Grading - 2016

#### 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	0.3976	5.3109	3.8968	0.0138	0.3209	0.0717	0.3925	0.0879	0.0659	0.1538						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0406	0.0486	0.5676	1.1600e-003	0.0943	7.6000e-004	0.0951	0.0250	7.0000e-004	0.0257						
<b>Total</b>	<b>0.4382</b>	<b>5.3595</b>	<b>4.4644</b>	<b>0.0150</b>	<b>0.4152</b>	<b>0.0724</b>	<b>0.4876</b>	<b>0.1129</b>	<b>0.0666</b>	<b>0.1795</b>						

#### 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					4.6835	0.0000	4.6835	2.5014	0.0000	2.5014						
Off-Road	2.5640	32.1183	31.3445	0.0427		1.6757	1.6757		1.5844	1.5844						
<b>Total</b>	<b>2.5640</b>	<b>32.1183</b>	<b>31.3445</b>	<b>0.0427</b>	<b>4.6835</b>	<b>1.6757</b>	<b>6.3592</b>	<b>2.5014</b>	<b>1.5844</b>	<b>4.0859</b>						

### 3.3 Grading - 2016

#### 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	0.3976	5.3109	3.8968	0.0138	0.3209	0.0717	0.3925	0.0879	0.0659	0.1538						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0406	0.0486	0.5676	1.1600e-003	0.0943	7.6000e-004	0.0951	0.0250	7.0000e-004	0.0257						
<b>Total</b>	<b>0.4382</b>	<b>5.3595</b>	<b>4.4644</b>	<b>0.0150</b>	<b>0.4152</b>	<b>0.0724</b>	<b>0.4876</b>	<b>0.1129</b>	<b>0.0666</b>	<b>0.1795</b>						

### 3.4 Paving - 2016

#### 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	3.1788	31.0298	23.1031	0.0420		1.6196	1.6196		1.5559	1.5559						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>3.1788</b>	<b>31.0298</b>	<b>23.1031</b>	<b>0.0420</b>		<b>1.6196</b>	<b>1.6196</b>		<b>1.5559</b>	<b>1.5559</b>						

### 3.4 Paving - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0609	0.0729	0.8514	1.7400e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.0609</b>	<b>0.0729</b>	<b>0.8514</b>	<b>1.7400e-003</b>	<b>0.1415</b>	<b>1.1400e-003</b>	<b>0.1426</b>	<b>0.0375</b>	<b>1.0400e-003</b>	<b>0.0386</b>						

#### 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	1.8604	24.2897	26.7622	0.0420		1.3425	1.3425		1.2788	1.2788						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.8604</b>	<b>24.2897</b>	<b>26.7622</b>	<b>0.0420</b>		<b>1.3425</b>	<b>1.3425</b>		<b>1.2788</b>	<b>1.2788</b>						

### 3.4 Paving - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0609	0.0729	0.8514	1.7400e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.0609</b>	<b>0.0729</b>	<b>0.8514</b>	<b>1.7400e-003</b>	<b>0.1415</b>	<b>1.1400e-003</b>	<b>0.1426</b>	<b>0.0375</b>	<b>1.0400e-003</b>	<b>0.0386</b>						

### 3.5 Building Construction - 2016

#### 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	5.1831	38.3681	28.7225	0.0506		2.1777	2.1777		2.1296	2.1296						
<b>Total</b>	<b>5.1831</b>	<b>38.3681</b>	<b>28.7225</b>	<b>0.0506</b>		<b>2.1777</b>	<b>2.1777</b>		<b>2.1296</b>	<b>2.1296</b>						

### 3.5 Building Construction - 2016

#### 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						
Vendor	0.0791	0.6784	0.8094	1.6700e-003	0.0465	0.0104	0.0570	0.0133	9.5800e-003	0.0229						
Worker	0.0649	0.0777	0.9082	1.8600e-003	0.1509	1.2100e-003	0.1521	0.0400	1.1100e-003	0.0411						
<b>Total</b>	<b>0.1441</b>	<b>0.7561</b>	<b>1.7176</b>	<b>3.5300e-003</b>	<b>0.1974</b>	<b>0.0116</b>	<b>0.2091</b>	<b>0.0533</b>	<b>0.0107</b>	<b>0.0640</b>						

#### 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	3.3571	29.7972	32.6348	0.0506		1.7724	1.7724		1.7243	1.7243						
<b>Total</b>	<b>3.3571</b>	<b>29.7972</b>	<b>32.6348</b>	<b>0.0506</b>		<b>1.7724</b>	<b>1.7724</b>		<b>1.7243</b>	<b>1.7243</b>						

### 3.5 Building Construction - 2016

#### 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						
Vendor	0.0791	0.6784	0.8094	1.6700e-003	0.0465	0.0104	0.0570	0.0133	9.5800e-003	0.0229						
Worker	0.0649	0.0777	0.9082	1.8600e-003	0.1509	1.2100e-003	0.1521	0.0400	1.1100e-003	0.0411						
<b>Total</b>	<b>0.1441</b>	<b>0.7561</b>	<b>1.7176</b>	<b>3.5300e-003</b>	<b>0.1974</b>	<b>0.0116</b>	<b>0.2091</b>	<b>0.0533</b>	<b>0.0107</b>	<b>0.0640</b>						

### 3.6 Architectural Coating - 2016

#### 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	3.6053					0.0000	0.0000		0.0000	0.0000						
Off-Road	2.2601	20.1945	15.8991	0.0316		1.0087	1.0087		1.0087	1.0087						
<b>Total</b>	<b>5.8654</b>	<b>20.1945</b>	<b>15.8991</b>	<b>0.0316</b>		<b>1.0087</b>	<b>1.0087</b>		<b>1.0087</b>	<b>1.0087</b>						

### 3.6 Architectural Coating - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0122	0.0146	0.1703	3.5000e-004	0.0283	2.3000e-004	0.0285	7.5000e-003	2.1000e-004	7.7100e-003						
<b>Total</b>	<b>0.0122</b>	<b>0.0146</b>	<b>0.1703</b>	<b>3.5000e-004</b>	<b>0.0283</b>	<b>2.3000e-004</b>	<b>0.0285</b>	<b>7.5000e-003</b>	<b>2.1000e-004</b>	<b>7.7100e-003</b>						

#### 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	3.6053					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.9417	13.4544	19.5581	0.0316		0.7316	0.7316		0.7316	0.7316						
<b>Total</b>	<b>4.5470</b>	<b>13.4544</b>	<b>19.5581</b>	<b>0.0316</b>		<b>0.7316</b>	<b>0.7316</b>		<b>0.7316</b>	<b>0.7316</b>						

### 3.6 Architectural Coating - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0122	0.0146	0.1703	3.5000e-004	0.0283	2.3000e-004	0.0285	7.5000e-003	2.1000e-004	7.7100e-003						
<b>Total</b>	<b>0.0122</b>	<b>0.0146</b>	<b>0.1703</b>	<b>3.5000e-004</b>	<b>0.0283</b>	<b>2.3000e-004</b>	<b>0.0285</b>	<b>7.5000e-003</b>	<b>2.1000e-004</b>	<b>7.7100e-003</b>						

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	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	5.0571	7.3739	35.7846	0.0585	3.8665	0.0922	3.9586	1.0343	0.0846	1.1189						
Unmitigated	5.0571	7.3739	35.7846	0.0585	3.8665	0.0922	3.9586	1.0343	0.0846	1.1189						

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Pharmacy/Drugstore with Drive Thru	1,599.02	1,599.02	1,599.02	1,820,808	1,820,808
<b>Total</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,820,808</b>	<b>1,820,808</b>

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Pharmacy/Drugstore with Drive	9.50	7.30	7.30	7.50	73.50	19.00	38	13	49

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546434	0.062864	0.174629	0.123506	0.034170	0.004889	0.015456	0.023695	0.002073	0.003288	0.006639	0.000690	0.001668

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

	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	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003						
NaturalGas Unmitigated	2.3400e-003	0.0213	0.0179	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003						

### 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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Pharmacy/Drugstore with Drive Thru	216.986	2.3400e-003	0.0213	0.0179	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003						
<b>Total</b>		<b>2.3400e-003</b>	<b>0.0213</b>	<b>0.0179</b>	<b>1.3000e-004</b>		<b>1.6200e-003</b>	<b>1.6200e-003</b>		<b>1.6200e-003</b>	<b>1.6200e-003</b>						

### 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						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
Pharmacy/Drugstore with Drive Thru	0.161384	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003							
<b>Total</b>		<b>1.7400e-003</b>	<b>0.0158</b>	<b>0.0133</b>	<b>9.0000e-005</b>		<b>1.2000e-003</b>	<b>1.2000e-003</b>		<b>1.2000e-003</b>	<b>1.2000e-003</b>							

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

	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	0.8837	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005							
Unmitigated	0.9511	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005							

### 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	0.0493					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.9009					0.0000	0.0000		0.0000	0.0000						
Landscaping	8.2000e-004	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
<b>Total</b>	<b>0.9511</b>	<b>8.0000e-005</b>	<b>8.4300e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>						

#### 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	0.0493					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.8336					0.0000	0.0000		0.0000	0.0000						
Landscaping	8.2000e-004	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
<b>Total</b>	<b>0.8837</b>	<b>8.0000e-005</b>	<b>8.4300e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>						

### 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
Generator Sets	1	0.50	12	64	0.74	Diesel

**UnMitigated/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
Equipment Type	lb/day										lb/day					
Generator Sets	0.0304	0.2302	0.1811	3.1000e-004		0.0161	0.0161		0.0161	0.0161						
<b>Total</b>	<b>0.0304</b>	<b>0.2302</b>	<b>0.1811</b>	<b>3.1000e-004</b>		<b>0.0161</b>	<b>0.0161</b>		<b>0.0161</b>	<b>0.0161</b>						

**10.0 Vegetation**

**Pinole CVS - AQ**  
**Bay Area AQMD Air District, Winter**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Pharmacy/Drugstore with Drive Thru	16.50	1000sqft	1.90	16,500.00	0
Parking Lot	64.00	Space	0.00	25,600.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2016
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - per project description

Construction Phase - based on info from applicant

Demolition -

Grading - based on info from applicant

Vehicle Trips - based on traffic report

Area Mitigation -

Energy Mitigation -

Off-road Equipment - project requires one generator for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Operational Off-Road Equipment - an emergency backup generator would be on-site during operations for the cell antenna

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	111.00
tblConstructionPhase	NumDays	200.00	111.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	4.00	12.00
tblConstructionPhase	NumDays	10.00	2.00

tblConstructionPhase	PhaseEndDate	2/3/2017	9/15/2016
tblConstructionPhase	PhaseStartDate	9/2/2016	4/14/2016
tblGrading	AcresOfGrading	4.50	1.70
tblGrading	MaterialImported	0.00	1,768.00
tblLandUse	LotAcreage	0.38	1.90
tblLandUse	LotAcreage	0.58	0.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	64.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	88.16	96.91
tblVehicleTrips	SU_TR	88.16	96.91
tblVehicleTrips	WD_TR	88.16	96.91

**2.0 Emissions Summary**



**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	0.9511	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Energy	2.3400e-003	0.0213	0.0179	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003						
Mobile	5.4112	8.1624	45.2577	0.0551	3.8665	0.0932	3.9596	1.0343	0.0856	1.1199						
Offroad	0.0304	0.2302	0.1811	3.1000e-004		0.0161	0.0161		0.0161	0.0161						
<b>Total</b>	<b>6.3951</b>	<b>8.4140</b>	<b>45.4651</b>	<b>0.0556</b>	<b>3.8665</b>	<b>0.1109</b>	<b>3.9774</b>	<b>1.0343</b>	<b>0.1033</b>	<b>1.1376</b>						

## 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	lb/day										lb/day					
Area	0.8837	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
Energy	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003						
Mobile	5.4112	8.1624	45.2577	0.0551	3.8665	0.0932	3.9596	1.0343	0.0856	1.1199						
Offroad	0.0304	0.2302	0.1811	3.1000e-004		0.0161	0.0161		0.0161	0.0161						
<b>Total</b>	<b>6.3271</b>	<b>8.4085</b>	<b>45.4606</b>	<b>0.0555</b>	<b>3.8665</b>	<b>0.1105</b>	<b>3.9770</b>	<b>1.0343</b>	<b>0.1029</b>	<b>1.1372</b>						

	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
<b>Percent Reduction</b>	<b>1.54</b>	<b>2.80</b>	<b>0.41</b>	<b>0.63</b>	<b>0.00</b>	<b>14.92</b>	<b>0.42</b>	<b>0.00</b>	<b>16.02</b>	<b>1.45</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 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	3/1/2016	3/10/2016	5	8	
2	Grading	Grading	3/11/2016	3/28/2016	5	12	
3	Paving	Paving	3/29/2016	3/30/2016	5	2	
4	Building Construction	Building Construction	3/31/2016	9/1/2016	5	111	
5	Architectural Coating	Architectural Coating	4/14/2016	9/15/2016	5	111	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.7**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 25,902; Non-Residential Outdoor: 8,634 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Generator Sets	1	24.00	122	0.74
Grading	Generator Sets	1	24.00	122	0.74
Paving	Generator Sets	1	24.00	122	0.74
Building Construction	Generator Sets	1	24.00	122	0.74
Architectural Coating	Generator Sets	1	24.00	122	0.74

**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	6	15.00	0.00	28.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	221.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	16.00	7.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	3.00	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

Clean Paved Roads

### 3.2 Demolition - 2016

#### 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					0.7506	0.0000	0.7506	0.1136	0.0000	0.1136						
Off-Road	4.7982	46.0801	35.5131	0.0531		2.5566	2.5566		2.4448	2.4448						
<b>Total</b>	<b>4.7982</b>	<b>46.0801</b>	<b>35.5131</b>	<b>0.0531</b>	<b>0.7506</b>	<b>2.5566</b>	<b>3.3072</b>	<b>0.1136</b>	<b>2.4448</b>	<b>2.5585</b>						

### 3.2 Demolition - 2016

#### 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	0.0907	1.0637	1.0673	2.6300e-003	0.0610	0.0137	0.0746	0.0167	0.0126	0.0293						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.1519</b>	<b>1.1539</b>	<b>1.8993</b>	<b>4.2400e-003</b>	<b>0.2024</b>	<b>0.0148</b>	<b>0.2172</b>	<b>0.0542</b>	<b>0.0136</b>	<b>0.0678</b>						

#### 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					0.7506	0.0000	0.7506	0.1136	0.0000	0.1136						
Off-Road	3.4798	39.3401	39.1722	0.0531		2.2795	2.2795		2.1678	2.1678						
<b>Total</b>	<b>3.4798</b>	<b>39.3401</b>	<b>39.1722</b>	<b>0.0531</b>	<b>0.7506</b>	<b>2.2795</b>	<b>3.0301</b>	<b>0.1136</b>	<b>2.1678</b>	<b>2.2814</b>						

### 3.2 Demolition - 2016

#### 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	0.0907	1.0637	1.0673	2.6300e-003	0.0610	0.0137	0.0746	0.0167	0.0126	0.0293						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.1519</b>	<b>1.1539</b>	<b>1.8993</b>	<b>4.2400e-003</b>	<b>0.2024</b>	<b>0.0148</b>	<b>0.2172</b>	<b>0.0542</b>	<b>0.0136</b>	<b>0.0678</b>						

### 3.3 Grading - 2016

#### 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					4.6835	0.0000	4.6835	2.5014	0.0000	2.5014						
Off-Road	3.8824	38.8584	27.6855	0.0427		1.9527	1.9527		1.8615	1.8615						
<b>Total</b>	<b>3.8824</b>	<b>38.8584</b>	<b>27.6855</b>	<b>0.0427</b>	<b>4.6835</b>	<b>1.9527</b>	<b>6.6362</b>	<b>2.5014</b>	<b>1.8615</b>	<b>4.3629</b>						

### 3.3 Grading - 2016

#### 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	0.4775	5.5973	5.6158	0.0138	0.3209	0.0719	0.3928	0.0879	0.0661	0.1540						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0408	0.0601	0.5547	1.0700e-003	0.0943	7.6000e-004	0.0951	0.0250	7.0000e-004	0.0257						
<b>Total</b>	<b>0.5183</b>	<b>5.6574</b>	<b>6.1705</b>	<b>0.0149</b>	<b>0.4152</b>	<b>0.0726</b>	<b>0.4878</b>	<b>0.1129</b>	<b>0.0668</b>	<b>0.1797</b>						

#### 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					4.6835	0.0000	4.6835	2.5014	0.0000	2.5014						
Off-Road	2.5640	32.1183	31.3445	0.0427		1.6757	1.6757		1.5844	1.5844						
<b>Total</b>	<b>2.5640</b>	<b>32.1183</b>	<b>31.3445</b>	<b>0.0427</b>	<b>4.6835</b>	<b>1.6757</b>	<b>6.3592</b>	<b>2.5014</b>	<b>1.5844</b>	<b>4.0859</b>						

### 3.3 Grading - 2016

#### 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	0.4775	5.5973	5.6158	0.0138	0.3209	0.0719	0.3928	0.0879	0.0661	0.1540						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0408	0.0601	0.5547	1.0700e-003	0.0943	7.6000e-004	0.0951	0.0250	7.0000e-004	0.0257						
<b>Total</b>	<b>0.5183</b>	<b>5.6574</b>	<b>6.1705</b>	<b>0.0149</b>	<b>0.4152</b>	<b>0.0726</b>	<b>0.4878</b>	<b>0.1129</b>	<b>0.0668</b>	<b>0.1797</b>						

### 3.4 Paving - 2016

#### 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	3.1788	31.0298	23.1031	0.0420		1.6196	1.6196		1.5559	1.5559						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>3.1788</b>	<b>31.0298</b>	<b>23.1031</b>	<b>0.0420</b>		<b>1.6196</b>	<b>1.6196</b>		<b>1.5559</b>	<b>1.5559</b>						

### 3.4 Paving - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.0612</b>	<b>0.0901</b>	<b>0.8320</b>	<b>1.6100e-003</b>	<b>0.1415</b>	<b>1.1400e-003</b>	<b>0.1426</b>	<b>0.0375</b>	<b>1.0400e-003</b>	<b>0.0386</b>						

#### 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	1.8604	24.2897	26.7622	0.0420		1.3425	1.3425		1.2788	1.2788						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.8604</b>	<b>24.2897</b>	<b>26.7622</b>	<b>0.0420</b>		<b>1.3425</b>	<b>1.3425</b>		<b>1.2788</b>	<b>1.2788</b>						

### 3.4 Paving - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0612	0.0901	0.8320	1.6100e-003	0.1415	1.1400e-003	0.1426	0.0375	1.0400e-003	0.0386						
<b>Total</b>	<b>0.0612</b>	<b>0.0901</b>	<b>0.8320</b>	<b>1.6100e-003</b>	<b>0.1415</b>	<b>1.1400e-003</b>	<b>0.1426</b>	<b>0.0375</b>	<b>1.0400e-003</b>	<b>0.0386</b>						

### 3.5 Building Construction - 2016

#### 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	5.1831	38.3681	28.7225	0.0506		2.1777	2.1777		2.1296	2.1296						
<b>Total</b>	<b>5.1831</b>	<b>38.3681</b>	<b>28.7225</b>	<b>0.0506</b>		<b>2.1777</b>	<b>2.1777</b>		<b>2.1296</b>	<b>2.1296</b>						

### 3.5 Building Construction - 2016

#### 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						
Vendor	0.1004	0.7103	1.2564	1.6600e-003	0.0465	0.0105	0.0571	0.0133	9.6800e-003	0.0230						
Worker	0.0653	0.0961	0.8875	1.7100e-003	0.1509	1.2100e-003	0.1521	0.0400	1.1100e-003	0.0411						
<b>Total</b>	<b>0.1657</b>	<b>0.8064</b>	<b>2.1439</b>	<b>3.3700e-003</b>	<b>0.1974</b>	<b>0.0117</b>	<b>0.2092</b>	<b>0.0533</b>	<b>0.0108</b>	<b>0.0641</b>						

#### 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	3.3571	29.7972	32.6348	0.0506		1.7724	1.7724		1.7243	1.7243						
<b>Total</b>	<b>3.3571</b>	<b>29.7972</b>	<b>32.6348</b>	<b>0.0506</b>		<b>1.7724</b>	<b>1.7724</b>		<b>1.7243</b>	<b>1.7243</b>						

### 3.5 Building Construction - 2016

#### 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						
Vendor	0.1004	0.7103	1.2564	1.6600e-003	0.0465	0.0105	0.0571	0.0133	9.6800e-003	0.0230						
Worker	0.0653	0.0961	0.8875	1.7100e-003	0.1509	1.2100e-003	0.1521	0.0400	1.1100e-003	0.0411						
<b>Total</b>	<b>0.1657</b>	<b>0.8064</b>	<b>2.1439</b>	<b>3.3700e-003</b>	<b>0.1974</b>	<b>0.0117</b>	<b>0.2092</b>	<b>0.0533</b>	<b>0.0108</b>	<b>0.0641</b>						

### 3.6 Architectural Coating - 2016

#### 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	3.6053					0.0000	0.0000		0.0000	0.0000						
Off-Road	2.2601	20.1945	15.8991	0.0316		1.0087	1.0087		1.0087	1.0087						
<b>Total</b>	<b>5.8654</b>	<b>20.1945</b>	<b>15.8991</b>	<b>0.0316</b>		<b>1.0087</b>	<b>1.0087</b>		<b>1.0087</b>	<b>1.0087</b>						

### 3.6 Architectural Coating - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0122	0.0180	0.1664	3.2000e-004	0.0283	2.3000e-004	0.0285	7.5000e-003	2.1000e-004	7.7100e-003						
<b>Total</b>	<b>0.0122</b>	<b>0.0180</b>	<b>0.1664</b>	<b>3.2000e-004</b>	<b>0.0283</b>	<b>2.3000e-004</b>	<b>0.0285</b>	<b>7.5000e-003</b>	<b>2.1000e-004</b>	<b>7.7100e-003</b>						

#### 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	3.6053					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.9417	13.4544	19.5581	0.0316		0.7316	0.7316		0.7316	0.7316						
<b>Total</b>	<b>4.5470</b>	<b>13.4544</b>	<b>19.5581</b>	<b>0.0316</b>		<b>0.7316</b>	<b>0.7316</b>		<b>0.7316</b>	<b>0.7316</b>						

### 3.6 Architectural Coating - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0122	0.0180	0.1664	3.2000e-004	0.0283	2.3000e-004	0.0285	7.5000e-003	2.1000e-004	7.7100e-003						
<b>Total</b>	<b>0.0122</b>	<b>0.0180</b>	<b>0.1664</b>	<b>3.2000e-004</b>	<b>0.0283</b>	<b>2.3000e-004</b>	<b>0.0285</b>	<b>7.5000e-003</b>	<b>2.1000e-004</b>	<b>7.7100e-003</b>						

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	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	5.4112	8.1624	45.2577	0.0551	3.8665	0.0932	3.9596	1.0343	0.0856	1.1199						
Unmitigated	5.4112	8.1624	45.2577	0.0551	3.8665	0.0932	3.9596	1.0343	0.0856	1.1199						

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Pharmacy/Drugstore with Drive Thru	1,599.02	1,599.02	1,599.02	1,820,808	1,820,808
<b>Total</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,820,808</b>	<b>1,820,808</b>

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Pharmacy/Drugstore with Drive	9.50	7.30	7.30	7.50	73.50	19.00	38	13	49

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546434	0.062864	0.174629	0.123506	0.034170	0.004889	0.015456	0.023695	0.002073	0.003288	0.006639	0.000690	0.001668

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

	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	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003							
NaturalGas Unmitigated	2.3400e-003	0.0213	0.0179	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003							

### 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					
Pharmacy/Drugstore with Drive Thru	216.986	2.3400e-003	0.0213	0.0179	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>		<b>2.3400e-003</b>	<b>0.0213</b>	<b>0.0179</b>	<b>1.3000e-004</b>		<b>1.6200e-003</b>	<b>1.6200e-003</b>		<b>1.6200e-003</b>	<b>1.6200e-003</b>						

### 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						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000							
Pharmacy/Drugstore with Drive Thru	0.161384	1.7400e-003	0.0158	0.0133	9.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003							
<b>Total</b>		<b>1.7400e-003</b>	<b>0.0158</b>	<b>0.0133</b>	<b>9.0000e-005</b>		<b>1.2000e-003</b>	<b>1.2000e-003</b>		<b>1.2000e-003</b>	<b>1.2000e-003</b>							

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

	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	0.8837	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005							
Unmitigated	0.9511	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005							

### 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	0.0493					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.9009					0.0000	0.0000		0.0000	0.0000						
Landscaping	8.2000e-004	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
<b>Total</b>	<b>0.9511</b>	<b>8.0000e-005</b>	<b>8.4300e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>						

#### 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	0.0493					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.8336					0.0000	0.0000		0.0000	0.0000						
Landscaping	8.2000e-004	8.0000e-005	8.4300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005						
<b>Total</b>	<b>0.8837</b>	<b>8.0000e-005</b>	<b>8.4300e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>						

### 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
Generator Sets	1	0.50	12	64	0.74	Diesel

**UnMitigated/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
Equipment Type	lb/day										lb/day					
Generator Sets	0.0304	0.2302	0.1811	3.1000e-004		0.0161	0.0161		0.0161	0.0161						
<b>Total</b>	<b>0.0304</b>	<b>0.2302</b>	<b>0.1811</b>	<b>3.1000e-004</b>		<b>0.0161</b>	<b>0.0161</b>		<b>0.0161</b>	<b>0.0161</b>						

**10.0 Vegetation**

**Pinole CVS - AQ**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Pharmacy/Drugstore with Drive Thru	16.50	1000sqft	1.90	16,500.00	0
Parking Lot	64.00	Space	0.00	25,600.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2016
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - per project description

Construction Phase - based on info from applicant

Demolition -

Grading - based on info from applicant

Vehicle Trips - based on traffic report

Area Mitigation -

Energy Mitigation -

Off-road Equipment - project requires one generator for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Operational Off-Road Equipment - an emergency backup generator would be on-site during operations for the cell antenna

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	111.00
tblConstructionPhase	NumDays	200.00	111.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	4.00	12.00
tblConstructionPhase	NumDays	10.00	2.00

tblConstructionPhase	PhaseEndDate	2/3/2017	9/15/2016
tblConstructionPhase	PhaseStartDate	9/2/2016	4/14/2016
tblGrading	AcresOfGrading	4.50	1.70
tblGrading	MaterialImported	0.00	1,768.00
tblLandUse	LotAcreage	0.38	1.90
tblLandUse	LotAcreage	0.58	0.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	64.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	88.16	96.91
tblVehicleTrips	SU_TR	88.16	96.91
tblVehicleTrips	WD_TR	88.16	96.91

**2.0 Emissions Summary**



## 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					
Area	0.1735	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	4.3000e-004	3.8800e-003	3.2600e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004						
Mobile	0.8997	1.4280	7.2555	0.0101	0.6773	0.0168	0.6941	0.1818	0.0155	0.1972						
Offroad	1.8000e-004	1.3800e-003	1.0900e-003	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004						
Waste						0.0000	0.0000		0.0000	0.0000						
Water						0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.0738</b>	<b>1.4333</b>	<b>7.2606</b>	<b>0.0101</b>	<b>0.6773</b>	<b>0.0172</b>	<b>0.6945</b>	<b>0.1818</b>	<b>0.0159</b>	<b>0.1976</b>						

## 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					
Area	0.1612	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Energy	3.2000e-004	2.8900e-003	2.4300e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
Mobile	0.8997	1.4280	7.2555	0.0101	0.6773	0.0168	0.6941	0.1818	0.0155	0.1972						
Offroad	1.8000e-004	1.3800e-003	1.0900e-003	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004						
Waste						0.0000	0.0000		0.0000	0.0000						
Water						0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.0614</b>	<b>1.4323</b>	<b>7.2598</b>	<b>0.0101</b>	<b>0.6773</b>	<b>0.0172</b>	<b>0.6945</b>	<b>0.1818</b>	<b>0.0158</b>	<b>0.1975</b>						

	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
<b>Percent Reduction</b>	<b>1.17</b>	<b>0.17</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>1.04</b>	<b>0.03</b>	<b>0.00</b>	<b>1.14</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 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	3/1/2016	3/10/2016	5	8	
2	Grading	Grading	3/11/2016	3/28/2016	5	12	
3	Paving	Paving	3/29/2016	3/30/2016	5	2	
4	Building Construction	Building Construction	3/31/2016	9/1/2016	5	111	
5	Architectural Coating	Architectural Coating	4/14/2016	9/15/2016	5	111	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.7**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 25,902; Non-Residential Outdoor: 8,634 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Generator Sets	1	24.00	122	0.74
Grading	Generator Sets	1	24.00	122	0.74
Paving	Generator Sets	1	24.00	122	0.74
Building Construction	Generator Sets	1	24.00	122	0.74
Architectural Coating	Generator Sets	1	24.00	122	0.74

**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	6	15.00	0.00	28.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	221.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	16.00	7.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	3.00	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

Clean Paved Roads

### 3.2 Demolition - 2016

#### 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					3.0000e-003	0.0000	3.0000e-003	4.5000e-004	0.0000	4.5000e-004						
Off-Road	0.0192	0.1843	0.1421	2.1000e-004		0.0102	0.0102		9.7800e-003	9.7800e-003						
<b>Total</b>	<b>0.0192</b>	<b>0.1843</b>	<b>0.1421</b>	<b>2.1000e-004</b>	<b>3.0000e-003</b>	<b>0.0102</b>	<b>0.0132</b>	<b>4.5000e-004</b>	<b>9.7800e-003</b>	<b>0.0102</b>						

