
INITIAL STUDY & ENVIRONMENTAL CHECKLIST

Project Title/File Number: Costco Fueling Facility Addition/PL13-0131

Project Location: 6720 and 6750 Stanford Ranch Road on the southwest corner of Stanford Ranch Rd and Five Star Bl; Roseville; Placer County; APNs: 017-123-015-000 and 017-123-017-000.

Project Description: The applicant requests approval of entitlements to allow the demolition of an existing Shell gas station (12 dispensers) that includes a convenience market and car wash and in its place allow the construction of a Costco member's only gas station (20 pumps) and control enclosure with site modifications on approximately 1.5 acres of land within the North Central Roseville Specific Plan. The requested entitlements include a Design Review Permit Modification for the new gas station facility and site improvements, a Conditional Use Permit Modification to modify the existing CUP for Shell to reflect the new facility and operator, and a Lot Line Adjustment to modify the property line between the Costco and Shell properties to increase the Shell site by 0.371 acres.

Project Applicant: David Babcock – David Babcock & Associates; (925) 283-5070; 3581 Mt. Diablo Bl., Lafayette, CA 94549

Property Owners: Michael Tooley, Micnan, LLC.; (916) 439-8447; 111 Exposition Bl. #600, Sacramento, CA 95815

Kim Katz, Costco Wholesale Corporation; (425) 427-7540; 999 Lake Dr., Issaquah, WA 98027

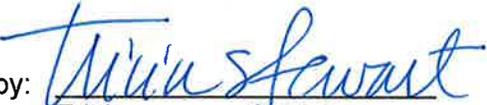
Lead Agency Contact Person: Tricia Stewart, Senior Planner - City of Roseville; (916) 774-5276

This initial study has been prepared to identify and assess the anticipated environmental impacts of the above described project application. The document relies on previous environmental documents and site-specific studies prepared to address in detail the effects or impacts associated with the project. Where documents were submitted by consultants working for the applicant, City staff reviewed such documents and, based on their own professional judgment and expertise, found such documents to be credible and persuasive. Staff has only relied on documents that reflect their independent judgment, and has not accepted at face value representations made by consultants for the applicant.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA), (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an EIR. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures to which the applicant agrees, the impact will be reduced to a less than significant effect, a negative declaration shall be prepared.

In reviewing the site specific information provided for this project, the City of Roseville Planning Division has analyzed the potential environmental impacts created by this project and determined that the impacts are less than significant. As demonstrated in the initial study checklist, there are no "project specific significant effects which are peculiar to the project or site" (CEQA Section 15183) and therefore an additional EIR **is not** required. Therefore, **on the basis of the following initial evaluation**, City staff finds that the proposed project **could not** have a significant effect on the environment, and a **Negative Declaration** will be prepared.

Prepared by: 
Tricia Stewart, Senior Planner

Date: 7/4/14

Table of Contents

Project Description.....4

Zoning and Land Use.....6

Uniformly Applied Policies and Standards.....6

Explanation of Initial Study Checklist7

 Initial Study Checklist.....8

 I. Aesthetics8

 II. Agricultural & Forestry Resources10

 III. Air Quality and Greenhouse Gases11

 IV. Biological Resources20

 V. Cultural Resources22

 VI. Geology and Soils23

 VII. Hazards and Hazardous Materials24

 VIII. Hydrology and Water Quality26

 IX. Land Use and Planning29

 X. Mineral Resources30

 XI. Noise30

 XII. Population and Housing31

 XIII. Public Services32

 XIV. Recreation33

 XV. Transportation / Traffic33

 XVI. Utilities and Service Systems37

 XVII. Mandatory Findings of Significance39

Environmental Determination40

Attachments

Appendices

PROJECT DESCRIPTION

Project Location

The North Central Roseville Specific Plan (NCRSP) is located in the City of Roseville, Placer County, California (see Figure 1, Regional Location). The NCRSP encompasses approximately 2,330 acres and is situated between Washington Boulevard and Interstate 80. The NCRSP was adopted July 5, 1990 by the City Council. Originally, the specific plan included a large land area to the north of State Route (SR) 65; however, through the specific plan entitlement process, this land area was designated as Urban Reserve, and subsequently a separate Specific Plan (Highland Reserve North) and EIR was prepared for that area and approved by the City in May 1997.

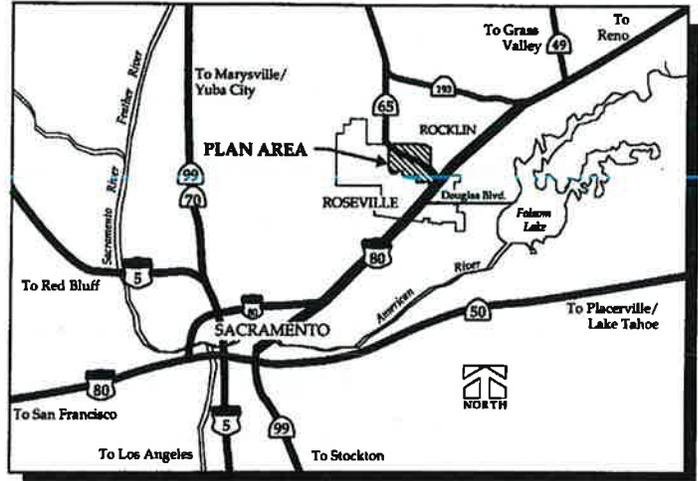


Figure 1: Regional Location

The project is located on Parcels 34A and 34B within the NCRSP area south of Five Star Bl. and west of Stanford Ranch Rd. within the Stanford Ranch Crossing Shopping Center (see Figure 2, Project Site). The existing Costco property is 13.27 acres and the existing Shell site is 1.14 acres. The properties have a zoning designation of General Commercial/Special Area Overlay - North Central Roseville Specific Plan (GC/SA-NC) and a land use designation of Community Commercial (CC).



approval included the construction of a 1,400 square foot convenience store, 750 square foot car wash and a fuel canopy with six fuel pumps (12 dispensers).

Physical or Natural Features On-Site

The project site is currently developed and includes two parcels (APNs: 017-123-015-000 and 017-123-017-000). The larger parcel includes an existing Costco retailer totaling 136,000 square feet. The smaller parcel located at the southwest corner of Stanford Ranch Rd. and Five Star Bl. is developed with an existing Shell gas station, convenience market and car wash. Both sites are fully developed with associated site improvements including parking, lighting and landscaping. There are no natural or protected features on site.

Proposed Project

Costco Wholesale currently operates a 136,000 square foot facility on parcel 017-123-017-000 located at 6750 Stanford Ranch Rd. A Shell gas station, convenience store and car wash is currently in operation on the property adjacent to Costco at 6720 Stanford Ranch Rd. (see figure 2). The Shell gas station currently has six multi-product dispensers that provide 12 fueling positions and two 15,000 gallon underground gasoline storage tanks and vapor recovery system. Costco proposes to replace the Shell gas station with a members only Costco fueling facility that will sell both unleaded and diesel gas. Costco has submitted an application requesting the following entitlements:

- Design Review Permit Modification (DRPMOD) – Costco proposes to demolish the existing Shell gas station, including removing the underground tanks and vapor recovery system and to construct a new gasoline facility that consists of:
 - One (1) 160 foot by 32 foot canopy,
 - Five (5) fueling islands (consisting of ten (10) multiproduct dispensers and 20 fueling positions),
 - Three (3) 30,000 gallon underground gasoline storage tanks, one (1) 20,000 gallon underground diesel storage tank, one (1) 3,500 gallon underground split diesel and gasoline fuel additive tank,
 - One clean air separator,
 - Underground communication lines connecting to the Costco Warehouse,
 - One (1) six foot by 12 foot controller enclosure (the purpose of the controller enclosure is to house the electronic monitoring equipment and alarm systems for the gasoline facility. This will be an unmanned facility.),
 - Modifications of the site to include (as described in the project conditions of approval and the April 7, 2014 traffic study prepared by Kimley-Horn and Associates provided as Appendix B):
 - Closure of two existing Five Star Bl. site driveways in the immediate vicinity of the existing Shell gas station
 - Extension by approximately 50-feet of the eastbound Five Star Bl. left turn pocket at Stanford Ranch Rd.
 - Reconfiguration of the Five Star Bl. median to a two-way left turn lane east of the main site access driveway
 - Addition of a narrow median island and minor widening at the main site driveway along Five Star Bl. to improve the throat depth thereby restricting left-turns to and from the first parking aisle
 - Installation of “Keep Clear” pavement markings along eastbound Five Star Bl. at the main site access driveway
 - Addition of a southbound right turn lane at the existing Stanford Ranch Rd. driveway

- Addition of a dedicated right turn lane to access the fueling station along the entrance lanes at the existing Stanford Ranch Rd. driveway
 - Potentially, three additional fueling islands (6 additional fueling dispensers)
 - Potentially, the relocation of the driveway on Stanford Ranch Rd. to the south to expand the fueling station queuing area.
- Conditional Use Permit Modification (CUPMOD) – The NCRSP requires approval of a CUP for gasoline sales on this site. The Shell station facility received approval of a CUP (previously known as a SUP) in May 1996. Costco requests approval of a CUPMOD to modify the existing CUP to allow for Costco gasoline sales at the site.
 - Lot Line Adjustment (LLA) – A LLA is requested to modify the lot lines between the existing Shell parcel and the Costco parcel. The adjustment is minor and slightly enlarges the existing Shell parcel by moving the western property line outward by 0.371 acres. Therefore, the Shell station property will increase in size from 1.1418 acres to 1.5127 acres and the Costco site will decrease in size from 13.2688 to 12.8978 acres for a net change of 0.371 acres.

A copy of the project plans are provided as Attachments 1 for reference.

ZONING AND LAND USE

Site and surrounding zoning and land use is as follows:

Location	Zoning	General Plan Land Use	Actual Use of Property
On-Site	General Commercial/Special Area (GC/SA-NC)	Community Commercial (CC)	Developed Costco Wholesale Store and Shell Gasoline Station
North	Private Roadway & GC/SA-NC	Private Roadway & CC	Five Star Bl. (Private Roadway) & Retail businesses within Stanford Ranch Crossing Shopping Center
South	-	-	Hwy 65 on ramp
East	-	-	Stanford Ranch Rd. and Retail Shopping Center (Rocklin)
West	GC/SA-NC	CC	Retail businesses within Stanford Ranch Crossing Shopping Center

UNIFORMLY APPLIED POLICIES AND STANDARDS

The State CEQA Guidelines allow a lead agency to rely on previously adopted development policies or standards as mitigation for environmental effects, when the standards have been adopted by the City, with findings based on substantial evidence, that the policies or standards

will substantially mitigate environmental effects, unless substantial new information shows otherwise (CEQA Guidelines §15183(f)). In April 2008, the City of Roseville adopted Findings of Fact related to the mitigating policies and standards, and adopting the City of Roseville CEQA Implementing Procedures for the preparation, processing, and review of environmental documents (Resolution 08-172). These findings are applicable to the following regulations and ordinances, which include standards and policies that are uniformly applied throughout the City, and will substantially mitigate specified environmental effects of future projects:

- City of Roseville General Plan
- City of Roseville Zoning Ordinance (RMC Title 19)
- Noise Regulation (RMC Ch.9.24)
- Flood Damage Prevention Ordinance (RMC Ch.9.80)
- Traffic Mitigation Fee (RMC Ch.4.44)
- Highway 65 Joint Powers Authority Improvement Fee (Resolution 2008-02)
- South Placer Regional Transportation Authority Transportation and Air Quality Mitigation Fee (Resolution 09-05)
- Drainage Fees (Dry Creek [RMC Ch.4.49] and Pleasant Grove Creek [RMC Ch.4.48])
- City of Roseville Improvement Standards (Resolution 02-37)
- City of Roseville Construction Standards (Resolution 01-208)
- Tree Preservation Ordinance (RMC Ch.19.66)
- Subdivision Ordinance (RMC Title 18)
- Community Design Guidelines (Resolution 95-347)
- Specific Plan Design Guidelines:
 - North Central Roseville Specific Plan and Landscape Design Guidelines (Resolution 90-170)

The City's Mitigating Policies and Standards are referenced, where applicable, in the Initial Study Checklist. The City of Roseville has adopted CEQA Findings that these Mitigating Policies and Standards substantially mitigate specified environmental impacts of the future project.

EXPLANATION OF INITIAL STUDY CHECKLIST

The California Environmental Quality Act (CEQA) Guidelines recommend that lead agencies use an Initial Study Checklist to determine potential impacts of the proposed project to the physical environment. The Initial Study Checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by this project. This section of the Initial Study incorporates a portion of Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines.

There are four (4) possible answers to the Environmental Impacts Checklist on the following pages. Each possible answer is explained herein:

- 1) A "Potentially Significant Impact" is appropriate if there is enough relevant information and reasonable inferences from the information that a fair argument based on substantial evidence can be made to support a conclusion that a substantial, or potentially substantial, adverse change may occur to any of the physical conditions within the area affected by the project. When one or more "Potentially Significant Impact" entries are made, an EIR is required.

- 2) A "Potentially Significant Unless Mitigation Incorporated" answer is appropriate where the applicant has agreed to incorporate a mitigation measure to reduce an impact from "Potentially Significant" to a "Less than Significant." For instance, impacts to flood waters could be reduced from a "potentially significant impact" to a "less than significant impact" by relocating a building to an area outside of the floodway. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level. Mitigation Measures are identified as MM followed by a number.
- 3) A "Less Than Significant Impact" answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant, or that the application of development policies and standards to the project will reduce the impact(s) to a less than significant level. For instance, the application of the City's Improvement Standards reduces potential erosion impacts to a less than significant impact.
- 4) A "No Impact" answer is appropriate where it can be clearly seen that the impact at hand does not have the potential to adversely affect the environment. For instance, a project in the center of an urbanized area will clearly not have an adverse effect on agricultural resources or operations.

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project level, indirect as well as direct, and construction as well as operational impacts.

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited in the parentheses following each response. A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards.

INITIAL STUDY CHECKLIST

I. Aesthetics

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

Setting:

The project site is located within the North Central Roseville Specific Plan Area (NCRSP). Parcels 34A and 34B are fully developed with a Costco Warehouse store and Shell Gas Station which is part of the Stanford Ranch Crossing Shopping Center. This area of the City is generally fully built out and all immediately surrounding parcels are developed. As noted in the project description, the existing Shell Station will be demolished and replaced with a Costco Gas Fueling Facility along with site improvements to improve traffic flow and circulation.

Discussion of Checklist Answers:

a-d) The project site does not abut and is not visible from any designated scenic vista or scenic highway. The project site is highly visible being located on a busy intersection at the corner of Stanford Ranch Rd. and Five Star Road. The project will replace an existing Shell Gas Station Facility with a Costco Gas Fueling Facility which includes modifications to the site and drive entries to improve traffic circulation and flow and includes a minor modification to interior property lines to slightly increase the size of the gas station parcel. The site is currently surrounded by development typical of an urban setting. Since the setting is now an urban environment, the proposed change from a Shell gas station to a slightly larger Costco gas station, including the site modifications, is considered a less than significant visual impact. Additionally, landscaping improvements both onsite and along Stanford Ranch Rd and Five Star Bl. will be included which will enhance the appearance on this corner.

The City of Roseville has adopted Community Design Guidelines (CDG) with the purpose of minimizing the aesthetic impacts of new development projects. The CDG includes guidelines for building design, site design and landscape design, which have the purpose of improving the aesthetics of the built environment. The NCRSP also contains design policies that promote high standards of architectural design and continuity within the specific plan area. Both the CDG and the NCRSP guidelines were identified as documents that substantially mitigate the environmental effects of future projects in the City's Mitigating Policies and Standards. Staff has evaluated the proposed project for potential impacts to the surrounding properties and determined that the site, building, and landscape designs meet the City's requirements. The City's approving authority on site design and architecture (Planning Commission) will ultimately review the DRP for conformance with City standards and requirements.

Due to the project's location within an urban environment and design being addressed under the DRP entitlement, the project will not substantially damage or degrade the aesthetics of the site or the aesthetics of its surroundings. In addition, the site included existing buildings and lighting features, therefore, the new Costco fueling facility will not result in an increase in light and glare.

Based on this information, aesthetic impacts would be less than significant.

II. Agricultural & Forestry Resources

The site has been previously developed and does not contain soils designated as agricultural.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Discussion of Checklist Answers:

a,e) The subject property contains no prime farmland, unique farmland, or farmland of statewide importance or active agricultural operations. According to the NCRSP, none of the soils within the plan area are considered Prime Agricultural Land Soils. Therefore, there will be no impact to farmlands and no mitigation is required.

b) The subject property is urban in nature and not under a Williamson Act contract or zoned for agricultural use. Development of the proposed project will not conflict with existing zoning for agriculture use or an active Williamson Act contract and no mitigation is required.

c-e) The project site does not support any forest resources and the land is not zoned for forestry activities or timberland. The project would have no impacts to forest resources. No mitigation is required.

No agricultural or forestry resources are present on the site. Therefore, the proposed project will not have an impact on agricultural or forestry resources.

III. Air Quality and Greenhouse Gases

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

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria 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)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Setting:

Air quality and Greenhouse Gas (GHG) is monitored through the efforts of various international, federal, State, regional and local government agencies. These agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies and policies regulating the air quality within the Roseville area have been outlined in the Air Quality and Greenhouse Gas and Health Risk Screening Impact Analysis study that was prepared by Ashworth Leininger Group (ALG) for the proposed project. A copy of the study is included as Appendix A. The purpose of the study is to evaluate the potential impacts from construction and operation of the proposed project, on both a project and cumulative level, in the context of the existing regional and local air quality conditions and regulations.

ALG used the air quality model CalEEMod to estimate baseline mobile source and area source emissions associated with the existing 12-fueling stations. Trip data from the August 26, 2013 traffic study prepared by Kittelson & Associates, Inc., and supplemental daily trip data provided on February 11, 2014 were used. Based on the information, the existing gas station generates 500 weekday daily trip ends and 660 weekend daily trip ends. This was calculated to be approximately 41.67 weekday trips per day and 55 weekend trips per day for each of the 12 existing fueling positions.

Discussion of Checklist Answers:

a,b) The proposed project site is located within the boundaries of the Placer County Air Pollution Control District (PCAPCD), and is also located within the western Placer County portion of the Sacramento Valley Air Basin (SVAB). The SVAB is designated nonattainment for state and federal ozone standards, and is classified a federal “severe” nonattainment area. The SVAB is also designated nonattainment for the federal fine particulate matter standard (PM_{2.5}, 2.5 microns in diameter and smaller) and for the state inhalable particulate matter standard (PM₁₀, 10 microns in diameter and smaller).

Air districts within the SVAB, including the PCAPCD, developed a 2009 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2009 Plan), to demonstrate how the region would meet the 1997 federal ozone standard by 2018. SVAB air districts approved the 2009 Plan in early 2009, and the plan was submitted to the California Air Resources Board (CARB) in February 2009. CARB adopted the 2009 Plan in March 2009, and submitted it to the U.S. Environmental Protection Agency (EPA) in April 2009. EPA has not yet approved the 2009 Plan.

In 2011, SVAB air districts revised the 2009 Plan to modify 20 control measures. The 2011 Revision was submitted to CARB in January 2012, but has not yet been submitted to EPA.

In 2013, SVAB air districts revised the 2009 Plan to update emissions data, review photochemical modeling results based on updated emissions data, update the reasonable further progress and attainment demonstrations, revise control measure adoption dates, and establish new motor vehicle emissions budgets for transportation conformity purposes. Based on the new data, the 2013 Revision confirmed that the region will meet the 1997 federal ozone standard by 2018. The 2013 Revision was submitted to CARB in November 2013.

In March 2008, EPA revised the federal 8-hour ozone standard, lowering it from 0.08 parts per million to 0.075 parts per million. The SVAB was classified as a “severe” nonattainment area for the 2008 8-hour ozone standard, with an attainment deadline of 2027. The EPA has not yet finalized its implementation rule for the 2008 ozone standard, but it is expected that a new attainment plan for the SVAB will be required in 2015.

To evaluate the impact of a proposed project with respect to ozone and other air pollutants, the PCAPCD recommends use of the following project-specific significance thresholds for emissions of reactive organic gases (ROG), nitrogen oxides (NOx), inhalable particulate matter (PM₁₀), and carbon monoxide (CO). Projects with emissions that do not exceed the thresholds presented in Table 2 are determined to have a less than significant impact on air quality implementation of air quality plans.

Table 2. Project-Specific Air Quality Significance Thresholds.

Project Component	Thresholds of Significance (pounds per day)			
	ROG	NOx	PM ₁₀	CO
Construction Emissions	82	82	82	550
Operation Emissions	82	82	82	550

Source: CEQA Air Quality Handbook, PCAPCD, October 2012, Table 2-1 (District Recommended Project-Level Thresholds of Significance), except for daily emission significance thresholds for CO which are based on discussions with PCAPCD staff.

Construction Emissions

As shown in Appendices A and C (to the Air Quality/GHG study), construction of the proposed 20-position VRF is expected to result in short-term emissions associated with:

- Combustion emissions associated with operation of off-road equipment
- Combustion emissions associated with operation of on-road motor vehicles
- Fugitive dust from earth-moving activities
- Off-gassing from asphalt paving and architectural coatings

Maximum daily emissions associated with project construction are shown in Table 3. Based on this information, project construction emissions are expected to have a less than significant impact on air quality and implementation of air quality plans.

Table 3. Maximum Daily Emissions Associated with Project Construction (pounds/day).

	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	13.53	20.89	15.89	0.03	1.77	1.33
PCAPCD Project-Specific Criteria Pollutant Significance Threshold	82	82	550	--	82	--
Significant?	No	No	No	N/A	No	N/A

Source: Appendix A (to the Air Quality/GHG study). "N/A" means not applicable.

Emissions from Project Operation

As shown in Appendices A and C (to the Air Quality/GHG study), operation of the proposed 20-position VRF is expected to result in increased emissions associated with:

- ROG emissions associated with fuel dispensing

- Combustion emissions associated with operation of on-road motor vehicles
- Emissions from “area sources”, including architectural coatings, use of consumer products, and landscape maintenance
- Emissions associated with energy use, notably assumed use of natural gas

Maximum daily emissions increases associated with operation of the proposed 20-position VRF (as compared to the existing 12-position VRF) are shown in Table 4. Based on this information, emissions associated with operation of the proposed 20-position VRF are expected to have a less than significant impact on air quality and implementation of air quality plans.

Table 4. Maximum Daily Emissions Increases Associated with Project Operation (pounds/day).

	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Emissions Increase	40.50	20.54	91.95	0.18	12.36	3.46
PCAPCD Project-Specific Criteria Pollutant Significance Threshold	82	82	550	--	82	--
Significant?	No	No	No	N/A	No	N/A

Source: Appendix A (to the Air Quality/GHG study). “N/A” means not applicable.

Because emissions associated with project construction and emission increases associated with operation of the proposed 20-position VRF are expected to have a less than significant impact on air quality and implementation of air quality plans within the regions, it can be concluded that:

- The project will have a less than significant impact with respect to conflicting with or obstructing implementation of the applicable air quality plan.
- The project will have a less than significant impact with respect to violating any air quality standard or contributing substantially to an existing or projected air quality violation.

Potential Carbon Monoxide “Hot Spots

The PCAPCD’s *CEQA Air Quality Handbook* (Section 4.3) recommends a screening analysis be conducted to determine whether traffic associated with a proposed project potentially would cause a carbon monoxide (CO) “hot spot” at an impacted intersection. Based on the recommended approach, a project could result in a localized exceedance of federal or state CO standards (or “hot spot”) if either of the following screening criteria is true:

- A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., LOS E or F); or
- A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. “Substantially worsen” includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.

If either of the above screening criteria is true, the PCAPCD recommends that a refined dispersion modeling analysis be conducted to determine local CO concentrations associated with vehicle traffic.

Based on analysis of data from the Kimley-Horn Traffic Study prepared for the proposed project (documented in Appendix A of the traffic study):

- All intersections in the project vicinity other than Stanford Ranch Road at Five Star Boulevard are projected to be at LOS D or below with the proposed project during both weekday and Saturday peak hours. Therefore, carbon monoxide impacts in the vicinity of these seven intersections are expected to be less than significant.
- The intersection of Stanford Ranch Road and Five Star Boulevard currently operates at LOS C during the weekday peak hour and is expected to remain at LOS C with the proposed project. During the Saturday peak hour, the intersection currently operates at LOS E and is expected to remain at LOS E, with an estimated increased Saturday peak hour delay of 3.4 seconds. Since this intersection operates at LOS C during the weekday peak hour and the estimated increased delay during the Saturday peak hours falls below the 10 seconds “substantially worsen” threshold, carbon monoxide impacts in the vicinity of this intersection are also expected to be less than significant.

c) With respect to cumulative air quality impacts, the proposed project can be evaluated as both a land use project and as a permitted stationary source. Evaluation of potential cumulative air quality impacts with respect to each perspective is presented below.

Proposed Project as a Land Use Project

The PCAPCD *CEQA Air Quality Handbook* recommends cumulative criteria pollutant significance thresholds of 10 pounds per day for ROG and NO_x (each) for land use projects. The City of Roseville, as lead agency under CEQA, has determined that a two-tier criteria pollutant cumulative analysis approach, similar to that adopted by the Sacramento Metropolitan Air Quality Management District is appropriate for land use projects. Under the City’s approach, if a proposed land use project is determined to have a less than significant project-level impact for a pollutant (or precursor) for which the region is designated nonattainment, the project will be determined to have a less than significant cumulative impact for that pollutant or precursor. Since the City of Roseville is located within the Sacramento Valley Air Basin, which is designated nonattainment for both the federal and California ozone standards, a land use project is determined to have a less than significant cumulative impact if ozone precursor emissions (ROG and NO_x) do not exceed the project-level significance thresholds of 82 pounds per day.

Should project ROG or NO_x emissions exceed the project-level significance thresholds, a Tier 2 evaluation is required to determine whether the project is consistent with the adopted State Implementation Plan (SIP) in accordance with CEQA Guidelines Section 15064(h)(3). Under the Tier 2 analysis, if a project is found to be consistent with the SIP and would not conflict with the SIP emissions budget, it will be determined to have a less than significant cumulative impact.

As demonstrated in Section 3.2.1, ROG and NO_x emission increases associated with the proposed 20-position VRF will not exceed the project-level significance thresholds of 82 pounds per day (Tier 1). Therefore, the proposed project is determined to have a less than significant cumulative impact on air quality, and a Tier 2 analysis is not required.

Proposed Project as a Permitted Stationary Source Project

Since the proposed project encompasses gasoline storage and dispensing equipment, the project is considered a stationary source subject to the PCAPCD's permit authority, primarily under provisions of Rules 501 (General Permit Requirements) and 502 (New Source Review). The PCAPCD's stationary source permitting program, along with enforcement of prohibitory rules under Regulation 2 (Prohibitions), ensures that stationary sources are permitted and operate in compliance with the federal and California Clean Air Acts and adopted regional air quality plans, discussed above. District review of new and modified sources under Rule 502 therefore ensures that permitted stationary sources will have a less than significant cumulative impact on air quality.

Rule 502 Section 303 (Offset Requirements) requires emissions from new and modified stationary sources to be "offset" by corresponding on- or off-site emission reductions if emissions exceed specified thresholds. For reactive organic gas (ROG) emissions, the thresholds are 5,000 pounds per quarter or 10 tons per year. As demonstrated in Appendix A (to the Air Quality/GHG study), the total ROG emissions associated with vehicle gasoline dispensing (assuming 20 million gallons of gasoline dispensed per year) is estimated to be 5.94 tons per year, or 32.55 pounds per day (equivalent to 2,970 pounds per quarter). Since ROG from vehicle gasoline dispensing does not exceed the Section 303 offset threshold, emission offsets will not be required.

Rule 502 Section 302 (Requirement to Install Best Available Control Technology) requires that Best Available Control Technology (BACT) be installed on new or modified emissions units if total emissions from the emissions unit exceed specified thresholds. For ROG emissions, the threshold is 10 pounds per day. Since ROG emissions from gasoline storage and dispensing will exceed this threshold, BACT will be required. For gasoline storage and dispensing, BACT is considered Phase I/Phase II vapor recovery systems as required by the California Air Resources Board. Costco proposes to install a compliant Phase I/Phase II vapor recovery system as part of its gasoline storage and dispensing operation. The permit issued by the PCAPCD also will require installation and operation of compliant Phase I/Phase II vapor recovery equipment.

Considering the proposed project as a permitted stationary source project, implementation of PCAPCD rules, as discussed above will ensure that the proposed project will have a less than significant cumulative impact on air quality.

d) Toxic Air Contaminants (TACs) are air contaminants not included in federal or state ambient air quality standards, but are considered hazardous to human health. TACs are defined by the California Air Resources Board (CARB) as those pollutants that "may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health".

The health effects associated with TACs are generally assessed locally rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage. TACs can also cause short-term acute effects such as eye watering, respiratory irritation, running nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and the cancer risk is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. On the other hand, non-carcinogens are assigned "reference exposure levels" (RELs). An REL is an airborne concentration of a chemical that is not anticipated to present a significant risk of an adverse non-cancer health effect.

TACs are primarily regulated through state and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to

TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA). As part of its jurisdiction under the Air Toxics Hot Spots Program (Health and Safety Code Section 44360(b) (2)), OEHHA derives cancer potencies and RELs for individual air contaminants based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children and other sensitive sub-populations.

To evaluate the health risks associated with a proposed project, the PCAPCD recommends use of the following significance thresholds:

- Cancer risk: increased cancer risk of 10/million
- Non-cancer risks: increased hazard index of 1

Projects with cancer and non-cancer risks that do not exceed the above thresholds are determined to pose a less than significant impact on health risk.

As indicated previously, ALG used the health risk screening approach described in the CAPCOA Air Toxics "Hot Spots" Program Gasoline Service Station Industrywide Risk Assessment Guidelines (November 1997, updated November 2001). ALG's health risk screening analysis (presented in Appendix B of the AQ/GHG Study) for the proposed 20-position VRF is summarized in Table 5. Based on this information, operation of the proposed 20-position VRF is expected to have a less than significant impact with respect to off-site health risks.

Table 5. Increased Health Risks Associated with Project Operation.

Receptor	Increased Cancer Risk (per million)	Increased Non-Cancer Risk (hazard index)
Nearest Residence	8.0	0.0045
Nearest Off-site Workplace	7.8	0.021
PCAPCD Health Risk Significance Threshold	10	1
Significant?	No	No

Source: Appendix B (to the Air Quality/GHG study).

e) According to CARB's *Air Quality and Land Use Handbook*,¹ the types of facilities that cause odor complaints are varied and range from small commercial facilities to large industrial facilities. Odor-producing facilities odors can include:

- Sewage treatment plants
- Landfills
- Recycling facilities
- Waste transfer Stations

¹ *Air Quality and Land Use Handbook: A Community Health Perspective*, California Air Resources Board, April 2005, available at www.arb.ca.gov/ch/landuse.htm (accessed January 3, 2013).

- Petroleum refineries
- Biomass operations
- Auto body shops
- Coating operations
- Fiberglass manufacturing
- Foundries
- Rendering plants
- Livestock operations

Common odorous materials emitted by facilities include sulfur compounds, organic solvents, and decomposition/digestion of biological materials.

Vehicle refueling facilities (VRFs) are not typically significant sources of off-site odor impacts since underground gasoline storage tanks and gasoline dispensing equipment are required to be certified by the California Air Resources Board to minimize release of gasoline vapors. Furthermore, VRF operators are required to comply with local air district and CARB testing requirements, and comply with local air district maintenance and repair requirements. For the proposed 20-position VRF, Costco will be required to comply with CARB certification requirements for Phase I/Phase II gasoline vapor recovery, and with PCAPCD Rules 213 (Gasoline Transfer Into Stationary Storage Containers) and 214 (Transfer Of Gasoline Into Vehicle Fuel Tanks). Diesel storage and dispensing at the facility is not anticipated to result in odor impacts, since diesel storage and dispensing emissions are 20 times lower than gasoline storage and dispensing emissions controlled by Phase I/Phase II vapor recovery.²

Compliance with the above existing requirements is expected to minimize VRF vapor emissions to the extent feasible. Therefore, the odor impacts associated with the proposed 20-position VRF are expected to be less than significant.

f,g) In September 2006, Governor Schwarzenegger signed Assembly Bill (AB) 32, the California Climate Solutions Act of 2006 (California Health and Safety Code, sec. 38500 et seq.). AB 32 requires statewide GHG emissions to be reduced to 1990 levels by the year 2020. Authority for implementation of AB 32 was delegated to the California Air Resources Board (CARB). In December 2008, CARB approved the 2008 Climate Change Scoping Plan, describing actions California will take to reduce the state's GHG emissions. Based on the 2008 Scoping Plan, a 29 percent reduction in GHG levels from the state's 2020 projected "Business As Usual" emissions will be required to meet the adopted 2020 GHG emissions target of 427 million metric tons (MMT) of carbon dioxide equivalents (CO₂e) per year.

In 2011, CARB revised the state's 2020 projected "Business as Usual" emissions to account for the economic downturn, and lowered the 2020 projected "Business as Usual" GHG emissions forecast

² Per *Guidelines and Examples for Manual Data Input of Liquid Storage Tanks*, South Coast Air Quality Management District, December 2011, diesel storage and dispensing has an emission factor of 0.028 pound total organic gases per thousand gallons, compared to the gasoline storage and dispensing emission factor of 0.594 pound per thousand gallons, presented in Table 1.

to 545 MMT CO₂e per year. Given the adopted 2020 GHG emissions target of 427 MMT CO₂e, GHG emissions need to be reduced by 21.7 percent from “Business as Usual” to reach California’s GHG emission goals.

It should be noted that the updated 2020 projected “Business as Usual” forecast of 545 MMT CO₂e does not account for two adopted programs: the Pavley Clean Car Standards (an additional 26 MMT CO₂e reduction) or the 20% Renewable Portfolio Standard (an additional 12 MMT CO₂e reduction). Together, these two measures further reduce the 2020 projected “Business as Usual” GHG forecast to 507 MMT CO₂e. This means that GHG emissions actually need to be reduced less as a result of adopted regulatory programs (by 15.8 percent from “Business as Usual”) to reach California’s GHG emission goals.³

The PCAPCD *CEQA Air Quality Handbook* does not recommend any specific threshold for determining the significance of greenhouse gas emissions. However, PCAPCD staff recommends that the threshold for determining significance for GHG emissions be based on an evaluation of a project’s compliance with Assembly Bill 32 (California Climate Solutions Act of 2006). More specifically, the PCAPCD recommends that a project be determined to have a significant cumulative impact on global climate change if its 2020 GHG emissions will not be reduced by 21.7 percent as compared to 2020 “Business as Usual” emissions (based on 2010 emission factors). The City of Roseville recently used a similar approach as recommended by PCAPCD staff in the Initial Study/Negative Declaration for the NCRSP PCL 46 Pearl Creek Apartments Project.

Construction Emissions

Even though evaluation of GHG emissions associated with project construction is not required under the PCAPCD approach, these short-term emissions are summarized in Table 6.

Table 6. Total GHG Emissions Associated with Project Construction (metric tons).

	Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	Carbon Dioxide Equivalent (CO ₂ e)
GHG Emissions	73.7	0.018	--	74.1

Source: Appendix A (to the Air Quality/GHG study). “--” means value estimated to be 0.

Emissions from Project Operation

Annual GHG emissions increases associated with operation of the proposed 20-position VRF (as compared to the existing 12-position VRF), assuming peak emissions in the first full year of operation in 2015, are summarized in Table 7.

Table 7. Annual GHG Emissions Increases Associated with Project Operation in 2015 (metric tons).

	CO ₂	CH ₄	N ₂ O	CO ₂ e
GHG Emissions	2,446.0	0.152	0.000	2,449.2

Source: Appendix A (to the Air Quality/GHG study).

³ See *Status of Scoping Plan Recommended Measures*, California Air Resources Board, (July 2011), available at www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf. Note also that the *First Update to the Climate Change Scoping Plan*, approved by the California Air Resources Board on May 22, 2014, shows that GHG emissions need to be reduced by 15.3 percent from the Plan’s updated “Business as Usual” GHG forecast for 2020. See Table 5 of the *First Update* document (available at www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm) at page 93.

As stated above, the PCAPCD recommends that GHG emissions from proposed projects be evaluated based on a comparison of the project's 2020 "Business as Usual" GHG emissions (based on 2010 emission factors) as compared to the project's actual estimated 2020 GHG emissions (based on 2020 emission factors). This comparison, based on calculations documented in Appendix A of the ALG Study, is presented in Table 8, below.

Table 8. Assessment of Project Greenhouse Gas Emissions Impacts (metric tons).

	CO ₂	CH ₄	N ₂ O	CO ₂ e
2020 "Business as Usual" Project GHG Emissions (assuming 2010 emission factors)	2,895.7	0.309	0.000	2,902.3
2020 Estimated Project GHG Emissions (assuming 2020 emission factors)	2,229.9	0.212	0.000	2,234.4
2020 Estimated Project GHG Emission Reductions Compared to "Business as Usual"	665.8	0.097	--	667.9
2020 Estimated Project GHG Emissions Percent Reduction from "Business as Usual"	23.0%			
PCAPCD Recommended GHG Significance Threshold (percent reduction from "Business as Usual")	21.7%			
Significant?	No			

Source: Appendix A (to the Air Quality/GHG study). "--" means value estimated to be 0.

The proposed 20-position VRF is projected to meet the PCAPCD recommended significance threshold of demonstrating a 21.7% or greater reduction in GHG emissions in 2020, as compared to "Business as Usual." Therefore, the project is expected to have a less than significant impact on global climate change.

IV. Biological Resources

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	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?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
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?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Setting:

The property is located in the North Central Roseville Specific Plan (NCRSP) area. The biological resources within the specific plan area were previously evaluated in the NCRSP EIR. The entire project site has been previously developed. No sensitive habitat exists on the site or in the vicinity.

Discussion of Checklist Answers:

- a) The site is currently developed and therefore there is no habitat onsite. Therefore, the modification to the site will not affect any sensitive or special status species and therefore there would be no impact.
- b) The project would not have a substantial adverse effect on riparian habitat because the project site is located outside of any riparian corridors. Consequently, there would be no impact to riparian resources.
- c) No wetlands are located onsite; therefore, there would be no impacts to wetlands.

d) The site is currently developed and there are no fish or wildlife located on site; therefore, there would be no impacts to fish and wildlife resources.

e) The site is currently developed and there are no protected oak trees located on site; therefore, there would be no impact related to biological resources or protected trees on site.

f) The project will not conflict with any conservation plans because there are no adopted plans that apply to the project site; therefore, there would be no impact.

V. Cultural Resources

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historic resource as defined in Section 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Discussion of Checklist Answers:

a-d) Archaeological surveys were performed for the entire NCRSP area and the findings were used to support the NCRSP EIR. The evaluation utilized field surveys of the Specific Plan area and a record search with the North Central Information Center of the California Archaeological Inventory. These surveys revealed recorded sites of archaeological significance within the NCRSP; however, no cultural resources were identified on this site. The site has been previously disturbed by construction of the existing gas station. It is unlikely that any resources are present.

Although no archaeological resources are known to be present on the project site, there is a possibility that activities during construction could disturb unknown archeological or paleontological resources beneath the surface. The City of Roseville Construction Standards (Resolution 01-208) requires that “[i]n the event that previously unidentified cultural resources are present on a project site, impacts to those resources would be prevented by the requirements of the City’s 2013 Design/Construction Standards. The Construction Standards require that “If signs of an archeological site, such as any unusual amounts of stone, bone, or shell are uncovered during grading or other construction activities, work shall be halted within 100 feet of the find and the City’s Environmental Coordinator shall be notified immediately. A qualified archaeologist shall be consulted for an on-site evaluation. Additional mitigation may be required by the archaeologist.” As discussed in the Uniformly Applied Policies and Standards section, the City’s Construction Standards are uniformly applied to development projects throughout the City

and consequently mitigates potential impacts to unknown buried archaeological and/or paleontological resources. Therefore, related impacts are considered less than significant and no mitigation is required.

VI. Geology and Soils

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	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:			X	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located in a geological 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?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
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?				X

Discussion of Checklist Answers:

- a) The project will not expose people or structures to potential substantial adverse effects involving seismic shaking, ground failure or landslides.

- i-iii) The project site is located in Roseville, which is within Placer County. The California Department of Mines and Geology classifies the South Placer area as a low severity earthquake zone. No active faults are known to exist within the County. The project site is considered to have low seismic risk with respect to faulting, ground shaking, seismically related ground failure and liquefaction. Therefore, less than significant impacts would occur in association with rupture of a known earthquake fault or seismic related ground failure.
- iv) Landslides typically occur where soils on steep slopes become saturated or where natural or manmade conditions have taken away supporting structures and vegetation. There are no slopes on the site.

b) Grading activities require approval of a grading permit from the Engineering Division of the Development Services Department. The grading plan will be reviewed for compliance with the City's Improvement Standards, including the provision of proper drainage, appropriate dust control and erosion control measures. Grading and erosion control measures will be incorporated into the required grading plans. A geotechnical study will also be required prior to building permit issuance to more fully address other erosion hazards. As conditioned, the project will be consistent with the City's Improvement Standards. Therefore, the impacts associated with disruption, displacement, and compaction of soils associated with the development is considered less than significant.

c,d) As noted above, the project site is not located in a sensitive geologic area and does not expose people to potential geologic impacts. Additionally, such impacts are considered to be less than significant since new buildings and structures are required to comply with all applicable building codes. The City of Roseville Building Division will review construction plans before a building permit is issued and the Engineering Division will review and approve all grading plans to insure that all grading and structures would withstand shrink-swell potentials and earthquake activity in this area.

e) No septic tanks are proposed as part of the project. All wastewater generated by the project will be required to be collected in a piped system and conveyed to the Dry Creek Wastewater Treatment Plant. Therefore, no impact to soils relative to supporting the use of septic tanks would occur.

VII. Hazards and Hazardous Materials

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	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?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
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?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Discussion of Checklist Answers:

a-c) The California Health and Safety Code and local City Ordinances regulate the handling, storage, and transportation of hazardous and toxic materials. The California Health and Safety Codes require a Risk Management and Prevention Program (RMPP) for those uses that handle specified quantities of toxic and/or hazardous materials.

The project includes an existing gas station which involves the routine use and storage of hazardous materials. The project will not result in a significant hazard to the public or environment because all storage, handling, transport, emission and disposal of hazardous substances will be in full compliance with local, State, and Federal regulations. The City of Roseville Fire Department is the Certified Unified Program Agency (CUPA) responsible for enforcing the Health and Safety Code. As the CUPA the Fire Department is required to regulate hazardous materials business plans and chemical inventory, hazardous wastes and permitting, underground storage tanks and risk management plans.

Furthermore, the Fire Department is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards and to suggest preventative measures to minimize the risk of a spill or release. Therefore, due to the strict requirements that regulate hazardous substances outline above, and the fact that the initial planning, ongoing monitoring and inspections will occur in compliance with local, state and Federal regulation, the project will not result in significant impacts related to the routine transport, use, and disposal of hazardous substances.

d) The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, and therefore would not create a significant hazard to the public or the environment. Therefore, the project would have no impact.

e,f) The project site is not located within an airport land use plan or within two miles of a public or private airport or airstrip. Therefore, the project would have no impact.

g) This project is located within an area currently receiving City emergency services. Fire Station 7 is located approximately 1.8 miles away and would be able to serve the site within the City's standard response time. The project will not substantially increase the demand for emergency services since a gas station use is already existing and therefore the project will have a less than significant impact to the City's Emergency Response or Management Plans.

h) The project site is surrounded by existing urban development. No adjacent wildlands exist. Therefore, the project does not have the potential for wildfires resulting in no impact.

VIII. Hydrology and Water Quality

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			X	
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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
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			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
off-site?				
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?			X	
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 water?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?			X	
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?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

Setting:

The proposed project is in an existing urban area, with adequate storm drain facilities. The project site is not located in a floodplain. The expansion of the proposed use will not increase flood hazards. Therefore, the impact is less than significant.

Discussion of Checklist Answers:

a, c-f) The project is subject to the Clean Water Act (CWA) with regards to the discharge of pollutants into waters of the U.S. Should it be determined that the project will result in direct discharges into surface waters, the developer will be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. As a condition of approval, all drainage will be collected through an on-site storm drain system and directed to the City's storm drain system. Prior to discharge from the site, the storm water shall be treated with appropriate storm water pollution treatment device(s) as required by the City's Stormwater Quality Design Manual.

The City's March 2003 Stormwater Management Plan (SWMP) contains a comprehensive set of priorities, activities, and strategies that comprise the City's minimum control measures and best management practices (BMPs) intended to address Phase II requirements. The goal is to reduce pollutants in stormwater to the maximum extent practicable. The SWMP identifies activities to implement the following six minimum control measures required under the City's General Stormwater Permit: public outreach, public involvement, illicit discharge detection and elimination, construction site runoff, new development and redevelopment, and municipal operations. The SWMP includes minimum required control measures for new development, such as structural and non-structural control strategies, and long-term operation and maintenance of controls. It also includes specific guidance for volume and flow control design parameters for structural controls such as detention ponds, vegetative areas, and runoff pretreatment.

The City adopted the "Urban Stormwater Quality Management and Discharge Control Ordinance" (Stormwater Ordinance) (Ord. 4395 § 2 (part), 2006.) in order to establish a regulatory framework to implement construction and post-construction stormwater controls. This Ordinance is a uniformly applied development policy or standard applicable to this project. In March 2007, the City adopted the Stormwater BMP Guidance Manual for Construction, and in May 2007, the City adopted the Stormwater Quality Design manual. The City has the authority during plan checks, as well as site inspections, to enforce the Stormwater Management Plan. Prior to final approval, the owner of any stormwater control structure will be required to submit an operations and maintenance manual and a proposed maintenance schedule. Additional detail on post construction controls is provided in the SWMP which is available on the City's website (www.roseville.ca.us).

The City also maintains policies and guidelines regarding grading, erosion control, inspection, and permitting. Section 16.20.040 of the Roseville Municipal Code regulates stockpiling and grading, and addresses conditions under which permits and grading plans are required. Section 16.20.070 identifies grading plan performance standards. These policies and guidelines, as set forth in the City Code, constitute uniformly applied development policies or standards applicable to this project.

Section 16.20.020 requires that all grading be performed in accordance with either City of Roseville Improvement Standards or Title 16 of the Roseville Municipal Code, whichever is more restrictive. The Engineering Division requires that a grading permit be obtained prior to grading activities. At that time, the applicant must submit, for review and approval, Improvement and/or Grading Plans along with a site-specific Stormwater Pollution Prevention Plan (SWPPP). Slopes or banks along creek channels must be designed with proper slope protection to prevent soil erosion and channel-bank undercutting. The City has also adopted standards that would apply to projects within public right-of-way or easements.

Because the site would disturb more than one acre, a Storm Water Pollution Prevention Plan (SWPPP) from the Regional Water Quality Control Board is required. Implementation of the SWPPP would ensure that the project will not result in the release of materials that could affect water quality. The SWPPP, combined with grading permit best management practices (BMP's) like erosion controls with hydro-seeding and mulching, and sediment control with fiber rolls and sediment basins, would serve to mitigate storm water erosion and related water quality impacts. Residual effects would be less than significant and no additional CEQA requirements would be required.

b) The project will rely on domestic water from the Roseville municipal system and no groundwater withdraw is proposed. Since the project site is already developed with impervious surfaces, there will be no reduction in the area available for infiltration of surface water, and therefore the impact from the project on groundwater recharge will be less than significant.

g-i) People and structures would not be exposed to hazards resulting from a 100-year flood event and build out of the project site would not significantly increase flood elevations beyond the existing

condition. Impacts related to the 100 year Special Flood Hazard Area are considered less than significant.

j) The project site is not located in the vicinity of a large body of water that could generate a seiche or tsunami. The project site and immediately adjacent properties generally have flat topography that would not be expected to be subject to substantial risk of mudflow. Therefore, this is considered to have a less than significant impact on the proposed project.

IX. Land Use and Planning

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion of Checklist Answers:

a) The project will not divide an existing community; therefore, no impact would occur.

b) Land use conflicts can arise when new development or land use causes impacts on persons or the physical environment in the vicinity of the project site, or conditions on or near the project site could have impacts on the persons or development introduced onto the site by the new project. Since the use is already existing, land use compatibility is not an issue.

c) There are no Habitat Conservation Plans or Natural Community Conservation Plans covering the project site. Therefore, no impact would occur.