### 3.2 Demolition - 2016

#### 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	3.3000e-004	4.1900e-003	3.6200e-003	1.0000e-005	2.4000e-004	5.0000e-005	2.9000e-004	6.0000e-005	5.0000e-005	1.1000e-004						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	2.3000e-004	3.3000e-004	3.1900e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004						
<b>Total</b>	<b>5.6000e-004</b>	<b>4.5200e-003</b>	<b>6.8100e-003</b>	<b>2.0000e-005</b>	<b>7.8000e-004</b>	<b>5.0000e-005</b>	<b>8.4000e-004</b>	<b>2.0000e-004</b>	<b>5.0000e-005</b>	<b>2.6000e-004</b>						

#### 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					3.0000e-003	0.0000	3.0000e-003	4.5000e-004	0.0000	4.5000e-004						
Off-Road	0.0139	0.1574	0.1567	2.1000e-004		9.1200e-003	9.1200e-003		8.6700e-003	8.6700e-003						
<b>Total</b>	<b>0.0139</b>	<b>0.1574</b>	<b>0.1567</b>	<b>2.1000e-004</b>	<b>3.0000e-003</b>	<b>9.1200e-003</b>	<b>0.0121</b>	<b>4.5000e-004</b>	<b>8.6700e-003</b>	<b>9.1200e-003</b>						

### 3.2 Demolition - 2016

#### 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	3.3000e-004	4.1900e-003	3.6200e-003	1.0000e-005	2.4000e-004	5.0000e-005	2.9000e-004	6.0000e-005	5.0000e-005	1.1000e-004						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	2.3000e-004	3.3000e-004	3.1900e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004						
<b>Total</b>	<b>5.6000e-004</b>	<b>4.5200e-003</b>	<b>6.8100e-003</b>	<b>2.0000e-005</b>	<b>7.8000e-004</b>	<b>5.0000e-005</b>	<b>8.4000e-004</b>	<b>2.0000e-004</b>	<b>5.0000e-005</b>	<b>2.6000e-004</b>						

### 3.3 Grading - 2016

#### 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					0.0281	0.0000	0.0281	0.0150	0.0000	0.0150						
Off-Road	0.0233	0.2332	0.1661	2.6000e-004		0.0117	0.0117		0.0112	0.0112						
<b>Total</b>	<b>0.0233</b>	<b>0.2332</b>	<b>0.1661</b>	<b>2.6000e-004</b>	<b>0.0281</b>	<b>0.0117</b>	<b>0.0398</b>	<b>0.0150</b>	<b>0.0112</b>	<b>0.0262</b>						

### 3.3 Grading - 2016

#### 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	2.6100e-003	0.0331	0.0286	8.0000e-005	1.8600e-003	4.3000e-004	2.2900e-003	5.1000e-004	4.0000e-004	9.1000e-004						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	2.3000e-004	3.3000e-004	3.1900e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004						
<b>Total</b>	<b>2.8400e-003</b>	<b>0.0334</b>	<b>0.0318</b>	<b>9.0000e-005</b>	<b>2.4000e-003</b>	<b>4.3000e-004</b>	<b>2.8400e-003</b>	<b>6.5000e-004</b>	<b>4.0000e-004</b>	<b>1.0600e-003</b>						

#### 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					0.0281	0.0000	0.0281	0.0150	0.0000	0.0150						
Off-Road	0.0154	0.1927	0.1881	2.6000e-004		0.0101	0.0101		9.5100e-003	9.5100e-003						
<b>Total</b>	<b>0.0154</b>	<b>0.1927</b>	<b>0.1881</b>	<b>2.6000e-004</b>	<b>0.0281</b>	<b>0.0101</b>	<b>0.0382</b>	<b>0.0150</b>	<b>9.5100e-003</b>	<b>0.0245</b>						

### 3.3 Grading - 2016

#### 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	2.6100e-003	0.0331	0.0286	8.0000e-005	1.8600e-003	4.3000e-004	2.2900e-003	5.1000e-004	4.0000e-004	9.1000e-004						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	2.3000e-004	3.3000e-004	3.1900e-003	1.0000e-005	5.4000e-004	0.0000	5.5000e-004	1.4000e-004	0.0000	1.5000e-004						
<b>Total</b>	<b>2.8400e-003</b>	<b>0.0334</b>	<b>0.0318</b>	<b>9.0000e-005</b>	<b>2.4000e-003</b>	<b>4.3000e-004</b>	<b>2.8400e-003</b>	<b>6.5000e-004</b>	<b>4.0000e-004</b>	<b>1.0600e-003</b>						

### 3.4 Paving - 2016

#### 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	3.1800e-003	0.0310	0.0231	4.0000e-005		1.6200e-003	1.6200e-003		1.5600e-003	1.5600e-003						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>3.1800e-003</b>	<b>0.0310</b>	<b>0.0231</b>	<b>4.0000e-005</b>		<b>1.6200e-003</b>	<b>1.6200e-003</b>		<b>1.5600e-003</b>	<b>1.5600e-003</b>						

### 3.4 Paving - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	6.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005						
<b>Total</b>	<b>6.0000e-005</b>	<b>8.0000e-005</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>						

#### 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	1.8600e-003	0.0243	0.0268	4.0000e-005		1.3400e-003	1.3400e-003		1.2800e-003	1.2800e-003						
Paving	0.0000					0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>1.8600e-003</b>	<b>0.0243</b>	<b>0.0268</b>	<b>4.0000e-005</b>		<b>1.3400e-003</b>	<b>1.3400e-003</b>		<b>1.2800e-003</b>	<b>1.2800e-003</b>						

### 3.4 Paving - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	6.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005						
<b>Total</b>	<b>6.0000e-005</b>	<b>8.0000e-005</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>1.4000e-004</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>						

### 3.5 Building Construction - 2016

#### 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	0.2877	2.1294	1.5941	2.8100e-003		0.1209	0.1209		0.1182	0.1182						
<b>Total</b>	<b>0.2877</b>	<b>2.1294</b>	<b>1.5941</b>	<b>2.8100e-003</b>		<b>0.1209</b>	<b>0.1209</b>		<b>0.1182</b>	<b>0.1182</b>						

### 3.5 Building Construction - 2016

#### 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						
Vendor	4.9500e-003	0.0389	0.0575	9.0000e-005	2.5000e-003	5.8000e-004	3.0800e-003	7.2000e-004	5.3000e-004	1.2500e-003						
Worker	3.3700e-003	4.8800e-003	0.0473	1.0000e-004	8.0600e-003	7.0000e-005	8.1200e-003	2.1400e-003	6.0000e-005	2.2000e-003						
<b>Total</b>	<b>8.3200e-003</b>	<b>0.0438</b>	<b>0.1047</b>	<b>1.9000e-004</b>	<b>0.0106</b>	<b>6.5000e-004</b>	<b>0.0112</b>	<b>2.8600e-003</b>	<b>5.9000e-004</b>	<b>3.4500e-003</b>						

#### 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	0.1863	1.6537	1.8112	2.8100e-003		0.0984	0.0984		0.0957	0.0957						
<b>Total</b>	<b>0.1863</b>	<b>1.6537</b>	<b>1.8112</b>	<b>2.8100e-003</b>		<b>0.0984</b>	<b>0.0984</b>		<b>0.0957</b>	<b>0.0957</b>						

### 3.5 Building Construction - 2016

#### 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						
Vendor	4.9500e-003	0.0389	0.0575	9.0000e-005	2.5000e-003	5.8000e-004	3.0800e-003	7.2000e-004	5.3000e-004	1.2500e-003						
Worker	3.3700e-003	4.8800e-003	0.0473	1.0000e-004	8.0600e-003	7.0000e-005	8.1200e-003	2.1400e-003	6.0000e-005	2.2000e-003						
<b>Total</b>	<b>8.3200e-003</b>	<b>0.0438</b>	<b>0.1047</b>	<b>1.9000e-004</b>	<b>0.0106</b>	<b>6.5000e-004</b>	<b>0.0112</b>	<b>2.8600e-003</b>	<b>5.9000e-004</b>	<b>3.4500e-003</b>						

### 3.6 Architectural Coating - 2016

#### 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	0.2001					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1254	1.1208	0.8824	1.7600e-003		0.0560	0.0560		0.0560	0.0560						
<b>Total</b>	<b>0.3255</b>	<b>1.1208</b>	<b>0.8824</b>	<b>1.7600e-003</b>		<b>0.0560</b>	<b>0.0560</b>		<b>0.0560</b>	<b>0.0560</b>						

### 3.6 Architectural Coating - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	6.3000e-004	9.1000e-004	8.8600e-003	2.0000e-005	1.5100e-003	1.0000e-005	1.5200e-003	4.0000e-004	1.0000e-005	4.1000e-004						
<b>Total</b>	<b>6.3000e-004</b>	<b>9.1000e-004</b>	<b>8.8600e-003</b>	<b>2.0000e-005</b>	<b>1.5100e-003</b>	<b>1.0000e-005</b>	<b>1.5200e-003</b>	<b>4.0000e-004</b>	<b>1.0000e-005</b>	<b>4.1000e-004</b>						

#### 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	0.2001					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.0523	0.7467	1.0855	1.7600e-003		0.0406	0.0406		0.0406	0.0406						
<b>Total</b>	<b>0.2524</b>	<b>0.7467</b>	<b>1.0855</b>	<b>1.7600e-003</b>		<b>0.0406</b>	<b>0.0406</b>		<b>0.0406</b>	<b>0.0406</b>						

### 3.6 Architectural Coating - 2016

#### 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						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	6.3000e-004	9.1000e-004	8.8600e-003	2.0000e-005	1.5100e-003	1.0000e-005	1.5200e-003	4.0000e-004	1.0000e-005	4.1000e-004						
<b>Total</b>	<b>6.3000e-004</b>	<b>9.1000e-004</b>	<b>8.8600e-003</b>	<b>2.0000e-005</b>	<b>1.5100e-003</b>	<b>1.0000e-005</b>	<b>1.5200e-003</b>	<b>4.0000e-004</b>	<b>1.0000e-005</b>	<b>4.1000e-004</b>						

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	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	0.8997	1.4280	7.2555	0.0101	0.6773	0.0168	0.6941	0.1818	0.0155	0.1972						
Unmitigated	0.8997	1.4280	7.2555	0.0101	0.6773	0.0168	0.6941	0.1818	0.0155	0.1972						

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Pharmacy/Drugstore with Drive Thru	1,599.02	1,599.02	1599.02	1,820,808	1,820,808
<b>Total</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,820,808</b>	<b>1,820,808</b>

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Pharmacy/Drugstore with Drive	9.50	7.30	7.30	7.50	73.50	19.00	38	13	49

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546434	0.062864	0.174629	0.123506	0.034170	0.004889	0.015456	0.023695	0.002073	0.003288	0.006639	0.000690	0.001668

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

	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						
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						
NaturalGas Mitigated	3.2000e-004	2.8900e-003	2.4300e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
NaturalGas Unmitigated	4.3000e-004	3.8800e-003	3.2600e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004						

**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					
Pharmacy/Drugstore with Drive Thru	79200	4.3000e-004	3.8800e-003	3.2600e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>		<b>4.3000e-004</b>	<b>3.8800e-003</b>	<b>3.2600e-003</b>	<b>2.0000e-005</b>		<b>3.0000e-004</b>	<b>3.0000e-004</b>		<b>3.0000e-004</b>	<b>3.0000e-004</b>						

### 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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Pharmacy/Drugstore with Drive Thru	58905	3.2000e-004	2.8900e-003	2.4300e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004						
<b>Total</b>		<b>3.2000e-004</b>	<b>2.8900e-003</b>	<b>2.4300e-003</b>	<b>2.0000e-005</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>						

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	22528				
Pharmacy/Drugstore with Drive Thru	191565				
<b>Total</b>					

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	22528				
Pharmacy/Drugstore with Drive Thru	178002				
<b>Total</b>					

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

	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	0.1612	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
Unmitigated	0.1735	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						

### 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	9.0000e-003					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.1644					0.0000	0.0000		0.0000	0.0000						
Landscaping	7.0000e-005	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1735</b>	<b>1.0000e-005</b>	<b>7.6000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

#### 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	9.0000e-003					0.0000	0.0000		0.0000	0.0000						
Consumer Products	0.1521					0.0000	0.0000		0.0000	0.0000						
Landscaping	7.0000e-005	1.0000e-005	7.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000						
<b>Total</b>	<b>0.1612</b>	<b>1.0000e-005</b>	<b>7.6000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>						

### 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				
Unmitigated				

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0				
Pharmacy/Drugstore with Drive Thru	1.16238 / 0.712429				
<b>Total</b>					

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0				
Pharmacy/Drugstore with Drive Thru	1.16238 / 0.712429				
<b>Total</b>					

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				
Unmitigated				

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0				
Pharmacy/Drugstore with Drive Thru	49.62				
<b>Total</b>					

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0				
Pharmacy/Drugstore with Drive Thru	49.62				
<b>Total</b>					

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	12	64	0.74	Diesel

**UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Generator Sets	1.8000e-004	1.3800e-003	1.0900e-003	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004						
<b>Total</b>	<b>1.8000e-004</b>	<b>1.3800e-003</b>	<b>1.0900e-003</b>	<b>0.0000</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>						

**10.0 Vegetation**

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**Pinole CVS - AQ**  
**Bay Area AQMD Air District, Mitigation Report**

**Construction Mitigation Summary**

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.22	0.33	-0.23	0.00	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.34	0.22	-0.13	0.00	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.27	0.14	-0.10	0.00	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.30	0.15	-0.11	0.00	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.41	0.22	-0.15	0.00	0.17	0.18	0.00	0.00	0.00	0.00	0.00	0.00

**OFFROAD Equipment Mitigation**

CalEEMod Version: CalEEMod.2013.2.2

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Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	1	No Change	0.00
Generator Sets	Diesel	Tier 3	6	6	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	6	No Change	0.00
Welders	Diesel	No Change	0	3	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					
Air Compressors	2.04500E-002	1.31660E-001	1.04560E-001	1.60000E-004	1.09100E-002	1.09100E-002						
Cement and Mortar Mixers	4.00000E-005	2.80000E-004	2.30000E-004	0.00000E+000	1.00000E-005	1.00000E-005						
Concrete/Industrial Saws	2.59000E-003	1.84900E-002	1.51000E-002	3.00000E-005	1.39000E-003	1.39000E-003						
Cranes	2.99700E-002	3.55130E-001	1.24240E-001	2.30000E-004	1.61100E-002	1.48300E-002						
Forklifts	9.45000E-003	8.13100E-002	5.25700E-002	6.00000E-005	6.80000E-003	6.25000E-003						
Generator Sets	2.66250E-001	2.44264E+000	1.92092E+000	3.86000E-003	1.17870E-001	1.17870E-001						
Graders	4.58000E-003	4.67100E-002	2.21700E-002	3.00000E-005	2.62000E-003	2.41000E-003						
Pavers	3.00000E-004	3.38000E-003	2.14000E-003	0.00000E+000	1.70000E-004	1.50000E-004						
Paving Equipment	3.10000E-004	3.57000E-003	2.54000E-003	0.00000E+000	1.80000E-004	1.60000E-004						
Rollers	2.90000E-004	2.72000E-003	1.76000E-003	0.00000E+000	2.00000E-004	1.80000E-004						
Rubber Tired Dozers	1.05300E-002	1.17900E-001	8.91200E-002	8.00000E-005	5.49000E-003	5.05000E-003						
Tractors/Loaders/Backhoes	2.03900E-002	1.94900E-001	1.44460E-001	1.90000E-004	1.50100E-002	1.38100E-002						
Welders	9.36100E-002	3.00040E-001	3.27940E-001	4.30000E-004	2.36500E-002	2.36500E-002						

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors	2.04500E-002	1.31660E-001	1.04560E-001	1.60000E-004	1.09100E-002	1.09100E-002						
Cement and Mortar Mixers	4.00000E-005	2.80000E-004	2.30000E-004	0.00000E+000	1.00000E-005	1.00000E-005						
Concrete/Industrial Saws	2.59000E-003	1.84900E-002	1.51000E-002	3.00000E-005	1.39000E-003	1.39000E-003						
Cranes	2.99700E-002	3.55120E-001	1.24240E-001	2.30000E-004	1.61100E-002	1.48300E-002						
Forklifts	9.45000E-003	8.13100E-002	5.25700E-002	6.00000E-005	6.80000E-003	6.25000E-003						
Generator Sets	7.72300E-002	1.51874E+000	2.38137E+000	3.86000E-003	7.69500E-002	7.69500E-002						
Graders	4.58000E-003	4.67100E-002	2.21700E-002	3.00000E-005	2.62000E-003	2.41000E-003						
Pavers	3.00000E-004	3.38000E-003	2.14000E-003	0.00000E+000	1.70000E-004	1.50000E-004						
Paving Equipment	3.10000E-004	3.57000E-003	2.54000E-003	0.00000E+000	1.80000E-004	1.60000E-004						
Rollers	2.90000E-004	2.72000E-003	1.76000E-003	0.00000E+000	2.00000E-004	1.80000E-004						
Rubber Tired Dozers	1.05300E-002	1.17900E-001	8.91200E-002	8.00000E-005	5.49000E-003	5.05000E-003						
Tractors/Loaders/Backhoes	2.03900E-002	1.94900E-001	1.44460E-001	1.90000E-004	1.50100E-002	1.38100E-002						
Welders	9.36100E-002	3.00040E-001	3.27940E-001	4.30000E-004	2.36500E-002	2.36500E-002						

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	2.81587E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	7.09934E-001	3.78238E-001	-2.39703E-001	0.00000E+000	3.47162E-001	3.47162E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Balkhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

**Fugitive Dust Mitigation**

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction: 0.00
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction: 0.00
No	Water Exposed Area	PM10 Reduction	0.00	PM2.5 Reduction: 0.00; Frequency (per day)

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.03	0.02	0.03	0.02	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Percent Reduction Summary**

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	25.58	25.52	25.46	0.00	26.67	26.67	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network			
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.00		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.00		

**Area Mitigation**

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

**Energy Mitigation Measures**

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

**Water Mitigation Measures**

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

**Solid Waste Mitigation**

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

**Pinole CVS - GHG**  
**Bay Area AQMD Air District, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Pharmacy/Drugstore with Drive Thru	16.50	1000sqft	1.90	16,500.00	0
Parking Lot	64.00	Space	0.00	25,600.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2016
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - per project description

Construction Phase - based on info from applicant

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - project requires one generator for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Off-road Equipment - generator required during construction for cell antenna

Demolition -

Grading - based on info from applicant

Vehicle Trips - based on traffic report

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Operational Off-Road Equipment - an emergency backup generator would be on-site during operations for the cell antenna

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	111.00
tblConstructionPhase	NumDays	200.00	111.00
tblConstructionPhase	NumDays	20.00	8.00
tblConstructionPhase	NumDays	4.00	12.00
tblConstructionPhase	NumDays	10.00	2.00

tblConstructionPhase	PhaseEndDate	2/3/2017	9/15/2016
tblConstructionPhase	PhaseStartDate	9/2/2016	4/14/2016
tblGrading	AcresOfGrading	4.50	1.70
tblGrading	MaterialImported	0.00	1,768.00
tblLandUse	LotAcreage	0.38	1.90
tblLandUse	LotAcreage	0.58	0.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	HorsePower	84.00	122.00
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	12.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	64.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.50
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	88.16	96.91
tblVehicleTrips	SU_TR	88.16	96.91
tblVehicleTrips	WD_TR	88.16	96.91

## 2.0 Emissions Summary

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**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					
Area											0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5200e-003
Energy											0.0000	66.5085	66.5085	2.9000e-003	6.6000e-004	66.7740
Mobile											0.0000	799.9169	799.9169	0.0386	0.0000	800.7264
Offroad											0.0000	0.1615	0.1615	1.0000e-005	0.0000	0.1618
Waste											10.0724	0.0000	10.0724	0.5953	0.0000	22.5729
Water											0.3688	2.5551	2.9239	0.0380	9.2000e-004	4.0064
<b>Total</b>											<b>10.4412</b>	<b>869.1434</b>	<b>879.5846</b>	<b>0.6747</b>	<b>1.5800e-003</b>	<b>894.2430</b>

## 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					
Area											0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5200e-003
Energy											0.0000	61.4799	61.4799	2.7000e-003	6.0000e-004	61.7236
Mobile											0.0000	799.9169	799.9169	0.0386	0.0000	800.7264
Offroad											0.0000	0.1615	0.1615	1.0000e-005	0.0000	0.1618
Waste											10.0724	0.0000	10.0724	0.5953	0.0000	22.5729
Water											0.3688	2.5551	2.9239	0.0380	9.2000e-004	4.0058
<b>Total</b>											<b>10.4412</b>	<b>864.1148</b>	<b>874.5560</b>	<b>0.6745</b>	<b>1.5200e-003</b>	<b>889.1920</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.60</b>	<b>0.59</b>	<b>0.03</b>	<b>3.80</b>	<b>0.58</b>

## 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	3/1/2016	3/10/2016	5	8	
2	Grading	Grading	3/11/2016	3/28/2016	5	12	
3	Paving	Paving	3/29/2016	3/30/2016	5	2	
4	Building Construction	Building Construction	3/31/2016	9/1/2016	5	111	
5	Architectural Coating	Architectural Coating	4/14/2016	9/15/2016	5	111	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.7**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 25,902; Non-Residential Outdoor: 8,634 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Generator Sets	1	24.00	122	0.74
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Generator Sets	1	24.00	122	0.74
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Generator Sets	1	24.00	122	0.74
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Generator Sets	1	24.00	122	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Generator Sets	1	24.00	122	0.74

**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	6	15.00	0.00	28.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	221.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	16.00	7.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	3.00	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

### 3.2 Demolition - 2016

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.8759	18.8759	2.8900e-003	0.0000	18.9366
<b>Total</b>											<b>0.0000</b>	<b>18.8759</b>	<b>18.8759</b>	<b>2.8900e-003</b>	<b>0.0000</b>	<b>18.9366</b>

### 3.2 Demolition - 2016

#### 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	0.9604	0.9604	1.0000e-005	0.0000	0.9606
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.4939	0.4939	3.0000e-005	0.0000	0.4945
<b>Total</b>											<b>0.0000</b>	<b>1.4544</b>	<b>1.4544</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.4551</b>

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	18.8759	18.8759	2.8900e-003	0.0000	18.9365
<b>Total</b>											<b>0.0000</b>	<b>18.8759</b>	<b>18.8759</b>	<b>2.8900e-003</b>	<b>0.0000</b>	<b>18.9365</b>

### 3.2 Demolition - 2016

#### 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	0.9604	0.9604	1.0000e-005	0.0000	0.9606
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.4939	0.4939	3.0000e-005	0.0000	0.4945
<b>Total</b>											<b>0.0000</b>	<b>1.4544</b>	<b>1.4544</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.4551</b>

### 3.3 Grading - 2016

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	22.7386	22.7386	3.3100e-003	0.0000	22.8081
<b>Total</b>											<b>0.0000</b>	<b>22.7386</b>	<b>22.7386</b>	<b>3.3100e-003</b>	<b>0.0000</b>	<b>22.8081</b>

### 3.3 Grading - 2016

#### 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	7.5805	7.5805	6.0000e-005	0.0000	7.5817
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.4939	0.4939	3.0000e-005	0.0000	0.4945
<b>Total</b>											<b>0.0000</b>	<b>8.0744</b>	<b>8.0744</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>8.0762</b>

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	22.7385	22.7385	3.3100e-003	0.0000	22.8081
<b>Total</b>											<b>0.0000</b>	<b>22.7385</b>	<b>22.7385</b>	<b>3.3100e-003</b>	<b>0.0000</b>	<b>22.8081</b>

### 3.3 Grading - 2016

#### 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	7.5805	7.5805	6.0000e-005	0.0000	7.5817
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.4939	0.4939	3.0000e-005	0.0000	0.4945
<b>Total</b>											<b>0.0000</b>	<b>8.0744</b>	<b>8.0744</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>8.0762</b>

### 3.4 Paving - 2016

#### 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											0.0000	3.7041	3.7041	5.2000e-004	0.0000	3.7150
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>3.7041</b>	<b>3.7041</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>3.7150</b>

### 3.4 Paving - 2016

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1235	0.1235	1.0000e-005	0.0000	0.1236
<b>Total</b>											<b>0.0000</b>	<b>0.1235</b>	<b>0.1235</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1236</b>

#### 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											0.0000	3.7041	3.7041	5.2000e-004	0.0000	3.7150
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>											<b>0.0000</b>	<b>3.7041</b>	<b>3.7041</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>3.7150</b>

### 3.4 Paving - 2016

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.1235	0.1235	1.0000e-005	0.0000	0.1236
<b>Total</b>											<b>0.0000</b>	<b>0.1235</b>	<b>0.1235</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1236</b>

### 3.5 Building Construction - 2016

#### 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											0.0000	239.7403	239.7403	0.0311	0.0000	240.3928
<b>Total</b>											<b>0.0000</b>	<b>239.7403</b>	<b>239.7403</b>	<b>0.0311</b>	<b>0.0000</b>	<b>240.3928</b>

### 3.5 Building Construction - 2016

#### 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
Vendor											0.0000	8.4017	8.4017	7.0000e-005	0.0000	8.4031
Worker											0.0000	7.3100	7.3100	4.0000e-004	0.0000	7.3184
<b>Total</b>											<b>0.0000</b>	<b>15.7116</b>	<b>15.7116</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>15.7215</b>

#### 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											0.0000	239.7400	239.7400	0.0311	0.0000	240.3925
<b>Total</b>											<b>0.0000</b>	<b>239.7400</b>	<b>239.7400</b>	<b>0.0311</b>	<b>0.0000</b>	<b>240.3925</b>

### 3.5 Building Construction - 2016

#### 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
Vendor											0.0000	8.4017	8.4017	7.0000e-005	0.0000	8.4031
Worker											0.0000	7.3100	7.3100	4.0000e-004	0.0000	7.3184
<b>Total</b>											<b>0.0000</b>	<b>15.7116</b>	<b>15.7116</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>15.7215</b>

### 3.6 Architectural Coating - 2016

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	150.8498	150.8498	0.0101	0.0000	151.0617
<b>Total</b>											<b>0.0000</b>	<b>150.8498</b>	<b>150.8498</b>	<b>0.0101</b>	<b>0.0000</b>	<b>151.0617</b>

### 3.6 Architectural Coating - 2016

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.3706	1.3706	8.0000e-005	0.0000	1.3722
<b>Total</b>											<b>0.0000</b>	<b>1.3706</b>	<b>1.3706</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.3722</b>

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	150.8497	150.8497	0.0101	0.0000	151.0615
<b>Total</b>											<b>0.0000</b>	<b>150.8497</b>	<b>150.8497</b>	<b>0.0101</b>	<b>0.0000</b>	<b>151.0615</b>

### 3.6 Architectural Coating - 2016

#### 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
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	1.3706	1.3706	8.0000e-005	0.0000	1.3722
<b>Total</b>											<b>0.0000</b>	<b>1.3706</b>	<b>1.3706</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>1.3722</b>

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	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											0.0000	799.9169	799.9169	0.0386	0.0000	800.7264
Unmitigated											0.0000	799.9169	799.9169	0.0386	0.0000	800.7264

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Pharmacy/Drugstore with Drive Thru	1,599.02	1,599.02	1,599.02	1,820,808	1,820,808
<b>Total</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,599.02</b>	<b>1,820,808</b>	<b>1,820,808</b>

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Pharmacy/Drugstore with Drive	9.50	7.30	7.30	7.50	73.50	19.00	38	13	49

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546434	0.062864	0.174629	0.123506	0.034170	0.004889	0.015456	0.023695	0.002073	0.003288	0.006639	0.000690	0.001668

### 5.0 Energy Detail

#### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24

	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	58.3365	58.3365	2.6400e-003	5.5000e-004	58.5611
Electricity Unmitigated											0.0000	62.2821	62.2821	2.8200e-003	5.8000e-004	62.5219
NaturalGas Mitigated											0.0000	3.1434	3.1434	6.0000e-005	6.0000e-005	3.1625
NaturalGas Unmitigated											0.0000	4.2264	4.2264	8.0000e-005	8.0000e-005	4.2521

**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					
Pharmacy/Drugstore with Drive Thru	79200											0.0000	4.2264	4.2264	8.0000e-005	8.0000e-005	4.2521
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>												<b>0.0000</b>	<b>4.2264</b>	<b>4.2264</b>	<b>8.0000e-005</b>	<b>8.0000e-005</b>	<b>4.2521</b>

### 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					
Parking Lot	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	58905											0.0000	3.1434	3.1434	6.0000e-005	6.0000e-005	3.1625
<b>Total</b>												<b>0.0000</b>	<b>3.1434</b>	<b>3.1434</b>	<b>6.0000e-005</b>	<b>6.0000e-005</b>	<b>3.1625</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	22528	6.5537	3.0000e-004	6.0000e-005	6.5789
Pharmacy/Drugstore with Drive Thru	191565	55.7285	2.5200e-003	5.2000e-004	55.9430
<b>Total</b>		<b>62.2821</b>	<b>2.8200e-003</b>	<b>5.8000e-004</b>	<b>62.5219</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	22528	6.5537	3.0000e-004	6.0000e-005	6.5789
Pharmacy/Drugstore with Drive Thru	178002	51.7828	2.3400e-003	4.8000e-004	51.9822
<b>Total</b>		<b>58.3365</b>	<b>2.6400e-003</b>	<b>5.4000e-004</b>	<b>58.5611</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

	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											0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5200e-003
Unmitigated											0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5200e-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	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5200e-003
<b>Total</b>											<b>0.0000</b>	<b>1.4400e-003</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.5200e-003</b>

#### 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											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5200e-003
<b>Total</b>											<b>0.0000</b>	<b>1.4400e-003</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.5200e-003</b>

### 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.9239	0.0380	9.2000e-004	4.0058
Unmitigated	2.9239	0.0380	9.2000e-004	4.0064

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	1.16238 / 0.712429	2.9239	0.0380	9.2000e-004	4.0064
<b>Total</b>		<b>2.9239</b>	<b>0.0380</b>	<b>9.2000e-004</b>	<b>4.0064</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	1.16238 / 0.712429	2.9239	0.0380	9.2000e-004	4.0058
<b>Total</b>		<b>2.9239</b>	<b>0.0380</b>	<b>9.2000e-004</b>	<b>4.0058</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.0724	0.5953	0.0000	22.5729
Unmitigated	10.0724	0.5953	0.0000	22.5729

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	49.62	10.0724	0.5953	0.0000	22.5729
<b>Total</b>		<b>10.0724</b>	<b>0.5953</b>	<b>0.0000</b>	<b>22.5729</b>

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Pharmacy/Drugstore with Drive Thru	49.62	10.0724	0.5953	0.0000	22.5729
<b>Total</b>		<b>10.0724</b>	<b>0.5953</b>	<b>0.0000</b>	<b>22.5729</b>

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Generator Sets	1	0.50	12	64	0.74	Diesel

**UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Generator Sets											0.0000	0.1615	0.1615	1.0000e-005	0.0000	0.1618
<b>Total</b>											<b>0.0000</b>	<b>0.1615</b>	<b>0.1615</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1618</b>

**10.0 Vegetation**

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**Pinole CVS - GHG**  
**Bay Area AQMD Air District, Mitigation Report**

**Construction Mitigation Summary**

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**OFFROAD Equipment Mitigation**

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Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	1	No Change	0.00
Generator Sets	Diesel	Tier 3	6	6	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	6	No Change	0.00
Welders	Diesel	No Change	0	3	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					
Air Compressors							0.00000E+000	1.41706E+001	1.41706E+001	1.67000E-003	0.00000E+000	1.42056E+001
Cement and Mortar Mixers							0.00000E+000	3.43700E-002	3.43700E-002	0.00000E+000	0.00000E+000	3.44500E-002
Concrete/Industrial Saws							0.00000E+000	2.15063E+000	2.15063E+000	2.10000E-004	0.00000E+000	2.15500E+000
Cranes							0.00000E+000	2.21371E+001	2.21371E+001	6.68000E-003	0.00000E+000	2.22774E+001
Forklifts							0.00000E+000	5.99359E+000	5.99359E+000	1.81000E-003	0.00000E+000	6.03155E+000
Generator Sets							0.00000E+000	3.31817E+002	3.31817E+002	2.13700E-002	0.00000E+000	3.32266E+002
Graders							0.00000E+000	2.65109E+000	2.65109E+000	8.00000E-004	0.00000E+000	2.66789E+000
Pavers							0.00000E+000	3.19120E-001	3.19120E-001	1.00000E-004	0.00000E+000	3.21140E-001
Paving Equipment							0.00000E+000	3.78010E-001	3.78010E-001	1.10000E-004	0.00000E+000	3.80400E-001
Rollers							0.00000E+000	2.16290E-001	2.16290E-001	7.00000E-005	0.00000E+000	2.17660E-001
Rubber Tired Dozers							0.00000E+000	7.12065E+000	7.12065E+000	2.15000E-003	0.00000E+000	7.16575E+000
Tractors/Loaders/Backhoes							0.00000E+000	1.75814E+001	1.75814E+001	5.30000E-003	0.00000E+000	1.76928E+001
Welders							0.00000E+000	3.13387E+001	3.13387E+001	7.61000E-003	0.00000E+000	3.14985E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors							0.00000E+000	1.41705E+001	1.41705E+001	1.67000E-003	0.00000E+000	1.42056E+001
Cement and Mortar Mixers							0.00000E+000	3.43700E-002	3.43700E-002	0.00000E+000	0.00000E+000	3.44500E-002
Concrete/Industrial Saws							0.00000E+000	2.15063E+000	2.15063E+000	2.10000E-004	0.00000E+000	2.15500E+000
Cranes							0.00000E+000	2.21371E+001	2.21371E+001	6.68000E-003	0.00000E+000	2.22773E+001
Forklifts							0.00000E+000	5.99358E+000	5.99358E+000	1.81000E-003	0.00000E+000	6.03155E+000
Generator Sets							0.00000E+000	3.31817E+002	3.31817E+002	2.13700E-002	0.00000E+000	3.32266E+002
Graders							0.00000E+000	2.65109E+000	2.65109E+000	8.00000E-004	0.00000E+000	2.66788E+000
Pavers							0.00000E+000	3.19120E-001	3.19120E-001	1.00000E-004	0.00000E+000	3.21140E-001
Paving Equipment							0.00000E+000	3.78010E-001	3.78010E-001	1.10000E-004	0.00000E+000	3.80400E-001
Rollers							0.00000E+000	2.16290E-001	2.16290E-001	7.00000E-005	0.00000E+000	2.17660E-001
Rubber Tired Dozers							0.00000E+000	7.12064E+000	7.12064E+000	2.15000E-003	0.00000E+000	7.16575E+000
Tractors/Loaders/Backhoes							0.00000E+000	1.75814E+001	1.75814E+001	5.30000E-003	0.00000E+000	1.76928E+001
Welders							0.00000E+000	3.13387E+001	3.13387E+001	7.61000E-003	0.00000E+000	3.14985E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.41138E-006	1.41138E-006	0.00000E+000	0.00000E+000	7.03946E-007
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.35519E-006	1.35519E-006	0.00000E+000	0.00000E+000	1.34666E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.66845E-006	1.66845E-006	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20548E-006	1.20548E-006	0.00000E+000	0.00000E+000	1.17376E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.74828E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.40437E-006	1.40437E-006	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Balkhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13757E-006	1.13757E-006	0.00000E+000	0.00000E+000	1.13041E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.57282E-007	9.57282E-007	0.00000E+000	0.00000E+000	9.52425E-007

**Fugitive Dust Mitigation**

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction: 0.00
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction: 0.00
No	Water Exposed Area	PM10 Reduction	0.00	PM2.5 Reduction: 0.00; Frequency (per day)

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00

**Operational Percent Reduction Summary**

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.34	6.34	6.38	6.90	6.34
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.62	25.62	25.00	25.00	25.62
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network			
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.00		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			
	Commute	Commute Subtotal	0.00		

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.00		

**Area Mitigation**

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

**Energy Mitigation Measures**

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	30.00	
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

**Water Mitigation Measures**

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

**Solid Waste Mitigation**

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

# **APPENDIX B**

## California Natural Diversity Database Search Results



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Taxonomic Group is (Fish or Amphibians or Reptiles or Birds or Mammals or Mollusks or Arachnids or Crustaceans or Insects) and (Federal Listing Status is (Endangered or Threatened) or State Listing Status is (Endangered or Threatened)) and Quad is (Benicia (3812212) or Briones Valley (3712282) or Mare Island (3812213) or Oakland East (3712272) or Oakland West (3712273) or Petaluma Point (3812214) or Richmond (3712283) or San Francisco North (3712274) or San Quentin (3712284))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence			
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.	
<i>Ambystoma californiense</i> California tiger salamander	G2G3 S2S3	Threatened Threatened	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	20 20	1132 S:1	0	0	0	0	1	0	1	0	0	0	0	1
<i>Enhydra lutris nereis</i> southern sea otter	G4T2 S2	Threatened None	CDFW_FP-Fully Protected IUCN_EN-Endangered MMC_SSC-Species of Special Concern	0 0	2 S:1	0	0	0	0	0	1	0	1	1	0	0	0
<i>Eucyclogobius newberryi</i> tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	5 10	117 S:2	0	0	0	0	1	1	2	0	1	0	0	1
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	G5T1 S1	Threatened None	XERCES_CI-Critically Imperiled	500 1,300	24 S:3	0	0	0	0	3	0	3	0	0	0	0	3
<i>Haliaeetus leucocephalus</i> bald eagle	G5 S2	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	590 590	318 S:1	1	0	0	0	0	0	0	1	1	0	0	0
<i>Hypomesus transpacificus</i> Delta smelt	G1 S1	Threatened Endangered	AFS_TH-Threatened IUCN_EN-Endangered	0 0	27 S:2	0	1	0	0	0	1	0	2	2	0	0	0
<i>Laterallus jamaicensis coturniculus</i> California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	2 1,010	241 S:17	6	2	1	0	1	7	6	11	16	1	0	0
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	G4T2 S2	Threatened Threatened		330 1,400	145 S:30	4	6	4	1	0	15	9	21	30	0	0	0



**Summary Table Report**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Plebejus icarioides missionensis</i> Mission blue butterfly	G5T1 S1	Endangered None	XERCES_CI-Critically Imperiled	400 700	14 S:2	0	0	0	0	1	1	1	1	2	0	0
<i>Rallus longirostris obsoletus</i> California clapper rail	G5T1 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	0 30	94 S:23	2	9	2	2	0	8	11	12	23	0	0
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	5 1,300	1374 S:26	6	7	4	1	0	8	8	18	26	0	0
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	G1G2 S1S2	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	0 5	141 S:13	1	5	1	1	0	5	8	5	13	0	0
<i>Riparia riparia</i> bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	10 10	296 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Speyeria callippe callippe</i> callippe silverspot butterfly	G5T1 S1	Endangered None	XERCES_CI-Critically Imperiled	900 900	8 S:2	0	0	0	0	1	1	1	1	1	0	1
<i>Spirinchus thaleichthys</i> longfin smelt	G5 S1	Candidate Threatened	CDFW_SSC-Species of Special Concern	0 0	45 S:6	0	0	0	0	0	6	1	5	6	0	0
<i>Sternula antillarum browni</i> California least tern	G4T2T3Q S2	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	10 10	67 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Thaleichthys pacificus</i> eulachon	G5 S3	Threatened None	CDFW_SSC-Species of Special Concern	0 0	10 S:1	0	0	0	0	0	1	0	1	1	0	0



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** CNPS List is (1A or 1B or 1B.1 or 1B.2 or 1B.3 or 2A or 2B or 2B.1 or 2B.2 or 2B.3) and Quad is (Benicia (3812212) or Briones Valley (3712282) or Mare Island (3812213) or Oakland East (3712272) or Oakland West (3712273) or Petaluma Point (3812214) or Richmond (3712283) or San Francisco North (3712274) or San Quentin (3712284))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden		69 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	550 1,611	64 S:20	0	4	1	0	0	15	5	15	20	0	0
<i>Arctostaphylos franciscana</i> Franciscan manzanita	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	100 325	4 S:3	0	0	0	0	2	1	2	1	1	0	2
<i>Arctostaphylos montana</i> ssp. <i>ravenii</i> Presidio manzanita	G3T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1	75 325	7 S:6	0	1	0	0	4	1	4	2	2	1	3
<i>Arctostaphylos pallida</i> pallid manzanita	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	700 1,470	9 S:9	0	1	2	4	1	1	1	8	8	1	0
<i>Arenaria paludicola</i> marsh sandwort	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_SBBG-Santa Barbara Botanic Garden		15 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2	10 50	65 S:4	0	0	0	0	4	0	4	0	0	3	1
<i>Blepharizonia plumosa</i> big tarplant	G2 S2	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden		48 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>California macrophylla</i> round-leaved filaree	G3? S3?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden		162 S:2	0	0	0	0	2	0	2	0	0	1	1
<i>Calochortus pulchellus</i> Mt. Diablo fairy-lantern	G2 S2	None None	Rare Plant Rank - 1B.2	100 1,020	40 S:6	0	3	0	0	0	3	4	2	6	0	0



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Calochortus tiburonensis</i> Tiburon mariposa-lily	G1 S1	Threatened Threatened	Rare Plant Rank - 1B.1	460 460	1 S:1	1	0	0	0	0	0	0	1	1	0	0
<i>Calystegia purpurata ssp. saxicola</i> coastal bluff morning-glory	G4T2T3 S2S3	None None	Rare Plant Rank - 1B.2		30 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Carex comosa</i> bristly sedge	G5 S2	None None	Rare Plant Rank - 2B.1	0 0	29 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Castilleja affinis var. neglecta</i> Tiburon paintbrush	G4G5T1 S1	Endangered Threatened	Rare Plant Rank - 1B.2 SB_UCBBG-UC Berkeley Botanical Garden	350 400	9 S:3	2	1	0	0	0	0	0	3	3	0	0
<i>Centromadia parryi ssp. congdonii</i> Congdon's tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	80 80	91 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Chloropyron maritimum ssp. palustre</i> Point Reyes salty bird's-beak	G4?T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	5 370	68 S:7	0	0	1	0	5	1	6	1	2	5	0
<i>Chloropyron molle ssp. molle</i> soft salty bird's-beak	G2T1 S1	Endangered Rare	Rare Plant Rank - 1B.2	0 5	27 S:5	0	2	1	0	2	0	3	2	3	1	1
<i>Chorizanthe cuspidata var. cuspidata</i> San Francisco Bay spineflower	G2T1 S1	None None	Rare Plant Rank - 1B.2	8 650	17 S:8	0	0	1	0	2	5	4	4	6	1	1
<i>Chorizanthe robusta var. robusta</i> robust spineflower	G2T1 S1	Endangered None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	30 30	21 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Cicuta maculata var. bolanderi</i> Bolander's water-hemlock	G5T3T4 S2	None None	Rare Plant Rank - 2B.1		17 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Cirsium andrewsii</i> Franciscan thistle	G3 S3	None None	Rare Plant Rank - 1B.2	60 900	27 S:4	0	0	3	0	0	1	1	3	4	0	0
<i>Clarkia franciscana</i> Presidio clarkia	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	75 1,000	4 S:4	0	2	1	0	1	0	1	3	3	1	0
<i>Collinsia corymbosa</i> round-headed Chinese-houses	G1 S1	None None	Rare Plant Rank - 1B.2	100 100	7 S:1	0	0	0	0	0	1	1	0	1	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Collinsia multicolor</i> San Francisco collinsia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	300 300	25 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Dirca occidentalis</i> western leatherwood	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	300 1,700	65 S:27	1	9	5	1	0	11	7	20	27	0	0
<i>Eriogonum luteolum var. caninum</i> Tiburon buckwheat	G5T2 S2	None None	Rare Plant Rank - 1B.2	200 950	26 S:8	0	0	3	0	0	5	1	7	8	0	0
<i>Extriplex joaquinana</i> San Joaquin spearscale	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden		109 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Fissidens pauperculus</i> minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	985 985	22 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Fritillaria liliacea</i> fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	10 200	77 S:9	0	0	0	0	7	2	9	0	2	6	1
<i>Gilia capitata ssp. chamissonis</i> blue coast gilia	G5T2 S2	None None	Rare Plant Rank - 1B.1	10 500	37 S:8	0	0	0	1	2	5	4	4	6	0	2
<i>Gilia millefoliata</i> dark-eyed gilia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	150 150	41 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Helianthella castanea</i> Diablo helianthella	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	150 1,800	96 S:32	1	12	6	1	0	12	8	24	32	0	0
<i>Hemizonia congesta ssp. congesta</i> congested-headed hayfield tarplant	G5T1T2 S1S2	None None	Rare Plant Rank - 1B.2		33 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Hesperolinon congestum</i> Marin western flax	G2 S2	Threatened Threatened	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	200 400	26 S:7	1	2	1	1	1	1	3	4	6	0	1
<i>Heteranthera dubia</i> water star-grass	G5 S1	None None	Rare Plant Rank - 2B.2		9 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Hoita strobilina</i> Loma Prieta hoita	G2 S2	None None	Rare Plant Rank - 1B.1	200 200	29 S:2	0	1	0	0	0	1	1	1	2	0	0



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Name (Scientific/Common)	CNDDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	100 900	37 S:15	0	0	0	3	11	1	7	8	4	5	6
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	G4T2 S2?	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	20 100	38 S:4	0	0	1	0	2	1	3	1	2	2	0
<i>Isocoma arguta</i> Carquinez goldenbush	G1 S1	None None	Rare Plant Rank - 1B.1		14 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lasthenia conjugens</i> Contra Costa goldfields	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	80 80	33 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Lathyrus jepsonii var. jepsonii</i> Delta tule pea	G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_BerrySB-Berry Seed Bank SB_RSABG-Rancho Santa Ana Botanic Garden	1 7	131 S:5	0	1	0	1	0	3	3	2	5	0	0
<i>Layia carnosa</i> beach layia	G2 S2	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	40 40	23 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Leptosiphon rosaceus</i> rose leptosiphon	G1 S1	None None	Rare Plant Rank - 1B.1		31 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Lessingia germanorum</i> San Francisco lessingia	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1	10 300	5 S:3	0	1	0	0	1	1	1	2	2	0	1
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	G2 S2	None Rare	Rare Plant Rank - 1B.1	0 5	197 S:6	1	2	2	0	0	1	4	2	6	0	0
<i>Meconella oregana</i> Oregon meconella	G2G3 S1	None None	Rare Plant Rank - 1B.1	1,000 1,500	5 S:4	0	0	0	0	0	4	3	1	4	0	0
<i>Microseris paludosa</i> marsh microseris	G2 S2	None None	Rare Plant Rank - 1B.2	300 300	39 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Monolopia gracilens</i> woodland woollythreads	G3 S3	None None	Rare Plant Rank - 1B.2		51 S:1	0	0	0	0	0	1	1	0	1	0	0



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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	180 400	14 S:2	0	0	0	0	2	0	2	0	0	0	2
<i>Plagiobothrys chorisianus var. chorisianus</i> Choris' popcornflower	G3T2Q S2	None None	Rare Plant Rank - 1B.2	20 200	40 S:3	0	0	0	0	1	2	3	0	2	0	1
<i>Plagiobothrys diffusus</i> San Francisco popcornflower	G1Q S1	None Endangered	Rare Plant Rank - 1B.1	200 920	15 S:2	0	0	1	0	1	0	1	1	1	0	1
<i>Plagiobothrys glaber</i> hairless popcornflower	GH SH	None None	Rare Plant Rank - 1A	15 15	9 S:1	0	0	0	0	0	1	1	0	0	1	0
<i>Polemonium carneum</i> Oregon polemonium	G3G4 S2	None None	Rare Plant Rank - 2B.2		16 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Sanicula maritima</i> adobe sanicle	G2 S2	None Rare	Rare Plant Rank - 1B.1 USFS_S-Sensitive	250 250	16 S:2	0	0	0	0	2	0	2	0	0	0	2
<i>Senecio aphanactis</i> chaparral ragwort	G3? S2	None None	Rare Plant Rank - 2B.2	200 200	47 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Silene verecunda ssp. verecunda</i> San Francisco campion	G5T2 S2	None None	Rare Plant Rank - 1B.2	10 200	11 S:3	0	0	0	1	0	2	0	3	3	0	0
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	G2 S2	None None	Rare Plant Rank - 1B.2	150 150	16 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Streptanthus albidus ssp. peramoenus</i> most beautiful jewelflower	G2T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	800 900	96 S:5	0	0	1	0	0	4	3	2	5	0	0
<i>Streptanthus glandulosus ssp. niger</i> Tiburon jewelflower	G4T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	300 350	2 S:2	0	2	0	0	0	0	0	2	2	0	0
<i>Stuckenia filiformis ssp. alpina</i> slender-leaved pondweed	G5T5 S3	None None	Rare Plant Rank - 2B.2	1,600 1,600	21 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Suaeda californica</i> California seablite	G1 S1	Endangered None	Rare Plant Rank - 1B.1	0 0	17 S:1	0	0	0	0	1	0	1	0	0	0	1



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Name (Scientific/Common)	CNDDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Symphotrichum lentum</i> Suisun Marsh aster	G2 S2	None None	Rare Plant Rank - 1B.2	0 10	173 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Trifolium amoenum</i> two-fork clover	G1 S1	Endangered None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	100 100	26 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Trifolium hydrophilum</i> saline clover	G2 S2	None None	Rare Plant Rank - 1B.2	10 10	49 S:6	0	0	0	0	4	2	6	0	2	1	3
<i>Triphysaria floribunda</i> San Francisco owl's-clover	G2 S2	None None	Rare Plant Rank - 1B.2	100 200	41 S:3	0	1	0	1	1	0	1	2	2	0	1
<i>Triquetrella californica</i> coastal triquetrella	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	360 525	13 S:2	0	0	0	0	0	2	0	2	2	0	0
<i>Viburnum ellipticum</i> oval-leaved viburnum	G4G5 S3?	None None	Rare Plant Rank - 2B.3	500 500	38 S:2	0	0	0	0	0	2	1	1	2	0	0



# Summary Table Report

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**Query Criteria:** Other Status Contains (MMC\_SSC-Species of Special Concern or NMFS\_SC-Species of Concern) and Quad is (Benicia (3812212) or Briones Valley (3712282) or Mare Island (3812213) or Oakland East (3712272) or Oakland West (3712273) or Petaluma Point (3812214) or Richmond (3712283) or San Francisco North (3712274) or San Quentin (3712284))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Enhydra lutris nereis</i> southern sea otter	G4T2 S2	Threatened None	CDFW_FP-Fully Protected IUCN_EN-Endangered MMC_SSC-Species of Special Concern	0 0	2 S:1	0	0	0	0	0	1	0	1	1	0	0

# **APPENDIX C**

## Radio Frequency Study

**Armstrong Development Properties, Inc. • CVS-Sign Tower Project  
Canyon Drive and Appian Way • Pinole, California**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Armstrong Development Properties, Inc., to evaluate two wireless telecommunication base stations (Project Name “CVS-Sign Tower Project”) proposed to be located near Canyon Drive and Appian Way in Pinole, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

**Executive Summary**

T-Mobile and Verizon Wireless propose to install directional panel antennas within a new signage tower to be located at the southeast corner of Canyon Drive and Appian Way in Pinole. The proposed operations will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standards**

The U.S. Congress requires that the Federal Communications Commission (“FCC”) evaluate its actions for possible significant impact on the environment. A summary of the FCC’s exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
BRS (Broadband Radio)	2,600	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

**General Facility Requirements**

Base stations typically consist of two distinct parts: the electronic transceivers (also called “radios” or “channels”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky.



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Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

**Computer Modeling Method**

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, “Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation,” dated August 1997. Figure 2 describes the calculation methodologies, reflecting the facts that a directional antenna’s radiation pattern is not fully formed at locations very close by (the “near-field” effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the “inverse square law”). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

**Site and Facility Description**

Based upon information provided by Armstrong Development Services, including zoning drawings by Zon Architects, Inc., dated August 25, 2014, T-Mobile and Verizon Wireless propose to install directional panel antennas within a new 65-foot signage tower to be sited to the south of a new CVS Pharmacy\* to be constructed at the southeast corner of Canyon Drive and Appian Way in Pinole.

T-Mobile proposes to install nine directional panel antennas – six Ericsson Model AIR21 and three Andrew Model LNX-6515DS-A1M – within the northeastern leg of the tower, mounted with up to 3° downtilt† at an effective height of about 57 feet above ground and oriented in identical groups of three toward 95°T, 185°T, and 300°T. The maximum effective radiated power in any direction from the T-Mobile antennas would be 5,400 watts, representing simultaneous operation at 2,200 watts for AWS, 2,200 watts for PCS, and 1,000 watts for 700 MHz service.

Verizon proposes to install nine Andrew directional panel antennas – three Model SBNH-1D6565B, three Model LNX-6514DS-A1M, and three Andrew Model HBX-6517DS-A1M – within the southwestern leg of the tower, mounted with up to 3° downtilt‡ at an effective height of about 57 feet above ground and oriented in identical groups of three toward 85°T, 185°T, and 290°T. The maximum effective radiated power in any direction from the Verizon antennas would be 12,600 watts,

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\* The new building will replace the existing three-story office building at that location.

† Assumed for the purposes of this study.

‡ Assumed for the purposes of this study.



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representing simultaneous operation at 6,040 watts for PCS, 4,220 watts for cellular, and 2,340 watts for 700 MHz service.

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed T-Mobile and Verizon operations is calculated to be 0.018 mW/cm<sup>2</sup>, which is 2.4% of the applicable public exposure limit. The maximum calculated cumulative level at the second-floor elevation of any nearby building<sup>§</sup> is 3.7% of the public limit. The maximum calculated cumulative level at the second-floor elevation of any nearby residence<sup>\*\*</sup> is 3.6% of the public exposure limit. It should be noted that these results include several “worst-case” assumptions and therefore are expected to overstate actual power density levels.

**Recommended Mitigation Measures**

Due to their mounting locations, the T-Mobile and Verizon antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training be provided to all authorized personnel who have access to the antennas, including employees and contractors of T-Mobile and Verizon and of the property owner. No access within 7 and 20 feet directly in front of the T-Mobile and Verizon antennas, respectively, such as might occur during maintenance work on the signage tower, should be allowed while the base stations are in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory signs<sup>††</sup> at the antennas or on the tower below the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within those distances, would be sufficient to meet FCC-adopted guidelines.

**Conclusion**

Based on the information and analysis above, it is the undersigned’s professional opinion that operation of the base stations proposed by T-Mobile West LLC and Verizon Wireless near Canyon Drive and Appian Way in Pinole, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than

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§ Located at least 60 feet away, based on the drawings.

\*\* Located at least 250 feet away, based on the drawings.

†† Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.



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the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

**Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-20309, which expires on March 31, 2015. This work has been carried out under her direction, and all statements are true and correct of her own knowledge except, where noted, when data has been supplied by others, which data she believes to be correct.



*Andrea L. Bright*  
\_\_\_\_\_  
Andrea L. Bright, P.E.  
707/996-5200

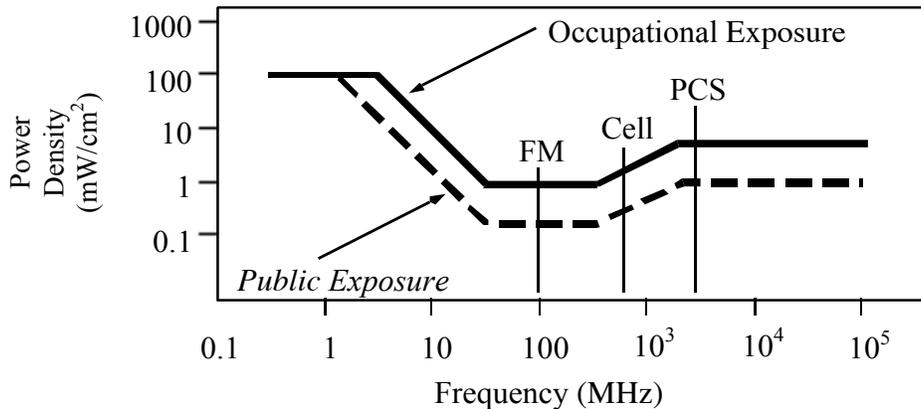
November 21, 2014

## FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission (“FCC”) to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, “Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements (“NCRP”). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm <sup>2</sup> )	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f<sup>2</sup></i>
3.0 – 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f <sup>2</sup>	<i>180/f<sup>2</sup></i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.



## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission (“FCC”) to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

#### Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density  $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$ , in mW/cm<sup>2</sup>,

and for an aperture antenna, maximum power density  $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$ , in mW/cm<sup>2</sup>,

- where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and  
 $P_{net}$  = net power input to the antenna, in watts,  
 $D$  = distance from antenna, in meters,  
 $h$  = aperture height of the antenna, in meters, and  
 $\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

#### Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

power density  $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$ , in mW/cm<sup>2</sup>,

- where ERP = total ERP (all polarizations), in kilowatts,  
RFF = relative field factor at the direction to the actual point of calculation, and  
D = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.



# **APPENDIX D**

## Environmental Noise Assessment

# Environmental Noise Assessment

## CVS Project

Pinole, California

BAC Job # 2015-098

Prepared For:

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Paul Bollard, President

October 13, 2015



## Introduction

This report addresses the potential noise impacts associated with a proposed CVS Project (project) located on the southeast corner of Appian Way and Canyon Drive in Pinole, California. The project site vicinity is shown on Figure 1.

This analysis focuses on noise generated by on-site commercial-related activity (i.e., truck circulation, loading dock, drive-through operations, and rooftop mechanical equipment) as it affects the neighboring residential uses which are located to east of the project site. This analysis also addresses noise generated by project construction activities and proposed cellular facility equipment to be constructed on the project site. In addition, this analysis evaluates potential impacts associated with off-site increases in traffic noise resulting from the proposed project. The project site plan is shown on Figure 2.

## Background and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz). Definitions of acoustical terminology used in this report are presented in Appendix A.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference defined as 0 dB. Other sound pressures are then compared to the reference pressure and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness. Figure 3 illustrates common noise levels associated with various sources.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by weighting the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

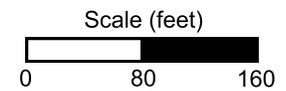
Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to describe the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ). The  $L_{eq}$  is the foundation of the day/night average noise level ( $L_{dn}$ ) and shows very good correlation with community response to noise.