X. Mineral Resources

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	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?			X	
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?			X	

Discussion of Checklist Answers:

a,b) The NCRSP EIR document identifies the project site as being located within the MRZ-3 zone based on the California Department of Mines and Geology survey lists. The survey indicates that most lands located east of Antelope Creek within the plan area are within the MRZ-3 zone. This designation means that the significance of mineral deposits within this area cannot be determined based on available data. The specific plan indicates that an agency may choose to further evaluate a property with a MRZ-3 designation to determine the significances of mineral deposits within the area; however, this is typically undertaken by an owner who is interested in developing the potential resource.

Impacts to mineral resources due to buildout of the NCRSP, including the project site, were found to be less than significant by the NCRSP final EIR and no mitigation was required. Mineral resource conditions of the project site have not changed since preparation of the NCRSP EIR and consequently the impact remains less than significant. No mitigation is required.

XI. Noise

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	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?			X	
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
the project?				
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
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?				X
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?				X

Discussion of Checklist Answers:

a-d) During the construction phase of the project, including demolition of the existing facility, noise from construction activities would add to the noise environment in the immediate vicinity. Typically, construction noise levels are higher than on-going project operation noise levels. The closest residential use is approximately 830 feet away. However, Noise Ordinance regulations allow for private construction between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and 8:00 a.m. and 8:00 p.m. Saturday and Sunday provided that all construction equipment shall be fitted with factory installed muffling devices and that all construction equipment shall be maintained in good working order. With adherence to the Noise Ordinance, which is a uniformly applied development policy or standard within the meaning of CEQA Guidelines section 15183, impacts from construction noise are found to be less than significant.

e,f) The project site is not located within two miles of an airport, or within an airport land use plan and therefore would have no impact.

XII. Population and Housing

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
existing housing, necessitating the construction of replacement housing elsewhere?				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Discussion of Checklist Answers:

a) The project will generate short-term construction jobs and a few long term jobs. The General Plan Land Use Element and the Housing Element include goals and policies to address the City’s jobs/housing balance. The General Plan assumed Roseville to be a regional importer of jobs and that there would be more jobs than housing. Therefore, the project will have a less than significant impact on population and housing.

b,c) The project site is currently developed and therefore will not cause displacement of any existing housing or people. Therefore, there will be no impact related to displacement of housing or people.

XIII. 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 following public services:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	

Discussion of Checklist Answers:

a) Operation of the fuel facility may require the services of the Roseville Fire Department (RFD) in the event of an emergency. The RFD operates eight fire stations within the City of Roseville. The closest station to the project site is Fire Station 7 at 911 Highland Pointe Dr., which is 1.8 miles away. RFD has reviewed the project and mapped Fire’s response times to the area determined that the response time meets the City’s General Plan requirements. Based on this, impacts to fire services will be less than significant.

b) Operation of the fuel facility may also require the services of the Roseville Police Department (RPD) in the event of an emergency. The site is within an area of the City that is currently receiving police services and, since the site is already developed, the new gasoline facility will not have a change in impacts as it relates to police services. As part of the DRP evaluation the project will be required to incorporate the City identified Crime Prevention through Environmental Design (CPTED) elements

identified in the uniformly applied Community Design Guidelines, which will assist in reducing the need for police services. With adherence to these guidelines, any potential impacts to police services will be reduced to less than significant.

c) The construction of commercial buildings can generate secondary impacts to local schools by inducing growth. However, because the project site is already developed the project will not have impacts to schools. The applicant for this project is required to pay school impact fees at a rate determined by state law and as adopted by local school districts. School fees will be collected prior to the issuance of building permits. Pursuant to state law, the payment of these fees is deemed to mitigate the school-related impacts of the project to a less than significant level.

d) The City's General Plan Parks and Recreation policies calculate the need for park facilities based on the residential population. Because this is a commercial development and is on a site that was already developed and utilized as a gas station, no new demand for park facilities is generated by this project. Based on this, the potential impact to parks is considered less than significant.

XIV. Recreation

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	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 physical deterioration of the facility would occur or be accelerated?			X	
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?			X	

Discussion of Checklist Answers:

a,b) As the site is already in a developed state, the development of the project including expansion of the fuel facility would not increase demand for or require the expansion of parks and recreation facilities, therefore, impacts related to recreational facilities is considered less than significant.

XV. Transportation/Traffic

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	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			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?				
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads and highways?			X	
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?				X
d) Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

Discussion of Checklist Answers:

a,b) Kimley-Horn prepared a traffic assessment to determine the CEQA impacts of the proposed project which is provided as Appendix B.

Standards of Significance

Project impacts were determined by comparing conditions with the proposed project to those without the project. Impacts for intersections are created when traffic from the proposed project forces the LOS to fall below a specific threshold. The City’s guidelines⁴ specify the following:

“Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the [weekday] p.m. peak hours.”

Furthermore, a significant impact was determined to occur if the proposed project causes:

- A signalized intersection that is currently operating at LOS C or better to operate at LOS D or worse during the AM or PM peak hours; or

⁴ City of Roseville General Plan 2025, City of Roseville, May 5, 2010.

- A signalized intersection that is currently operating at LOS D or E to worsen by one or more LOS categories (i.e., from LOS D to E) during the AM or PM peak hours.

**Table 9 (Table 1 in the Traffic Study)
Proposed Project Trip Generation**

Costco Warehouse Fueling Station (20 fueling positions)	Weekday PM Peak-Hour	Saturday Midday Peak- Hour
Total Trip Ends	431	457
Internal Trip Reduction (Weekday, Saturday) 34% 35%	-147	-160
Subtotal External Trips	284	297
Pass-by Trip Reduction (Weekday, Saturday) 37% 33%	-105	-98
Total Costco Trips	179	199
Existing Shell Station Trips	-80	-105
Net New External Costco Trips:	100	95
Source: <i>Technical Memorandum - Roseville Costco Gasoline Fuel Station Addition</i> , Kittelson & Associates, Inc., August 26, 2013.		

As shown in Table 9, the proposed project is estimated to generate 100 new weekday PM peak-hour trips, and 95 new Saturday midday peak-hour trips.

The following intersections are included in this evaluation:

1. Stanford Ranch Road @ Fairway Drive
2. Stanford Ranch Road @ Five Star Boulevard
3. Stanford Ranch Road @ SR-65 NB Ramps
4. Galleria Boulevard @ SR-65 SB Ramps
5. Fairway Drive @ Five Star Boulevard
6. *Five Star Boulevard @ Western Site Driveway⁺*
7. *Five Star Boulevard @ Main Site Driveway⁺*
8. *Five Star Boulevard @ Eastern Site Driveway⁺ (eliminated with project)*

⁺ Privately owned and maintained intersection. However, it has been included in this study due to the potential effect at this location on adjacent City-owned intersection(s).

A copy of the full analysis on these intersections is provided as Appendix B to the traffic study.

Consistent with methodology approved by the City, Levels of Service were determined using the SimTraffic® traffic analysis software. SimTraffic® is a microsimulation tool that is useful for analyzing complex situations such as closely spaced intersections and the effects of signals on nearby unsignalized intersections and driveways. Two SimTraffic® networks were obtained from the City, one for Stanford Ranch Rd, and one for Fairway Dr. These networks were used as the basis for the analyses documented in this report. SimTraffic® Measures of Effectiveness (MOEs) were compared against the Highway Capacity Manual (HCM) intersection delay thresholds to equate the SimTraffic® results to HCM LOS.

**Table 10 (Table 4 in the Traffic Study)
Existing (2013) and Existing (2013) plus Proposed Project
Intersection Levels of Service**

#	Intersection	Traffic Control	Analysis Scenario	Weekday Peak-Hour		Saturday Peak-Hour	
				Delay** (seconds)	LOS	Delay** (seconds)	LOS
1	Stanford Ranch Rd @ Fairway Dr	Signal	Exist	25.1	C	36.7	D
			Exist+PP	24.2	C	52.0	D
2	Stanford Ranch Rd @ Five Star Blvd	Signal	Exist	33.4	C	60.5	E
			Exist+PP	32.7	C	63.9	E
3	Stanford Ranch Rd @ SR-65 NB Ramps	Signal	Exist	6.8	A	10.6	B
			Exist+PP	6.9	A	10.4	B
4	Galleria Blvd @ SR-65 SB Ramps	Signal	Exist	19.0	B	31.4	C
			Exist+PP	17.9	B	23.5	C
5	Fairway Blvd @ Five Star Blvd	Signal	Exist	14.3	B	18.1	B
			Exist+PP	14.4	B	17.6	B
6	Five Star Blvd @ Western Site Dwy ⁺	SSSC	Exist	0.4 (5.8)	A (A)	14.7	B (F)
			Exist+PP	0.4 (5.9)	A (A)	3.6 (19.4)	A
7	Five Star Blvd @ Main Site Dwy ⁺	SSSC	Exist	1.3 (11.4)	A (B)	21.4	C (F)
			Exist+PP	1.4 (15.3)	B	11.3	B (F)
8	Five Star Blvd @ Eastern Site Dwy ⁺	SSSC	Exist	8.0 (57.2)	A (F)	34.8	D (F)
			Exist+PP	Eliminated with project			

* Exist. = Existing (2013), Exist.+PP = Existing (2013) plus Proposed Project
 ** SSSC presented as Overall Intersection (Worst Minor Approach Movement).
 + Privately owned and maintained intersection.

The proposed project will not result in a significant level of service impact to any of the intersections.

Although the proposed project is consistent with the City's *General Plan* (and the project's long term traffic impact is already accounted for through the City's Capital Improvement Program), because the proposed project is anticipated to have a net increase in project site traffic, the effect of this additional traffic is evaluated to ensure the surrounding transportation facilities operate at acceptable levels. Per the City's direction and consistent with the City's guidelines, a "Short-Term" traffic study was performed to identify the project's effect on the external roadway network under existing conditions and to evaluate site access and operations. A short-term traffic analysis was conducted for the weekday PM peak-hour and weekend peak-hour for the following scenarios:

- A. Existing (2013) Conditions
- B. Existing (2013) plus Proposed Project Conditions

The addition of the proposed project does not result in a significant impact at a City-owned and maintained intersection. As such, no mitigations are required to satisfy the City's Level of Service standard.

c) No airports are located in proximity to the project site. The project will not result in a change to air traffic patterns. No impact would occur.

d) The design of on-site circulation is reviewed as part of the DRP application. The City has adopted standards for site circulation, parking lot designs, and vehicular queuing. The City's Engineering Division has evaluated the project design as it relates to driveway design and location to ensure City standards have been met and no hazardous conditions will be present. Based on this, the impact is considered less than significant. However, it is acknowledged that this is a busy intersection, and increasing the use on this corner will result in potential back-ups at Five Star Bl and Stanford Ranch Rd, especially during peak hours and holidays.

Although the proposed project is consistent with the City's *General Plan* (and the project's long term traffic impact is already accounted for through the City's Capital Improvement Program), because the proposed project is anticipated to have a net increase in project site traffic, the effect of this additional traffic is evaluated to ensure the surrounding transportation facilities operate at acceptable levels. Per the City's direction and consistent with the City's guidelines, a "Short-Term" traffic study was performed to identify the project's effect on the external roadway network under existing conditions and to evaluate site access and operations. A short-term traffic analysis was conducted for the weekday PM peak-hour and weekend peak-hour for the following scenarios:

- A. Existing (2013) Conditions
- B. Existing (2013) plus Proposed Project Conditions

The addition of the proposed project does not result in a significant impact to any intersections. As such, no mitigations are required to satisfy the City's Level of Service standard.

e) The City's Fire Department reviewed the project and determined that the design will provide adequate emergency access and meets their design criteria and code requirements. With adherence to the City of Roseville Design and Construction Standards (January 2010), the project will have a less than significant impact to emergency access.

f) The project will provide adequate parking based on the Zoning Ordinance and therefore, the project is anticipated to have a less than significant impact on parking.

g) The proposed gasoline facility does not generate the need for any bicycle parking as the facility will not include a convenience store and the project is dedicated to vehicle fueling only. For employees that may ride their bicycle to work, existing bicycle parking (bike lockers) is located on the Costco Warehouse site and will remain unchanged. The proposed project will not conflict with adopted policies, plans, or programs supporting alternative transportation and therefore no impact will occur.

XVI. Utilities and Service Systems

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
expansion of existing facilities, the construction of which could cause significant environmental effects?				
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition of the provider's existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Discussion of Checklist Answers:

a,b,e) The site is currently developed. The new fuel facility will not increase impacts to utility and service systems and impacts to these utilities are already evaluated with the original development of the site. Based on this information, the project will have a less than significant impact as it relates to wastewater treatment.

c) Storm water will be collected on-site and transferred via pipe into an off-site storm drain system. The project will not result in the need for new drainage facilities or the expansion of existing facilities.

f, g) Solid waste will be collected by the City of Roseville's Refuse Department. All aspects of the project as it relates to solid waste will be required to comply with federal, state and local statutes and regulations. Project compliance with these rules will be overseen by the City's Environmental Utilities Department staff. Therefore, the project will have a less than significant impact as it relates to solid waste.

d) Water is provided by the City of Roseville. City generation rates for water are based on zoning, which was evaluated during the original development of the project. The proposed project will not increase the demand for water.

Consistent with the City's Water Efficient Landscape Ordinance (WELo), the Environmental Utilities Department requires the project to include water conservation measures for landscaping to minimize

the amount of water needed for the project. Portions of the landscaping will be re-installed or rehabilitated on site and all landscaping will be required to meet WELO requirements. Therefore, impacts to water would be less than significant.

XVII. Mandatory Findings of Significance

Environmental Issue	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	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, substantially reduce the number or restrict the range of an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts which 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).			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion of Checklist Answers:

As a result of the project, there would be no impacts on wildlife. The cumulative impacts, the focus of question (b), have been addressed in each section throughout this document where applicable. Potentially substantial adverse effects on human beings, the concern of question (c), are dealt with in chapters addressing potential health-related impacts (e.g., Air Quality, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Traffic/Transportation). The project

does not have the potential to degrade the quality of the environment, substantially reduce the habitat of any wildlife species or create substantial adverse effects on human beings.

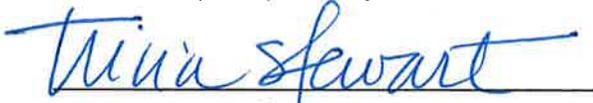
ENVIRONMENTAL DETERMINATION:

As shown in the checklist prepared as part of this Initial Study, City staff has not identified any impacts that are peculiar to the parcels that would have a significant impact, whether offsite or cumulative in nature, and the City's Mitigating Policies and Standards have been undertaken.

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

Initial Study Prepared by:



Tricia Stewart, Senior Planner
City of Roseville Development Services - Planning Division

Attachments:

1. Project Plans

Appendices:

- A. Air Quality/Greenhouse Gas Analysis for Costco Wholesale Proposed Vehicle Refueling Facility prepared by Ashworth Leininger Group dated June 10, 2014
- B. Traffic Study for Costco Wholesale Fueling Station Addition prepared by Kimley-Horn dated April 7, 2014



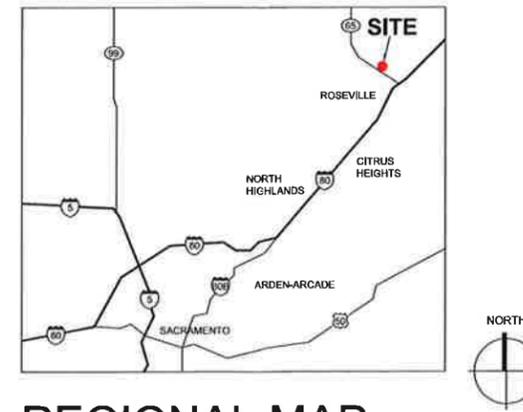
VICINITY MAP

N.T.S.



STANFORD RANCH ROAD &
FIVE-STAR BOULEVARD
ROSEVILLE, CA

APPLICATION FOR:
DESIGN REVIEW PERMIT MODIFICATION
CONDITIONAL USE PERMIT MODIFICATION
LOT LINE ADJUSTMENT



REGIONAL MAP

N.T.S.

PROJECT DIRECTORY

APPLICANT:
COSTCO WHOLESAL
999 LAKE DRIVE
ISSAQUAH, WA 98027
PHONE: (425) 427-7540
CONTACT: KIM KATZ

ARCHITECTS:
DAVID BABCOCK & ASSOCIATES
3581 MOUNT DIABLO BLVD., SUITE 235
LAFAYETTE, CA. 94549
PHONE: (925) 283-5070
FAX: (925) 283-4823
CONTACT: DAVID BABCOCK

MULVANNY G2 ARCHITECTURE
1110 112TH AVENUE NE
SUITE 500
BELLEVUE, WA 98004
PHONE: (425) 463-1416
FAX: (425) 463-2050
CONTACT: JOSEPH WELCH

CIVIL ENGINEER/SURVEY:
KIER & WRIGHT
2850 COLLIER CANYON RD.
LIVERMORE, CA 94551
PHONE: (925) 245-8788
FAX: (925) 245-8796
CONTACT: STEVE CALCAGNO

LANDSCAPE ARCHITECT:
DAVID BABCOCK & ASSOCIATES
3581 MT. DIABLO BLVD., SUITE 235
LAFAYETTE, CA. 94549
PHONE: (925) 283-5070
FAX: (925) 283-4823
CONTACT: DAVID BABCOCK



PROJECT DATA

PROJECT LOCATION: 6720 + 6750 STANFORD RANCH ROAD
S.W. CORNER OF STANFORD RANCH
ROAD AND FIVE STAR BOULEVARD
ROSEVILLE, CA

PARCEL NUMBER: APN: 017-123-015-000
017-123-017-000

GENERAL PLAN DESIGNATION: CC - COMMUNITY COMMERCIAL

CURRENT ZONING: GC/SA-NC - GENERAL COMMERCIAL /
SPECIAL AREA - NORTH
CENTRAL

SITE AREA: 1.51 ACRES - ACQUIRED GAS STATION
12.89 ACRES - (E) WAREHOUSE

JURISDICTION: CITY OF ROSEVILLE, CA

SCOPE OF WORK

DEMOLITION OF EXISTING GAS STATION AND CONSTRUCTION OF
NEW 5 ISLAND COSTCO GAS STATION. ASSOCIATED SITE WORK
TO IMPROVE CIRCULATION.

SHEET INDEX

- T1 TITLE SHEET
- DD11-18 CONCEPT SITE PLAN
- DD21-19 CONCEPT ROOF PLAN AND SECTION
- DD31-01 CONCEPT ELEVATIONS
- L1 PRELIMINARY LANDSCAPE PLAN
- C1 TOPOGRAPHIC SURVEY
- C2 SITE AND HORIZONTAL CONTROL PLAN
- C3 PRELIMINARY GRADING AND DRAINAGE PLAN
- C4 PRELIMINARY GRADING AND DRAINAGE PLAN
- SE-1 ELECTRICAL SITE PLAN

1 Lot Line Adjustment

TITLE SHEET



ROSEVILLE, CA

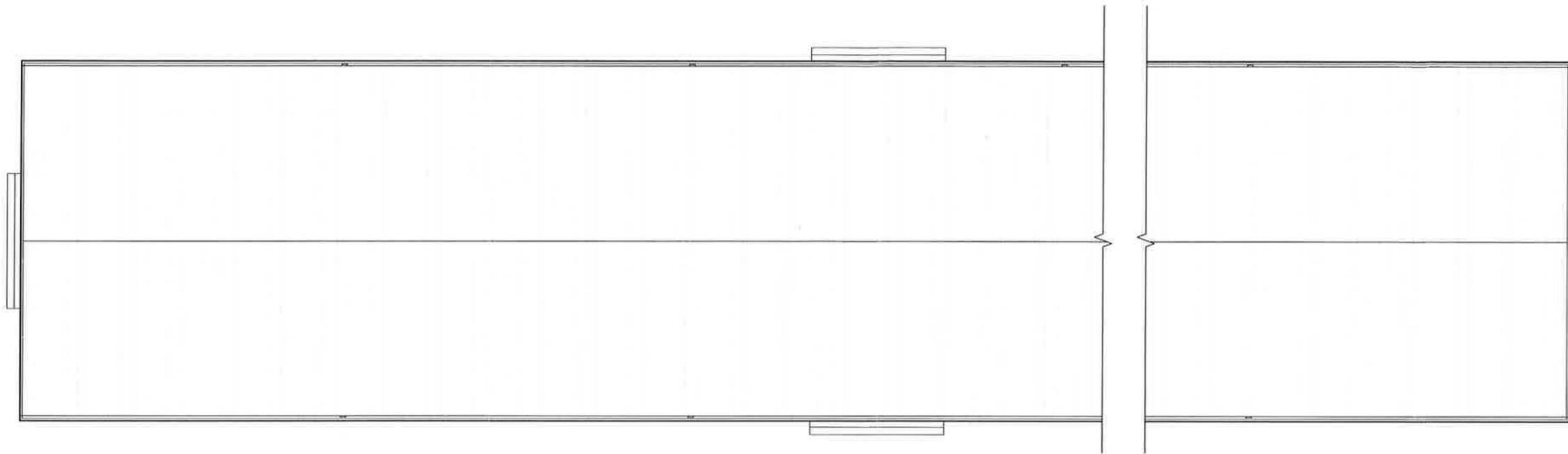


DAVID BABCOCK + ASSOCIATES
ARCHITECTURE LANDSCAPE PLANNING
3581 MT. DIABLO BLVD., SUITE 235
LAFAYETTE, CALIFORNIA 94549
T: 925 283 5070

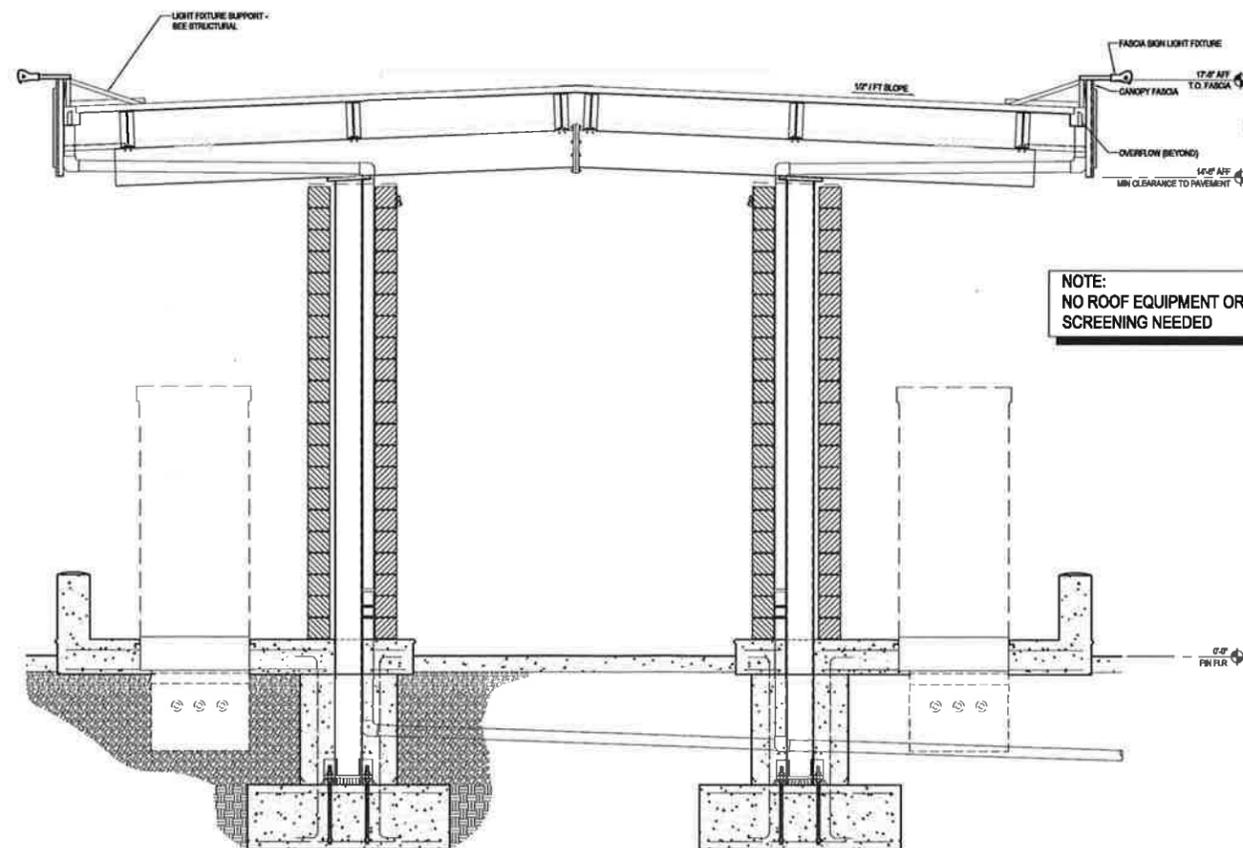
0008.P.228
June 11, 2014
TITLE SHEET

T1





1 CANOPY ROOF PLAN
SCALE: 1/4" = 1'-0"



NOTE:
NO ROOF EQUIPMENT OR
SCREENING NEEDED

2 CANOPY FASCIA / COLUMN SECTION
SCALE: 1/2" = 1'-0"

COSTCO
WHOLESALE

ROSEVILLE, CA
29

6720 / 6750 STANFORD RANCH
ROAD ROSEVILLE, CA 95678

MULVANNY G2

1110 112TH AVE. NE | SUITE 500
BELLEVUE, WA | 98004
1 425 483 2000 | 1 425 483 2002

MulvannyG2.com

13-0321-01
JUNE 11, 2014
CONCEPT
ROOF PLAN AND
SECTION

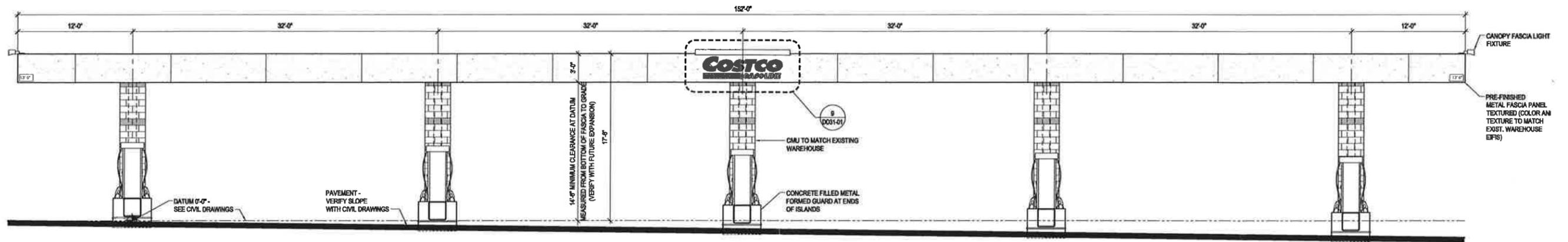
DD21-19

COSTCO WHOLESALE

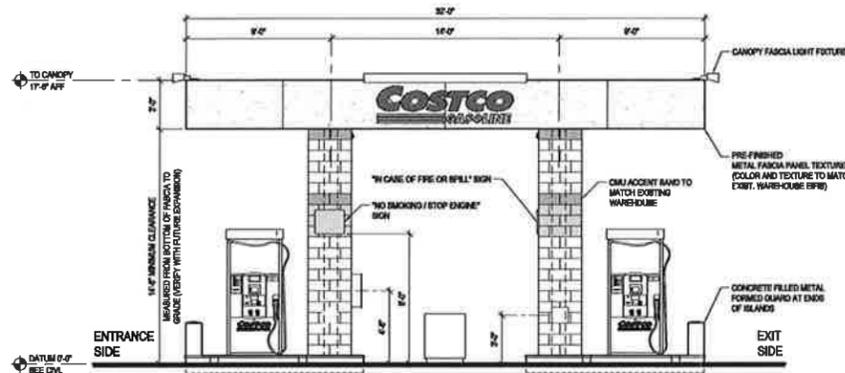
ROSEVILLE, CALIFORNIA

CONCEPT ROOF PLAN AND SECTION

JUNE 11, 2014



1 CANOPY NORTH AND SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



6 CANOPY EAST AND WEST ELEVATION
SCALE: 1/4" = 1'-0"
NOTE: WEST ELEVATION DOES NOT HAVE SIGN

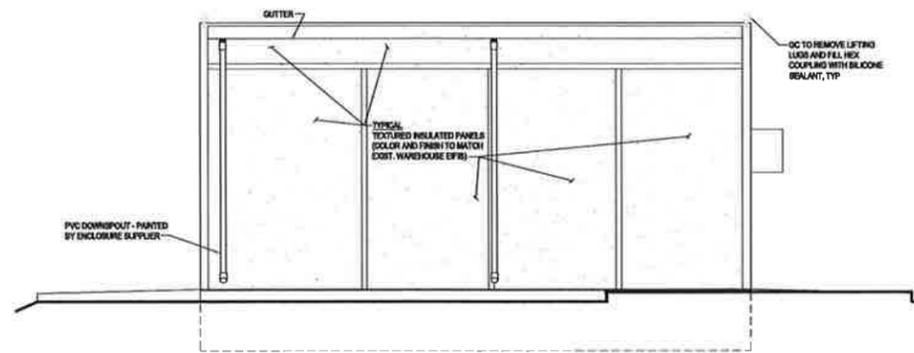
NOTE:
SIGNS SHOWN ON THE PLANS WILL NOT BE APPROVED AS PART OF THE REQUESTED ENTITLEMENTS AND A SEPARATE PERMIT WILL BE REQUIRED FOR ANY SIGNAGE

FUEL STATION SIGNAGE AREA				
QTY	SIGN	SIZE	AREA (SF) EA	TOTAL SF
3	COSTCO GASOLINE	8'-6 3/8" x 7'-4"	19.87 SF	59.61 SF
TOTAL SIGNAGE AREA				59.61 SF

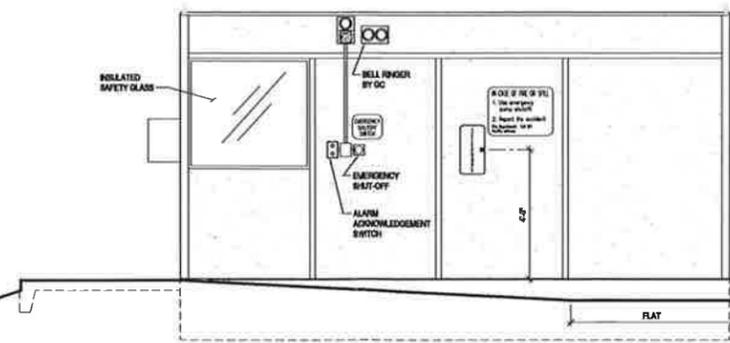
NOTE:
MAX. SIGN AREA ALLOWED: 200SF
(PER STANFORD RANCH CROSSING - PLANNED SIGN PERMIT PROGRAM - PAGE 11)



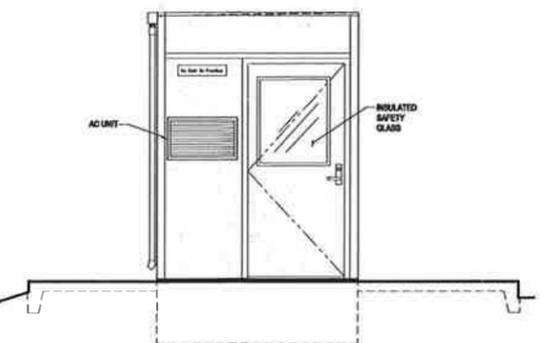
9 CANOPY SIGN
SCALE: 1/2" = 1'-0"



15 ENCLOSURE WEST ELEVATION
SCALE: 1/2" = 1'-0"



17 ENCLOSURE EAST ELEVATION
SCALE: 1/2" = 1'-0"



20 ENCLOSURE NORTH ELEVATION (SOUTH SIM)
SCALE: 1/2" = 1'-0"

COSTCO WHOLESALE
ROSEVILLE, CA # 29
6750 STANFORD RANCH ROAD
ROSEVILLE, CA 95678

MULVANNY G2

1130 112TH AVE. NE | SUITE 500
BELLEVUE, WA | 98004
1 425 463 2000 | 1 425 463 2002

MulvannyG2.com

13-0321-01
JUNE 11, 2014
CONCEPT ELEVATIONS

DD31-01



Plant Legend

Symbol	Botanical / Common Name	Size / Comments	Quantity	Water Usage*	Height / Width @ 15years (in feet)
Trees					
	<i>Carpinus betulus</i> 'Fastiglata' / Upright European Hornbeam	24" Box Matched Standards	9	M	20' / 8'
	<i>Pistacia chinensis</i> 'Keith Davey' / Keith Davey Chinese Pistache	24" box, Matched Standards	37	M / L	20' / 25'
Shrubs, Perennials & Ground Cover					
	<i>Arctostaphylos</i> 'Emerald Carpet' / Emerald Carpet manzanita	1 gal.	30	L	8' / 5'
	<i>Berberis thunbergii</i> 'Rose Glow' / Japanese Barberry	5 gal.	40	M	4' / 6'
	<i>Cotoneaster dammeri</i> 'Lowfast' / Lowfast (Prostrate Cotoneaster)	1 gal.	30	M / L	1' / 8'
	<i>Diets vegeta</i> / Fortnight Lily	5 gal.	65	M	5' / 4'
	<i>Diets bicolor</i> / Yellow Flowering Fortnight Lily	5 gal.	50	M	4' / 3'
	<i>Hemerocallis</i> hyb. / Yellow Daylily (Evergreen)	1 gal.	90	M	2' / 2'
	<i>Juniperus horizontalis</i> 'Wiltonii' / Blue Carpet Juniper	1 gal.	20	M / L	5' / 7'

Infiltration Planter Legend

The proposed infiltration planters will match the existing planters in landscape design and palette.

	<i>Diets bicolor</i> / Yellow Flowering Fortnight Lily	1 gal.	30	M	4' / 3'
	<i>Hemerocallis</i> hyb. / Yellow Daylily (Evergreen)	1 gal.	25	M	2' / 2'

Denotes existing turf grass area. Replace dead turf grass with sod to match existing. Repair existing irrigation system for turf grass area. Fertilize all new and existing turf grass area.

EXISTING TREE TO REMAIN

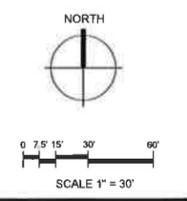
Irrigation System Statement

The landscape plans will comply with the City's Water Efficient Landscape Ordinance (WELCO).
 The irrigation system will be a water efficient low flow, point source system designed to provide adequate watering to support plant growth and insure deeply rooted plant material while avoiding excess water application. The system will be programmable, allowing operation during late night and or early morning hours, with multiple start times and cycles. Irrigation materials specified for the site will be selected on the basis of durability and ease of maintenance.

Shading Calculations

Approved Impervious Parking Area:	281,645 sf
Impervious Parking Area Removed:	-5,654 sf
Proposed Impervious Parking Area:	275,991
Existing Approved Shade Coverage:	153,894 sf
Shade Area to be removed:	-26,936 sf (26 trees x 962 square feet)
Shade Area to be planted:	+33,670 sf (35 Chinese Pistache trees x 962 square feet)
Proposed Shade Coverage:	160,628 sf

The proposed shade coverage in fifteen years is 58%. The city requires a minimum of 50%.



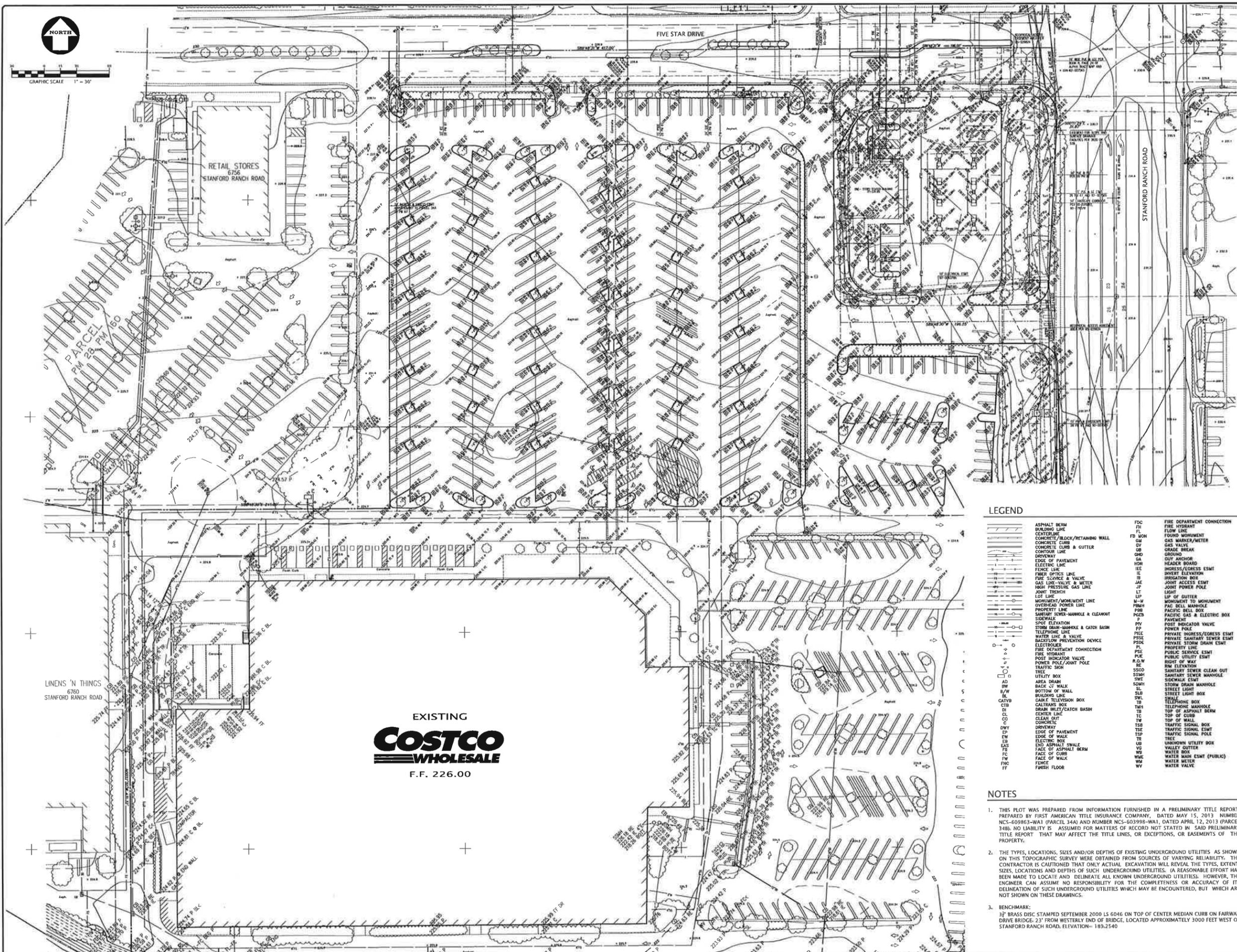
CW13-0058
0008.P_228
June 11, 2014

L1



ROSEVILLE, CALIFORNIA

Preliminary Landscape Plan



GRAPHIC SCALE 1" = 30'

RETAIL STORES
6756
STANFORD RANCH ROAD

LINENS 'N THINGS
6760
STANFORD RANCH ROAD

EXISTING
COSTCO
WHOLESALE
F.F. 226.00

LEGEND

ASPHALT BERM	FD	FIRE DEPARTMENT CONNECTION
BUILDING LINE	FL	FIRE HYDRANT
CENTERLINE	FM	FLOW LINE
CONCRETE/BLOCK/RETAINING WALL	FO	FOUND MONUMENT
CONCRETE CURB	FR	GAS MARKER/METER
CONCRETE CURB & GUTTER	GS	GAS VALVE
CONTOUR LINE	GR	GRADE BREAK
DEWEYWAY	GRD	GROUND
EDGE OF PAVEMENT	GRD	CUT ANCHOR
ELECTRIC LINE	HDR	HEADER BOARD
FENCE LINE	IEE	INGRESS/EGRESS ESMT
FIBER OPTIC LINE	IE	INVERT ELEVATION
FIRE SERVICE & VALVE	IB	IRRIGATION BOX
GAS LINE/VALVE & METER	JAE	JOINT ACCESS ESMT
HIGH PRESSURE GAS LINE	JP	JOINT POWER POLE
JOINT TRENCH	LT	LIGHT
LOT LINE	LIP	LIP OF GUTTER
MONUMENT/MONUMENT LINE	M-M	MONUMENT TO MONUMENT
OVERHEAD POWER LINE	PMH	PAC BELL MANHOLE
PROPERTY LINE	PFB	PACIFIC BELL BOX
SANITARY SEWER-MANHOLE & CLEANOUT	PCB	PACIFIC GAS & ELECTRIC BOX
SIDEWALK	P	PAVEMENT
SPOT ELEVATION	PIV	POST INDICATOR VALVE
STORM DRAIN-MANHOLE & CATCH BASIN	PP	POWER POLE
TELEPHONE LINE	FILE	PRIVATE INGRESS/EGRESS ESMT
WATER LINE & VALVE	FILE	PRIVATE SANITARY SEWER ESMT
BACKFLOW PREVENTION DEVICE	PSDE	PRIVATE STORM DRAIN ESMT
ELECTRODES	P	PUBLIC SERVICE ESMT
FIRE DEPARTMENT CONNECTION	PUE	PUBLIC UTILITY ESMT
POST INDICATOR VALVE	R.O.W	RIGHT OF WAY
POWER POLE/JOINT POLE	RE	R.M. ELEVATION
TRAFFIC SIGN	SSD	SANITARY SEWER CLEAN OUT
TREE	SSM	SANITARY SEWER MANHOLE
UTILITY BOX	SME	SIDEWALK ESMT
AREA DRAIN	SOMH	STORM DRAIN MANHOLE
BACK OF WALK	SL	STREET LIGHT
BOTTOM OF WALL	SLB	STREET LIGHT BOX
BUILDING LINE	SWL	STREET LIGHT BOX
CABLE TELEVISION BOX	TD	TELEPHONE BOX
CALTRANS BOX	TMH	TELEPHONE MANHOLE
DRAIN INLET/CATCH BASIN	TC	TOP OF ASPHALT BERM
IN	TC	TOP OF CURB
CL	TC	TOP OF WALL
C	TSB	TRAFFIC SIGNAL BOX
CONCRETE	TSP	TRAFFIC SIGNAL ESMT
CLEAN OUT	TR	TRAFFIC SIGNAL POLE
CONCRETE	TR	TREE
DWEYWAY	UC	UNKNOWN UTILITY BOX
EDG. OF PAVEMENT	VC	VALLEY GUTTER
EDGE OF WALK	WB	WATER BOX
ELECTRIC BOX	WME	WATER MAIN ESMT (PUBLIC)
FAS	WM	WATER METER
FACE OF ASPHALT BERM	WV	WATER VALVE
FACE OF CURB		
FACE OF WALK		
FENCE		
FINISH FLOOR		

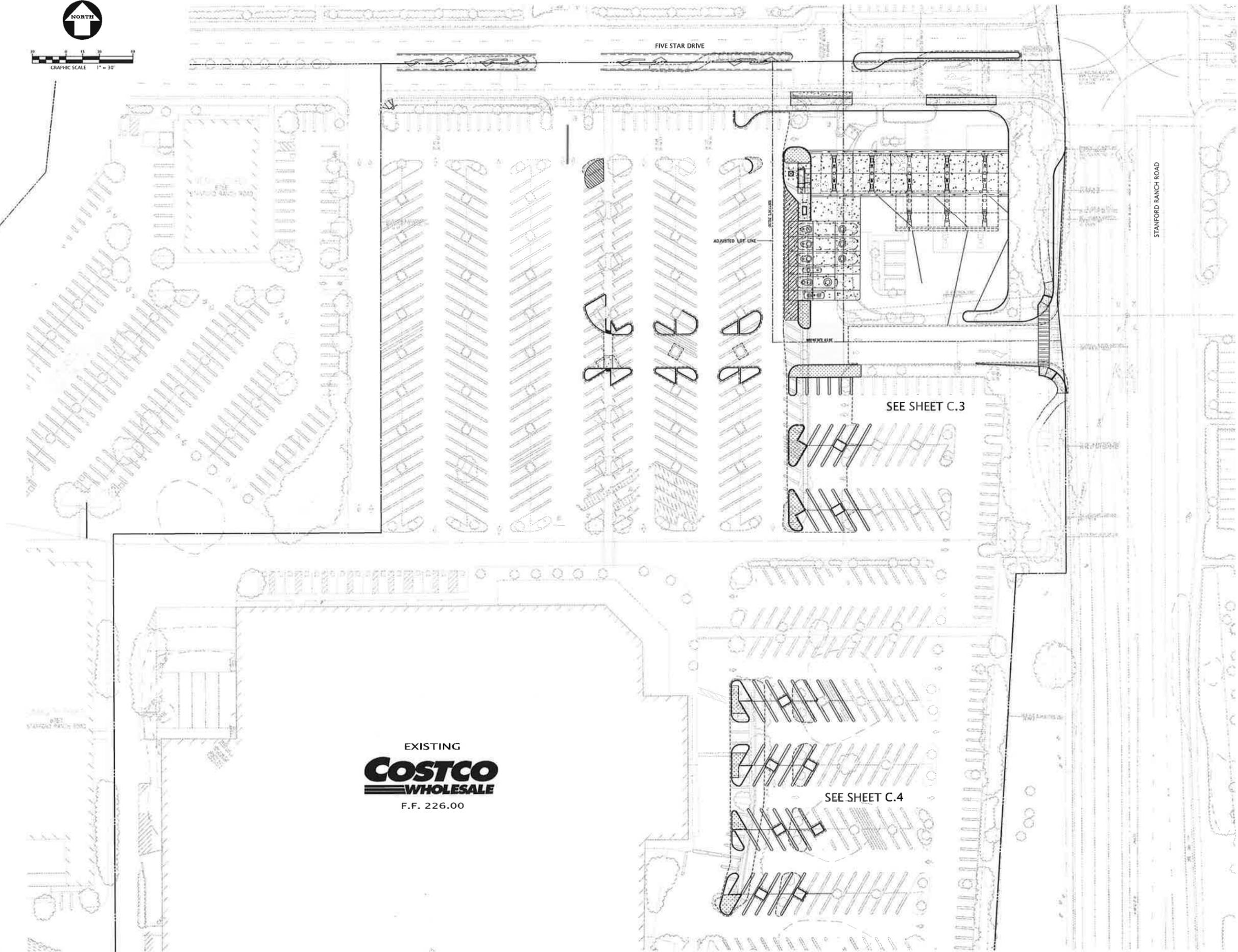
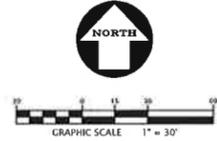
NOTES

1. THIS PLOT WAS PREPARED FROM INFORMATION FURNISHED IN A PRELIMINARY TITLE REPORT, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, DATED MAY 15, 2013 NUMBER NCS-00863-WA1 (PARCEL 34A) AND NUMBER NCS-60398-WA1, DATED APRIL 12, 2013 (PARCEL 34B). NO LIABILITY IS ASSUMED FOR MATTERS OF RECORD NOT STATED IN SAID PRELIMINARY TITLE REPORT THAT MAY AFFECT THE TITLE LINES, OR EXCEPTIONS, OR EASEMENTS OF THE PROPERTY.
2. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES). HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
3. BENCHMARK:
3" BRASS DISC STAMPED SEPTEMBER 2000 LS 6046 ON TOP OF CENTER MEDIAN CURB ON FAIRWAY DRIVE BRIDGE, 23' FROM WESTERLY END OF BRIDGE, LOCATED APPROXIMATELY 3000 FEET WEST OF STANFORD RANCH ROAD, ELEVATION= 189.2540