**Figure 1**  
Project Area and Noise Measurement Locations  
CVS Project - Pinole, California

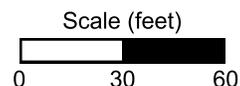
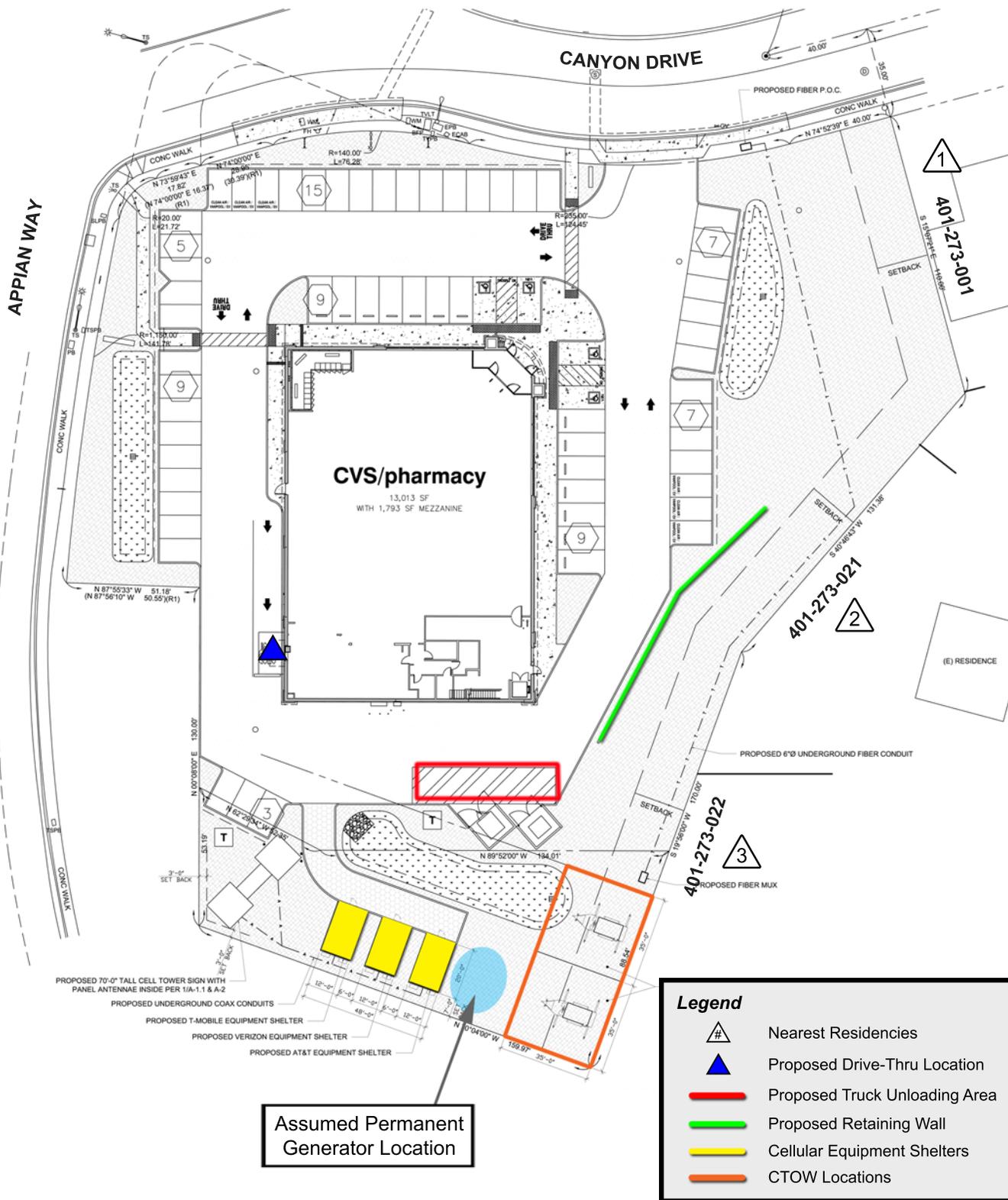


**Legend**

- # Short-term Noise Monitoring Locations
- A 24-hr Long-term Noise Monitoring Location
- Approximate Project Area

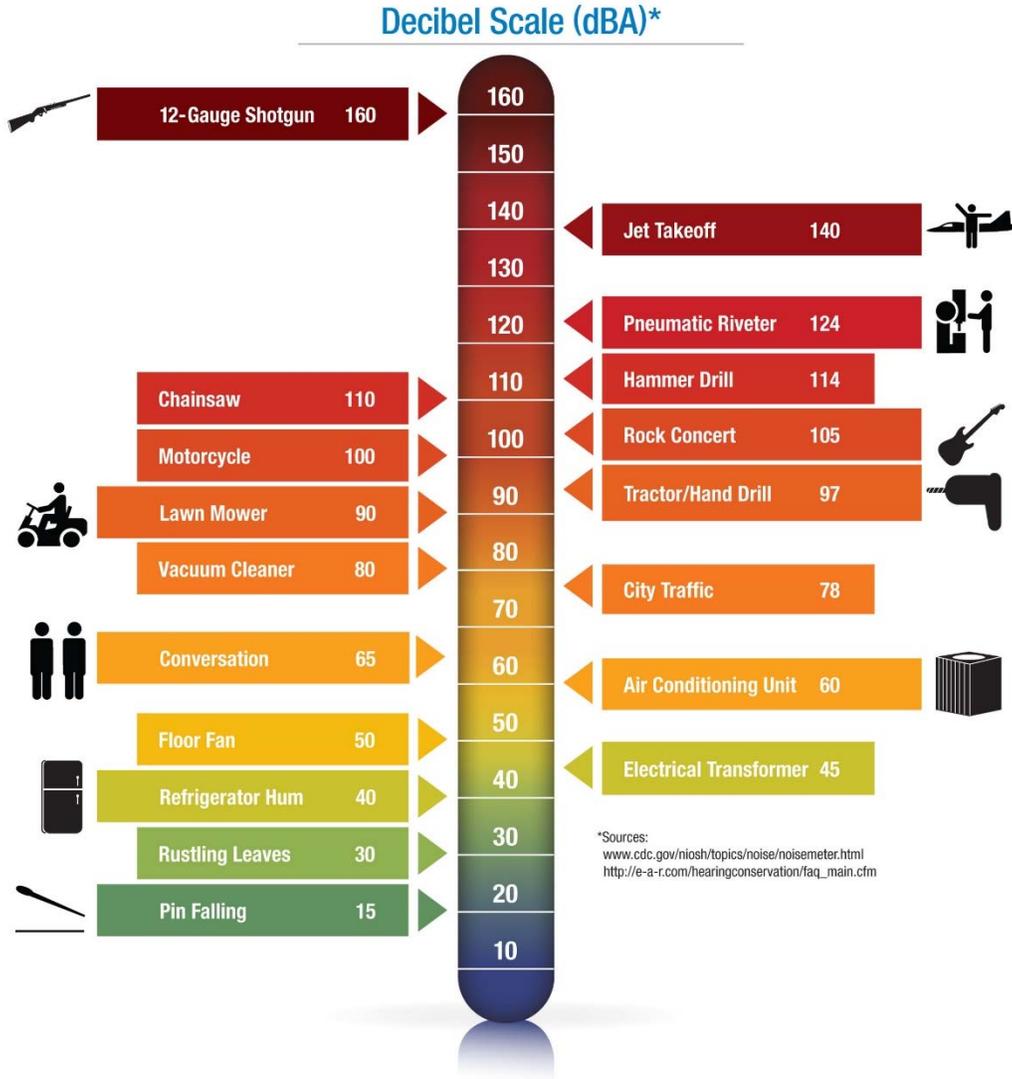


**Figure 2**  
**Proposed Project Site Plan**  
**CVS Project - Pinole, California**



Existing acoustical literature and application of accepted noise prediction and sound propagation algorithms were used to predict project related noise levels. Specific noise sources evaluated in this section were onsite noise sources associated with the commercial development. Average Sound Exposure Level (SEL) estimates were used to predict noise levels due to truck circulation on the project site. The SEL noise descriptor is the equivalent sound energy of an acoustical event normalized to a one second duration.

**Figure 3  
Noise Levels Associated with Common Noise Sources**



## Environmental Setting

### Existing Land Uses in the Project Vicinity

The project site currently contains a medical office building and related parking. The rear of the site is currently being used for storage. The site is bordered to the north by Canyon Drive, beyond which is a parking area. There is an existing gas station on the northwest corner of Appian Way and Tara Hills Drive, and a professional building at the southwest corner of this intersection, opposite the project site. No noise-sensitive outdoor areas were identified for the existing professional building to the west.

The nearest residential land uses to the project site consist of single-family residences to the immediate east of the project site. One of the adjacent residences is located on Canyon Drive and two additional residences at the end of El Toro Way border the eastern project site boundary. The residence on Canyon Drive is depressed relative to the project site by approximately 8 feet whereas the El Toro Way residences are depressed approximately 40 feet relative to the project site. This elevation change results in substantial shielding of the project site from view of the El Toro Way residences.

For the purposes of this impact assessment, this analysis focuses on the noise sensitive residential uses to the immediate east of the project site. No exterior noise-sensitivity was identified for any other existing land uses in the immediate project vicinity.

### Existing General Ambient Noise Environment in the Project Vicinity

The ambient noise environment in the immediate project vicinity is primarily defined by traffic on Interstate 80, Appian Way and Canyon Drive. To quantify the existing ambient noise environment in the project vicinity, short-term (15-minute) and long-term (3-day) noise level measurements were conducted at the project site. The short-term monitoring was conducted on April 24, 2015 and the long-term monitoring covered the 72-hour period from April 25 through 27, 2015. The noise measurement locations are shown on Figure 1.

Larson-Davis Laboratories (LDL) Model 820 precision integrating sound level meters was used to complete the noise level measurement surveys. The meters were calibrated before use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4). The long-term noise level measurement survey results are summarized below in Table 1, with the detailed results of the long-term measurements contained in Appendices B and C. Table 2 contains the short-term noise measurement results.

**Table 1**  
**Summary of Long-Term Ambient Noise Measurement Results**  
**CVS Project – Pinole, California**

Noise Level Metric	Average Hourly Noise Level (Range), dB					
	April 25, 2015		April 26, 2015		April 27, 2015	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
L <sub>eq</sub>	65 (61-66)	60 (58-63)	60 (57-62)	58 (56-61)	60 (57-61)	60 (56-63)
L <sub>max</sub>	77 (71-82)	67 (63-70)	73 (65-81)	67 (62-80)	72 (66-78)	70 (64-79)
L <sub>dn</sub>	68		65		67	

Source: Bollard Acoustical Consultants, Inc. 2015

**Table 2**  
**Summary of Short-Term Ambient Noise Measurement Results**  
**CVS Project – Pinole, California – April 24, 2015**

Site	Time	L <sub>eq</sub>	L <sub>max</sub>	Notes
1	12:27 pm	60.8	68.8	Traffic on Canyon Drive primary source
2	12:55 pm	66.6	80.4	Appian Way / Canyon Drive traffic
3	1:11 pm	63.0	72.0	I-80 Dominant noise source

Source: Bollard Acoustical Consultants, Inc. 2015

Both the long-term and short-term ambient noise survey results indicate that the project area noise environment is elevated, with average daytime noise levels of approximately 60 dB L<sub>eq</sub> at the nearest residential property line to the east, and maximum noise levels between 70 and 80 dB L<sub>max</sub>. Due to the presence of Interstate 80, nighttime average ambient conditions were not substantially lower than measured daytime noise levels.

### Baseline Traffic Noise Conditions

To predict existing noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD 77 108) was used. The Model uses the Calvenio reference noise factors for automobiles, medium trucks, and heavy trucks. The Model considers vehicle volume and speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the sound propagation path.

Table 3 summarizes the calculated existing traffic noise levels in terms of L<sub>dn</sub> at a reference distance of 50 feet from the centerlines of existing project-area roadways. The table also includes the distances to existing traffic noise contours. Appendices D & E contain the detailed FHWA Model inputs and predicted traffic noise levels.

**Table 3**  
**Existing Traffic Noise Levels**  
**CVS Project Area Roadways – Pinole, California**

Intersection	Direction	L <sub>dn</sub> at 50ft (dB)	Distances to Traffic Noise Contours, L <sub>dn</sub> (dB)		
			70	65	60
Appian Way/ Canyon Drive	North	67	33	70	151
	South	70	48	103	223
	East	57	6	14	29
	West	67	29	63	136
Appian Way/ WB Ramp	North	70	51	109	236
	South	70	49	106	229
	East	67	34	73	158
	West	65	25	53	115
Appian Way/ EB Ramp	North	70	50	109	234
	South	70	53	114	245
	East	66	26	56	121
	West	68	34	74	160
Entrance/ Canyon Drive	South	--	--	--	--
	East	57	6	14	29
	West	57	6	14	29
Ridgecrest Drive/ Canyon Drive	North	55	5	11	23
	East	51	3	5	12
	West	56	6	12	27

## Notes:

1. FHWA-RD-77-108 with Calveno vehicle emission curves and inputs from Abrams Associates Traffic Engineering, Inc.; Caltrans; and BAC.

## Regulatory Setting

In order to limit population exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. The City of Pinole General Plan Noise Element and CEQA provide regulations regarding noise levels for uses relevant to the proposed project. The following provides a general overview of the existing regulations established by the City and CEQA.

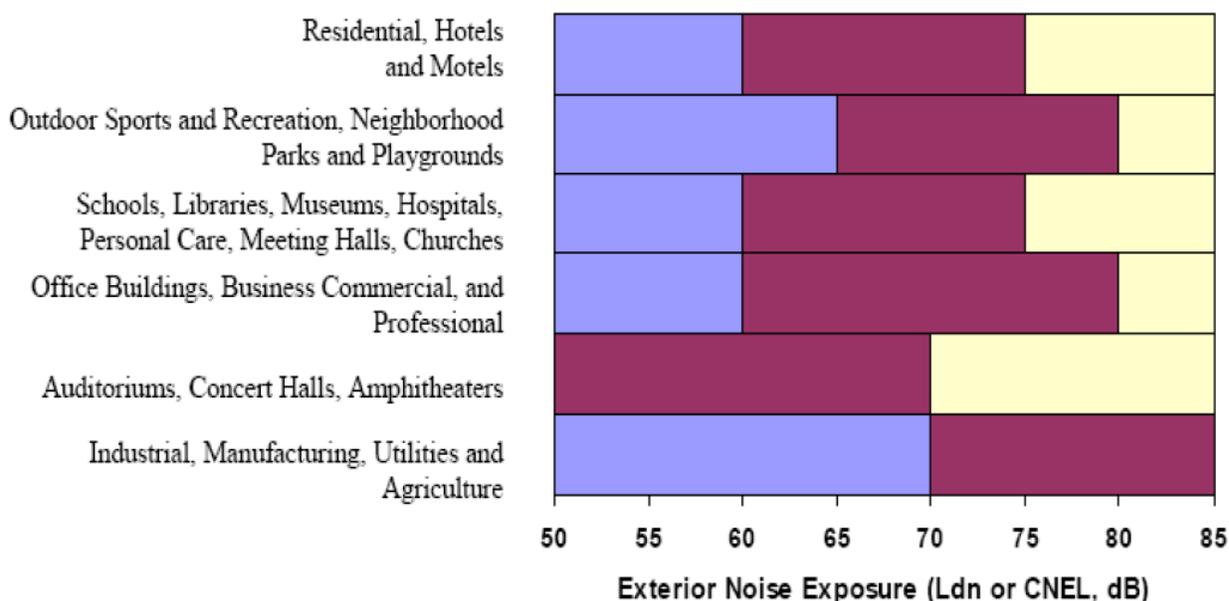
### City of Pinole Health & Safety Element Noise Criteria

The City of Pinole Health and Safety Element establishes land use compatibility criteria for a variety of land uses in terms of the  $L_{dn}$  (or CNEL). The following specific noise policies would be applicable to this project:

#### **POLICY HS.8.1**

New development projects should meet acceptable exterior noise level standards. The normally acceptable noise standards for new land uses are established in Land Use Compatibility for Community Exterior Noise Environments (as shown below).

#### **Land Use Compatibility for Community Noise Environments**



-  **Normally Acceptable**  
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
-  **Conditionally Acceptable**  
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.
-  **Unacceptable**  
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with Noise Element policies.

The Land Use Compatibility Chart shown above indicates that commercial uses, such as the proposed CVS Project, would be normally acceptable in an exterior noise environment up to 60 dB Ldn, but conditionally acceptable in an exterior noise environment up to 80 dB Ldn.

**Action HS.8.1.1**

Adopt a noise ordinance with noise level performance standards, including maximum allowable noise exposure, ambient versus nuisance noise, method of measuring noise, and enforcement procedures.

**Action HS.8.1.2**

Review development proposals to assure consistency with noise standards. Require new development of noise-creating uses to conform to the City's noise level standards.

**Action HS.8.1.3**

Require a combination of design features to reduce noise impacts on adjacent properties through the following and other means, as appropriate:

- Screen and control noise sources such as parking, outdoor activities and mechanical equipment.
- Increase setbacks for noise sources from adjacent dwellings.
- Modify building designs and site planning to reduce noise exposure through a combination of sound attenuation (e.g., sound-rated windows and ventilation systems, insulation, physical and landscape buffers) and site planning (e.g., increased separation and private open area buffers) to reduce noise exposure.
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.
- Require additional landscaping to assist with buffering where feasible.

**Action HS.8.1.5**

Require the use of temporary construction noise control measures including the use of temporary noise barriers, temporary relocation of noise-sensitive land uses, or other appropriate measures as mitigation for noise generated during construction of public and/or private projects.

**Action HS.8.2.1**

Require an acoustical analysis as part of the environmental review process when noise-sensitive land uses are proposed in areas where current or projected exterior noise levels exceed the City's standards.

**POLICY HS.9.1**

Noise created by commercial or industrial sources associated with new projects or developments should be controlled so as not to exceed the noise level standards set forth in the table below (Maximum Allowable Noise Exposure for Stationary Noise Sources), as measured at any affected residential land use.

**Maximum Allowable Noise Exposure for Stationary Noise Sources<sup>1</sup>**

	<b>Daytime<sup>5</sup></b> <b>(7 AM to 10 PM)</b>	<b>Nighttime<sup>2,5</sup></b> <b>(10 PM to 7 AM)</b>
Hourly $L_{eq}$ , dB <sup>3</sup>	55	45
Maximum Level, dB <sup>3</sup>	70	65
Maximum Level, dB – Impulsive Noise <sup>4</sup>	65	60

1. As determined at the property line of the receiving land use. When determining effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
2. Applies only where the receiving land use operates or is occupied during nighttime hours.
3. Sound level measurements shall be made with "slow" meter response.
4. Sound level measurements shall be made with "fast" meter response.
5. Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly  $L_{eq}$  is at least 10 dB lower than the allowable level.

Footnote 5 of this table indicates that allowable noise levels shall be increased to the ambient noise level where ambient noise levels exceed the standards shown above. Based on the ambient noise measurement results shown in Tables 1 and 2, daytime and nighttime ambient noise conditions at the nearest residential property line to the east averaged approximately 60 dB  $L_{eq}$ . As a result, this analysis applies a property line noise level standard of 60 dB  $L_{eq}$  to the eastern project site boundary.

Table 1 also indicates that measured maximum noise levels at the eastern residential property line were generally between 65-70 dBA during nighttime hours. As a result, no modifications to the City's 65 dB  $L_{max}$  nighttime noise level standard appear to be warranted for this project. However, Tables 1 and 2 indicate that measured daytime maximum noise levels frequently exceeded 70 dB  $L_{max}$  at the eastern residential property line. As a result, this analysis applies a property line noise level standard of 75 dB  $L_{max}$  to the eastern project site boundary for daytime hours.

## Impacts and Mitigation Measures

### Standards of Significance

Appendix G of the State CEQA Guidelines provides that the proposed general plan would result in a significant noise impact if the following occur:

- 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. a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- C. a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- D. exposure of persons to or generation of excessive groundborne vibration or noise levels;
- E. for a project located within an ALUP or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, the project would expose people residing or working in the project area to excessive noise levels;
- F. or a project within the vicinity of a private airstrip, the project would expose people residing or working in the project area to excessive noise levels.

Because this project is not located in an area which is impacted by aircraft noise, items E and F listed above would not apply. In addition, no appreciable sources of existing vibration were identified in the project area and the project operations would not introduce any substantive sources of vibration to the immediate project area. As a result, an analysis of groundborne vibration is not warranted for this project.

### Criteria for Determining a Substantial Increase in Traffic Noise Levels

It is generally recognized that an increase of at least 3 dB for similar noise sources is usually required before most people will perceive a change in noise levels, and an increase of 6 dB is required before the change will be clearly noticeable (Egan, Architectural Acoustics, page 21, 1988, McGraw Hill).

The Federal Interagency Commission on Noise (FICON) has developed a graduated scale for use in the assessment of project-related noise level increases. Table 4 was developed by FICON as a means of developing thresholds for impact identification for project-related noise level increases. The FICON standards have been used extensively in recent years by the

authors of this section in the preparation of the noise sections of Environmental Impact Reports that have been certified in many California Cities and Counties.

The rationale for the graduated scale used in the FICON standards is that test subjects' reactions to increases in noise levels varied depending on the starting level of noise. Specifically, with lower ambient noise environments, such as those below 60 dB  $L_{dn}$ , a larger increase in noise levels was required to achieve a negative reaction than was necessary in more elevated noise environments.

The use of the FICON standards are considered conservative relative to thresholds used by other agencies in the State of California. For example, the California Department of Transportation (Caltrans) requires a project-related traffic noise level increase of 12 dB for a finding of significance, and the California Energy Commission (CEC) considers project-related noise level increases between 5-10 dB significant, depending on local factors. Therefore, the use of the FICON standards, which set the threshold for finding of significant noise impacts as low as 1.5 dB, provides a very conservative approach to impact assessment for this project.

Ambient Noise Level Without Project, $L_{dn}$	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON)

Based on the FICON research, as shown in Table 4, a 5 dB increase in noise levels due to a project is required for a finding of significant noise impact where ambient noise levels without the project are less than 60 dB  $L_{dn}$ . Where pre-project ambient conditions are between 60 and 65 dB  $L_{dn}$ , a 3 dB increase is applied as the standard of significance. Finally, in areas already exposed to higher noise levels, specifically pre-project noise levels in excess of 65 dB  $L_{dn}$ , a 1.5 dB increase is considered by FICON as the threshold of significance.

This graduated scale indicates that in quieter noise environments, test subjects tolerated a higher increase in noise levels due to a project before the onset of adverse noise impacts than did test subjects in louder environments.

According to the FICON study, if screening analysis shows that noise-sensitive areas will be at or above DNL 65 dB and will have an increase of DNL 1.5 or more, further analysis should be conducted. The FICON study also reported the following: Every change in the noise environment does not necessarily impact public health and welfare.

Audibility is not a test of significance according to CEQA. If this were the case, any project which added any audible amount of noise to the environment would be considered

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unacceptable according to CEQA. Because every physical process creates noise, whether by the addition of a single vehicle on a roadway, or a tractor in an agricultural field, the use of audibility alone as significance criteria would be unworkable. CEQA requires a substantial increase in noise levels before noise impacts are identified, not simply an audible change.

## Methodology

The noise producing components of this project evaluated in this study include project construction, truck deliveries/unloading, drive-through operations (including speaker usage), and rooftop mechanical equipment (HVAC). The noise generation of each of these sources is evaluated individually below, as well as cumulatively. In addition, an assessment of potential noise impacts associated with increases in off-site traffic noise levels resulting from the project was also performed.

### Impact 1      Increases in Off-Site Traffic Noise Levels

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at a representative distance for both existing and future, project and no-project conditions. Noise impacts are identified at existing noise-sensitive areas if the noise level increases which result from the project exceed the 3 dB significance criteria of the City of Pinole.

To describe existing and projected noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions. To predict traffic noise levels in terms of  $L_{dn}$ , it is necessary to adjust the input volume to account for the day/night distribution of traffic.

FHWA Model inputs are provided for all scenarios in Appendix D. Table 5 shows the predicted increases in traffic noise levels on the local roadway network for existing and future (cumulative) conditions which would result from the project. This table is provided in terms of  $L_{dn}$  at a standard distance of 50 feet from the centerlines of the project-area roadways. The 50 foot distance was selected because it represents the approximate distances from the roadway centerlines to the nearest existing residences to those roadways.

The intent of Table 5 is to determine project-related noise level increases. It is recognized that there are many factors which could cause actual traffic noise levels to differ from those provided in Table 5, including shielding by existing noise barriers, buildings, or topography, variations in vehicle speeds, truck percentages, day/night distribution of traffic, etc. It is not feasible to account for every such variation, nor is it necessary to satisfy the intent of this analysis. By holding such variables constant, and only varying the traffic volumes to reflect the additional traffic generated by the CVS project, then the project-related increase in noise levels can be isolated.

**Table 5**  
**Project-Related Increases in Traffic Noise Levels**  
**CVS Project Area Roadways – Pinole, California**

Intersection	Direction	Baseline	B+P	Change	Future	F+P	Change
Appian Way/ Canyon Drive	North	67.3	67.4	0.0	67.8	67.8	0.0
	South	69.9	69.9	0.1	70.3	70.4	0.1
	East	56.7	57.6	1.0	57.1	58.0	1.0
	West	66.7	66.7	0.0	67.1	67.2	0.0
Appian Way/ WB Ramp	North	70.2	70.3	0.1	70.7	70.8	0.1
	South	70.0	70.1	0.1	70.4	70.6	0.1
	East	67.6	67.6	0.0	68.1	68.1	0.0
	West	65.6	65.6	0.0	65.8	66.1	0.0
Appian Way/ EB Ramp	North	70.2	70.2	0.0	70.6	70.7	0.0
	South	70.5	70.5	0.0	70.9	71.0	0.0
	East	65.9	65.9	0.0	66.4	66.4	0.0
	West	67.7	67.7	0.0	68.2	68.2	0.0
Entrance/ Canyon Drive	South	--	43.1	N/A	--	43.1	N/A
	East	56.7	56.7	0.0	57.1	57.2	0.0
	West	56.7	57.6	1.0	57.1	58.0	1.0
Ridgecrest Drive/ Canyon Drive	North	55.0	55.0	0.0	55.5	55.5	0.0
	East	50.7	50.7	0.0	51.2	51.2	0.0
	West	56.1	56.1	0.0	56.6	56.6	0.0

Source: FHWA Model with inputs from BAC & Project Traffic Study

Inspection of the Table 5 data indicate that the project-related increases in both existing (baseline) and future (cumulative) traffic noise levels would be 1.0 dB Ldn or less on all project area roadways. Because this range of traffic noise level increases is below the FICON thresholds shown in Table 4, this increase is considered **less than significant**.

## Impact 2 Project Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. This would include noise generated during the construction of the proposed retaining wall and site grading. Activities involved in typical construction would generate maximum noise levels, as indicated in Table 6, ranging from 70 to 90 dB at a distance of 50 feet.

**Table 6  
Typical Construction Equipment Noise**

Equipment Description	Maximum Noise Level at 50 feet, dBA
Auger drill rig	85
Backhoe	80
Bar bender	80
Boring jack power unit	80
Chain saw	85
Compactor (ground)	80
Compressor (air)	80
Concrete batch plant	83
Concrete mixer truck	85
Concrete pump truck	82
Concrete saw	90
Crane (mobile or stationary)	85
Dozer	85
Dump truck	84
Excavator	85
Flatbed truck	84
Front end loader	80
Generator (25 kilovoltamperes [kVA] or less)	70
Generator (more than 25 kVA)	82
Grader	85
Hydra break ram	90
Jackhammer	85
Mounted impact hammer (hoe ram)	90
Paver	85
Pneumatic tools	85
Pumps	77
Rock drill	85
Scraper	85
Soil mix drill rig	80
Tractor	84
Vacuum street sweeper	80
Vibratory concrete mixer	80

*Source: Federal Highway Administration 2006.*

When demolition, ground clearing, excavation, and foundation work are occurring near the adjacent residences, daytime noise levels can be expected to exceed existing noise levels at those locations. As a result, construction activities associated with the proposed project has the potential to result in temporary noise levels that could impact nearby residences.

Construction related noise impacts are typically only occasionally intrusive and cease once construction is complete. Nonetheless, because project construction could result in substantial short-term increases in ambient noise levels at the nearby residential land uses, this **impact is considered significant**.

To ensure that noise levels due to onsite construction are minimized Mitigation Measure 1 (MM-1), set forth below shall be implemented. Adherence to measure MM-1 will ensure that potential noise impacts due to the temporary exposure of sensitive receptors to excessive noise during construction are reduced to less than significant levels.

**MM-1.** Due to the proximity of sensitive receptors to the subdivision site, all construction activities shall be required to comply with the following and be noted accordingly on construction contracts:

1. **Construction Hours/Scheduling:** The following are required to limit construction activities to the portion of the day when occupancy of the adjacent sensitive receptors are at the lowest:
  - a. Construction activities for all phases of construction, including servicing of construction equipment shall only be permitted during the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. to 5:00 p.m. on Saturdays. Construction is prohibited on Sundays and on all holidays.
  - b. Delivery of materials or equipment to the site and truck traffic coming to and from the site is restricted to the same construction hours specified above.
2. **Construction Equipment Mufflers and Maintenance:** All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
3. **Idling Prohibitions:** All equipment and vehicles shall be turned off when not in use. Unnecessary idling of internal combustion engines is prohibited.
4. **Equipment Location and Shielding:** All stationary noise-generating construction equipment, such as air compressors, shall be located as far as practical from the adjacent homes. Acoustically shield such equipment when it must be located near adjacent residences.
5. **Quiet Equipment Selection:** Select quiet equipment, particularly air compressors, whenever possible. Motorized equipment shall be outfitted with proper mufflers in good working order.
6. **Staging and Equipment Storage:** The equipment storage location shall be sited as far as possible from nearby sensitive receptors.
7. **Noise Disturbance Coordinator:** Developer shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. This individual would most likely be the contractor or a

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contractor's representative. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented. The telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.