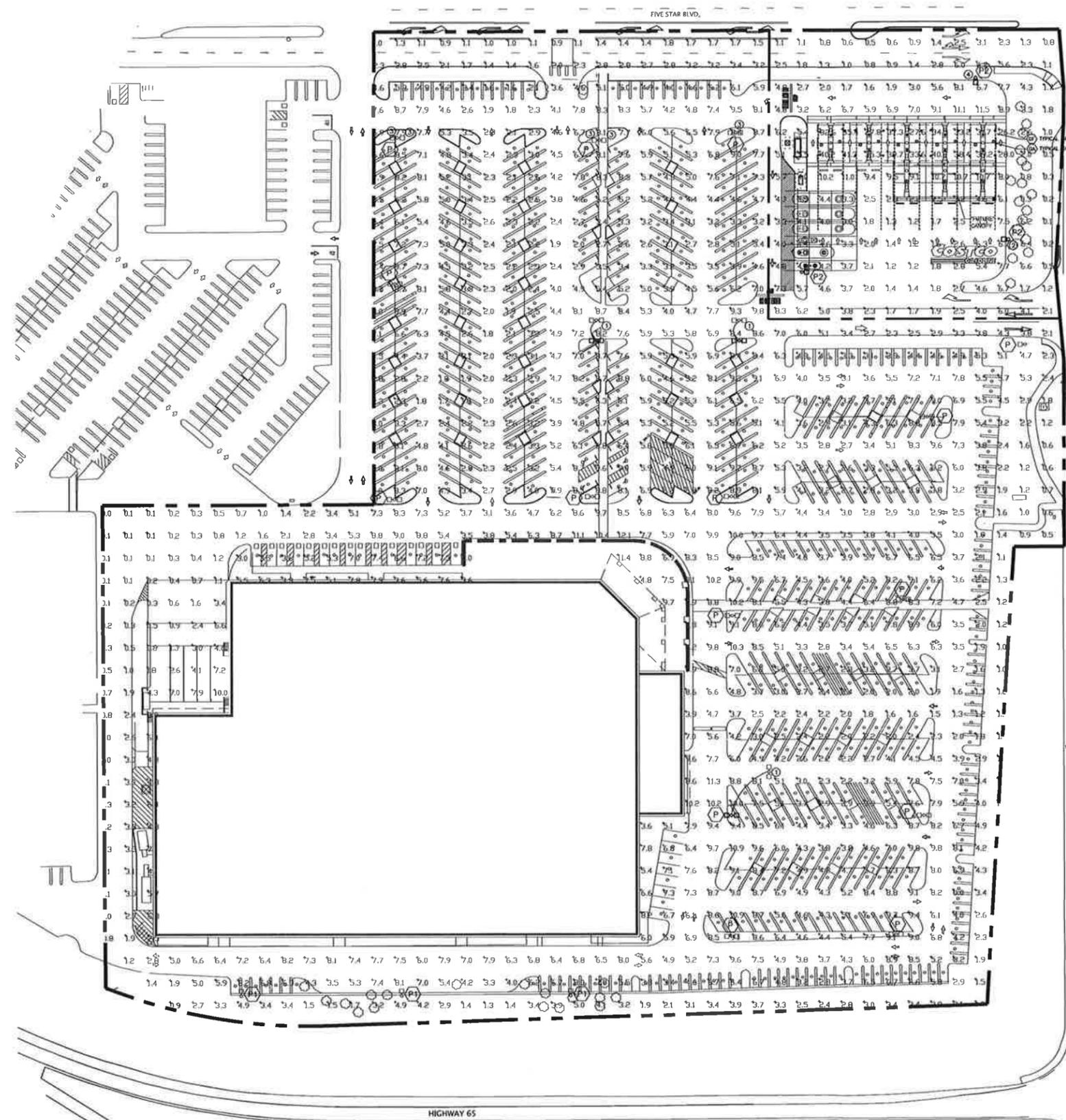
DATE	08/22/2013
SCALE	1" = 30'
DESIGNER	M.F.B.
JOB NO.	95566-17
SHEET	C.1
OF	4 SHEETS

NO.	BY	DATE	REVISION
1		08/02/2013	
2		08/22/2013	
3		12/10/2013	
4		04/05/2014	
5		06/06/2014	

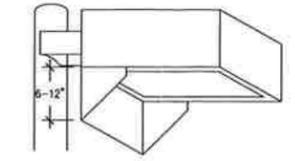
KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC. 2850 Collier Canyon Road Livermore, California 94551 (925) 241-8788 Fax: (925) 241-8796		TOPOGRAPHIC SURVEY ROSEVILLE COSTCO - GAS STATION COSTCO WHOLESALE INC.	CALIFORNIA
--	--	---	------------



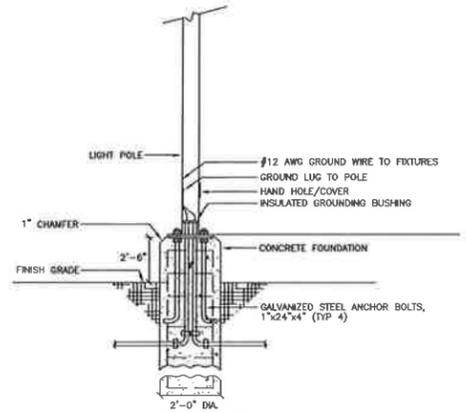
DATE	08/22/2013	
SCALE	1" = 30'	
DESIGNER	M.F.B.	
JOB NO.	95566-17	
SHEET	C.2	
OF	4 SHEETS	
ROSEVILLE CALIFORNIA		
SITE & HORIZONTAL CONTROL PLAN ROSEVILLE COSTCO - GAS STATION COSTCO WHOLESALE INC.		
KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC. 2850 Collier Canyon Road Livermore, California 94551 Tel: (925) 245-8788 Fax: (925) 245-8796		
NO.	BY	REVISION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		
100		



SITE PLAN
SCALE: 40' = 1'-0"

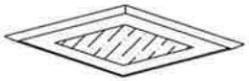


HOUSE SIDE SHIELD DETAIL
NO SCALE



NOTE: PROVIDE CONCRETE J-BOX AS REQUIRED.
THIS DETAIL IS FOR ELECTRICAL CONDUITS ROUTING ONLY.
SEE STRUCTURAL DRAWINGS FOR CONSTRUCTION DETAIL.

POLE BASE DETAIL
NO SCALE



FUEL FACILITY - LED (GA & GF)
NO SCALE

SITE PLAN NOTES:

- ① E.C. TO REMOVE AND RELOCATE EXISTING POLE, AND FIXTURE. DEMOLISH EXISTING BASE. PROVIDE HEAVY DUTY TRAFFIC RATED J-BOX AT EXISTING POLE LOCATION. EXTEND EXISTING FEEDER TO NEW LOCATION AND REPAIR WIRE AS REQUIRED. PROVIDE NEW BASE AT NEW LOCATION. RELAMP AND CLEAN LENS OF EXISTING FIXTURE. TRENCH, FILL AND PATCH TO MATCH EXISTING AS REQUIRED.
- ② PROVIDE 12" HOUSE SIDE SHIELD
- ③ E.C. TO REMOVE EXISTING HOUSE SIDE SHIELDS FROM EXISTING LIGHT FIXTURES. FIELD VERIFY.
- ④ PROVIDE 6" HOUSE SIDE SHIELD

FIXTURE DESCRIPTION.

(P)	EXISTING LIGHT POLE, 1000 MH DROP LENS, TYPE S DISTRIBUTION. 35'-0" POLE, WITH 2'-6" BASE.
(P1)	EXISTING LIGHT POLE, 1000 MH DROP LENS, TYPE 3 DISTRIBUTION. 35'-0" POLE, WITH 2'-6" BASE.
(P2)	NEW COOPER GALLERIA GSL-1000W-PSM4-AS-DROP LENS, TYPE 3 DISTRIBUTION. 22'-6" ROUND TAPERED STEEL POLE, WITH 2'-6" BASE.
(GA)	FUEL CANOPY AREA LIGHT, 155W LED, FLAT LENS
(GF)	FUEL CANOPY FOCUS LIGHT, 150W LED, FLAT LENS

ELECTRICAL SITE PLAN

PROJECT NO: 13-313
NO PART OF THIS DOCUMENT MAY BE USED OR COPIED IN WHOLE OR IN PART WITHOUT THE PRIOR WRITTEN CONSENT OF T.E.I. INC.
ARCHITECT REFERENCE NO: 94-0960-
ISSUE DATE: JUNE 11, 2014
REVISION DATE: JUNE 11, 2014
DRAWN: KAL
CHECKED: ANT/JGM

T.E.I. Inc.
880 N. RIVERSIDE DRIVE
RENTON, WA 98057
PHONE: 425-970-8783
FAX: 425-970-8758

FUEL FACILITY WAREHOUSE #029
6750 STANFORD RANCH ROAD
ROSEVILLE, CA 95678

COSTCO WHOLESALE

SE-1



Air Quality/Greenhouse Gas Analysis

Costco Wholesale Proposed Vehicle Refueling Facility

Roseville, California

Prepared by:

**Ashworth Leininger Group
601 East Daily Drive, Suite 302
Camarillo, California 93010**

**Tel: 805-764-6010
Fax: 805-764-6011**

Revised June 10, 2014

Table of Contents

1. INTRODUCTION	1
2. METHODOLOGY	3
2.1 Air Quality	3
2.2 Greenhouse Gas Emissions.....	7
3. AIR QUALITY	9
3.1 Environmental Checklist.....	9
3.2 Discussion of Checklist Answers.....	9
4. GREENHOUSE GAS EMISSIONS	17
4.1 Environmental Checklist.....	17
4.2 Discussion of Checklist Answers.....	17

APPENDIX A: EMISSION CALCULATIONS

APPENDIX B: HEALTH RISK SCREENING ANALYSIS

APPENDIX C: CALEEMOD PRINTOUTS – PROJECT CONSTRUCTION/OPERATION

**APPENDIX D: CALEEMOD PRINTOUTS – GREENHOUSE GAS EMISSIONS FOR 2020
BUSINESS AS USUAL AND 2020 PROJECT**

**APPENDIX E: REVISED PROPOSED SCOPE OF WORK FOR AIR QUALITY/
GREENHOUSE GAS ANALYSIS**

1. INTRODUCTION

Ashworth Leininger Group (ALG) has been retained by Costco Wholesale to evaluate the air quality and greenhouse gas emissions impacts associated with a proposed vehicle refueling facility (VRF) adjacent to its existing warehouse located at 6750 Stanford Ranch Road in Roseville, California. The proposed 20-fueling position Costco VRF will be constructed on the site of the existing 12-position Shell VRF located at 6720 Stanford Ranch Rd, at the southwest corner of Five Star Boulevard and Stanford Ranch Road. Note that the City of Roseville has proposed permit conditions requiring a study of traffic conditions at the project site following 90 days of operation. Based on the traffic study ("After Study"), the City may require appropriate mitigation measures, including adding up to six additional fueling positions at the site.

This Air Quality/Greenhouse Gas Analysis has been prepared to support completion of the Air Quality and Greenhouse Gas Emissions sections of the City of Roseville's Initial Study Environmental Checklist for the proposed project, under the California Environmental Quality Act (CEQA). This Analysis addresses the following:

- Methodology. This section documents the methods, assumptions, and information sources used to complete the technical analyses contained within this report.
- Air Quality. This section provides responses to the City of Roseville's Environmental Checklist for air quality issues, along with supporting documentation for each response.
- Greenhouse Gas Emissions. This section provides responses to the City's Environmental Checklist for greenhouse gas emissions issues, along with supporting documentation for each response.

2. METHODOLOGY

This Air Quality/Greenhouse Gas Analysis has been prepared consistent with the revised Scope of Work submitted to the City of Roseville Planning Department on December 19, 2013. The Analysis also incorporates comments provided by the Placer County Air Pollution Control District (PCAPCD) on December 20, 2013, regarding the greenhouse gas analysis. The Analysis also has been revised to reflect comments provided by the PCAPCD on May 14, 2014, and by the City of Roseville on May 21, 2014, on the February 25, 2014 version of the report. The Scope of Work, included as Appendix E, outlines the data sources, analytical tools, and assumptions to be used in this Analysis. This section documents the specific methods, assumptions, and information sources used to complete the technical analyses contained within this report.

2.1 Air Quality

2.1.1 Criteria Pollutant Emissions

Construction Emissions

As recommended by the PCAPCD's *CEQA Air Quality Handbook* (October 2012, available at www.placer.ca.gov/departments/air/landuseceqa), ALG used the California Air Pollution Control Officers Association's (CAPCOA) California Emissions Estimator Model (CalEEMod) Version 2013.2.2 to estimate emissions associated with demolition activities and construction of the new 20-position vehicle refueling facility (VRF). ALG assumed that the structure housing the current car wash and convenience store (roughly 50 feet by 45 feet) will be demolished. Since specific construction schedules for the proposed project are not yet known, ALG used CalEEMod default values for demolition/construction equipment and activities.

Baseline Emissions

ALG also used CalEEMod Version 2013.2.2 to estimate baseline mobile source and area source emissions associated with the existing 12-position VRF. ALG used trip data from the August 26, 2013 Kittelson & Associates, Inc. (KAI) Traffic Study (Memorandum from Ashish Sabnekar, Radu Nan, and Sonia Henum to Mark Stout, City of Roseville, "Technical Memorandum: Roseville Costco Gasoline Fuel Station Addition – Costco Gasoline Transportation Information"). This was supplemented by daily trip data provided by KAI on February 11, 2014. Based on this information, the existing 12-position VRF generates 500 weekday daily trip ends and 660 weekend daily trip ends. Since CalEEMod requires trip data per fueling position, these values were converted to 41.67 weekday trips/day and 55 weekend trips/day for each of the 12 existing fueling positions. Moreover, since no information regarding trip purpose (primary, diverted, or pass-by) was available, ALG used the CalEEMod default values for trip purpose distribution.

For baseline stationary emissions, ALG used the average annual gasoline throughput from the existing VRF for the 10-year period from 2003 through 2012, or 1.8 million gallons per year. ALG used an emission factor of 0.597 pounds of reactive organic gases (ROG) per thousand gallons of gasoline dispensed. This factor is based on the California Air Resources Board's (CARB) *Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities* (Revised Emission Factors), December 23, 2013 (available at www.arb.ca.gov/vapor/gdf-emisfactor/gdf-emisfactor.htm). Emission factors from CARB's Revised Emission Factor report are presented in Table 1, below. The factors reflect

Air Quality/Greenhouse Gas Analysis
 Costco Proposed Vehicle Refueling Facility

implementation of enhanced vapor recovery, as required by the California Air Resources Board, and phase-in of onboard refueling vapor recovery (ORVR) equipped vehicles starting in 1998.

Table 1. Reactive Organic Gas Emission Factors for Gasoline Dispensing Facilities.

Component	Emission Factor (pound ROG/ 1,000 gallons)	Notes
Loading (Phase I Losses)	0.15	
Breathing (Pressure Driven Losses)	0.024	
Refueling (Phase II Fueling Losses)	0.12	Based on CARB data demonstrating that 76% of gasoline will be dispensed to ORVR vehicles in 2014 and 24% of gasoline will be dispensed to non-ORVR vehicles. See Appendix B for more information.
Spillage (Phase II) Hose Permeation	0.24 0.060	Based on CARB gasoline dispensing hose permeation factor for 2014.
Total:	0.594	

Notes:

1. Based on CARB's Revised Emission Factors report, December 23, 2013.
2. Assumes reactive organic gases associated with gasoline dispensing = total organic gases.

Proposed Project Emissions

ALG used CalEEMod Version 2013.2.2 to estimate post-project mobile source and area source emissions associated with the proposed 20-position VRF. Traffic data for both week days and weekend days were used to generate emissions data, as described below.

ALG used trip data from the August 26, 2013 KAI Traffic Study, supplemented by daily trip data provided by KAI on February 11, 2014. Based on this information, the proposed 20-position Costco VRF will generate 5,453 weekday daily trip ends. KAI estimated that 34% of those will be "internal" trips (members visiting the vehicle refueling facility whose primary purpose was to shop at the warehouse), leaving a net 3,599 external weekday daily trip ends. Since CalEEMod requires trip data per fueling position, this was converted to 179.95 weekday trips/day for each of the 20 proposed fueling positions. ALG also used the KAI estimate that 37% of the remaining trips will be "pass-by" trips in the CalEEMod input file, and assumed that diverted link trips will be 0%.

Based on KAI's data, the proposed 20-position Costco VRF will generate 4,783 weekend daily trip ends, 35% of which will be internal trips, leaving a net 3,109 external weekend daily trip ends. KAI further estimates that 33% of the external weekend daily trips will be pass-by trips (as compared to the estimate of 37% for weekday trips). Unfortunately, CalEEMod does not allow different trip distributions (with respect to primary, diverted, and pass-by trips) for weekdays and weekends. ALG therefore adjusted the 3,109 external weekend daily trip ends upward by a ratio of $(1 - 33\%)/(1 - 37\%)$, or 3,306 trips/day, so that after subtracting pass-by trips (using the weekday pass-by trip rate of 37%) the resultant value of 2,083 trips/weekend

Air Quality/Greenhouse Gas Analysis
Costco Proposed Vehicle Refueling Facility

day is the same as estimated by KAI.¹ ALG converted the adjusted external weekend daily trip rate of 3,306 trips/day to 165.30 weekend trips/day for each of the 20 fueling positions.

The proposed vehicle refueling facility will dispense both gasoline and diesel fuel. This analysis is based on the worst-case assumption that 100% of the fuel dispensed from the facility will be gasoline. To calculate proposed project stationary source emissions, ALG used the same emission factor of 0.594 pounds of reactive organic gases (ROG) per thousand gallons of gasoline dispensed as described above. Annual fuel throughput for the proposed 20-position VRF was assumed to be 20 million gallons per year, based on anticipated fuel sales for the facility with a substantial safety margin, to be conservative.

2.1.2 Health Risk Screening Analysis

To estimate the cancer and non-cancer health risks associated with the proposed VRF, ALG used the health risk screening analysis approach described in the California Air Pollution Control Officers Association's (CAPCOA) *CAPCOA Air Toxics "Hot Spots" Program Gasoline Service Station Industrywide Risk Assessment Guidelines* (November 1997). The health risk screening analysis tables from this report were updated in November 2001 (*Addendum to the CAPCOA Air Toxics "Hot Spots" Program's Gasoline Service Station Industrywide Risk Assessment Guidelines: Appendix E, Revised 11/01/01 – Cancer Risks: Tables and Graphs By Scenario (to 1,000 meters)*).²

ALG's health risk screening analysis was based on CAPCOA Scenario 6B (underground storage tanks equipped with Phase I and Phase II vapor recovery with vent valves) assuming rural dispersion coefficients. The PCAPCD has determined that use of rural dispersion screening coefficients is appropriate based on its analysis of land use within a three kilometer radius surrounding the proposed VRF.

Since ALG used an emission factor of 0.594 pounds ROG per thousand gallons of gasoline dispensed rather than the Scenario 6B emission factor of 1.269 pounds ROG per thousand gallons of gasoline dispensed, ALG adjusted the CAPCOA Scenario 6B distance-based screening results downward by the ratio of 0.594/1.269 to reflect the difference in emission factors. This adjustment is appropriate, as the stringency of air pollution controls required for gasoline dispensing facilities has increased since the CAPCOA guidelines were released. The PCAPCD has concurred with this approach (December 12, 2013).

The health risk screening analysis was based on the following data:

- Distance to Off-Site Receptors. The following distances from the proposed VRF to the nearest off-site receptors were used:
 - Nearest residence (5800 block of Lincoln Avenue, Rocklin): 280 meters (920 feet, or 0.17 mile).
 - Nearest off-site workplace (6710 Stanford Ranch Road, Roseville): 75 meters (245 feet, or 0.05 mile).

¹ ALG estimates that use of 3,306 trips per weekend day along with the weekday pass-by trip rate of 37% and CalEEMod default trip distances overestimates annual mobile source emissions by 0.04%. Peak day mobile source emissions are not affected, since these are based on weekday trips.

² Both of these documents are available at www.arb.ca.gov/ab2588/riskassess.htm (accessed December 23, 2013).

Air Quality/Greenhouse Gas Analysis
Costco Proposed Vehicle Refueling Facility

- Gasoline Throughput. At the request of the PCAPCD, the health risk screening analysis for the proposed project is based on the total gasoline throughput for the proposed facility (20 million gallons per year, assuming 100% gasoline dispensed), rather than the anticipated increased gasoline throughput (18.2 million gallons/year).
- Off-Site Workplace Cancer Risk. The CAPCOA Industrywide Risk Assessment Guidelines present distance- and throughput-based lifetime excess cancer risk screening factors for residential receptors. These receptors were assumed to be exposed 24 hours/day, 365 days/year, over a 70-year lifetime at the same address. Using the same CAPCOA risk assessment guidance in effect when the CAPCOA Industrywide Risk Assessment Guidelines were developed, the maximum excess cancer risk for the nearest off-site workplace assumes exposure for 8 hours/day, 240 days/year (5 days/week for 48 weeks/year), over a 46-year work career. Accounting for the difference in lifetime exposures between residences and off-site workplaces, the lifetime off-site workplace exposure adjustment factor is calculated to be 0.144.
- Off-Site Worker Exposure to Source Operating Less Than 24 Hours/Day. Because the proposed 20-position VRF will operate less than 24 hours/day (assumed operation 16 hours/day), an additional worker adjustment factor is necessary to account for proportionally greater worker exposure during the same hours that the VRF operates. This factor is calculated as the ratio of the total hours in a week (168 hours/week) divided by the number of hours/week the VRF is assumed to operate (16 hours/day X 7 days/week = 112 hours/week), or a factor of 1.5.⁴
- Non-Cancer Risks. To determine the chronic non-cancer hazard index for benzene, annual benzene concentration factors (per million gallons) are derived by multiplying the one-hour maximum benzene concentration factors (per million gallons) from the CAPCOA Industrywide Risk Assessment Guidelines by an annual average persistence factor of 0.08.⁵ The annual average benzene concentrations for the appropriate receptor distances are calculated by multiplying the annual benzene concentration factors (per million gallons) by the anticipated increased annual gasoline throughput. The chronic non-cancer hazard index for benzene is calculated as the ratio of the annual benzene concentrations for each receptor to the chronic reference exposure level of 60 µg/m³.⁶

The three nearest schools to the proposed project site are as follows:

- Antelope Creek Elementary School, 6185 Springview Drive, Rocklin: 2,300 feet (0.44 mile) to the southeast of the project site

⁴ See *Air Toxics Hot Spots Program Risk Assessment Guidelines: Technical Support Document for Exposure Assessment and Stochastic Analysis*, California Office of Environmental Health Hazard Assessment, August 2012, Section 2.8.1.1.1 (Non-Continuous Sources), available at oehha.ca.gov/air/hot_spots/tsd082712.html (accessed January 2, 2014).

⁵ The 0.08 annual average persistence factor reflects the ratio of the maximum one-hour ambient concentration to the annual average ambient concentration. The 0.08 persistence factor is from *CAPCOA Air Toxics "Hot Spots" Program Gasoline Service Station Industrywide Risk Assessment Guidelines*, CAPCOA, November 1997, Appendix G (Calculation of Cancer Risk).

⁶ From *Table of All Acute, 8-hour and Chronic Reference Exposure Level (REL)s*, California Office of Environmental Health Hazard Assessment (OEHHA), October 2013, available at oehha.ca.gov/air/allrels.html (accessed December 23, 2013).

Air Quality/Greenhouse Gas Analysis
Costco Proposed Vehicle Refueling Facility

- Adventure Christian School, 6401-B Stanford Ranch Road, Roseville: 3,300 feet (0.63 mile) to the north of the project site
- Thomas Jefferson Elementary School, 750 Central Park Drive, Roseville: 3,600 feet (0.68 mile) to the northwest of the project site

The nearest school site is located 2.5 times farther away from the proposed project site than the nearest residence analyzed in the health risk screening analysis. Therefore, potential health risks at schools are expected to be far lower than analyzed for the nearest residences. Also, since no school is located within 1,000 feet of the proposed project, supplemental public notification is not required under California Health and Safety Code section 42301.6.

2.2 Greenhouse Gas Emissions

The methodologies, assumptions, and information sources used to evaluate the impacts associated with greenhouse gas (GHG) emissions are the same as presented above in Section 2.1.1 for criteria pollutant emissions.

3. AIR QUALITY

This section provides responses to the City of Roseville’s Environmental Checklist with respect to the proposed Costco 20-position vehicle refueling facility (VRF) for air quality issues. Discussion of each response is presented below the checklist.