### **Impact 3    On-Site Truck Circulation and Unloading Noise**

The truck unloading area shown on Figure 2 will be largely shielded from view of the nearby residential property line and nearest residences to the east due to the dramatic elevation difference between the project site and those receptors. Specifically, the nearest residential property line to the east is depressed approximately 20 feet relative to the proposed project site elevation, with the nearest residences on El Toro Way depressed an additional 20 feet at the residential building pad elevation, for a total depression of 40 feet relative to the project site. Because noise generated during truck unloading activities would be substantially attenuated by this elevation difference, the noisiest component of truck deliveries to the project site is expected to be truck passbys near the eastern site boundary.

CVS Pharmacies typically generate light heavy truck activity once initial store stocking has been completed. According to project representatives, The CVS store will receive up to three (3) regular weekly heavy truck deliveries to provide product for the store. These deliveries would occur on different days and times throughout the week. Heavy truck unloading would occur at the unloading area identified on Figure 2. In addition to occasional heavy truck deliveries, medium-duty vendor trucks and side-step vans will also deliver products to the store.

For a conservative assessment of daily truck delivery noise levels at this location, it was assumed that 1 heavy truck and 4 medium duty trucks/vans would deliver products to the store on a typical busy day. For the purposes of predicting hourly average noise levels for comparison against the City's noise standards, it was assumed that 1 heavy truck and 2 medium duty trucks could have store deliveries during the same worst-case hour.

According to the project site plans, one site access is proposed on Canyon Drive. The nearest residential property line to the east (El Toro Way Residences) is approximately 50 feet from the center of the truck passby area, and approximately 80 feet from the center of the truck unloading area.

Truck deliveries are expected to be relatively brief, and would likely occur primarily during normal business (daytime) hours. BAC file data indicate that heavy truck passbys produce an average Sound Exposure Level (SEL) of approximately 90 dB at a distance of 50 feet, with medium duty trucks (including side step vans), producing a SEL of approximately 76 dB. Based on these levels, and 1 semi-trailer delivery and 2 medium duty truck deliveries during any given hour, the resulting average noise level at the nearest residential property line to the east would be approximately 50 dB  $L_{eq}$  during the worst-case hour of truck deliveries, including shielding provided by the elevation differential between the property line and project site. This noise level would satisfy the adjusted 60 dB  $L_{eq}$  property line noise level standard of the City of Pinole during both daytime and nighttime hours.

After consideration of the shielding resulting from the depressed position of the property line relative to the project site, maximum ( $L_{max}$ ) noise levels generated by heavy truck passbys are predicted to range from 70-75 dB  $L_{max}$  at the nearest residential property line to the east, with medium duty truck predicted to range from 60-65 dB  $L_{max}$ . This range of predicted heavy truck maximum noise levels would be satisfactory relative to the City's adjusted 75 dB  $L_{max}$  noise standard during daytime hours, but would exceed the City's 65 dB  $L_{max}$  noise standard during nighttime hours. The predicted range of medium duty truck maximum noise levels would be satisfactory with both daytime and nighttime noise level standards of the City of Pinole. However, because nighttime heavy truck deliveries could result in exceedance of the City's noise standards at the nearest residential property boundary, this **impact is considered significant**.

To ensure that noise levels due to heavy truck deliveries to the site are minimized Mitigation Measure 2 (MM-2), set forth below shall be implemented. Adherence to measure MM-2 will ensure that potential noise impacts due to heavy truck deliveries to the site are reduced to less than significant levels at the nearest residences.

**MM-2.** Due to the proximity of sensitive receptors to the subdivision site, all heavy truck deliveries shall be limited to daytime hours (7 am – 7 pm) until it can be demonstrated through site-specific noise measurements that heavy truck deliveries to the site would not result in exceedance of the 65 dB  $L_{max}$  noise standard at the eastern site boundary.

#### **Impact 4 Pharmacy Drive-Through Noise**

The project proposes a single lane pharmacy drive-through on the west side of the building (see Figure 2 for drive-through location). The distance from the drive-through to the nearest residential property line is approximately 175 feet to the east, and the proposed drive-through area would be completely shielded from view of the nearest residences to the east by the proposed CVS building.

Although CVS does not anticipate extensive drive-through activity during nighttime hours, for convenience to CVS customers the drive-through pharmacy operations would be available 24-hours per day.

To quantify the noise emissions of proposed drive-through vehicle passages and speaker usage, BAC conducted noise level measurements of CVS drive-through operations at the Calvine/Bradshaw store in Elk Grove, California. Those measurements indicated that drive-through speaker and vehicle idling noise levels are approximately 50 dB  $L_{eq}$  and 55 dB  $L_{max}$  at a reference distance of 50 feet from the drive-through speaker. At the 175-foot distance to the nearest residential property line to the east, average and maximum noise levels associated with continuous drive-through lane usage would be 24 dB  $L_{eq}$  and 29 dB  $L_{max}$ , including a conservative estimate of 15 dB shielding provided by intervening topography and the proposed CVS building. The predicted drive-through noise levels at the nearest residential property lines to the east would be well below the City's noise standards during both daytime and nighttime hours. As a result, this impact is considered **less than significant**.

### **Impact 5 Rooftop Mechanical Equipment Noise**

Project representatives have indicated that the heating, ventilating, and air conditioning (HVAC) requirements for this store will be met using packaged roof-top systems. These units would be shielded from view of neighboring residential uses by the rooftop parapet.

BAC file data for packaged rooftop air conditioning systems indicates that such equipment is typically inaudible at ground level receptors due to the elevated position of the equipment and shielding provided by the rooftop parapets. Given the substantial elevation change between the project site and nearest residential property line, HVAC equipment noise levels are predicted to be approximately 45 dB  $L_{eq}$  at that nearest property line.

Because the predicted worst-case HVAC equipment noise level of 45 dB  $L_{eq}$  would satisfy both the daytime and nighttime noise level standards of the City of Pinole, and generate noise levels well below measured existing ambient noise levels in the project vicinity, HVAC noise impacts are considered to be **less than significant**.

### **Impact 6 Permanent Cellular Facility Equipment Shelter HVAC Noise**

As indicated in Figure 2, the project proposes the installation of three permanent cellular equipment shelters, each for a different cellular provider, in the southern portion of the site behind the proposed CVS store. The project site plans indicate that each equipment shelter will have two exterior mounted HVAC units, all facing in the southwest direction. Based on BAC's extensive experience with performing hundreds of noise analyses for cellular equipment facilities, it is likely that the HVAC units will be Bard WA3S1 Wall-Mount Step Capacity Air Conditioners. Noise exposure from the each of HVAC units is approximately 67 dB ( $L_{eq}$ ) at a distance of 10 feet from the equipment. Because the HVAC units will not directly face the residential property line to the east and have a sideline exposure, predicted noise levels were conservatively adjusted by 5 dB to account for the noise-generation directionality of the HVAC units.

The combined noise level of the six HVAC units at the nearest residential property line to the east would be 51 dB  $L_{eq}$ . This level would satisfy both the adjusted daytime and nighttime noise level standards of the City of Pinole, and generate noise levels well below measured existing ambient noise levels in the project vicinity. As a result, noise generated by the cellular equipment shelter HVAC units is considered to be **less than significant**.

### **Impact 7 Permanent Cellular Facility Generator Noise**

Emergency generators are commonly installed at cellular equipment sites to provide ongoing cellular communication capabilities during power outages. It is our understanding that a Generac Industrial Power Systems Model SD048, equipped with a level 2 acoustic enclosure, will be provided for backup power for the proposed Verizon Wireless equipment shelter. The generator will be located just east of the three proposed equipment shelters. With a level 2

acoustic enclosure, noise generation from this generator is reported to be 66 dB at a distance of 23 feet from the equipment while the generator is operating.

Cellular facility emergency generators are tested during daytime hours, once per week, for a duration of approximately 30 minutes. Such emergency generators only operate at night during power outages. Nighttime operation of the project emergency generator would likely be exempt from the City's exterior noise exposure criteria due to the need for continuous cellular service during power outages. As a result, the City's adjusted daytime average noise level standard of 60 dB  $L_{eq}$  would be applied to the routine daytime testing operations of the generator.

The nearest residential property line is approximately 50 feet from the likely generator location. At that distance the predicted hourly average noise levels for the routine generator testing during daytime hours would be approximately 56 dB  $L_{eq}$  without applying any offset for shielding by the intervening grade differential. Because the predicted generator noise emissions satisfy the City's adjusted 60 dB  $L_{eq}$  noise criteria at the nearest residential property line, this impact is considered **less than significant**.

## **Impact 8     Temporary Cellular Facility Noise**

During construction of the CVS store, Verizon Wireless will utilize a Cellular Tower on Wheels (CTOW) along with a single generator. CTOW is a mobile cell site that consists of a cellular antenna tower, electronic radio transceiver equipment, and a backup power generator on a trailer. The location of the temporary CTOW is indicated on Figure 2. During construction, the general contractor may provide on-site power to the CTOW. However, the CTOW may rely solely on the generator for power which would result in the generator operating throughout the day. The following worst-case analysis assumes that the generator provides power to the CTOW during all hours of the day.

The project site plans indicate that the CTOW will have two exterior mounted HVAC units, both facing away from the residential property line to the east. It is expected that the HVAC units will have similar noise generation to those assumed for the permanent equipment shelter installation, 67 dB at a reference distance of 10 feet. Because the HVAC units are proposed to face away from the residential property line to the east, predicted noise levels were conservatively adjusted by 10 dB to account for the noise-generation directionality of the HVAC units. The combined noise level of the two HVAC units at the nearest residential property line to the east, 18 feet away, would be 54 dB  $L_{eq}$ .

It is our understanding that a Generac Industrial Power Systems Mobile Generator, MMG100, will be provided for power for the proposed CTOW. The generator will be located adjacent to the CTOW. Noise generation from this generator is reported to be 68 dB at a distance of 23 feet from the equipment while the generator is operating. The nearest residential property line is approximately 20 feet from the temporary generator location. At that distance the predicted hourly average noise levels for generator operation would be approximately 69 dB  $L_{eq}$ .

The combined noise exposure from the CTOW and generator would be 69 dB  $L_{eq}$  at the nearest residential property line to the east and would exceed the City of Pinole adjusted nighttime noise level criteria of 60 dB  $L_{eq}$ . Because nighttime operation of the temporary generator during construction could result in exceedance of the City's noise standards at the nearest residential property boundary, this **impact is considered significant**.

To ensure that noise levels due to the CTOW and generator operation are minimized, Mitigation Measure 3 (MM-3) set forth below shall be implemented. Adherence to measure MM-3 will ensure that potential noise impacts due to the CTOW and generator operation are reduced to less than significant levels at the nearest residences.

**MM-3.** Due to the proximity of sensitive receptors to the project site, the CTOW and generator shall be located a minimum of 50 feet away from the residential property line to the east. Maintaining a 50 foot buffer from the residential property line would result in predicted facility noise levels of less than 60 dB  $L_{eq}$ , satisfying the City of Pinole daytime and nighttime noise level standards.

### Impact 9 Cumulative Noise from all Project Noise Sources

Combined noise levels for each source individually, as well as the cumulative noise exposure from all sources operating concurrently, are shown below in Table 7. It should be noted that project construction noise would not occur simultaneously with operational noise. Because the cumulative noise generation of all sources would be less than the City of Pinole exterior noise criteria applied at the property line of residential land uses, this impact is considered **less than significant**.

<b>Table 7 Summary of Predicted Noise levels at Nearest Residences CVS Project – Pinole, California</b>		
<b>Source</b>	<b>Noise Level at Residential Property Line, Leq</b>	<b>Daytime / Nighttime Noise Standard, Leq</b>
Truck Circulation & Unloading	50	
Drive-Through	24	
Rooftop Mechanical Equipment	45	
Cellular Equipment Cabinets	42	60 /60 <sup>1</sup>
Cellular Emergency Generator	50	
Project-Generated Off-Site Traffic	43	
<b>Combined Sources</b>	<b>54</b>	
<ol style="list-style-type: none"> <li>1. See Regulatory Setting Section. City's 55 dB Leq daytime and 45 dB Leq nighttime average noise level standards were increased to account for high measured ambient conditions at the project site.</li> <li>2. Source: Bollard Acoustical Consultants, Inc.</li> </ol>		

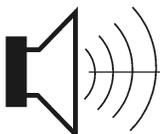
## Conclusions

This analysis concludes that noise impacts associated with the various noise-generating components of the proposed CVS project would either be insignificant or less than significant after implementation of reasonable noise mitigation measures.

This concludes BAC's environmental noise assessment for the proposed CVS Project in the City of Pinole, California. These conclusions are based on the site plan shown on Figure 2, and on the assumptions contained herein. Deviation from the site plan and assumptions could cause actual noise levels to vary. Implementation of the above-described noise mitigation measures is expected to fully reduce any potential noise impacts to a level of insignificance. Please contact BAC at (916) 663-0500 or [paulb@bacnoise.com](mailto:paulb@bacnoise.com) with any comments or questions regarding this report.

## Appendix A Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>L<sub>dn</sub></b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>L<sub>max</sub></b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Masking</b>	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
<b>Noise</b>	Unwanted sound.
<b>Peak Noise</b>	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
<b>RT<sub>60</sub></b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>Sabin</b>	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
<b>SEL</b>	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.



B O L L A R D

Acoustical Consultants

**Appendix B-1**  
**2015-098 CVS Project**  
**Ambient Noise Monitoring Results - Site A**  
**Saturday, April 25, 2015**

Hour	Leq	Lmax	L50	L90
0:00	62	67	61	60
1:00	59	65	59	57
2:00	58	63	57	55
3:00	58	64	57	55
4:00	59	75	58	55
5:00	61	67	60	58
6:00	63	69	62	60
7:00	66	75	66	65
8:00	66	71	65	64
9:00	66	78	66	64
10:00	65	82	64	63
11:00	64	79	64	62
12:00	64	76	63	61
13:00	63	76	62	58
14:00	62	71	60	57
15:00	64	76	64	61
16:00	64	80	64	60
17:00	66	76	65	64
18:00	66	80	65	64
19:00	66	80	65	64
20:00	64	74	64	61
21:00	61	72	61	60
22:00	61	67	61	60
23:00	60	68	60	58

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	66	61	65	63	58	60
Lmax (Maximum)	82	71	77	75	63	67
L50 (Median)	66	60	64	62	57	60
L90 (Background)	65	57	62	60	55	58

Computed Ldn, dB	68
% Daytime Energy	82%
% Nighttime Energy	18%

**Appendix B-2**  
**2015-098 CVS Project**  
**Ambient Noise Monitoring Results - Site A**  
**Sunday, April 26, 2015**

Hour	Leq	Lmax	L50	L90
0:00	59	69	59	57
1:00	57	65	57	55
2:00	56	63	56	54
3:00	56	62	55	53
4:00	56	66	56	53
5:00	58	64	58	55
6:00	57	63	57	55
7:00	57	65	57	55
8:00	57	66	57	55
9:00	59	80	58	56
10:00	59	81	58	56
11:00	58	71	58	56
12:00	58	69	58	56
13:00	59	81	58	56
14:00	60	76	59	57
15:00	62	75	62	60
16:00	61	71	61	59
17:00	61	70	61	59
18:00	61	75	60	59
19:00	61	78	61	59
20:00	60	68	60	59
21:00	60	66	60	58
22:00	61	80	61	59
23:00	60	71	59	57

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	57	60	61	56	58
Lmax (Maximum)	81	65	73	80	62	67
L50 (Median)	62	57	59	61	55	57
L90 (Background)	60	55	57	59	53	55

Computed Ldn, dB	65
% Daytime Energy	71%
% Nighttime Energy	29%

**Appendix B-3**  
**2015-098 CVS Project**  
**Ambient Noise Monitoring Results - Site A**  
**Monday, April 27, 2015**

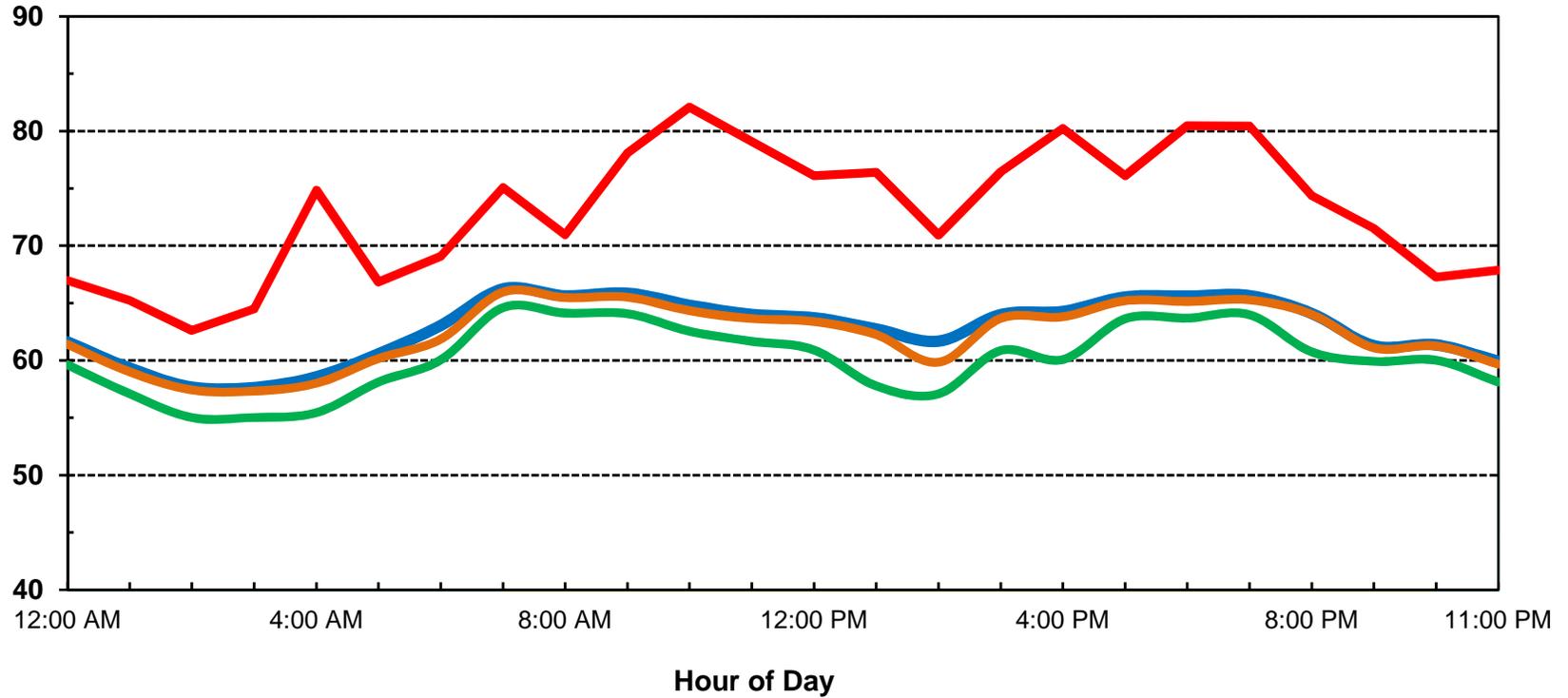
Hour	Leq	Lmax	L50	L90
0:00	60	67	59	57
1:00	58	79	57	54
2:00	56	64	55	52
3:00	56	68	55	52
4:00	61	67	60	58
5:00	63	70	63	62
6:00	62	70	62	61
7:00	61	67	61	59
8:00	60	72	59	58
9:00	60	68	59	58
10:00	59	78	58	56
11:00	58	71	57	56
12:00	58	77	57	55
13:00	57	66	57	55
14:00	58	71	57	55
15:00	59	70	59	57
16:00	61	78	60	59
17:00	60	69	59	58
18:00	60	71	59	58
19:00	61	73	60	59
20:00	59	69	58	56
21:00	61	74	61	59
22:00	60	66	60	59
23:00	60	76	60	58

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	61	57	60	63	56	60
Lmax (Maximum)	78	66	72	79	64	70
L50 (Median)	61	57	59	63	55	59
L90 (Background)	59	55	57	62	52	57

Computed Ldn, dB	67
% Daytime Energy	59%
% Nighttime Energy	41%

Appendix C-1  
2015-098 CVS Project  
Ambient Noise Monitoring Results - Site A  
Saturday, April 25, 2015

Sound Level, dBA

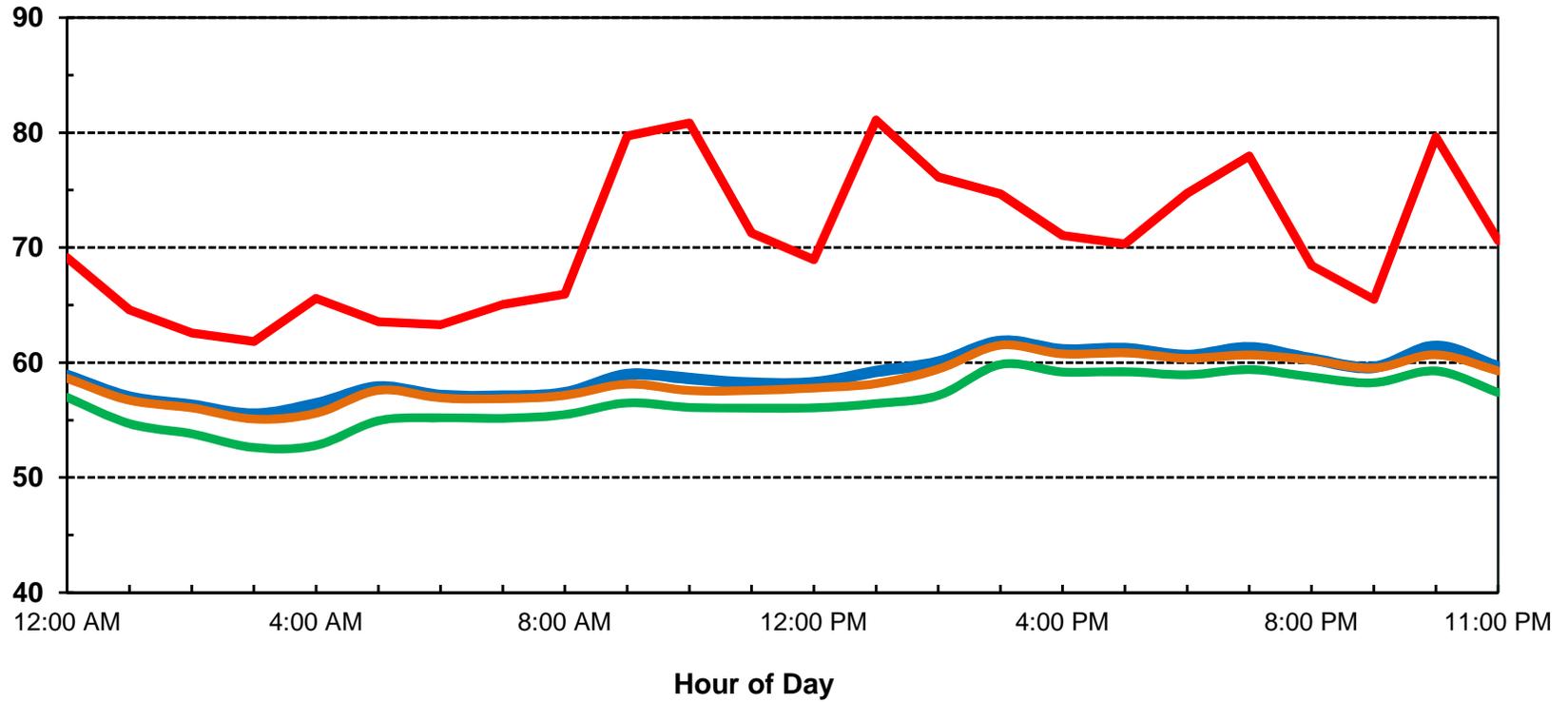


— Average (Leq) — Maximum (Lmax) — L50 — L90

Ldn: 68 dB

Appendix C-2  
2015-098 CVS Project  
Ambient Noise Monitoring Results - Site A  
Sunday, April 26, 2015

Sound Level, dBA

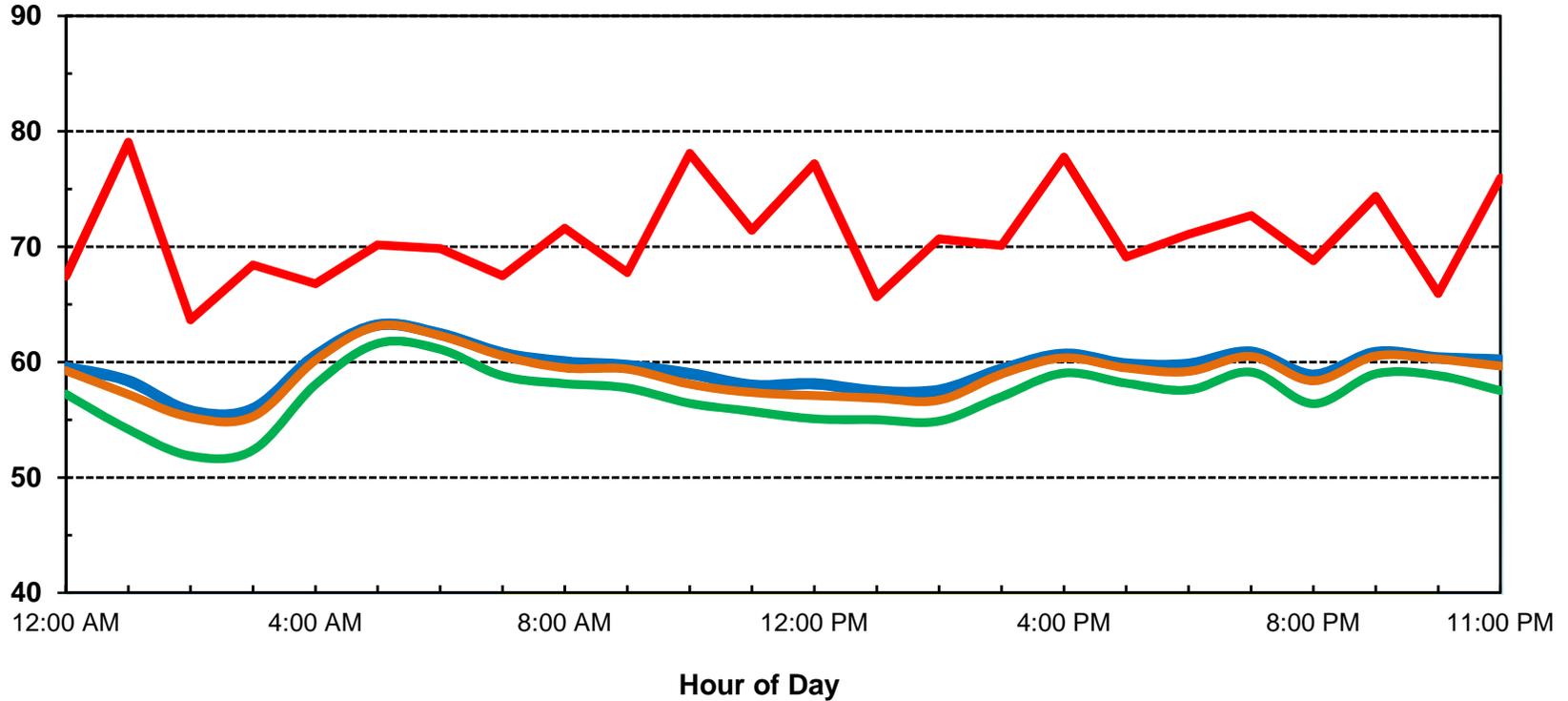


— Average (Leq) — Maximum (Lmax) — L50 — L90

Ldn: 65 dB

Appendix C-3  
2015-098 CVS Project  
Ambient Noise Monitoring Results - Site A  
Monday, April 27, 2015

Sound Level, dBA



— Average (Leq) — Maximum (Lmax) — L50 — L90

Ldn: 67 dB

**Appendix D-1**  
**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
**Data Input Sheet**

Project #: 2015-098 CVS Project  
Description: Existing  
Ldn/CNEL: Ldn  
Hard/Soft: Soft

Segment	Intersection	Direction	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Appian Way/ Canyon Drive	North	13,940	83		17	2	2	35	50	
2		South	24,960	83		17	2	2	35	50	
3		East	1,890	83		17	2	2	25	50	
4		West	13,830	83		17	2	2	30	50	
5	Appian Way/ WB Ramp	North	27,160	83		17	2	2	35	50	
6		South	25,970	83		17	2	2	35	50	
7		East	11,185	83		17	2	2	40	50	
8		West	9,265	83		17	2	2	35	50	
9	Appian Way/ EB Ramp	North	26,905	83		17	2	2	35	50	
10		South	28,700	83		17	2	2	35	50	
11		East	9,970	83		17	2	2	35	50	
12		West	11,435	83		17	2	2	40	50	
13	Entrance/ Canyon Drive	South	0	83		17	2	2	15	50	
14		East	1,890	83		17	2	2	25	50	
15		West	1,890	83		17	2	2	25	50	
16	Ridgecrest Drive/ Canyon Drive	North	1,295	83		17	2	2	25	50	
17		East	475	83		17	2	2	25	50	
18		West	1,650	83		17	2	2	25	50	