3.1 Environmental Checklist

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

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
<i>a) Conflict with or obstruct implementation of the applicable air quality plan?</i>			X	
<i>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</i>			X	
<i>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)?</i>			X	
<i>d) Expose sensitive populations to substantial pollutant concentrations?</i>			X	
<i>e) Create objectionable odors affecting a substantial number of people?</i>			X	

3.2 Discussion of Checklist Answers

3.2.1 Issues a) and b)

The proposed project site is located within the boundaries of the Placer County Air Pollution Control District (PCAPCD), and is also located within the western Placer County portion of the Sacramento Valley Air Basin (SVAB). The SVAB is designated nonattainment for state and federal ozone standards, and is classified a federal “severe” nonattainment area. The SVAB is also designated nonattainment for the federal fine particulate matter standard (PM_{2.5}, 2.5 microns in diameter and smaller) and for the state inhalable particulate matter standard (PM₁₀, 10 microns in diameter and smaller).

Air Quality/Greenhouse Gas Analysis
 Costco Proposed Vehicle Refueling Facility

Air districts within the SVAB, including the PCAPCD, developed a 2009 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2009 Plan), to demonstrate how the region would meet the 1997 federal ozone standard by 2018. SVAB air districts approved the 2009 Plan in early 2009, and the plan was submitted to the California Air Resources Board (CARB) in February 2009. CARB adopted the 2009 Plan in March 2009, and submitted it to the U.S. Environmental Protection Agency (EPA) in April 2009. EPA has not yet approved the 2009 Plan.

In 2011, SVAB air districts revised the 2009 Plan to modify 20 control measures. The 2011 Revision was submitted to CARB in January 2012, but has not yet been submitted to EPA.

In 2013, SVAB air districts revised the 2009 Plan to update emissions data, review photochemical modeling results based on updated emissions data, update the reasonable further progress and attainment demonstrations, revise control measure adoption dates, and establish new motor vehicle emissions budgets for transportation conformity purposes. Based on the new data, the 2013 Revision confirmed that the region will meet the 1997 federal ozone standard by 2018. The 2013 Revision was submitted to CARB in November 2013.

In March 2008, EPA revised the federal 8-hour ozone standard, lowering it from 0.08 parts per million to 0.075 parts per million. The SVAB was classified as a “severe” nonattainment area for the 2008 8-hour ozone standard, with an attainment deadline of 2027. The EPA has not yet finalized its implementation rule for the 2008 ozone standard, but it is expected that a new attainment plan for the SVAB will be required in 2015.

To evaluate the impact of a proposed project with respect to ozone and other air pollutants, the PCAPCD recommends use of the following project-specific significance thresholds for emissions of reactive organic gases (ROG), nitrogen oxides (NOx), inhalable particulate matter (PM₁₀), and carbon monoxide (CO). Projects with emissions that do not exceed the thresholds presented in Table 2 are determined to have a less than significant impact on air quality implementation of air quality plans.

Table 2. Project-Specific Air Quality Significance Thresholds.

Project Component	Thresholds of Significance (pounds per day)			
	ROG	NOx	PM ₁₀	CO
Construction Emissions	82	82	82	550
Operation Emissions	82	82	82	550

Source: *CEQA Air Quality Handbook*, PCAPCD, October 2012, Table 2-1 (District Recommended Project-Level Thresholds of Significance), except for daily emission significance thresholds for CO which are based on discussions with PCAPCD staff.

Construction Emissions

As shown in Appendices A and C, construction of the proposed 20-position VRF is expected to result in short-term emissions associated with:

- Combustion emissions associated with operation of off-road equipment
- Combustion emissions associated with operation of on-road motor vehicles

Air Quality/Greenhouse Gas Analysis
 Costco Proposed Vehicle Refueling Facility

- Fugitive dust from earth-moving activities
- Off-gassing from asphalt paving and architectural coatings

Maximum daily emissions associated with project construction are shown in Table 3. Based on this information, project construction emissions are expected to have a less than significant impact on air quality and implementation of air quality plans.

Table 3. Maximum Daily Emissions Associated with Project Construction (pounds/day).

	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	13.53	20.89	15.89	0.03	1.77	1.33
PCAPCD Project-Specific Criteria Pollutant Significance Threshold	82	82	550	--	82	--
Significant?	No	No	No	N/A	No	N/A

Source: Appendix A. "N/A" means not applicable.

Emissions from Project Operation

As shown in Appendices A and C, operation of the proposed 20-position VRF is expected to result in increased emissions associated with:

- ROG emissions associated with fuel dispensing
- Combustion emissions associated with operation of on-road motor vehicles
- Emissions from "area sources", including architectural coatings, use of consumer products, and landscape maintenance
- Emissions associated with energy use, notably assumed use of natural gas

Maximum daily emissions increases associated with operation of the proposed 20-position VRF (as compared to the existing 12-position VRF) are shown in Table 4. Based on this information, emissions associated with operation of the proposed 20-position VRF are expected to have a less than significant impact on air quality and implementation of air quality plans.

Table 4. Maximum Daily Emissions Increases Associated with Project Operation (pounds/day).

	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Daily Emissions Increase	40.50	20.54	91.95	0.18	12.36	3.46
PCAPCD Project-Specific Criteria Pollutant Significance Threshold	82	82	550	--	82	--
Significant?	No	No	No	N/A	No	N/A

Source: Appendix A. "N/A" means not applicable.

Air Quality/Greenhouse Gas Analysis
Costco Proposed Vehicle Refueling Facility

Because emissions associated with project construction and emission increases associated with operation of the proposed 20-position VRF are expected to have a less than significant impact on air quality and implementation of air quality plans within the regions, it can be concluded that:

- The project will have a less than significant impact with respect to conflicting with or obstructing implementation of the applicable air quality plan.
- The project will have a less than significant impact with respect to violating any air quality standard or contributing substantially to an existing or projected air quality violation.

Potential Carbon Monoxide "Hot Spots"

The PCAPCD's *CEQA Air Quality Handbook* (Section 4.3) recommends a screening analysis be conducted to determine whether traffic associated with a proposed project potentially would cause a carbon monoxide (CO) "hot spot" at an impacted intersection. Based on the recommended approach, a project could result in a localized exceedance of federal or state CO standards (or "hot spot") if either of the following screening criteria is true:

- A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., LOS E or F); or
- A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.

If either of the above screening criteria is true, the PCAPCD recommends that a refined dispersion modeling analysis be conducted to determine local CO concentrations associated with vehicle traffic.

Based on analysis of data from the Kimley-Horn Traffic Study prepared for the proposed project (documented in Appendix A):

- All intersections in the project vicinity other than Stanford Ranch Road at Five Star Boulevard are projected to be at LOS D or below with the proposed project during both weekday and Saturday peak hours. Therefore, carbon monoxide impacts in the vicinity of these seven intersections are expected to be less than significant.
- The intersection of Stanford Ranch Road and Five Star Boulevard currently operates at LOS C during the weekday peak hour and is expected to remain at LOS with the proposed project. During the Saturday peak hour, the intersection currently operates at LOS E and is expected to remain at LOS E, with an estimated increased Saturday peak hour delay of 3.4 seconds. Since this intersection operates at LOS C during the weekday peak hour and the estimated increased delay during the Saturday peak hours falls below the 10 seconds "substantially worsen" threshold, carbon monoxide impacts in the vicinity of this intersection are also expected to be less than significant.

Air Quality/Greenhouse Gas Analysis
Costco Proposed Vehicle Refueling Facility

3.2.2 Issue c)

With respect to cumulative air quality impacts, the proposed project can be evaluated as both a land use project and as a permitted stationary source. Evaluation of potential cumulative air quality impacts with respect to each perspective is presented below.

Proposed Project as a Land Use Project

The PCAPCD *CEQA Air Quality Handbook* recommends cumulative criteria pollutant significance thresholds of 10 pounds per day for ROG and NO_x (each) for land use projects. The City of Roseville, as lead agency under CEQA, has determined that a two-tier criteria pollutant cumulative analysis approach, similar to that adopted by the Sacramento Metropolitan Air Quality Management District is appropriate for land use projects. Under the City's approach, if a proposed land use project is determined to have a less than significant project-level impact for a pollutant (or precursor) for which the region is designated nonattainment, the project will be determined to have a less than significant cumulative impact for that pollutant or precursor. Since the City of Roseville is located within the Sacramento Valley Air Basin, which is designated nonattainment for both the federal and California ozone standards, a land use project is determined to have a less than significant cumulative impact if ozone precursor emissions (ROG and NO_x) do not exceed the project-level significance thresholds of 82 pounds per day.

Should project ROG or NO_x emissions exceed the project-level significance thresholds, a Tier 2 evaluation is required to determine whether the project is consistent with the adopted State Implementation Plan (SIP) in accordance with CEQA Guidelines Section 15064(h)(3). Under the Tier 2 analysis, if a project is found to be consistent with the SIP and would not conflict with the SIP emissions budget, it will be determined to have a less than significant cumulative impact.

As demonstrated in Section 3.2.1, ROG and NO_x emission increases associated with the proposed 20-position VRF will not exceed the project-level significance thresholds of 82 pounds per day (Tier 1). Therefore, the proposed project is determined to have a less than significant cumulative impact on air quality, and a Tier 2 analysis is not required.

Proposed Project as a Permitted Stationary Source Project

Since the proposed project encompasses gasoline storage and dispensing equipment, the project is considered a stationary source subject to the PCAPCD's permit authority, primarily under provisions of Rules 501 (General Permit Requirements) and 502 (New Source Review). The PCAPCD's stationary source permitting program, along with enforcement of prohibitory rules under Regulation 2 (Prohibitions), ensures that stationary sources are permitted and operate in compliance with the federal and California Clean Air Acts and adopted regional air quality plans, discussed above. District review of new and modified sources under Rule 502 therefore ensures that permitted stationary sources will have a less than significant cumulative impact on air quality.

Rule 502 Section 303 (Offset Requirements) requires emissions from new and modified stationary sources to be "offset" by corresponding on- or off-site emission reductions if emissions exceed specified thresholds. For reactive organic gas (ROG) emissions, the thresholds are 5,000 pounds per quarter or 10 tons per year. As demonstrated in Appendix A, the total ROG emissions associated with vehicle gasoline dispensing (assuming 20 million gallons of gasoline dispensed per year) is estimated to be 5.94 tons per year, or 32.55 pounds

Air Quality/Greenhouse Gas Analysis
Costco Proposed Vehicle Refueling Facility

per day (equivalent to 2,970 pounds per quarter). Since ROG from vehicle gasoline dispensing does not exceed the Section 303 offset threshold, emission offsets will not be required.

Rule 502 Section 302 (Requirement to Install Best Available Control Technology) requires that Best Available Control Technology (BACT) be installed on new or modified emissions units if total emissions from the emissions unit exceed specified thresholds. For ROG emissions, the threshold is 10 pounds per day. Since ROG emissions from gasoline storage and dispensing will exceed this threshold, BACT will be required. For gasoline storage and dispensing, BACT is considered Phase I/Phase II vapor recovery systems as required by the California Air Resources Board. Costco proposes to install a compliant Phase I/Phase II vapor recovery system as part of its gasoline storage and dispensing operation. The permit issued by the PCAPCD also will require installation and operation of compliant Phase I/Phase II vapor recovery equipment.

Considering the proposed project as a permitted stationary source project, implementation of PCAPCD rules, as discussed above will ensure that the proposed project will have a less than significant cumulative impact on air quality.

3.2.3 Issue d)

Toxic Air Contaminants (TACs) are air contaminants not included in federal or state ambient air quality standards, but are considered hazardous to human health. TACs are defined by the California Air Resources Board (CARB) as those pollutants that “may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health”.

The health effects associated with TACs are generally assessed locally rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage. TACs can also cause short-term acute effects such as eye watering, respiratory irritation, running nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and the cancer risk is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. On the other hand, non-carcinogens are assigned “reference exposure levels” (RELs). An REL is an airborne concentration of a chemical that is not anticipated to present a significant risk of an adverse non-cancer health effect.

TACs are primarily regulated through state and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA). As part of its jurisdiction under the Air Toxics Hot Spots Program (Health and Safety Code Section 44360(b) (2)), OEHHA derives cancer potencies and RELs for individual air contaminants based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children and other sensitive sub-populations.

To evaluate the health risks associated with a proposed project, the PCAPCD recommends use of the following significance thresholds:

- Cancer risk: increased cancer risk of 10/million
- Non-cancer risks: increased hazard index of 1

Air Quality/Greenhouse Gas Analysis
 Costco Proposed Vehicle Refueling Facility

Projects with cancer and non-cancer risks that do not exceed the above thresholds are determined to pose a less than significant impact on health risk.

As indicated previously, ALG used the health risk screening approach described in the *CAPCOA Air Toxics "Hot Spots" Program Gasoline Service Station Industrywide Risk Assessment Guidelines* (November 1997, updated November 2001). ALG's health risk screening analysis (presented in Appendix B) for the proposed 20-position VRF is summarized in Table 5. Based on this information, operation of the proposed 20-position VRF is expected to have a less than significant impact with respect to off-site health risks.

Table 5. Increased Health Risks Associated with Project Operation.

Receptor	Increased Cancer Risk (per million)	Increased Non-Cancer Risk (hazard index)
Nearest Residence	8.0	0.0045
Nearest Off-site Workplace	7.8	0.021
PCAPCD Health Risk Significance Threshold	10	1
Significant?	No	No

Source: Appendix B.

3.2.4 Issue e)

According to CARB's *Air Quality and Land Use Handbook*,⁷ the types of facilities that cause odor complaints are varied and range from small commercial facilities to large industrial facilities. Odor-producing facilities odors can include:

- Sewage treatment plants
- Landfills
- Recycling facilities
- Waste transfer Stations
- Petroleum refineries
- Biomass operations
- Auto body shops
- Coating operations
- Fiberglass manufacturing
- Foundries

⁷ *Air Quality and Land Use Handbook: A Community Health Perspective*, California Air Resources Board, April 2005, available at www.arb.ca.gov/ch/landuse.htm (accessed January 3, 2013).

Air Quality/Greenhouse Gas Analysis
Costco Proposed Vehicle Refueling Facility

- Rendering plants
- Livestock operations

Common odorous materials emitted by facilities include sulfur compounds, organic solvents, and decomposition/digestion of biological materials.

Vehicle refueling facilities (VRFs) are not typically significant sources of off-site odor impacts since underground gasoline storage tanks and gasoline dispensing equipment are required to be certified by the California Air Resources Board to minimize release of gasoline vapors. Furthermore, VRF operators are required to comply with local air district and CARB testing requirements, and comply with local air district maintenance and repair requirements. For the proposed 20-position VRF, Costco will be required to comply with CARB certification requirements for Phase I/Phase II gasoline vapor recovery, and with PCAPCD Rules 213 (Gasoline Transfer Into Stationary Storage Containers) and 214 (Transfer Of Gasoline Into Vehicle Fuel Tanks). Diesel storage and dispensing at the facility is not anticipated to result in odor impacts, since diesel storage and dispensing emissions are 20 times lower than gasoline storage and dispensing emissions controlled by Phase I/Phase II vapor recovery.⁸

Compliance with the above existing requirements is expected to minimize VRF vapor emissions to the extent feasible. Therefore, the odor impacts associated with the proposed 20-position VRF are expected to be less than significant.

⁸ Per *Guidelines and Examples for Manual Data Input of Liquid Storage Tanks*, South Coast Air Quality Management District, December 2011, diesel storage and dispensing has an emission factor of 0.028 pound total organic gases per thousand gallons, compared to the gasoline storage and dispensing emission factor of 0.594 pound per thousand gallons, presented in Table 1.

4. GREENHOUSE GAS EMISSIONS

This section provides responses to the City of Roseville’s Environmental Checklist with respect to the proposed Costco 20-position vehicle refueling facility (VRF) for greenhouse gas (GHG) emissions. Discussion of each response is presented below the checklist.

4.1 Environmental Checklist

Would the project:

<i>Environmental Issue</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<i>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</i>			X	
<i>b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i>			X	

4.2 Discussion of Checklist Answers

4.2.1 Issues a) and b)

In September 2006, Governor Schwarzenegger signed Assembly Bill (AB) 32, the California Climate Solutions Act of 2006 (California Health and Safety Code, sec. 38500 et seq.). AB 32 requires statewide GHG emissions to be reduced to 1990 levels by the year 2020. Authority for implementation of AB 32 was delegated to the California Air Resources Board (CARB). In December 2008, CARB approved the 2008 Climate Change Scoping Plan, describing actions California will take to reduce the state’s GHG emissions. Based on the 2008 Scoping Plan, a 29 percent reduction in GHG levels from the state’s 2020 projected “Business As Usual” emissions will be required to meet the adopted 2020 GHG emissions target of 427 million metric tons (MMT) of carbon dioxide equivalents (CO₂e) per year.

In 2011, CARB revised the state’s 2020 projected “Business as Usual” emissions to account for the economic downturn, and lowered the 2020 projected “Business as Usual” GHG emissions forecast to 545 MMT CO₂e per year. Given the adopted 2020 GHG emissions target of 427 MMT CO₂e, GHG emissions need to be reduced by 21.7 percent from “Business as Usual” to reach California’s GHG emission goals.

It should be noted that the updated 2020 projected “Business as Usual” forecast of 545 MMT CO₂e does not account for two adopted programs: the Pavley Clean Car Standards (an additional 26 MMT CO₂e reduction) or the 20% Renewable Portfolio Standard (an additional 12 MMT CO₂e reduction). Together, these two measures further reduce the 2020 projected “Business as Usual” GHG forecast to 507 MMT CO₂e. This means that GHG emissions actually

Air Quality/Greenhouse Gas Analysis
 Costco Proposed Vehicle Refueling Facility

need to be reduced less as a result of adopted regulatory programs (by 15.8 percent from “Business as Usual”) to reach California’s GHG emission goals.⁹

The PCAPCD *CEQA Air Quality Handbook* does not recommend any specific threshold for determining the significance of greenhouse gas emissions. However, PCAPCD staff recommends that the threshold for determining significance for GHG emissions be based on an evaluation of a project’s compliance with Assembly Bill 32 (California Climate Solutions Act of 2006). More specifically, the PCAPCD recommends that a project be determined to have a significant cumulative impact on global climate change if its 2020 GHG emissions will not be reduced by 21.7 percent as compared to 2020 “Business as Usual” emissions (based on 2010 emission factors). The City of Roseville recently used a similar approach as recommended by PCAPCD staff in the Initial Study/Mitigated Negative Declaration for the NCRSP PCL 46 Pearl Creek Apartments Project.

Construction Emissions

Even though evaluation of GHG emissions associated with project construction is not required under the PCAPCD approach, these short-term emissions are summarized in Table 6.

Table 6. Total GHG Emissions Associated with Project Construction (metric tons).

	Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	Carbon Dioxide Equivalents (CO ₂ e)
GHG Emissions	73.7	0.018	--	74.1

Source: Appendix A. “--” means value estimated to be 0.

Emissions from Project Operation

Annual GHG emissions increases associated with operation of the proposed 20-position VRF (as compared to the existing 12-position VRF), assuming peak emissions in the first full year of operation in 2015, are summarized in Table 7.

Table 7. Annual GHG Emissions Increases Associated with Project Operation in 2015 (metric tons).

	CO ₂	CH ₄	N ₂ O	CO ₂ e
GHG Emissions	2,446.0	0.152	0.000	2,449.2

Source: Appendix A.

As stated above, the PCAPCD recommends that GHG emissions from proposed projects be evaluated based on a comparison of the project’s 2020 “Business as Usual” GHG emissions (based on 2010 emission factors) as compared to the project’s actual estimated 2020 GHG emissions (based on 2020 emission factors). This comparison, based on calculations documented in Appendix A, is presented in Table 8, below.

⁹ See *Status of Scoping Plan Recommended Measures*, California Air Resources Board, (July 2011), available at www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf. Note also that the *First Update to the Climate Change Scoping Plan*, approved by the California Air Resources Board on May 22, 2014, shows that GHG emissions need to be reduced by 15.3 percent from the Plan’s updated “Business as Usual” GHG forecast for 2020. See Table 5 of the *First Update* document (available at www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm) at page 93.

Air Quality/Greenhouse Gas Analysis
 Costco Proposed Vehicle Refueling Facility

Table 8. Assessment of Project Greenhouse Gas Emissions Impacts (metric tons).

	CO ₂	CH ₄	N ₂ O	CO ₂ e
2020 "Business as Usual" Project GHG Emissions (assuming 2010 emission factors)	2,895.7	0.309	0.000	2,902.3
2020 Estimated Project GHG Emissions (assuming 2020 emission factors)	2,229.9	0.212	0.000	2,234.4
2020 Estimated Project GHG Emission Reductions Compared to "Business as Usual"	665.8	0.097	--	667.9
2020 Estimated Project GHG Emissions Percent Reduction from "Business as Usual"	23.0%			
PCAPCD Recommended GHG Significance Threshold (percent reduction from "Business as Usual")	21.7%			
Significant?	No			

Source: Appendix A. "--" means value estimated to be 0.

The proposed 20-position VRF is projected to meet the PCAPCD recommended significance threshold of demonstrating a 21.7% or greater reduction in GHG emissions in 2020, as compared to "Business as Usual." Therefore, the project is expected to have a less than significant impact on global climate change.

Appendices A – E to the Air Quality & Greenhouse Gas study
are available for review in the Planning Division

Traffic Study

**Costco Wholesale
Fueling Station Addition
Roseville, California**

April 7, 2014

Prepared for:



Prepared by:



11919 Foundation Place, Suite 200
Gold River, California 95670

Phone: (916) 858-5800
Fax: (916) 608-0885



EXECUTIVE SUMMARY

This report documents the results of a traffic study completed for the Costco Wholesale fueling station addition project in Roseville, California (the “project”). The existing Costco Wholesale located in the southwest corner of the Stanford Ranch Road intersection with Five Star Boulevard is proposing to convert the adjacent, operational Shell Gas Station to a Costco branded fueling station. The proposed project includes several offsite and access modifications with the closure of two existing Five Star Boulevard site driveways and the addition of a southbound right-turn lane at the existing Stanford Ranch Road driveway as the primary elements. The primary focus of this evaluation is the access, circulation, and queuing associated with the proposed fueling station expansion. This evaluation also includes the effect of the proposed onsite changes on offsite traffic operations in the vicinity of the project site.

An initial traffic study has been prepared (by others) for the proposed project. This previous study utilizes information contained in a database of unique traffic data and travel characteristics for Costco Wholesale including trip rates, trip type percentages, and parking demand for their locations in the United States, Canada, and Mexico. The study generates project trips and assesses on-site vehicle queuing (with the addition of the fuel station) using this Costco Wholesale database. This trip data has been reviewed and compared against ITE data. The comparison confirmed that the ITE data yields lower trip counts than the Costco Wholesale data provided. After consultation with the City and the author of the initial traffic study, the appropriately conservative, anticipated trip generation characteristics for the proposed project are depicted in **Table ES-1**.

Table ES-1 – Proposed Project Trip Generation

Costco Warehouse Fueling Station (20 fueling positions)	Weekday PM Peak-Hour	Saturday Midday Peak- Hour
Total Trip Ends	431	457
Internal Trip Reduction (Weekday, Saturday) 34% 35%	-147	-160
Subtotal External Trips	284	297
Pass-by Trip Reduction (Weekday, Saturday) 37% 33%	-105	-98
Total Costco Trips	179	199
Existing Shell Station Trips	-80	-105
Net New External Costco Trips:	100	95
Source: <i>Technical Memorandum - Roseville Costco Gasoline Fuel Station Addition</i> , Kittelson & Associates, Inc., August 26, 2013.		

As shown in **Table ES-1**, the proposed project is estimated to generate 100 new weekday PM peak-hour trips, and 95 new Saturday midday peak-hour trips.

The following intersections are included in this evaluation:

1. Stanford Ranch Road @ Fairway Drive
2. Stanford Ranch Road @ Five Star Boulevard
3. Stanford Ranch Road @ SR-65 NB Ramps
4. Galleria Boulevard @ SR-65 SB Ramps
5. Fairway Drive @ Five Star Boulevard
6. *Five Star Boulevard @ Western Site Driveway**
7. *Five Star Boulevard @ Main Site Driveway**
8. *Five Star Boulevard @ Eastern Site Driveway* (eliminated with project)*

* Privately owned and maintained intersection. However, included in this study due to potential effect at this location on adjacent City-owned intersection(s).

Consistent with methodology approved by the City, Levels of Service were determined using the SimTraffic® traffic analysis software. SimTraffic® is a microsimulation tool that is useful for analyzing complex situations such as closely spaced intersections and the effects of signals on nearby unsignalized intersections and driveways. Two SimTraffic® networks were obtained from the City, one for Stanford Ranch Road, and one for Fairway Drive. These networks were used as the basis for the analyses documented in this report. SimTraffic® Measures of Effectiveness (MOEs) were compared against the Highway Capacity Manual (HCM) intersection delay thresholds to equate the SimTraffic® results to HCM LOS.