**Appendix D-2**

**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Data Input Sheet**

Project #: 2015-098 CVS Project

Description: Baseline

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Appian Way/ Canyon Drive	North	14,360	83		17	2	2	35	50	
2		South	25,720	83		17	2	2	35	50	
3		East	1,945	83		17	2	2	25	50	
4		West	14,245	83		17	2	2	30	50	
5	Appian Way/ WB Ramp	North	27,985	83		17	2	2	35	50	
6		South	26,755	83		17	2	2	35	50	
7		East	11,520	83		17	2	2	40	50	
8		West	9,550	83		17	2	2	35	50	
9	Appian Way/ EB Ramp	North	27,715	83		17	2	2	35	50	
10		South	29,565	83		17	2	2	35	50	
11		East	10,270	83		17	2	2	35	50	
12		West	11,770	83		17	2	2	40	50	
13	Entrance/ Canyon Drive	South	0	83		17	2	2	15	50	
14		East	1,945	83		17	2	2	25	50	
15	Ridgecrest Drive/ Canyon Drive	West	1,945	83		17	2	2	25	50	
16		North	1,330	83		17	2	2	25	50	
17		East	490	83		17	2	2	25	50	
18		West	1,700	83		17	2	2	25	50	

**Appendix D-3**

**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Data Input Sheet**

Project #: 2015-098 CVS Project

Description: Baseline + Project

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Appian Way/ Canyon Drive	North	14,420	83		17	2	2	35	50	
2		South	26,075	83		17	2	2	35	50	
3		East	2,440	83		17	2	2	25	50	
4		West	14,325	83		17	2	2	30	50	
5	Appian Way/ WB Ramp	North	28,520	83		17	2	2	35	50	
6		South	27,230	83		17	2	2	35	50	
7		East	11,520	83		17	2	2	40	50	
8		West	9,610	83		17	2	2	35	50	
9	Appian Way/ EB Ramp	North	27,915	83		17	2	2	35	50	
10		South	29,705	83		17	2	2	35	50	
11		East	10,270	83		17	2	2	35	50	
12		West	11,830	83		17	2	2	40	50	
13	Entrance/ Canyon Drive	South	505	83		17	2	2	15	50	
14		East	1,955	83		17	2	2	25	50	
15	Ridgecrest Drive/ Canyon Drive	West	2,440	83		17	2	2	25	50	
16		North	1,340	83		17	2	2	25	50	
17		East	490	83		17	2	2	25	50	
18		West	1,710	83		17	2	2	25	50	

**Appendix D-4**

**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Data Input Sheet**

Project #: 2015-098 CVS Project

Description: Cumulative

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Appian Way/ Canyon Drive	North	16,025	83		17	2	2	35	50	
2		South	28,700	83		17	2	2	35	50	
3		East	2,165	83		17	2	2	25	50	
4		West	15,900	83		17	2	2	30	50	
5	Appian Way/ WB Ramp	North	31,225	83		17	2	2	35	50	
6		South	29,355	83		17	2	2	35	50	
7		East	12,855	83		17	2	2	40	50	
8		West	10,155	83		17	2	2	35	50	
9	Appian Way/ EB Ramp	North	30,780	83		17	2	2	35	50	
10		South	32,845	83		17	2	2	35	50	
11		East	11,460	83		17	2	2	35	50	
12		West	13,135	83		17	2	2	40	50	
13	Entrance/ Canyon Drive	South	0	83		17	2	2	15	50	
14		East	2,175	83		17	2	2	25	50	
15	Ridgecrest Drive/ Canyon Drive	West	2,175	83		17	2	2	25	50	
16		North	1,480	83		17	2	2	25	50	
17		East	550	83		17	2	2	25	50	
18		West	1,900	83		17	2	2	25	50	

**Appendix D-5**

**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Data Input Sheet**

Project #: 2015-098 CVS Project

Description: Cumulative + Project

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Appian Way/ Canyon Drive	North	16,085	83		17	2	2	35	50	
2		South	29,055	83		17	2	2	35	50	
3		East	2,660	83		17	2	2	25	50	
4		West	15,980	83		17	2	2	30	50	
5	Appian Way/ WB Ramp	North	31,580	83		17	2	2	35	50	
6		South	30,150	83		17	2	2	35	50	
7		East	12,855	83		17	2	2	40	50	
8		West	10,715	83		17	2	2	35	50	
9	Appian Way/ EB Ramp	North	31,130	83		17	2	2	35	50	
10		South	33,135	83		17	2	2	35	50	
11		East	11,460	83		17	2	2	35	50	
12		West	13,195	83		17	2	2	40	50	
13	Entrance/ Canyon Drive	South	505	83		17	2	2	15	50	
14		East	2,185	83		17	2	2	25	50	
15	Ridgecrest Drive/ Canyon Drive	West	2,670	83		17	2	2	25	50	
16		North	1,490	83		17	2	2	25	50	
17		East	550	83		17	2	2	25	50	
18		West	1,910	83		17	2	2	25	50	

**Appendix E-1**

**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Predicted Levels**

Project #: 2015-098 CVS Project

Description: Existing

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	Autos	Medium Trucks	Heavy Trucks	Total
1	Appian Way/ Canyon Drive	North	65	57	63	67
2		South	67	60	65	70
3		East	52	46	54	57
4		West	63	56	63	67
5	Appian Way/ WB Ramp	North	67	60	66	70
6		South	67	60	65	70
7		East	65	57	62	67
8		West	63	56	61	65
9	Appian Way/ EB Ramp	North	67	60	65	70
10		South	68	61	66	70
11		East	63	56	61	66
12		West	65	57	62	68
13	Entrance/ Canyon Drive	South	--	--	--	--
14		East	52	46	54	57
15		West	52	46	54	57
16	Ridgecrest Drive/ Canyon Drive	North	50	45	52	55
17		East	46	40	48	51
18		West	51	46	54	56

## Appendix E-2

### FHWA-RD-77-108 Highway Traffic Noise Prediction Model

#### Predicted Levels

Project #: 2015-098 CVS Project

Description: Baseline

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	Autos	Medium Trucks	Heavy Trucks	Total
1	Appian Way/ Canyon Drive	North	65	58	63	67
2		South	67	60	65	70
3		East	52	47	54	57
4		West	63	56	64	67
5	Appian Way/ WB Ramp	North	68	60	66	70
6		South	67	60	65	70
7		East	65	58	62	68
8		West	63	56	61	66
9	Appian Way/ EB Ramp	North	68	60	66	70
10		South	68	61	66	70
11		East	63	56	61	66
12		West	66	58	62	68
13	Entrance/ Canyon Drive	South	--	--	--	--
14		East	52	47	54	57
15		West	52	47	54	57
16	Ridgecrest Drive/ Canyon Drive	North	50	45	53	55
17		East	46	41	48	51
18		West	51	46	54	56

## Appendix E-3

### FHWA-RD-77-108 Highway Traffic Noise Prediction Model

#### Predicted Levels

Project #: 2015-098 CVS Project

Description: Baseline + Project

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	Autos	Medium Trucks	Heavy Trucks	Total
1	Appian Way/ Canyon Drive	North	65	58	63	67
2		South	67	60	65	70
3		East	53	48	55	58
4		West	63	57	64	67
5	Appian Way/ WB Ramp	North	68	61	66	70
6		South	67	60	66	70
7		East	65	58	62	68
8		West	63	56	61	66
9	Appian Way/ EB Ramp	North	68	60	66	70
10		South	68	61	66	70
11		East	63	56	61	66
12		West	66	58	62	68
13	Entrance/ Canyon Drive	South	35	33	42	43
14		East	52	47	54	57
15		West	53	48	55	58
16	Ridgecrest Drive/ Canyon Drive	North	50	45	53	55
17		East	46	41	48	51
18		West	51	46	54	56

**Appendix E-4**

**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Predicted Levels**

Project #: 2015-098 CVS Project

Description: Cumulative

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Intersection	Direction	Autos	Medium Trucks	Heavy Trucks	Total
1	Appian Way/ Canyon Drive	North	65	58	63	68
2		South	68	61	66	70
3		East	52	47	55	57
4		West	63	57	64	67
5	Appian Way/ WB Ramp	North	68	61	66	71
6		South	68	61	66	70
7		East	66	58	63	68
8		West	63	56	61	66
9	Appian Way/ EB Ramp	North	68	61	66	71
10		South	68	61	66	71
11		East	64	57	62	66
12		West	66	58	63	68
13	Entrance/ Canyon Drive	South	--	--	--	--
14		East	52	47	55	57
15		West	52	47	55	57
16	Ridgecrest Drive/ Canyon Drive	North	51	45	53	55
17		East	46	41	49	51
18		West	52	47	54	57

**Appendix E-5**  
**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
**Predicted Levels**

Project #: 2015-098 CVS Project  
 Description: Cumulative + Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

Segment	Intersection	Direction	Autos	Medium Trucks	Heavy Trucks	Total
1	Appian Way/ Canyon Drive	North	65	58	63	68
2		South	68	61	66	70
3		East	53	48	56	58
4		West	63	57	64	67
5	Appian Way/ WB Ramp	North	68	61	66	71
6		South	68	61	66	71
7		East	66	58	63	68
8		West	63	56	62	66
9	Appian Way/ EB Ramp	North	68	61	66	71
10		South	68	61	66	71
11		East	64	57	62	66
12		West	66	58	63	68
13	Entrance/ Canyon Drive	South	35	33	42	43
14		East	52	47	55	57
15		West	53	48	56	58
16	Ridgecrest Drive/ Canyon Drive	North	51	45	53	56
17		East	46	41	49	51
18		West	52	47	54	57

# **APPENDIX E**

## Traffic Study



*Transportation Impact Analysis*

**Pinole CVS Project**

City of Pinole

Prepared by:  
Abrams Associates  
1875 Olympic Boulevard, Suite 210  
Walnut Creek, CA 94596

August 1+, 2015

# CVS Pharmacy Project

## City of Pinole

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## TRANSPORTATION AND CIRCULATION

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### 1) EXECUTIVE SUMMARY

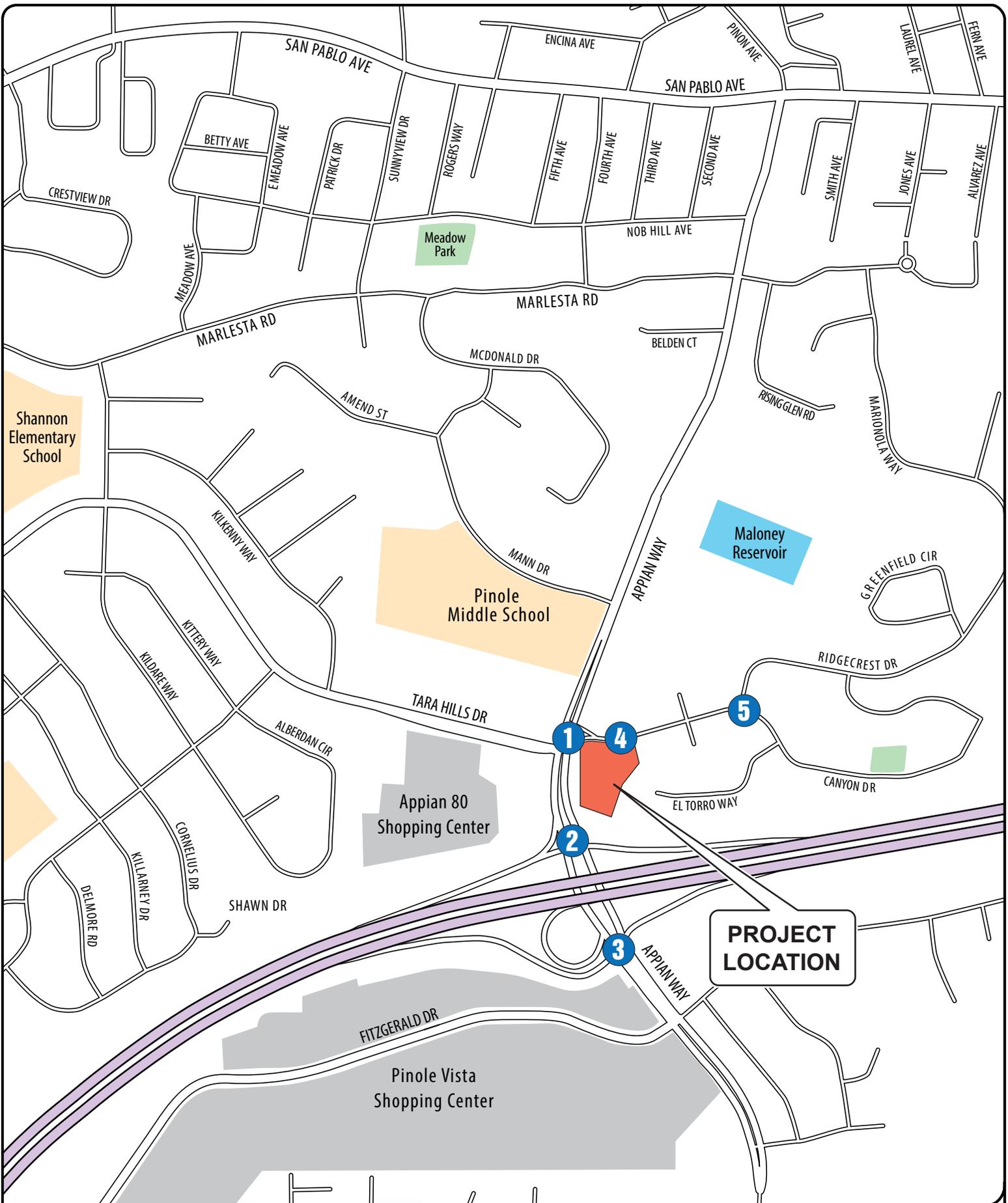
This traffic impact study describes the existing and future conditions for transportation with and without the proposed commercial development which is proposed to include a total of 14,806 square feet of commercial/retail space that is proposed to be occupied entirely by a CVS Pharmacy with a drive through. The study presents information on the regional and local roadway networks, pedestrian and transit conditions, and provides an analysis of the effects on transportation facilities associated with the project.

This study also describes the regulatory setting; the criterion used for determining the significance of environmental impacts; and summarizes potential environmental impacts and appropriate mitigation measures. This study has been conducted in accordance with the requirements and methodologies set forth by the City of Pinole, the Contra Costa Transportation Authority (CCTA), Caltrans, and the applicable provisions of CEQA. Based on this analysis the project would not result in any safety problems and would not cause any intersections in the study area to exceed City, County, or Caltrans standards. As a result, no off-site vehicular traffic mitigations are recommended.

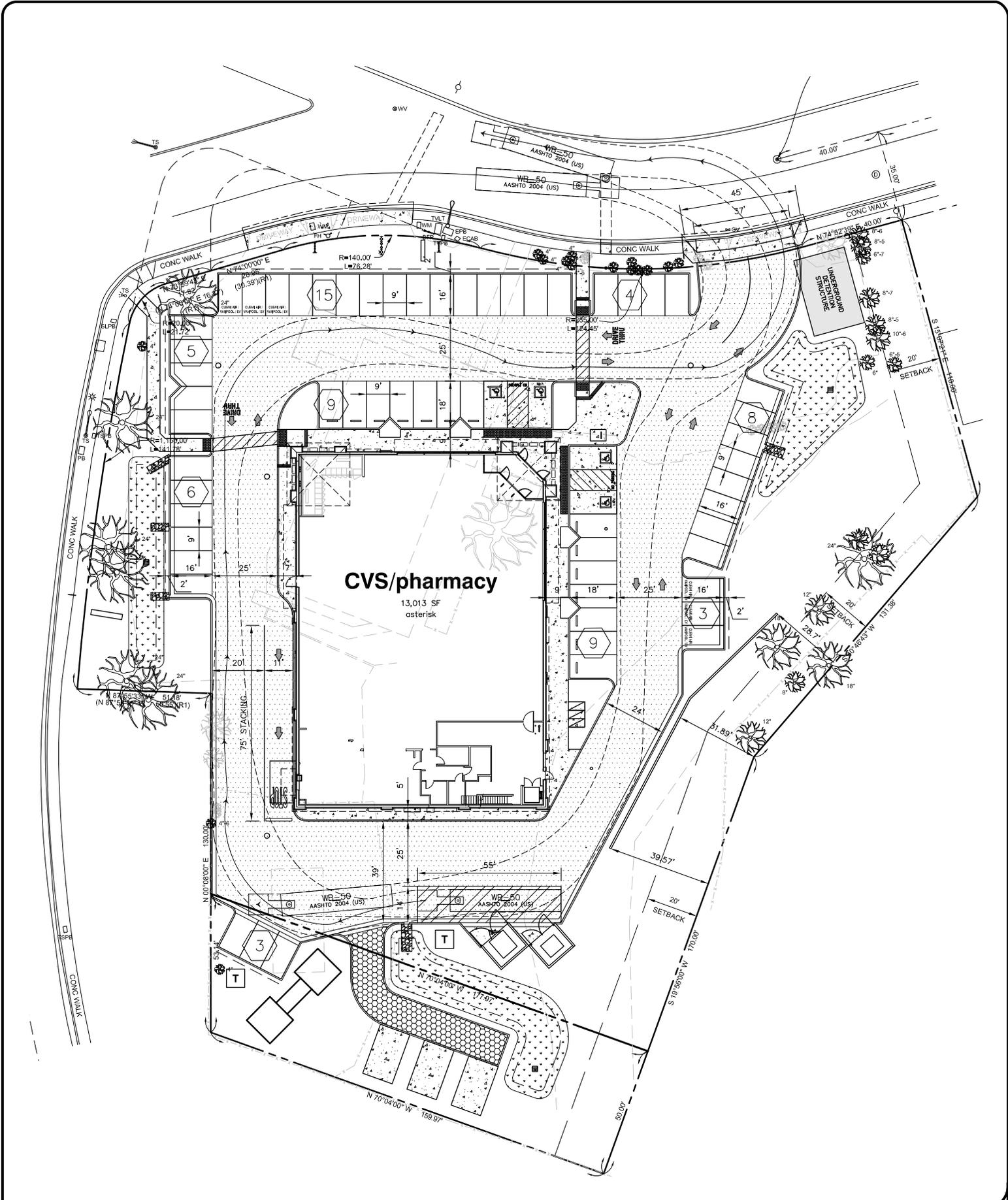
### 2) PROJECT DESCRIPTION

As mentioned above, the proposed project is a commercial development proposed to include 14,806 square feet of commercial/retail space. The commercial space is proposed to include a CVS Pharmacy with a drive through. The project is located on the east side of Appian Way just north of its interchange with Interstate 80.

All access to the site will be from one unsignalized intersection on Canyon Drive just east of Appian Way. Please note that the property currently has two existing driveway that provide access to the existing office building on the site and the western driveway is proposed to be closed as part of the project. **Figure 1** shows the location of the project and the surrounding roadway network. **Figure 2** shows the proposed site plan for the project.



**FIGURE 1 | PROJECT LOCATION**  
**TRANSPORTATION IMPACT ANALYSIS**  
 Pinole CVS Pharmacy  
 City of Pinole



**FIGURE 2 | SITE PLAN**  
**TRANSPORTATION IMPACT ANALYSIS**  
 Pinole CVS Pharmacy  
 City of Pinole

### 3) ENVIRONMENTAL SETTING

This section of the report describes the roadways, traffic conditions and other existing transportation characteristics in the vicinity of the project. The primary basis of the analysis is the peak hour level of service for the key intersections. The hours identified as the “peak” hours are generally between 7:30 a.m. and 8:30 a.m. and 4:30 p.m. and 5:30 p.m. for the majority of the transportation facilities described. Throughout this report, these peak hours will be identified as the AM and PM peak hours, respectively.

#### 3.1 Project Study Intersections

Based on the project's trip generation and the potential for traffic impacts a list of project study intersections was prepared in coordination with the City of Pinole. **Figure 1** shows the location of the project study intersections. As mentioned above, all access to the site will be from one unsignalized intersection on Canyon Drive. There are five (5) study intersections included in the analysis. All of the existing study intersections are controlled with traffic signals with the exception of intersections #4 and 5.

##### Project Study Intersections

1. Appian Way at Canyon Drive/Tara Hills Drive
2. Appian Way at the I-80 Westbound Ramps
3. Appian Way at the I-80 Eastbound Ramps
4. Canyon Drive at the Proposed Project Entrance
5. Canyon Drive at Ridgecrest Drive

Please note this list includes all intersections where over 50 peak hour trips could be added in accordance with the Contra Costa Transportation Authority (CCTA) technical procedures.<sup>1</sup>

#### 3.2 Traffic Analysis Scenarios

The study intersections were evaluated for the following five scenarios:

- Scenario 1: *Existing Conditions* – Level of Service (LOS) based on existing peak hour volumes and existing intersection configurations.
- Scenario 2: *Existing Plus Project* – Existing traffic volumes plus trips from the proposed project.
- Scenario 3: *Baseline (No Project) Conditions* – The Baseline scenario is based on the existing volumes plus growth in background traffic (for three years) plus the traffic from all reasonably foreseeable developments that could substantially affect the volumes at the project study intersections. These included the Pinole Gateway Project and a proposed 10,000 square foot medical office building at the corner of Henry Avenue and Pinole Valley Road.
- Scenario 4: *Baseline Plus Project Conditions* – This scenario is based on the Baseline traffic volumes plus the trips from the proposed project.

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<sup>1</sup> *Final Technical Procedures*, Contra Costa Transportation Authority, Walnut Creek, CA, January 16, 2013.

- Scenario 5: *Cumulative Conditions* – This scenario includes year 2040 cumulative volumes based on planned and approved projects and the most recent (March, 2013) release of the Countywide Travel Demand Model.
- Scenario 6: *Cumulative Plus Project Conditions* – This scenario includes year 2040 cumulative volumes based on the most recent release of the Countywide Travel Demand Model plus the trips from the proposed project.

### 3.3 Existing Roadway Network

**Routes of Regional Significance** - Routes of Regional Significance (RRS) are major roadway and freeway corridors that serve regional traffic. These are identified in Action Plans adopted by the Contra Costa Transportation Authority under the countywide Measure J program. Within the area the I-80 freeway and Appian Way are identified as RRS in the West County Action Plan.

As discussed previously, the project location and the surrounding roadway network are illustrated in **Figure 1**. The following is a more detailed description of the Routes of Regional Significance in the area:

- **Interstate 80** – Interstate 80 (I-80) is the primary regional east-west freeway in the project area. I-80 is eight lanes (three lanes plus an HOV lane in each direction) and travels in a generally north/south direction in the project vicinity through the Cities of Pinole, Richmond, San Pablo and El Cerrito. This freeway is the primary route for regional traffic between San Francisco and Sacramento. The proposed project is located just north of the I-80 interchange with Appian Way.
- **Appian Way** – In the project study area Appian Way provides the primary access to I-80 as well as the shopping areas along Tara Hills Drive and Fitzgerald Drive. It is designated as an arterial route of regional significance. It serves both local and regional traffic and within the study area it is a four-lane roadway with a raised median.

**Local Roadways** – There are also a number of local roadways that were included in the analysis including the following:

- **Appian Way** – In the project study area Appian Way provides the primary access to I-80 as well as the shopping areas along Tara Hills Drive and Fitzgerald Drive. It is designated as a collector street in the City's general plan. In the vicinity of the proposed project Appian Way is a two-lane roadway that provides access to residential areas to the east of the project site.
- **Canyon Drive** – Canyon Drive is generally an east west local roadway that extends east from Appian Way. It provides access to commercial uses and residential areas and is designated as a collector street in the City's general plan. The proposed project would have all access from a driveway on Canyon Drive.
- **Tara Hills Drive** – Tara Hills Drive is an east west local roadway that extends west from Appian Way to terminate at Montara Bay Park. It provides access to commercial and residential areas and is designated as an arterial in the City's general plan.

- **Ridgecrest Drive** – Ridgecrest Drive is a two lane roadway serving residential areas and providing a connection to Henry Avenue and Pinole Valley Road. . It is designated as a local street in the City's general plan.

### 3.4 Intersection Analysis Methodology

Existing operational conditions at the five (5) study intersections have been evaluated according to the requirements set forth by the Contra Costa County Transportation Authority (CCTA) using the methodology set forth in the Final Technical Procedures Update (dated July 19, 2006). Analysis of traffic operations was conducted using the 2010 *Highway Capacity Manual (HCM)* Level of Service (LOS) methodology with Synchro software.<sup>2</sup>

Level of service is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through it at any given time. The level of service scale describes traffic flow with six ratings ranging from A to F, with "A" indicating relatively free flow of traffic and "F" indicating stop-and-go traffic and traffic jams.

As the amount of traffic moving through a given intersection or roadway segment increases, the traffic flow conditions that motorists experience rapidly deteriorate as the capacity of the intersection or roadway segment is reached. Under such conditions, there is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays that lead to traffic congestion. This near-capacity situation is labeled level of service (LOS) E. Beyond LOS E, the intersection or roadway segment capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it.

For signalized intersections, The *HCM* methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average control delay and LOS are presented for the intersection. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in the appendix to this report. **Table 1** summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections.

For unsignalized (all-way stop controlled and two-way stop controlled) intersections, the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. In general, the operating conditions for unsignalized intersections are presented for the worst approach. **Table 2** summarizes the relationship between LOS and average control delay at unsignalized intersections.

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<sup>2</sup> 2010 *Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2011

**TABLE 1  
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS**

<u>Level of Service</u>	<u>Description of Operations</u>	<u>Average Delay (sec/veh)</u>	<u>Volume to Capacity Ratio</u>
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	≤ 10	< 0.60
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20	> 0.61 to 0.70
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35	> 0.71 to 0.80
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55	> 0.81 to 0.90
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80	> 0.91 to 1.00
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80	> 1.00

**SOURCES:** 2010 *Highway Capacity Manual*, Transportation Research Board, 2011. *Technical Procedures Update*, Contra Costa Transportation Authority, January 16, 2013.

**TABLE 2  
UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS**

<u>Level of Service</u>	<u>Description of Operations</u>	<u>Average Delay (seconds/vehicle)</u>
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

**SOURCE:** 2010 *Highway Capacity Manual*, Transportation Research Board, 2011.

### 3.5 Existing Intersection Capacity Conditions (Scenario 1)

The existing intersection geometry at each of the project study intersections can be seen in **Figure 3**. Traffic counts at the study intersections were conducted in May of 2015 at times when local schools were in session. **Figure 4** presents the existing traffic volumes at the project study intersections. **Table 3** summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions. Please note that the corresponding LOS analysis calculation sheets are presented in the *Traffic Analysis Appendix*. As shown in **Table 3**, all of the signalized study intersections currently have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

**TABLE 3  
EXISTING INTERSECTION LEVEL OF SERVICE CONDITIONS**

INTERSECTION		CONTROL	PEAK HOUR	EXISTING	
				Delay	LOS
1	APPIAN WAY & TARA HILLS DR	Signalized	AM	34.9	C
			PM	18.6	B
2	I-80 WESTBOUND RAMPS & APPIAN WAY	Signalized	AM	29.5	C
			PM	21.0	C
3	I-80 EASTBOUND RAMPS & APPIAN WAY	Signalized	AM	8.1	A
			PM	16.2	B
4	PROJECT ENTRANCE & CANYON RD	Two Way Stop	AM	N/A	N/A
			PM	N/A	N/A
5	RIDGECREST DR & CANYON DR	All Way Stop	AM	7.1	A
			PM	7.6	A

**SOURCE:** Abrams Associates, 2015

**NOTES:** HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.

### 3.6 Pedestrian and Bicycle Facilities

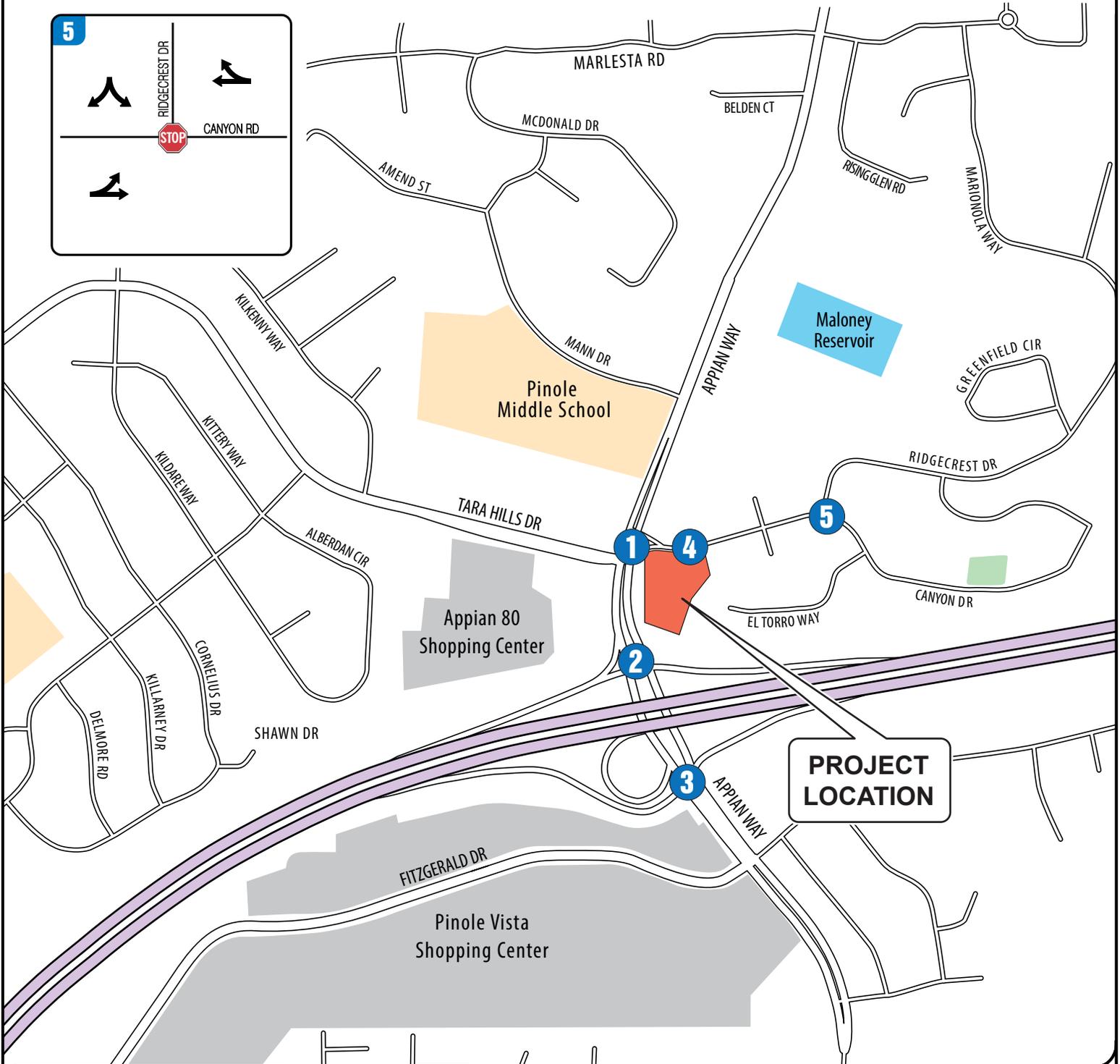
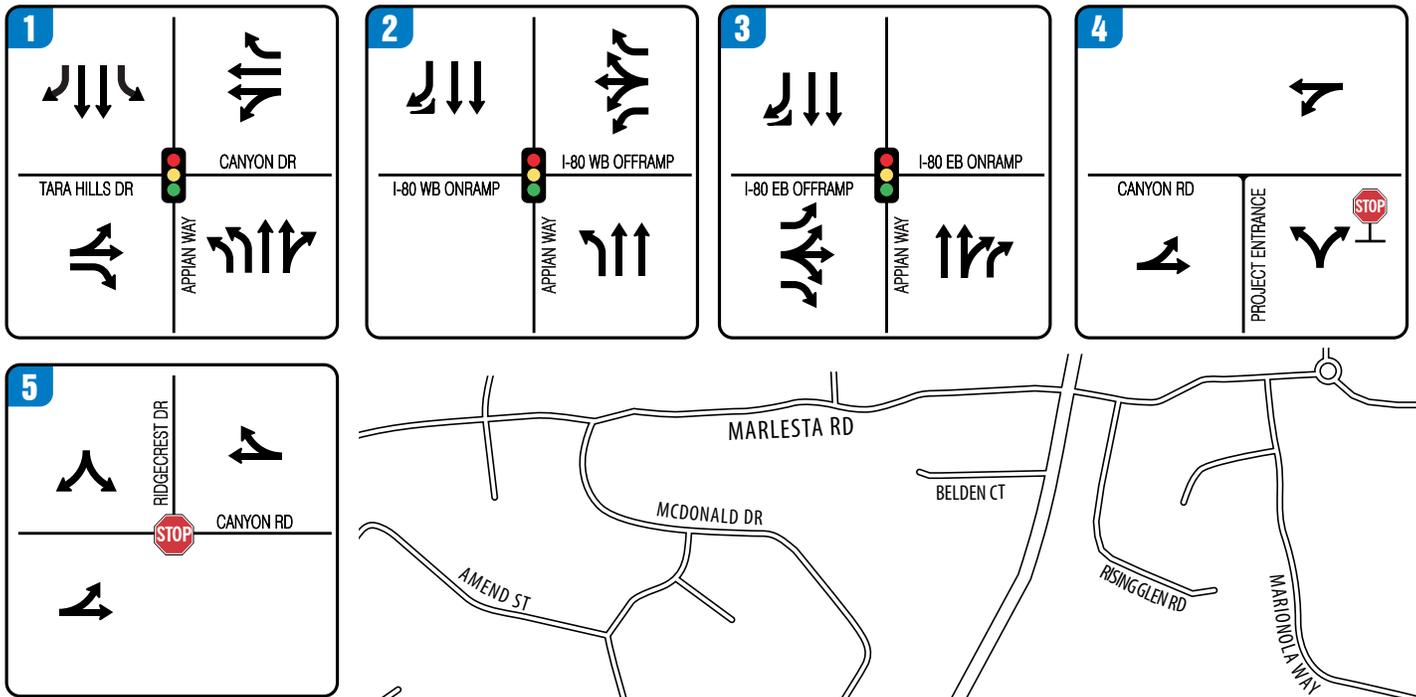
Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following three classes:

*Class I* – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.

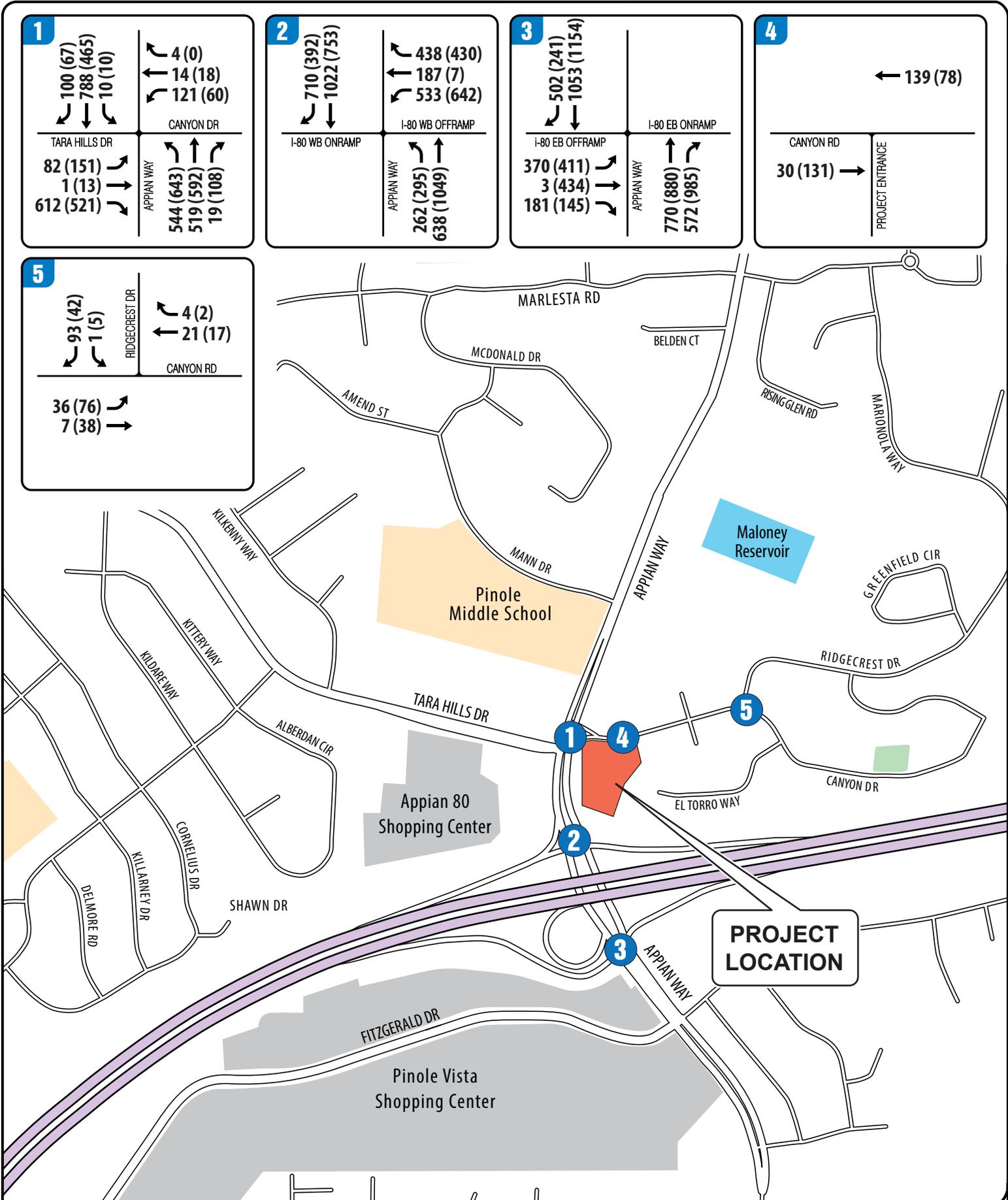
*Class II* – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.

*Class III* – Provides a route designated by signs or permanent markings and shared with pedestrians and motorists.

Appian Way does not currently have bicycle lanes but the City’s Three Corridors Specific Plan indicates a planned bike route along Appian Way adjacent to the project site.



**FIGURE 3 | EXISTING LANE CONFIGURATIONS**  
 TRANSPORTATION IMPACT ANALYSIS  
 Pinole CVS Pharmacy  
 City of Pinole



**FIGURE 4 | EXISTING AM(PM) PEAK HOUR TRAFFIC VOLUMES**  
 TRANSPORTATION IMPACT ANALYSIS  
 Pinole CVS Pharmacy  
 City of Pinole

### 3.7 Transit Service

Two major public mass transit operators provide service within or adjacent to the study area. These include BART and WestCAT. These operators are described below.

**Bay Area Rapid Transit (BART)** – BART is a rapid mass transit system which provides regional transportation connections to much of the Bay Area. It runs from the North Bay Area in Richmond to the South Bay Area in Fremont. In the east-west direction it runs from Pittsburg to the San Francisco Airport and Milbrae with several connections in Oakland. The closest BART Station is located in the City of Richmond but most commuters in the area transfer to BART at the El Cerrito Del Norte station because it is located much closer to the I-80 freeway. The El Cerrito Del Norte station can be reached by bus via Westcat (described below). BART has trains running from about 4:00 am to 12:30 am daily with a weekday frequency of 15 minutes.

**WestCAT** - WestCAT provides bus service the Cities of Pinole and Hercules and the unincorporated areas of Montalvin Manor, Bayview, Tara Hills, Rodeo, Crockett, and Port Costa. WestCAT operates 8 local fixed routes, 2 regional routes, and 4 express routes. The WestCAT routes that run closest to the proposed project are routes 16 and 17. Route 17 has stops on Appian Way just north of Canyon Drive and Route 16 has a bus stop on Canyon Drive, adjacent to the project site. Route 16 currently operates on approximately ½ hour headways from about 5:00 AM to 7:30 PM with a total of about 28 buses per day in each direction. The existing bus stop, directly adjacent to the project, would remain and a new bench will be installed. WestCAT has indicated they would prefer to keep the bus stop at that location.

## 4) REGULATORY CONTEXT

Existing policies, laws and regulations that apply to the proposed project are summarized below.

### 4.1 State

The California Department of Transportation (Caltrans) has jurisdiction over State highways. Therefore, Caltrans controls all construction, modification, and maintenance of State highways, such as SR 4. Any improvements to these roadways would require Caltrans' approval. The Guide for the Preparation of Traffic Impact Studies provides consistent guidance for Caltrans staff who review local development and land use change proposals. The Guide also informs local agencies about the information needed for Caltrans to analyze the traffic impacts to state highway facilities which include freeway segments, on- or off-ramps, and signalized intersections.

### 4.2 Local

**Contra Costa Countywide Comprehensive Transportation Plan Update (2009)** - The transportation policies that are currently applicable within Contra Costa County are based on the Contra Costa County Comprehensive Transportation Plan. This document identifies standards and procedures for analyzing transportation impacts in the county and includes action plans for routes of regional significance such as the West County Action Plan covering the project area.

**City of Pinole General Plan** - The Transportation and Circulation Element included in the City of Pinole General Plan was prepared pursuant to Section 65302(b) of the California

Government Code. The Transportation and Circulation Element addresses the location and extent of existing and planned transportation routes, terminals, and other local public utilities and facilities.

The General Plan identifies roadway and transit goals and policies that have been adopted to ensure that the transportation system of the City will have adequate capacity to serve planned growth. These goals and policies are intended to provide a plan and implementation measures for an integrated, multi-modal transportation system that will safely and efficiently meet the transportation needs of all economic and social segments of the City.

### 4.3 Significance Criteria

The goal of the City of Pinole is to maintain level of service standards according to Figure 7.4 of the General Plan. However, this analysis also includes intersections under the jurisdiction of Contra Costa County, and Caltrans. Please note that for the Caltrans freeway facilities being studied, the operational standards and significance criteria are established by the Contra Costa Transportation Authority (CCTA), acting as the designated Congestion Management Agency (CMA) representing the jurisdictions of Contra Costa County.

As the acting CMA, the CCTA establishes the traffic LOS standards for all state highway facilities in Contra Costa County, which supersede the general Caltrans operational standard for all state highways.<sup>3</sup> As the designated CMA representing the jurisdictions of Contra Costa County, the CCTA is responsible for preparing and adopting a Congestion Management Program (CMP).

Consistent with the CMP legislation, the CCTA has established a level-of-service standard of LOS E for all parts of the CMP network except those that were already operating at worse levels of service in 1991. However, in this case the most stringent standards for the project study intersections are those currently established by the City of Pinole (as described below) and these formed the basis for the significance criteria used in this analysis.

*Intersection Significance Thresholds* – As per Figure 7.4 of the City of Pinole General Plan, project-related operational impacts on the signalized study intersections in this part of the City of Pinole are considered significant if project-related traffic causes the Level of Service (LOS) rating to deteriorate beyond Level of Service (LOS) E+ during the peak commute hours (i.e. beyond a V/C of 0.94) at the Appian Way study intersections on the north side of I-80 (Intersections #1 and #2).

At the one study intersection located to the south of I-80 (Intersection #3) the project would be considered to have a significant impact if the project-related traffic causes the intersection LOS to deteriorate beyond Level of Service (LOS) D- during the peak commute hours (i.e. beyond a V/C of 0.89). For intersections on Canyon Drive (Intersections #4 and #5) the project would be considered to have a significant impact if the project-related traffic causes the intersection LOS to deteriorate beyond Level of Service (LOS) D+ during the peak commute hours (i.e. beyond a V/C of 0.84).

According to CEQA guidelines, a project would have a significant impact if it would:

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<sup>3</sup> 2011 Contra Costa Congestion Management Plan, Contra Costa Transportation Authority, Walnut Creek, CA, 94598.

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- 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.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency vehicle access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

I-80 Freeway Delay Index - For the I-80 freeway the West County Action Plan specifies a maximum delay index of 3.0.<sup>4</sup> Please note the Action Plan also establishes a goal of increasing HOV lane usage by at least 10% over 2013 levels.

## 5) IMPACTS AND MITIGATION MEASURES

### 5.1 Project Trip Generation

The proposed project would include a total of 14,806 square feet of commercial/retail space that is proposed to be occupied entirely by a CVS Pharmacy with a drive through. The trip generation calculations are shown in **Table 4**. They are based on rates from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9<sup>th</sup> Edition.

As shown in **Table 4**, the total trip generation for the retail space has been reduced by 34% to account for the fact that approximately one third of the retail trips would be forecast to be pass-by trips from existing local traffic as determined from data contained in the standard reference for pass-by rates, the ITE Trip Generation Handbook. Pass-by trips are vehicle trips that are already in the traffic stream passing by the site and are not counted as new trips. The 34% reduction was based the ITE pass-by rate for shopping centers (ITE Land Use 820).

Once the removal of the forecast pass-by trips are accounted for the trip generation added to the surrounding street system is conservatively estimated to be 26 trips during the AM peak hour and 75 trips during the PM peak hour. Please note that although there is an existing three story office building on the site it was only partially occupied at the time of the intersection traffic counts and therefore, to be conservative, no credit was given for reduced traffic due to the planned removal of the existing building.

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<sup>4</sup> Draft West County Action Plan for Routes of Regional Significance, Fehr & Peers Associates, Walnut Creek, CA, January 2014.

**Table 4**  
**Project Trip Generation Estimates**

Land Use	ITE Code	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Pharmacy With Drive Through Rates	881		96.91	1.79	1.66	3.45	4.96	4.96	9.91
Pharmacy Trip Generation		14,806 sq. ft.	1,435	26	25	51	74	73	147
Reduction for Pass-By/Non-Auto Trips (34%)			703	13	12	25	36	36	72
<b>Net New Trip Generation for the Proposed Project</b>			<b>732</b>	<b>13</b>	<b>13</b>	<b>26</b>	<b>38</b>	<b>37</b>	<b>75</b>

**SOURCE:** Trip Generation, 9th Edition, Institute of Transportation Engineers, Washington D.C., 2012.

For purposes of determining the reasonable worst-case impacts the trips generated by this proposed development are estimated for the peak commute hours of 7:30 a.m. and 8:30 a.m. and 4:30 p.m. and 5:30 p.m., which represent the peak of “*adjacent street traffic*”. This is the period when the project traffic would generally contribute to the greatest amount of congestion.

## 5.2 Project Trip Distribution

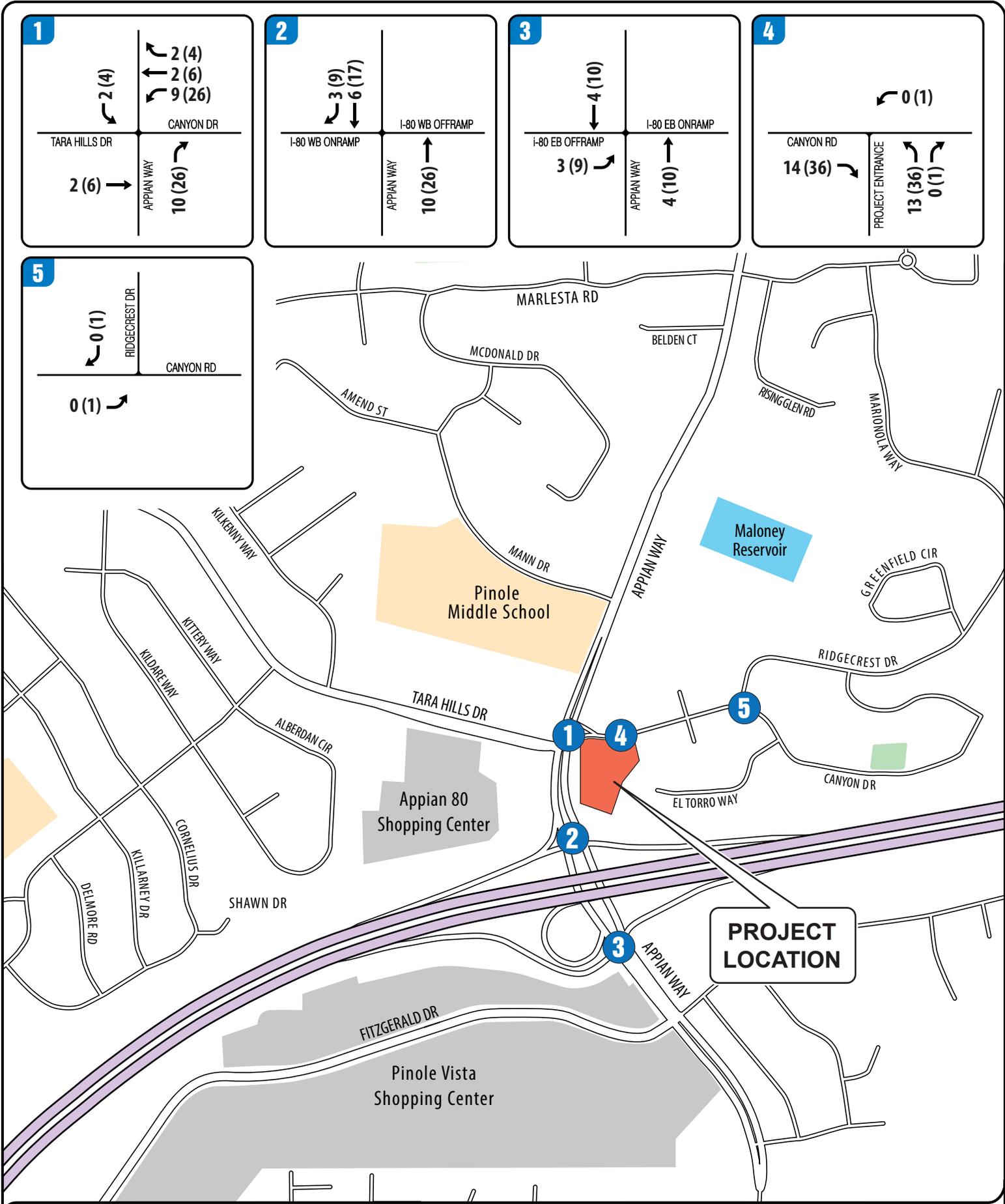
The trip distribution assumptions have been based on the project’s proximity to freeway interchanges, the existing directional split at nearby intersections, and the overall land use patterns in the area based on the most recent (January 2013) update to the Countywide Travel Demand Model. The resulting distribution indicated approximately 28% of the project traffic would be to and from the west on I-80 and about 18% would be to and from the east. **Figure 5** shows the project traffic that would be added at each of the study intersections.

## 5.3 Existing Plus Project Traffic Capacity Conditions (Scenario 2)

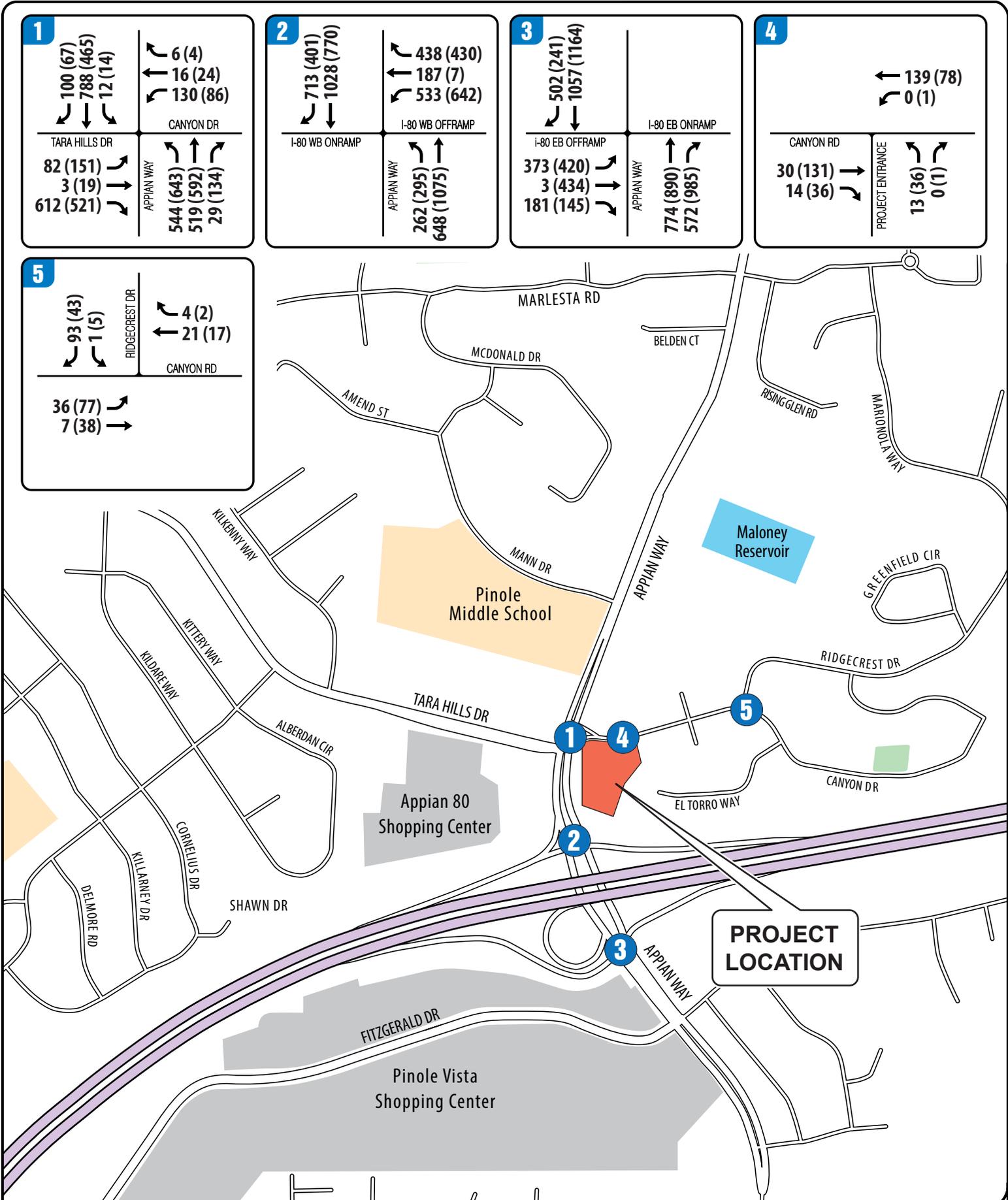
This scenario evaluates the existing conditions with the addition of traffic from the proposed project. The capacity calculations for the Existing Plus Project scenario are shown in **Table 5** and the resulting volumes at the project study intersections are shown in **Figure 6**. Please note that the corresponding LOS analysis calculation sheets are presented in the Traffic Analysis Appendix. As shown in **Table 5**, all of the project study intersections would have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

## 5.4 Baseline Traffic Capacity Conditions (Scenario 3)

The Baseline scenario evaluates the existing conditions with the addition of traffic from reasonably foreseeable projects in the area. These include the Pinole Gateway Shopping Center Project and a proposed 10,000 square foot medical office building at the corner of Henry Avenue and Pinole Valley Road. In addition, the general baseline growth in traffic was developed based on the assumption that the project completion date would be 2017. This scenario was prepared in coordination with the City of Pinole and includes one half percent per year growth in background traffic for three years plus traffic from all reasonably foreseeable projects that would significantly affect the traffic volumes in the area.