Although the proposed project is consistent with the City's *General Plan* (and the project's long term traffic impact is already accounted for through the City's Capital Improvement Program), because the proposed project is anticipated to have a net increase in project site traffic, the effect of this additional traffic is evaluated to ensure the surrounding transportation facilities operate at acceptable levels. Per the City's direction and consistent with the City's guidelines, a "Short-Term" traffic study was performed to identify the project's effect on the external roadway network under existing conditions and to evaluate site access and operations. A short-term traffic analysis was conducted for the weekday PM peak-hour and weekend peak-hour for the following scenarios:

- A. Existing (2013) Conditions
- B. Existing (2013) plus Proposed Project Conditions

The addition of the proposed project does not result in a significant impact at a City-owned and maintained intersection. As such, no mitigations are required to satisfy the City's Level of Service standard.

Site visits were completed during Saturday peak-period conditions at the existing Costco Wholesale in Roseville and at the Folsom, California Costco Wholesale site. The Folsom store has an existing, operational 16 position fueling station. Observations at both locations were used to develop recommendations for operational and circulation improvements.

Based on the analyses documented in this report and the supporting information provided by the project applicant, the proposed project is not anticipated to result in significant offsite level of service (LOS) impacts or adversely affect on-site operations. However, recognizing the likely public perception of both the existing traffic conditions in the vicinity of the proposed project site and the effect of the proposed fueling station addition on these conditions, additional consideration has been given to applicable strategies to ensure operating conditions that are at least the same, if not better than existing conditions. Accordingly, the following strategies are proposed:

- **Require 2nd Fueling Station Attendant for First 90-Days of Operation**
At the time of this study, the project applicant has communicated a late-October/early-November completion date for the proposed project. We further understand that the standard operations at Costco Wholesale Fueling Stations is to have one attendant onsite at all times the fueling station is open. As a strategy to address public perception and to protect against the possible adverse on-site operations, and considering the opening date's proximity to the holiday season, an additional fueling station attendant should be provided for at least the station's first 90-days of operation. This additional attendant would be required to be present at all times when both the fueling station and Costco Wholesale are open to the general public. In conjunction with the other attendance, this additional attendant would be responsible for guiding and directing entering vehicles to improve the efficiency of fueling operations, to maximize the utilization of all fueling pumps, and to guard against queuing that has the potential

of affecting the operations of the Stanford Ranch Road driveway. In the event of queuing that results in an obstruction along the entrance lanes of this driveway, the attendant should be instructed to direct vehicles past the fueling station.

▪ **Require an “After Study” After 90-Days of Operation**

An “After” study should be performed (by others) to document the actual operational parameters of the fueling station. The project applicant should collect this “after” data following the completion of the first 90-days of operation and provide the information to the City. This after study should, at a minimum, include the following data:

- weekday PM peak-hour average and maximum observed vehicle queues
- Saturday peak-hour average and maximum observed vehicle queues
- Summary of site observations and attendant activities
- Summary of conflicts observed in the vicinity of the site’s Stanford Ranch Road driveway

As deemed appropriate by the City based on the outcome of these two strategies, the City should consider the following as an additional/alternate mitigation strategy:

▪ **Relocate the Stanford Ranch Road Driveway to the South**

Relocating the existing driveway to the south would expand the proposed fueling station queuing and staging area in an effort to contain the fueling operation within the designated area. This additional space would be anticipated to minimize the likelihood of onsite queuing adversely affecting offsite operations along Stanford Ranch Road. The exact location of this relocated driveway would need to be determined by the project applicant.

- It is acknowledged that relocation of this driveway as far south as the main east-west drive aisle may have the undesirable effect of promoting “cut-through” traffic through the congested main customer entrance area of Costco Wholesale.
- It is also acknowledged that relocation of this driveway would adversely impact onsite parking by eliminating approximately 30 additional parking stalls. According to information provided by the project applicant¹, the project site currently has 695 parking stalls with the addition of the proposed project already resulting in a net reduction of 14 stalls. The loss of an additional 30 stalls would bring the onsite supply to 651 stalls. Using information contained in the initial traffic study prepared (by others) for the proposed project, even when an additional 54 “shared” parking spaces are incorporated, the site currently operates with a peak utilization of 85 percent. The 14 stall reduction with the proposed project is already anticipated to increase the peak utilization to 87 percent. Reducing the supply an additional 30 stalls with the relocation of the Stanford Ranch Road driveway to the south would further increase the peak utilization to 90 percent. Parking utilization approaching 90 percent is understood to signify a site operating at capacity. Considering the documented and observed traffic congestion both onsite and in the vicinity of the project site, this additional loss of parking supply (30 stalls) is not desirable.

TABLE OF CONTENTS

INTRODUCTION..... 1

PROJECT DESCRIPTION 1

PROJECT AREA ROADWAYS 1

ASSESSMENT OF PROPOSED PROJECT 3

 Proposed Project Trip Generation..... 3

 Proposed Project Trip Distribution and Assignment 3

TRAFFIC ANALYSIS METHODOLOGY..... 4

EXISTING (2013) CONDITIONS..... 6

EXISTING (2013) PLUS PROJECT CONDITIONS..... 8

IMPACTS AND MITIGATION10

 Standards of Significance 10

 Impacts and Mitigation 10

OTHER CONSIDERATIONS.....10

 Site Observations 10

 Site Access 11

 Fueling Station Operations..... 12

CONCLUSIONS13

APPENDICES

Kittelson & Associates, Inc. Technical Memorandum Appendix A

Traffic Count Data Sheets Appendix B

Analysis Worksheets for Existing (2013) Conditions Appendix C

Analysis Worksheets for Existing (2013) plus Proposed Project Conditions..... Appendix D

LIST OF TABLES

Table 1 – Proposed Project Trip Generation..... 3

Table 2 – Intersection Level of Service Criteria..... 4

Table 3 – Existing (2013) Intersection Levels of Service 6

Table 4 – Existing (2013) and Existing (2013) plus Proposed Project Intersection Levels of Service..... 8

LIST OF FIGURES

Figure 1 – Proposed Project Site Plan 2

Figure 2 – Study Intersections and Trip Distribution/Assignment 5

Figure 3 – Existing (2013) Peak-Hour Traffic Volumes 7

Figure 4 – Existing (2013) plus Proposed Project Peak-Hour Traffic Volumes..... 9

INTRODUCTION

This report documents the results of a traffic study completed for the Costco Wholesale fueling station addition project in Roseville, California (the “project”). The existing Costco Wholesale located in the southwest corner of the Stanford Ranch Road intersection with Five Star Boulevard is proposing to convert the adjacent, operational Shell Gas Station to a Costco branded fueling station. The purpose of this study is to evaluate near-term traffic conditions including local circulation, vehicle queuing, and potential impacts to local intersections, and a review of the proposed project’s anticipated onsite operations. The primary focus of this evaluation is the access, circulation, and queuing associated with the proposed fueling station expansion. This evaluation also includes the effect of the proposed onsite changes on offsite traffic operations in the vicinity of the project site. This study was performed in accordance with the Scope of Services approved by the City.

PROJECT DESCRIPTION

The project proposes to convert and expand the adjacent, operational Shell Gas Station to a Costco branded fueling station. The proposed project includes the following offsite and access modifications:

- Closure of two existing Five Star Boulevard site driveways in the immediate vicinity of the existing Shell Gas Station
- Extension by approximately 50-feet of the eastbound Five Star Boulevard left-turn pocket at Stanford Ranch Road
- Reconfiguration of the Five Star Boulevard median to a two-way left-turn lane east of the main site access driveway
- Addition of a narrow median island and minor widening at the main site driveway along Five Star Boulevard to improve the throat depth thereby restricting left-turns to and from the first parking aisle.
- Installation of “KEEP CLEAR” pavement markings along eastbound Five Star Boulevard at the main site access driveway
- Addition of a southbound right-turn lane at the existing Stanford Ranch Road driveway
- Addition of a dedicated right-turn lane to access the fueling station along the entrance lanes at the existing Stanford Ranch Road driveway

Upon completion, primary access to the site will be provided via two driveways along Five Star Boulevard, and one right-in/right-out driveway along Stanford Ranch Road. The proposed project location and site plan are depicted in **Figure 1**.

PROJECT AREA ROADWAYS

State Route 65 (SR-65) is a north-south freeway facility located south of the project site. SR-65 links the project area with Interstate 80 (I-80) to the south and the Cities of Rocklin and Lincoln to the north. Primary access to the project site is provided at the Stanford Ranch Road/Galleria Boulevard interchange. Although SR-65 is generally a four-lane divided facility, south of Stanford Ranch Road/Galleria Boulevard the roadway has three southbound lanes and two northbound lanes.

Stanford Ranch Road is a north-south arterial that borders the project site on the east. South of SR-65 the roadway changes names to **Galleria Boulevard**. Through the project area, this roadway generally has three travel lanes in each direction with numerous signalized intersections.

Fairway Drive is an east-west minor arterial that generally parallels SR-65 from Stanford Ranch Road north to the Rocklin City limits. This roadway has two travel lanes in each direction and provides direct access to numerous commercial and high density residential developments.

PROJECT DATA

CLIENT:
 COSTCO WHOLESALE
 895 LAKE DRIVE
 ISSAQUAH, WA 98027
 6720 STANFORD RANCH RD /
 6730 STANFORD RANCH RD
 ROSEVILLE, CA 95678

PROJECT ADDRESS:
 SC/SAN - GENERAL COMMERCIAL /
 SPECIAL AREA - NORTH CENTRAL
 12.88 ACRES (661,001 S.F.)

ZONING:
 1.52 ACRES (66,267 S.F.)

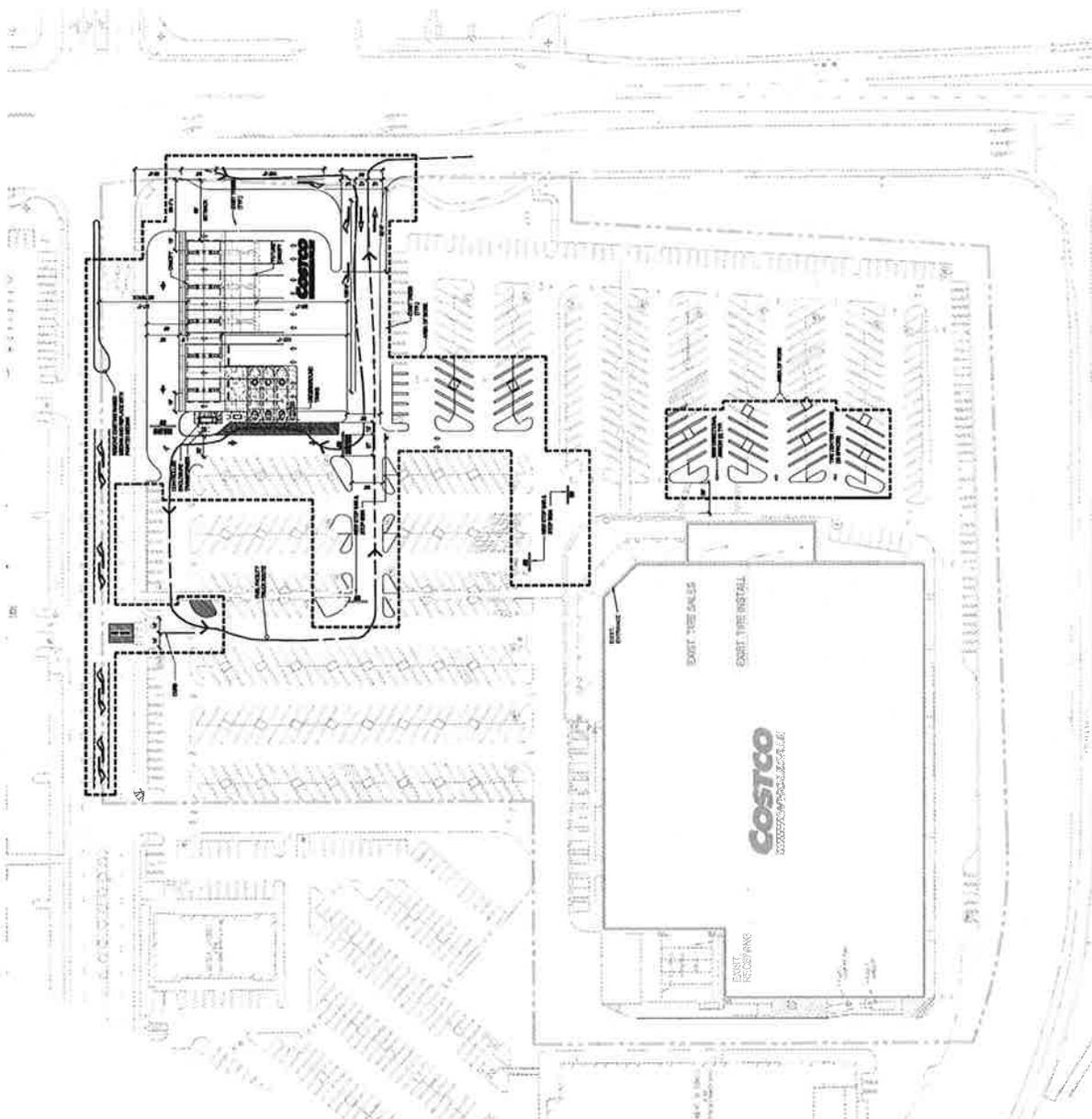
**EXISTING WAREHOUSE
 SITE AREA:**
 CITY OF ROSEVILLE, CA
 60' FRONT, SIDE, & REAR

STATION SITE AREA:
 THIS PLAN HAS BEEN
 PREPARED BY USDC & KIER
 & WRIGHT SITE PLAN DATED
 8.22.13.

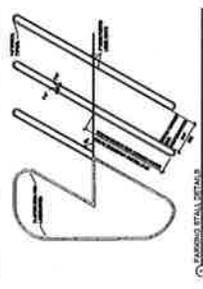
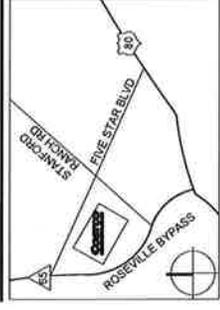
EXIST. BUILDING DATA:
 EXIST. BUILDING AREA 131,754 S.F.
 EXIST. TIRE CENTER 5,200 S.F.
 TOTAL EXIST. BUILDING 136,954 S.F.
 TOTAL REQUIRED PARKING:
 1 STALL PER 200SF 685 STALLS

PARKING DATA:
 EXISTING NO. OF STALLS PER 1000 S.F. 5.00 STALLS
 10' WIDE STALLS 550 STALLS
 9' WIDE STALLS 123 STALLS
 HANDICAP STALLS 22 STALLS
 EXIST. TOTAL PARKING 695 STALLS
 10' WIDE STALLS 540 STALLS
 9' WIDE STALLS 121 STALLS
 HANDICAP STALLS 20 STALLS
 PROPOSED TOTAL PARKING 681 STALLS
 NO. OF STALLS PER 1000 S.F. 4.96 STALLS
 NO. OF STALLS PER 300 S.F. 1.48 STALLS

NOTES:
 EXISTING CONDITIONS TO BE FIELD VERIFIED.



VICINITY MAP



CONCEPT SITE PLAN

APRIL 2, 2014

FIGURE 1- Proposed Project Site Plan



13-0321-01
 APRIL 2, 2014
 CONCEPT
 SITE PLAN

DD11-19

COSTCO WHOLESALE

ROSEVILLE, CALIFORNIA

Five Star Boulevard is a collector roadway that borders the project site on the north. Adjacent to the project site and within the City of Roseville, this is a private roadway owned by the surrounding commercial developments. Five Star Boulevard extends east of Stanford Ranch Road into the City of Rocklin. Primary site access is obtained from Five Star Boulevard west of Stanford Ranch Road.

ASSESSMENT OF PROPOSED PROJECT

Proposed Project Trip Generation

The number of trips anticipated to be generated by a proposed project are typically approximated using *Trip Generation Manual, 9th Edition* published by the Institute of Transportation Engineers (ITE). As deemed appropriate and allowable by the City, adjustments are typically then made to the proposed project’s trip generation to account for pass-by trips, diverted-link trips, alternate mode trips, and the interaction between project land uses. Project traffic is then typically distributed to the surrounding roadway network based on existing traffic volumes, output from the City’s travel demand model, or professional judgment.

An initial traffic study has been prepared (by others) for the proposed project¹ and is included in **Appendix A** to this report. This previous study utilizes information contained in a database of unique traffic data and travel characteristics for Costco Wholesale including trip rates, trip type percentages, and parking demand for their locations in the United States, Canada, and Mexico. The study generates project trips and assesses on-site vehicle queuing (with the addition of the fuel station) using this Costco Wholesale database. This trip data has been reviewed and compared against ITE data. The comparison confirmed that the ITE data yields lower trip counts than the Costco Wholesale data provided. After consultation with the City and the author of the initial traffic study, the appropriately conservative, anticipated trip generation characteristics for the proposed project are depicted in **Table 1**.

Table 1 – Proposed Project Trip Generation

Costco Warehouse Fueling Station (20 fueling positions)	Weekday PM Peak-Hour	Saturday Midday Peak- Hour
Total Trip Ends	431	457
Internal Trip Reduction (Weekday, Saturday) 34% 35%	-147	-160
Subtotal External Trips	284	297
Pass-by Trip Reduction (Weekday, Saturday) 37% 33%	-105	-98
Total Costco Trips	179	199
Existing Shell Station Trips	-80	-105
Net New External Costco Trips:	100	95

Source: *Technical Memorandum - Roseville Costco Gasoline Fuel Station Addition*, Kittelson & Associates, Inc., August 26, 2013.

As shown in **Table 1**, the proposed project is estimated to generate 100 new weekday PM peak-hour trips, and 95 new Saturday midday peak-hour trips.

Proposed Project Trip Distribution and Assignment

The distribution of project trips was based on existing traffic volumes, knowledge of local traffic patterns, and professional judgment. Accordingly, the following intersections are included in this evaluation:

¹ *Technical Memorandum - Roseville Costco Gasoline Fuel Station Addition*, Kittelson & Associates, Inc., August 26, 2013.

1. Stanford Ranch Road @ Fairway Drive
2. Stanford Ranch Road @ Five Star Boulevard
3. Stanford Ranch Road @ SR-65 NB Ramps
4. Galleria Boulevard @ SR-65 SB Ramps
5. Fairway Drive @ Five Star Boulevard
6. Five Star Boulevard @ Western Site Driveway⁺
7. Five Star Boulevard @ Main Site Driveway⁺
8. Five Star Boulevard @ Eastern Site Driveway⁺ (eliminated with project)

⁺ Privately owned and maintained intersection. However, included in this study due to potential effect at this location on adjacent City-owned intersection(s).

The project trip distribution percentages, as well as the resulting peak-hour traffic volumes attributed to the proposed project are illustrated in **Figure 2**. As discussed later in this document, the addition of the proposed project and the assignment of its trips results in the redistribution of inbound and outbound project site trips resulting from the change of access along Five Star Boulevard.

TRAFFIC ANALYSIS METHODOLOGY

Analysis of traffic operations at intersections is typically based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Intersection LOS for this study was determined using methods defined in the *Highway Capacity Manual, 2000* (HCM) and appropriate traffic analysis software.

The HCM includes procedures for analyzing side-street stop controlled (SSSC), all-way stop controlled (AWSC), and signalized intersections. These procedures define LOS as a function of average control delay. **Table 2** presents intersection LOS definitions as defined in the HCM.

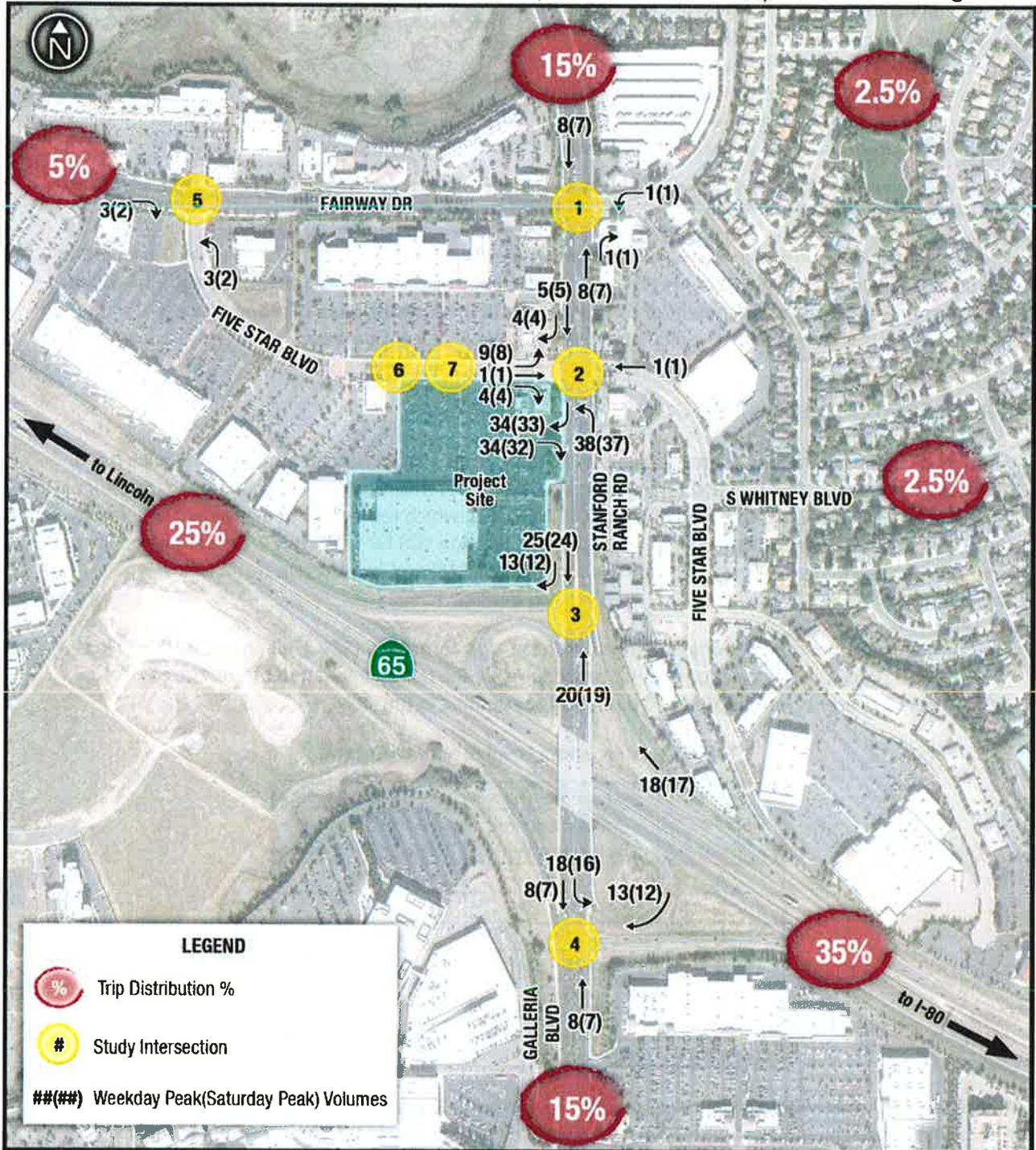
Table 2 – Intersection Level of Service Criteria

Level of Service (LOS)	Un-Signalized	Signalized
	Average Control Delay (sec/veh)	Control Delay per Vehicle (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F	> 50	> 80

Source: Highway Capacity Manual, 2000

Consistent with methodology approved by the City, Levels of Service were determined using the SimTraffic[®] traffic analysis software. SimTraffic[®] is a microsimulation tool that is useful for analyzing complex situations such as closely spaced intersections and the effects of signals on nearby unsignalized intersections and driveways. Two SimTraffic[®] networks were obtained from the City, one for Stanford Ranch Road, and one for Fairway Drive. These networks were used as the basis for the analyses documented in this report. SimTraffic[®] Measures of Effectiveness (MOEs) were compared against the HCM intersection delay thresholds (**Table 2**) to equate the SimTraffic[®] results to HCM LOS.