**FIGURE 5 | PROJECT AM(PM) PEAK HOUR TRIPS**  
**TRANSPORTATION IMPACT ANALYSIS**  
 Pinole CVS Pharmacy  
 City of Pinole



**FIGURE 6 | EXISTING PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES**

TRANSPORTATION IMPACT ANALYSIS

Pinole CVS Pharmacy

City of Pinole

**TABLE 5  
EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS**

INTERSECTION		CONTROL	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	APPIAN WAY & TARA HILLS DR	Signalized	AM	34.9	C	35.6	D
			PM	18.6	B	20.2	C
2	I-80 WESTBOUND RAMPS & APPIAN WAY	Signalized	AM	29.5	C	29.6	C
			PM	21.0	C	21.5	C
3	I-80 EASTBOUND RAMPS & APPIAN WAY	Signalized	AM	8.1	A	8.2	A
			PM	16.2	B	16.5	B
4	PROJECT ENTRANCE & CANYON RD	Two Way Stop	AM	N/A	N/A	9.6	A
			PM	N/A	N/A	10.1	B
5	RIDGECREST DR & CANYON DR	All Way Stop	AM	7.1	A	7.1	A
			PM	7.6	A	7.6	A

**SOURCE:** Abrams Associates, 2015

**NOTES:** HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.

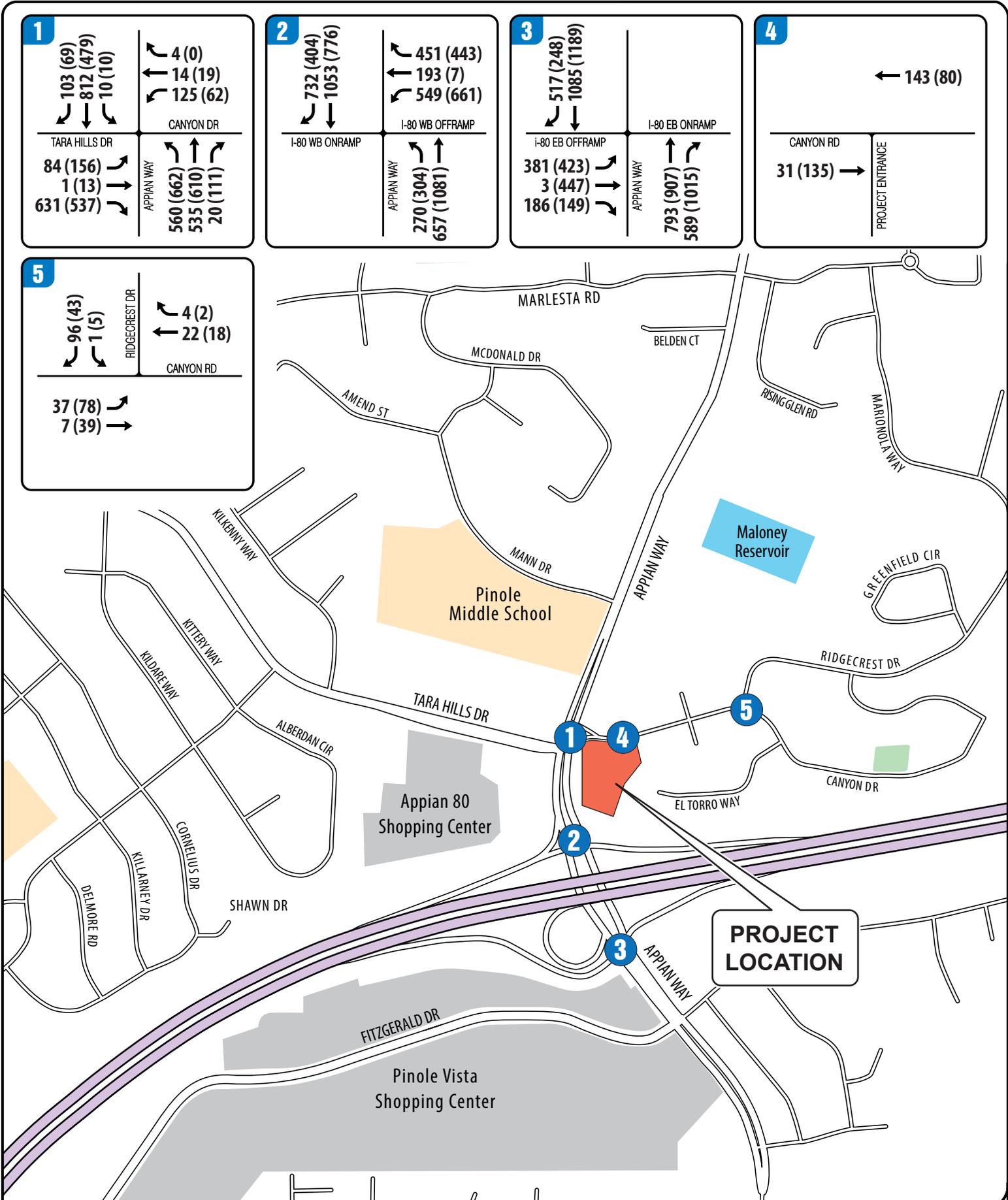
**Figure 7** presents the resulting baseline volumes at each of the project study intersections. **Table 6** summarizes the associated LOS computation results for the Baseline weekday AM and PM peak hour conditions. The corresponding LOS analysis calculation sheets are presented in the *Traffic Analysis Appendix*. As shown in **Table 6**, with addition of traffic from the proposed project all study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

**TABLE 6  
BASELINE INTERSECTION LEVEL OF SERVICE CONDITIONS**

INTERSECTION		CONTROL	PEAK HOUR	BASELINE		BASELINE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	APPIAN WAY & TARA HILLS DR	Signalized	AM	37.9	D	38.7	D
			PM	19.4	B	21.0	C
2	I-80 WESTBOUND RAMPS & APPIAN WAY	Signalized	AM	32.9	C	33.0	C
			PM	22.2	C	22.3	C
3	I-80 EASTBOUND RAMPS & APPIAN WAY	Signalized	AM	8.4	A	8.4	A
			PM	17.3	B	17.6	B
4	PROJECT ENTRANCE & CANYON RD	Two Way Stop	AM	N/A	N/A	9.6	A
			PM	N/A	N/A	10.2	B
5	RIDGECREST DR & CANYON DR	All Way Stop	AM	7.1	A	7.1	A
			PM	7.6	A	7.6	A

**SOURCE:** Abrams Associates, 2015

**NOTES:** HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.



**FIGURE 7 | BASELINE AM(PM) PEAK HOUR TRAFFIC VOLUMES**  
 TRANSPORTATION IMPACT ANALYSIS  
 Pinole CVS Pharmacy  
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## 5.5 Baseline Plus Project Traffic Capacity Conditions (Scenario 4)

The Baseline plus proposed project traffic forecasts were developed by adding project-related traffic to the baseline traffic volumes. **Figure 8** presents the Baseline Plus Project traffic volumes that were used in the analysis. **Table 6** summarizes the LOS results for the Baseline and Baseline Plus Project weekday AM and PM peak hour conditions. Please note that the corresponding LOS analysis calculation sheets are presented in the appendix. As shown in **Table 6**, all of the project study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

## 5.6 Internal Circulation and Access

No internal site circulation or access issues have been identified that would cause a traffic safety problem or any unusual traffic congestion or delay. The volumes on the internal parking aisles would be light enough so that no significant conflicts would be expected with through traffic and vehicles accessing parking spaces or loading areas within the project site. The review of traffic operations and safety at the project entrance indicated there would be no capacity or sight distance problems with the proposed driveway location and lane configuration. Please note **Figure 9** presents the truck circulation showing all the required turning movements.

## 5.7 Parking Impacts

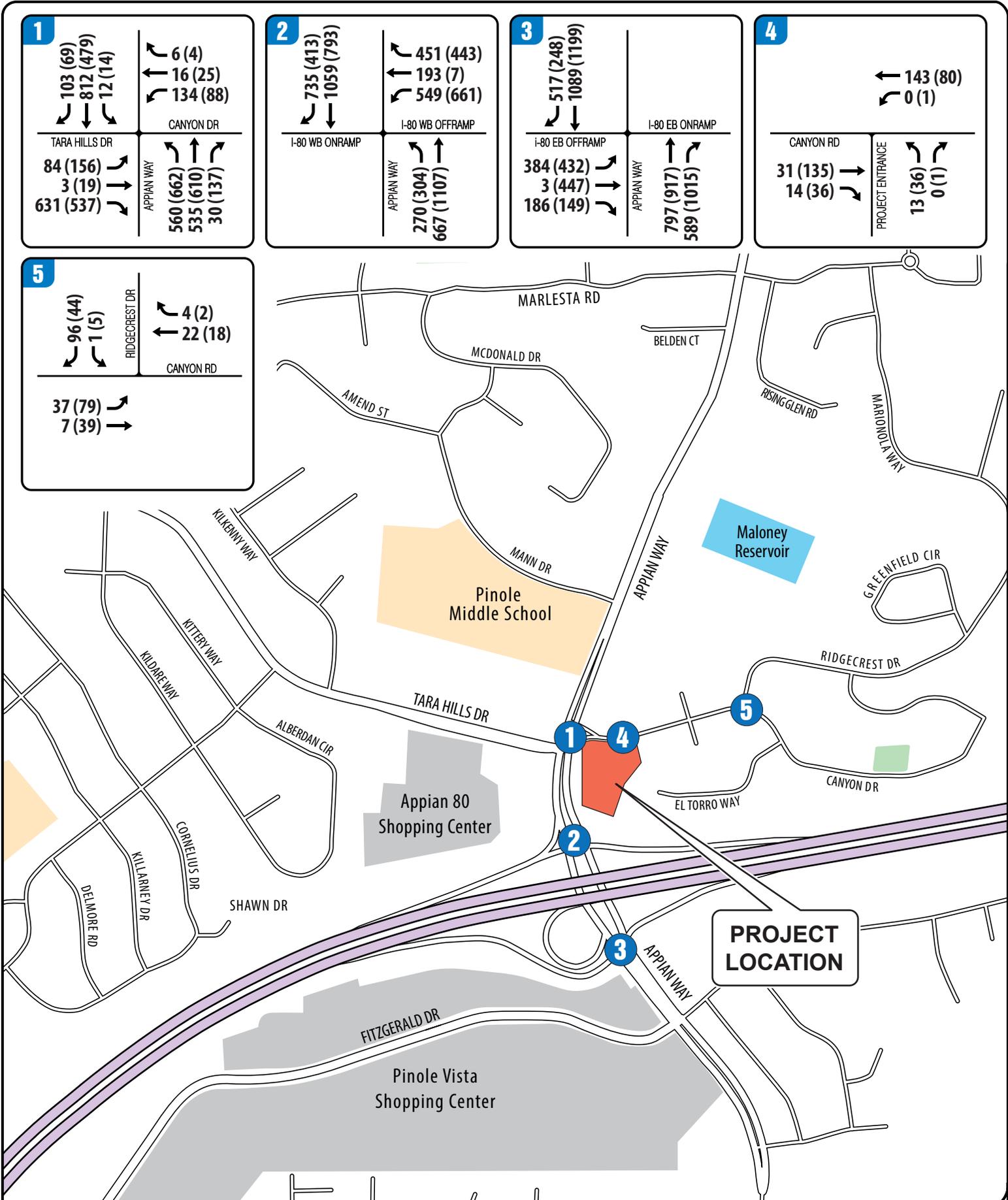
The proposed project would provide an adequate supply of off-street parking based on the City's requirements. The project is currently proposing to meet the City's parking requirements and subject to final City approval of the proposed parking plan there would be no significant parking impacts expected to the surrounding properties.

## 5.8 Pedestrian and Bicycle Impacts

The proposed project would generate additional pedestrian and bicycle traffic in the area, thereby potentially increasing conflicts between vehicles, bicycles, and pedestrians. Along the perimeter of the project the existing sidewalks would be maintained. According to CEQA a project would be considered to have a significant impact if it would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, based on the significance criteria established by CEQA the project's impacts on pedestrian and bicycle travel would be considered less than significant and no mitigations would be required.

## 5.9 Transit Impacts

The proposed project would not interfere with any existing bus routes and would not remove or relocate any existing bus stops. The proposed project could also support existing bus services with additional transit ridership and would not conflict with any transit plans or goals of the City or WestCAT. Although the proposed project does have the potential to increase patronage on bus lines in the area, based on this traffic analysis the project would not result in degradation of the level of service (or a significant increase in delay) on any roadway segments currently being utilized by bus transit in the area and, as such, no significant impacts to transit are expected. As a result, the project would not be expected to result in any significant impacts to transit service in the area.

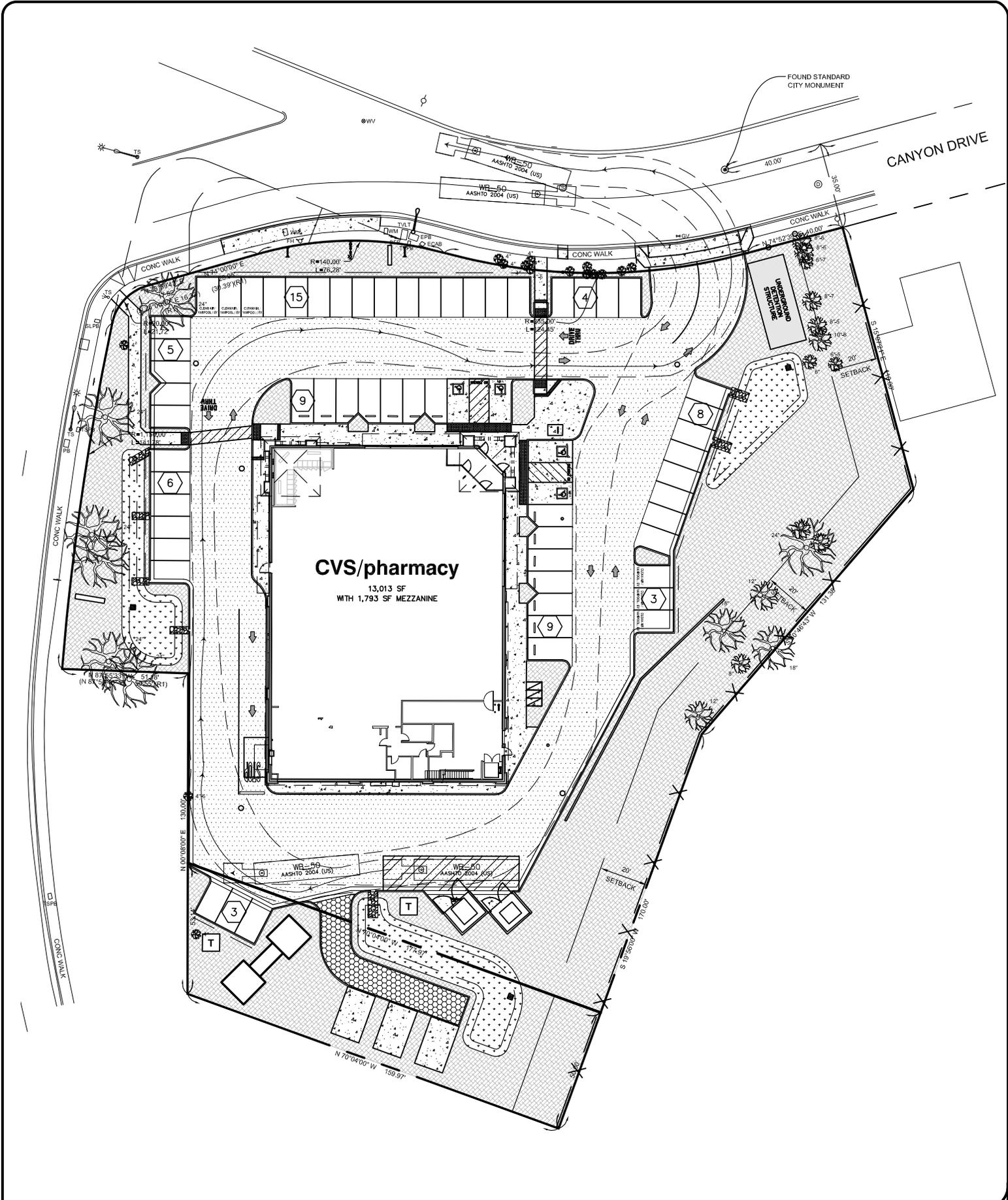


**FIGURE 8 | BASELINE PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES**

TRANSPORTATION IMPACT ANALYSIS

Pinole CVS Pharmacy

City of Pinole



**FIGURE 9 | TRUCK CIRCULATION**  
**TRANSPORTATION IMPACT ANALYSIS**  
 Pinole CVS Pharmacy  
 City of Pinole

## 5.10 Cumulative Traffic Capacity Conditions (Scenario 5)

For the cumulative conditions, the intersection traffic volumes were based on the existing turning movements with the addition of traffic from all planned and approved projects plus the addition of incremental growth in background traffic estimated by the County's traffic model for the area, which equates to one half percent per year to the year 2040.

**Figure 10** presents the cumulative build-out traffic volumes for the project study intersections. **Table 7** summarizes the LOS results for the Cumulative (Year 2040) traffic conditions at each of the project study intersections. No cumulative roadway improvements were assumed for the area. As shown on this table, all of the signalized study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours.

**TABLE 7  
CUMULATIVE INTERSECTION LEVEL OF SERVICE CONDITIONS**

INTERSECTION		CONTROL	PEAK HOUR	CUMULATIVE		CUMULATIVE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	APPIAN WAY & TARA HILLS DR	Signalized	AM	47.0	D	48.1	D
			PM	22.7	C	24.5	C
2	I-80 WESTBOUND RAMPS & APPIAN WAY	Signalized	AM	46.0	D	46.2	D
			PM	28.1	C	28.4	C
3	I-80 EASTBOUND RAMPS & APPIAN WAY	Signalized	AM	9.5	A	9.6	A
			PM	23.6	C	24.1	C
4	PROJECT ENTRANCE & CANYON RD	Two Way Stop	AM	N/A	N/A	9.8	A
			PM	N/A	N/A	10.4	B
5	RIDGECREST DR & CANYON DR	All Way Stop	AM	7.2	A	7.2	A
			PM	7.7	A	7.7	A

**SOURCE:** Abrams Associates, 2015

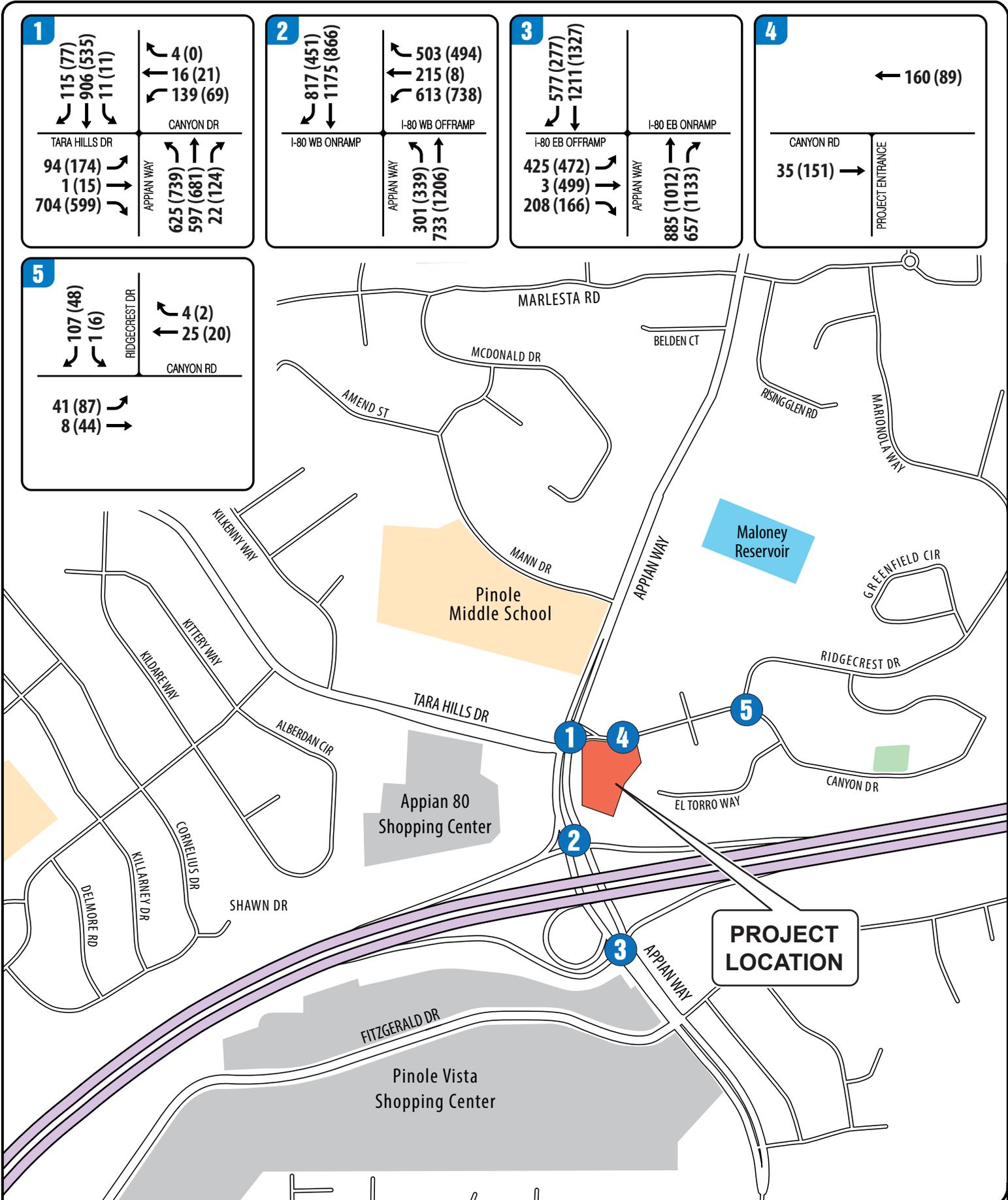
**NOTES:** HCM LOS results are presented in terms of average intersection delay in seconds per vehicle. For stop controlled intersections the results for the worst side street approach are presented.

## 5.11 Cumulative Plus Project Traffic Capacity Conditions (Scenario 6)

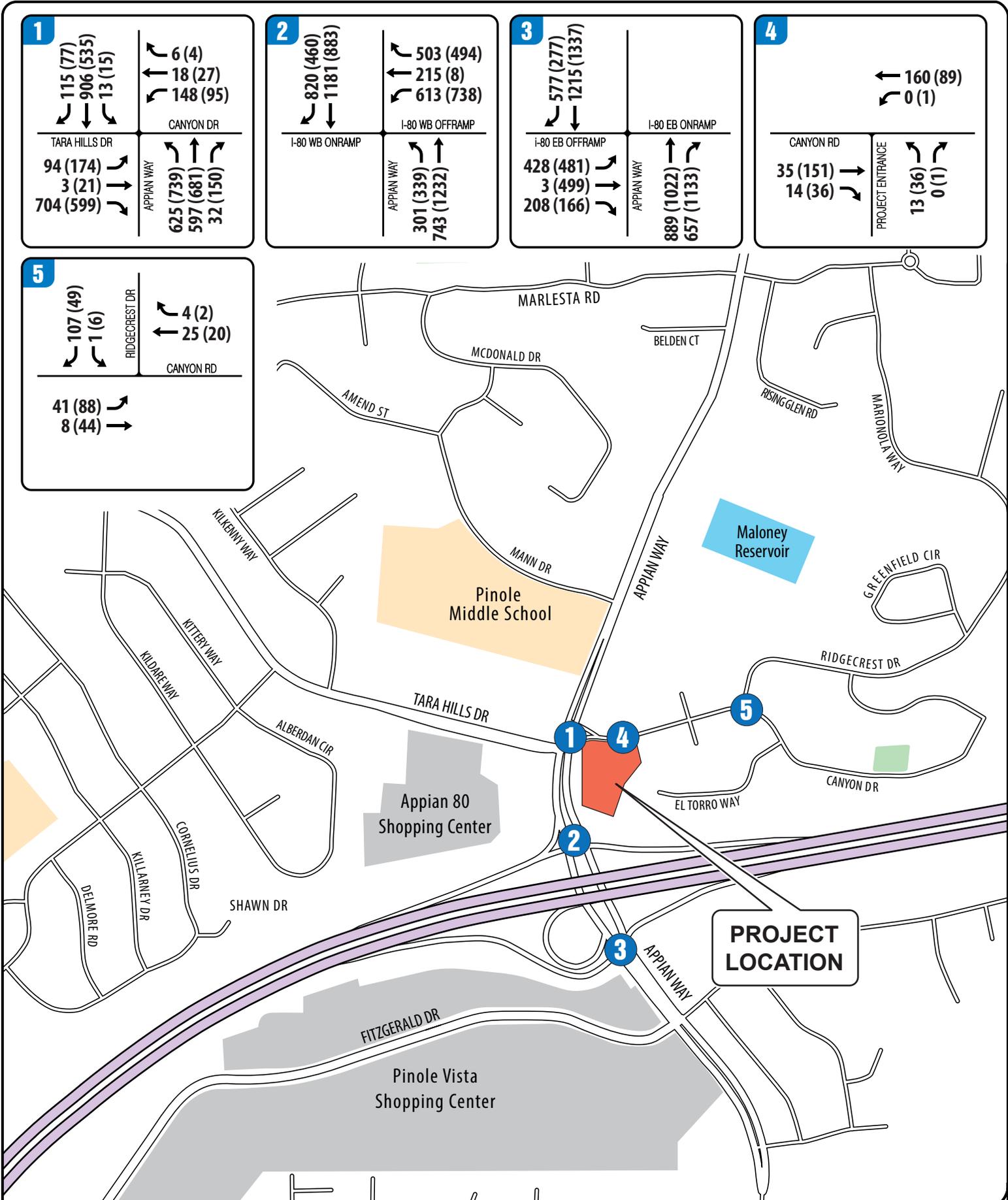
**Figure 11** presents the cumulative build-out traffic volumes including the traffic from the proposed commercial project. **Table 7** summarizes the LOS results for the Cumulative Plus Project (Year 2040) traffic conditions at each of the project study intersections. As shown on this table, all of the study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours with the addition of traffic from the proposed project.

## 5.12 Project-Specific Impacts and Mitigation Measures

The following is a list of potential transportation impacts of the project. With the implementation of the proposed measures described in this section, all project transportation impacts would be reduced to a less than significant level.



**FIGURE 10 | CUMULATIVE AM(PM) PEAK HOUR TRAFFIC VOLUMES**  
 TRANSPORTATION IMPACT ANALYSIS  
 Pinole CVS Pharmacy  
 City of Pinole



**FIGURE 11 | CUMULATIVE PLUS PROJECT AM(PM) PEAK HOUR TRAFFIC VOLUMES**

TRANSPORTATION IMPACT ANALYSIS

Pinole CVS Pharmacy

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**TR-1 Impacts related to pedestrian facilities.**

The proposed project would generate additional pedestrian and bicycle traffic in the area, thereby potentially increasing conflicts between vehicles, bicycles, and pedestrians. Along the perimeter of the project the existing sidewalks would be maintained. According to CEQA a project would be considered to have a significant impact if it would conflict with adopted policies, plans, or programs regarding pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, based on the significance criteria established by CEQA the project's impacts on pedestrian travel would be considered ***less-than-significant***.

Mitigation Measure(s)

*None required.*

**TR-2 Impacts related to bicycle facilities.**

Although the proposed project would increase vehicle and pedestrian traffic in the project vicinity it is not expected to significantly impact or change the design of any existing bicycle facilities or create any new safety problems for bicyclists in the area. Although the proposed project would increase vehicle and pedestrian traffic in the project vicinity it is not expected to significantly impact or change the design of any existing bicycle facilities or create any new safety problems for bicyclists in the area. Therefore, based on the significance criteria established by CEQA the project's impacts on bicycle travel would be considered ***less-than-significant***.

Mitigation Measure(s)

*None required.*

**TR-3 Impacts related to transit facilities.**

The proposed project has the potential to increase patronage on bus lines in the area. However, based on this analysis the project would not result in degradation of the level of service (or a significant increase in delay) on any roadway segments currently being utilized by bus transit in the area and, as such, no significant impacts to transit are expected.

The project contribution to key roadway segments in the area would not result in any significant changes to travel speeds. As a result, the project would be expected to result in a ***less-than-significant*** to transit service in the area.

Mitigation Measure(s)

*None required.*

**TR-4 Demolition and construction activities associated with the proposed project would result in an increase in traffic to and from the site and could lead to unsafe conditions near the project site.**

The increase in traffic as a result of demolition and construction activities associated with the proposed project has been quantified assuming a worst-case single phase construction period of 12 months.

### *Heavy Equipment*

Approximately eight pieces of heavy equipment are estimated to be transported on and off the site each month throughout the demolition and construction of the proposed project. Heavy equipment transport to and from the site could cause traffic impacts in the vicinity of the project site during construction. However, each load would be required to obtain all necessary permits, which would include conditions. Prior to issuance of grading and building permits, the project applicant would be required to submit a Traffic Control Plan.

The requirements within the Traffic Control Plan include, but are not limited to, the following: truck drivers would be notified of and required to use the most direct route between the site and the freeway, as determined by the City Engineering Department; all site ingress and egress would occur only at the main driveways to the project site and construction activities may require installation of temporary (or ultimate) traffic signals as determined by the City Engineer; specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress; warning signs indicating frequent truck entry and exit would be posted on adjacent roads; and any debris and mud on nearby streets caused by trucks would be monitored daily and may require instituting a street cleaning program. In addition, eight loads of heavy equipment being hauled to and from the site each month would be short-term and temporary.

### *Employees*

The weekday work is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. These peak hours are slightly before the citywide commute peaks. It should be noted that the number of trips generated during construction would not only be temporary, but would also be substantially less than the proposed project at buildout. Based on past construction of similar projects, construction workers could require parking for up to 30 vehicles during the peak construction period. Additionally, deliveries, visits, and other activities may generate peak non-worker parking demand of 5 to 10 trucks and automobiles per day. Therefore, up to 40 vehicle parking spaces may be required during the peak construction period. Furthermore the Traffic Control Plan will require construction employee parking be provided on the project site to eliminate conflicts with nearby residential areas. Because the construction of the project can be staggered so that employee parking demand is met by using on-site parking, the impacts of construction-related employee traffic and parking are considered less-than-significant.

### *Construction Material Import*

The project would also require the importation of construction material, including raw materials for the building pads, the buildings, the parking areas, and landscaping. Under the provisions of the Traffic Control Plan, if importation and exportation of material becomes a traffic nuisance, then the City Engineer may limit the hours the activities can take place.

### *Traffic Control Plan*

The Traffic Control Plan would indicate how parking for construction workers would be provided during construction and ensure a safe flow of traffic in the project area during construction. This analysis assumed construction of the entire project in one phase to identify the potential worst-case traffic effects. If the project is built in phases over time, the effects of each phase will be the same or less. Each phase will be subject to a Traffic Control Plan and oversight by the City Engineer. The last phase may require added worker parking measures, depending on the circumstances, as there will not be any remaining vacant land for parking. Therefore, the demolition and construction activities associated with the proposed project or its individual phases would not lead to noticeable congestion in the vicinity of the site or the perception of decreased traffic safety resulting in a ***less-than-significant*** impact.

#### Mitigation Measure(s)

*None required.*

### **TR-5 Impacts to freeway operations.**

The development of the proposed project would increase the total traffic during both AM and PM peak hours. However, the project site has already been planned to be developed in the General Plans of the City of Pinole and Contra Costa County and has already been assumed in all cumulative build-out traffic forecasts that have been used in the design of freeway facilities in the area. Therefore the proposed project would have a ***less-than-significant*** impact to freeway operations.

#### Mitigation Measure(s)

*None required.*

### **TR-6 Impacts related to site access and circulation.**

The proposed project would have one unsignalized driveway. Based on a review of the revised site plan it was determined that the site circulation should function well. No internal site circulation or access issues have been identified that would cause a traffic safety problem or any unusual traffic congestion or delay. The volumes on the internal parking aisles would be light enough so that no significant conflicts would be expected with through traffic and vehicles accessing parking spaces or loading areas within the project site. The review of traffic operations and safety at the project entrance indicated there would be no capacity or sight distance problems with the proposed driveway location and lane configuration. In general the project site design has been required to conform to City design standards and is thereby not expected to create any significant impacts to pedestrians, bicyclists or traffic operations. Therefore, impacts related to site access and circulation for the proposed project would be ***less-than-significant***.

#### Mitigation Measure(s)

*None required.*

### **TR-7 Impacts regarding emergency vehicle access on and surrounding the proposed project site.**

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The land use plan for the proposed project

includes only one entrance but also has Canyon Drive and Appian Way adjacent to the site to meet the required access by the fire department. All lane widths within the project should meet the minimum width that can accommodate emergency vehicles and there would be sufficient access for emergency vehicles (subject to final approval from the Fire Department). Therefore, the development of the proposed project is expected to have **less-than-significant** impacts regarding emergency vehicle access.

Mitigation Measure(s)

*None required.*