FIGURE 2 — Study Intersections and Trip Distribution/Assignment



Although the proposed project is consistent with the City's *General Plan* (and the project's long term traffic impact is already accounted for through the City's Capital Improvement Program), because the proposed project is anticipated to have a net increase in project site traffic, the effect of this additional traffic is evaluated to ensure the surrounding transportation facilities operate at acceptable levels. Per the City's direction and consistent with the City's guidelines², a "Short-Term" traffic study was performed to identify the project's effect on the external roadway network under existing conditions and to evaluate site access and operations. A short-term traffic analysis was conducted for the weekday PM peak-hour and weekend peak-hour for the following scenarios:

- A. Existing (2013) Conditions
- B. Existing (2013) plus Proposed Project Conditions

The following is a discussion of the analyses completed for these scenarios.

EXISTING (2013) CONDITIONS

New traffic data was collected for the eight study intersections in October 2013. Count data was obtained on a weekday between the hours of 4:00 p.m. and 7:00 p.m., and on a Saturday between the hours of 11:00 a.m. and 3:00 p.m. Traffic count data for the five signalized intersections (Study intersections #1-#5) were obtained from the City's central traffic control system. Three supplemental counts were performed manually for the study intersections along Five Star Boulevard. All eight data collection efforts were performed concurrently.

Existing (2013) peak-hour turn movement volumes are presented in **Figure 3**, and the traffic count data sheets are provided in **Appendix B**. **Table 3** presents the peak-hour intersection operating conditions for this analysis scenario.

Table 3 – Existing (2013) Intersection Levels of Service

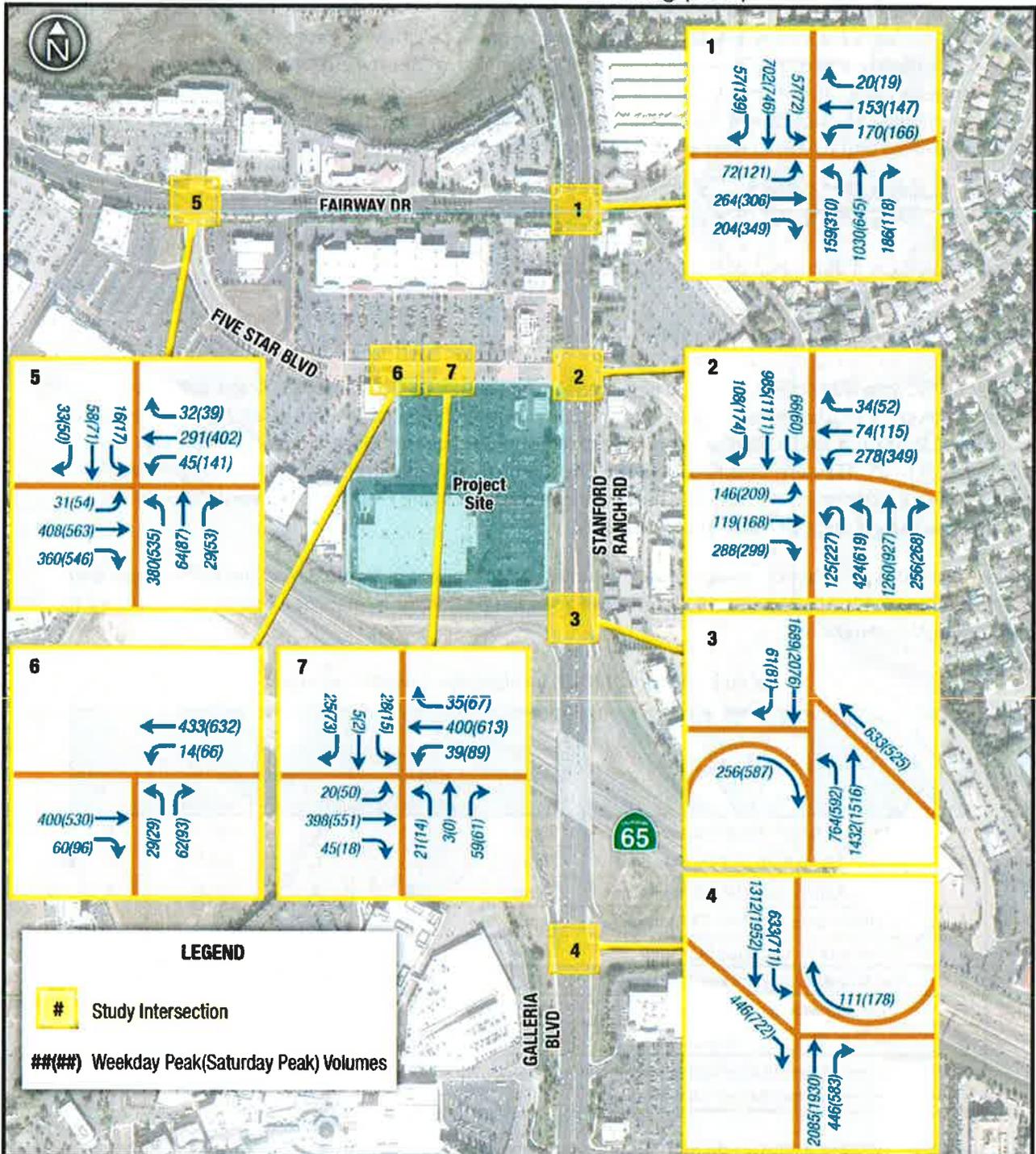
#	Intersection	Traffic Control	Weekday Peak-Hour		Saturday Peak-Hour	
			Delay* (seconds)	LOS	Delay* (seconds)	LOS
1	Stanford Ranch Rd @ Fairway Dr	Signal	25.1	C	36.7	D
2	Stanford Ranch Rd @ Five Star Blvd	Signal	33.4	C	60.5	E
3	Stanford Ranch Rd @ SR-65 NB Ramps	Signal	6.8	A	10.6	B
4	Galleria Blvd @ SR-65 SB Ramps	Signal	19.0	B	31.4	C
5	Fairway Blvd @ Five Star Blvd	Signal	14.3	B	18.1	B
6	Five Star Blvd @ Western Site Dwy [†]	SSSC	0.4 (5.8)	A (A)	14.7 (107.4)	B (F)
7	Five Star Blvd @ Main Site Dwy [†]	SSSC	1.3 (11.4)	A (B)	21.4 (286.8)	C (F)
8	Five Star Blvd @ Eastern Site Dwy [†]	SSSC	8.0 (57.2)	A (F)	34.8 (864.7)	D (F)

* SSSC presented as Overall Intersection (Worst Minor Approach Movement).
[†] Privately owned and maintained intersection.

As indicated in **Table 3**, the study intersections operate from LOS A to LOS F during the peak hours. Analysis worksheets for this scenario are provided in **Appendix C**.

² Section 4 Traffic Impact Studies, City of Roseville Design Standards, January 2013.

FIGURE 3 — Existing (2013) Peak-Hour Traffic Volumes



EXISTING (2013) PLUS PROJECT CONDITIONS

Peak-hour traffic associated with the proposed project was added to the existing traffic volumes and Levels of Service were determined at the study intersections. It is important to note that the addition of the project results in the closure of two existing Five Star Boulevard driveways (see **Figure 1**), one of which is a study intersection (#8). Due to these closures, site traffic (both inbound and outbound) has been manually reassigned to other driveways.

Table 4 provides a summary of the intersection analysis and **Figure 4** provides the peak-hour traffic volumes at the study intersections for this analysis scenario.

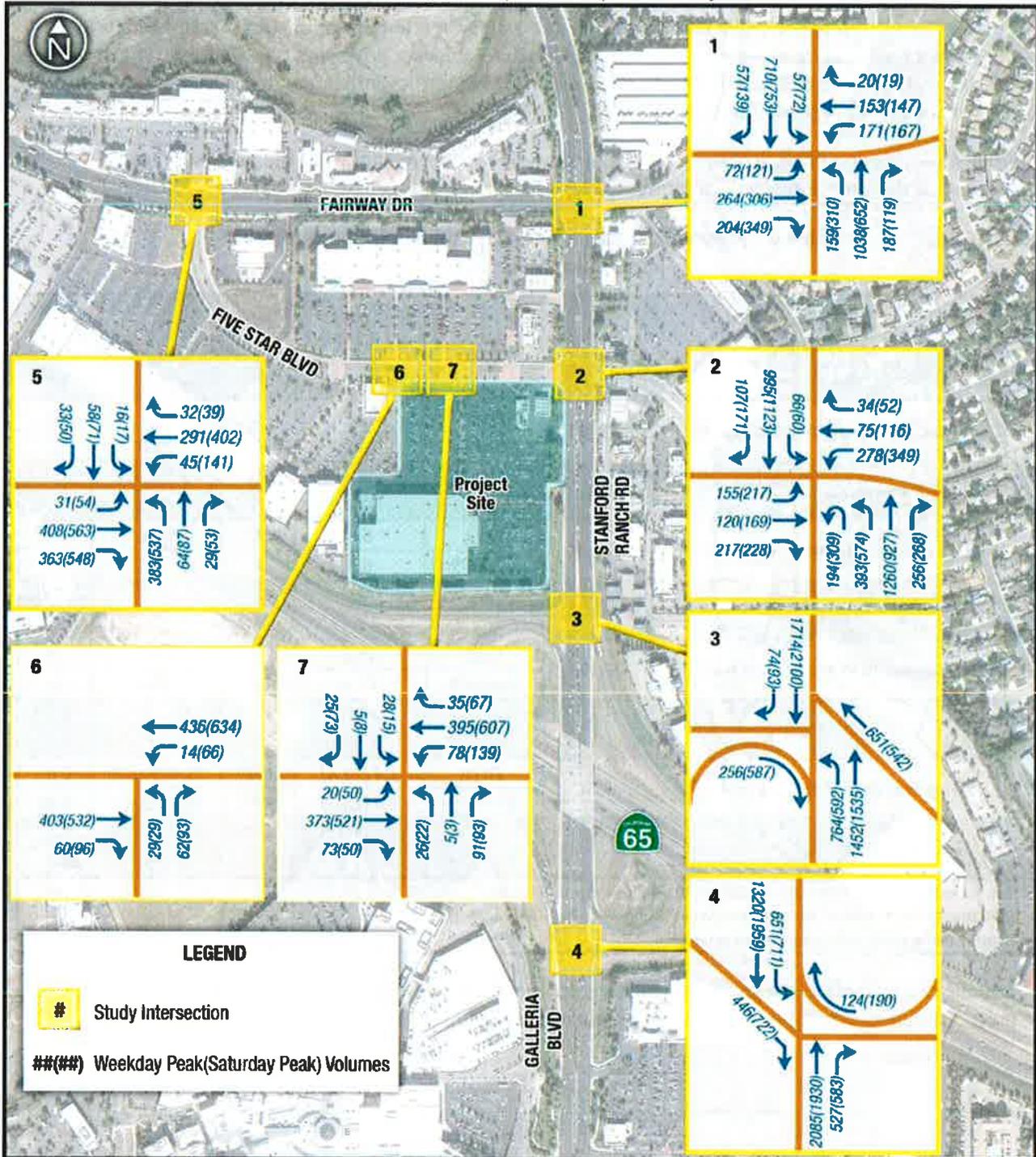
**Table 4 – Existing (2013) and Existing (2013) plus Proposed Project
Intersection Levels of Service**

#	Intersection	Traffic Control	Analysis Scenario*	Weekday Peak-Hour		Saturday Peak-Hour	
				Delay** (seconds)	LOS	Delay** (seconds)	LOS
1	Stanford Ranch Rd @ Fairway Dr	Signal	Exist	25.1	C	36.7	D
			Exist+PP	24.2	C	52.0	D
2	Stanford Ranch Rd @ Five Star Blvd	Signal	Exist	33.4	C	60.5	E
			Exist+PP	32.7	C	63.9	E
3	Stanford Ranch Rd @ SR-65 NB Ramps	Signal	Exist	6.8	A	10.6	B
			Exist+PP	6.9	A	10.4	B
4	Galleria Blvd @ SR-65 SB Ramps	Signal	Exist	19.0	B	31.4	C
			Exist+PP	17.9	B	23.5	C
5	Fairway Blvd @ Five Star Blvd	Signal	Exist	14.3	B	18.1	B
			Exist+PP	14.4	B	17.6	B
6	Five Star Blvd @ Western Site Dwy [†]	SSSC	Exist	0.4 (5.8)	A (A)	14.7 (107.4)	B (F)
			Exist+PP	0.4 (5.9)	A (A)	3.6 (19.4)	A (C)
7	Five Star Blvd @ Main Site Dwy [†]	SSSC	Exist	1.3 (11.4)	A (B)	21.4 (286.8)	C (F)
			Exist+PP	1.4 (15.3)	B (C)	11.3 (115.4)	B (F)
8	Five Star Blvd @ Eastern Site Dwy [†]	SSSC	Exist	8.0 (57.2)	A (F)	34.8 (864.7)	D (F)
			Exist+PP	Eliminated with project			

* Exist. = Existing (2013), Exist.+PP = Existing (2013) plus Proposed Project
 ** SSSC presented as Overall Intersection (Worst Minor Approach Movement).
 † Privately owned and maintained intersection.

As indicated in **Table 4**, the study intersections operate from LOS A to LOS F with the addition of the project during the peak-hours. The analysis worksheets for this scenario are provided in **Appendix D**.

FIGURE 4 — Existing (2013) plus Proposed Project Peak-Hour Traffic Volumes



IMPACTS AND MITIGATION

Standards of Significance

Project impacts were determined by comparing conditions with the proposed project to those without the project. Impacts for intersections are created when traffic from the proposed project forces the LOS to fall below a specific threshold. The City's guidelines³ specify the following:

"Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the [weekday] p.m. peak hours."

Furthermore, a significant impact was determined to occur if the proposed project causes:

- A signalized intersection that is currently operating at LOS C or better to operate at LOS D or worse during the AM or PM peak hours; or
- A signalized intersection that is currently operating at LOS D or E to worsen by one or more LOS categories (i.e., from LOS D to E) during the AM or PM peak hours.

Impacts and Mitigation

As reflected in **Table 4**, the addition of the proposed project does not result in a significant impact at a City-owned and maintained intersection. As such, no mitigations are required to satisfy the City's LOS standard.

OTHER CONSIDERATIONS

Site Observations

A site visit was completed during Saturday peak-period conditions (2:30-3:00) at the existing Costco Wholesale to observe existing project site operations including intersection/driveway lane configurations, vehicle storage lengths, lane utilization, existing traffic control, speed limits, adjacent land uses, and other readily apparent features. The following are the primary observations noted during this site visit:

- Northbound-to-southbound u-turns at the Stanford Ranch Road intersection with Five Star Boulevard are significant (as discussed later in this report, this u-turn equates to approximately 25 percent of the northbound left-turn volume). Virtually all of these vehicles were observed to enter the project's Stanford Ranch Road driveway.
- Eastbound Five Star Boulevard traffic destined for southbound Stanford Ranch Road forms a long queue in the number two eastbound lane, consistently backing up to and blocking as far west as the project's western site driveway intersection. This movement's effective green time is limited at the Stanford Ranch Road signalized intersection due to the presence and magnitude of the aforementioned northbound-to-southbound u-turn movement, and the heavy conflicting southbound through movement (limiting right-turns on red).
- The apparent lack of traffic control at the Costco Wholesale main customer entrance creates confusion and hesitation for both vehicles and pedestrians. This area of concentrated pedestrian activity is adjacent to an intersection of seven separate drive aisles. Very few if any pedestrians were observed to use the delineated crosswalks and pedestrian paths. The lack of traffic control and delineation of primary vehicular routes was observed to complicate operations as both vehicles and pedestrians seek to determine rights-of-way.
- All site driveway intersections have minimal throat depth and on-site queuing was observed as a result of congestion at each access location.

³ City of Roseville General Plan 2025, City of Roseville, May 5, 2010.

- The relatively recent adjacent on-site connectivity improvement constructed by the shopping center improves circulation and (presumably) lessens the amount of traffic using Five Star Boulevard to travel between adjacent commercial uses. Most importantly, this connection, which is located between the Toys “R” Us and Jo-Ann stores, provides access to the Fairway Drive traffic signal with Home Depot.

An additional site visit was completed during Saturday peak-period conditions (1:30-2:00 pm) to observe site operations at the Folsom, California Costco Wholesale site which has an existing, operational 16 position fueling station. The purpose of this additional site visit was to observe vehicle circulation, queuing, and storage associated with the fueling operation. Through consultation with the City, this location was determined to have relatively similar cliental and operations that are anticipated at the project site in Roseville. The following are the primary observations noted during this site visit:

- This location has 16 fueling positions, not 12 as noted in the database provided with the initial traffic study¹.
- While vehicle arrival is random, more pronounced “waves” of vehicles were observed to approach the fueling facility at times.
- Unlike typical fueling stations, this and other Costco Wholesale fueling stations have one-way circulation with back-to-back pump islands. This configuration requires the pumps to potentially be located on the opposite side of the vehicles’ gas cap location. As a result of this configuration, the following observations were noted:
 - Because most vehicles have gas caps located on the driver’s side, at times, approaching vehicles were observed to queue in the “left-pump side” aisles when adjacent “right-pump side” aisles had a much shorter queue.
 - The back-to-back pump islands requires the queued vehicle #3 to go around fueling vehicle #2 to access the first pump location if vacated in this order. Because of this, the #3 vehicles were observed to provide additional distance between them and the #2 vehicle to enable them to make this maneuver.
- During this peak period, a fairly consistent queue (including those at the pumps) of approximately 35 vehicles was observed. A minimum queue of approximately 25 and a maximum of approximately 40 were also observed.

Site Access

As reflected in **Figure 1**, access to the project site is proposed to be modified with the addition of the project. More specifically, the proposed project includes the following offsite and access modifications:

- Closure of two existing Five Star Boulevard site driveways in the immediate vicinity of the existing Shell Gas Station
- Extension by approximately 50-feet of the eastbound Five Star Boulevard left-turn pocket at Stanford Ranch Road
- Reconfiguration of the Five Star Boulevard median to a two-way left-turn lane east of the main site access driveway
- Addition of a narrow median island and minor widening at the main site driveway along Five Star Boulevard to improve the throat depth thereby restricting left-turns to and from the first parking aisle.
- Installation of “KEEP CLEAR” pavement markings along eastbound Five Star Boulevard at the main site access driveway
- Addition of a southbound right-turn lane at the existing Stanford Ranch Road driveway
- Addition of a dedicated right-turn lane to access the fueling station along the entrance lanes at the existing Stanford Ranch Road driveway

In addition, onsite circulation is depicted as changing primarily to accommodate modifications to primary drive aisles and parking supply. Additional pavement markings and stop control are also indicated as being added presumably to assist with the delineation of primary routes and to improve onsite operations.

The consolidation of access points along Five Star Boulevard is certainly a benefit of the project. Currently, the 650-foot project frontage along Five Star Boulevard has four driveways. Closure of two of these access locations eliminates one-half of the driveways along this congested segment, both of which are located closest to the signalized intersection at Stanford Ranch Road. This consolidation of access and maximized separation from Stanford Ranch Road will improve traffic operations along this segment of Five Star Boulevard.

Using the City's guidelines², the Minimum Required Throat Depth (MRTD) has been calculated for the project site's main driveway intersection with Five Star Boulevard. According to guidelines' Exhibit 4-1, the westbound left-turn into the driveway requires 150-feet of storage while the single, all-purpose outbound lane requires 225-feet.

Site access to and from Stanford Ranch Road is accommodated by an existing right-in/right-out driveway which is proposed to be enhanced with the addition of a southbound right-turn lane into the site and a dedicated right-turn lane to access the fueling station along the entrance lanes. The presence of this driveway has the following direct effect on off-site traffic operations; it attracts traffic away from the Five Star Boulevard access locations, and it results in a heavy u-turn movement for northbound Stanford Ranch Road traffic at the adjacent signal with Five Star Boulevard. Traffic count data confirmed that this u-turn movement equates to 26 percent of the volume for the northbound left-turn movement during the Saturday peak-hour. While operationally inefficient at the signal (slower northbound left-turns and conflict with eastbound right-turns), the accommodation of these vehicles at the Stanford Ranch Road driveway instead of the Five Star Boulevard driveway(s) has the effect of improving the balance and circulation of site traffic. To emphasize this point, if the u-turn movement was prohibited, 194 weekday peak-hour and 309 Saturday peak-hour vehicles (both values assume that all u-turning vehicles are destined for the project site) would be required to enter the project site via Five Star Boulevard driveways. This shift in volume would equate to an approximately 235 percent increase of volume at the main driveway intersection with Five Star Boulevard.

Fueling Station Operations

According to the initial traffic study prepared (by others)¹, the proposed project is demonstrated to adequately accommodate the maximum fueling station queue (47 vehicles) observed at the other Costco Wholesale fueling facility sites surveyed. The study concludes that:

"...the site has been designed to provide enough stacking space for the maximum observed queue of 47 vehicles, plus room for many more vehicles, all contained within the fuel station area itself. As such, there is room for the maximum observed queue to stack within the fuel station facility before any vehicles will start to extend into the on-site drive aisle...the proposed site design will provide sufficient vehicle storage within the fuel station facility to accommodate even worst-case condition peak demands and maximum queues without interference to the on-site drive aisle that leads to other areas of the parking field and the site access to Stanford Ranch Road. Therefore, the proposed gasoline station design will not have a negative impact on the main site access traffic operations along Stanford Ranch Road."

According to Figure 5 of the initial study, the 47 vehicles are depicted as queuing across the 10 aisles leaving space between the Stanford Ranch Road drive aisle and the fueling station operations.

CONCLUSIONS

Based on the analyses documented in this report and the supporting information provided by the project applicant, the proposed project is not anticipated to result in significant offsite level of service (LOS) impacts or adversely affect on-site operations. However, recognizing the likely public perception of both the existing traffic conditions in the vicinity of the proposed project site and the effect of the proposed fueling station addition on these conditions, additional consideration has been given to applicable strategies to ensure operating conditions that are at least the same, if not better than existing conditions. Accordingly, the following strategies are proposed:

- **Require 2nd Fueling Station Attendant for First 90-Days of Operation**
At the time of this study, the project applicant has communicated a late-October/early-November completion date for the proposed project. We further understand that the standard operations at Costco Wholesale Fueling Stations is to have one attendant onsite at all times the fueling station is open. As a strategy to address public perception and to protect against the possible adverse on-site operations, and considering the opening date's proximity to the holiday season, an additional fueling station attendant should be provided for at least the station's first 90-days of operation. This additional attendant would be required to be present at all times when both the fueling station and Costco Wholesale are open to the general public. In conjunction with the other attendance, this additional attendant would be responsible for guiding and directing entering vehicles to improve the efficiency of fueling operations, to maximize the utilization of all fueling pumps, and to guard against queuing that has the potential of affecting the operations of the Stanford Ranch Road driveway. In the event of queuing that results in an obstruction along the entrance lanes of this driveway, the attendant should be instructed to direct vehicles past the fueling station.
- **Require an "After Study" After 90-Days of Operation**
An "After" study should be performed (by others) to document the actual operational parameters of the fueling station. The project applicant should collect this "after" data following the completion of the first 90-days of operation and provide the information to the City. This after study should, at a minimum, include the following data:
 - weekday PM peak-hour average and maximum observed vehicle queues
 - Saturday peak-hour average and maximum observed vehicle queues
 - Summary of site observations and attendant activities
 - Summary of conflicts observed in the vicinity of the site's Stanford Ranch Road driveway

As deemed appropriate by the City based on the outcome of these two strategies, the City should consider the following as an additional/alternate mitigation strategy:

- **Relocate the Stanford Ranch Road Driveway to the South**
Relocating the existing driveway to the south would expand the proposed fueling station queuing and staging area in an effort to contain the fueling operation within the designated area. This additional space would be anticipated to minimize the likelihood of onsite queuing adversely affecting offsite operations along Stanford Ranch Road. The exact location of this relocated driveway would need to be determined by the project applicant.
 - It is acknowledged that relocation of this driveway as far south as the main east-west drive aisle may have the undesirable effect of promoting "cut-through" traffic through the congested main customer entrance area of Costco Wholesale.
 - It is also acknowledged that relocation of this driveway would adversely impact onsite parking by eliminating approximately 30 additional parking stalls. According to information provided by the project applicant¹, the project site currently has 695 parking stalls with the addition of the proposed project already resulting in a net reduction of 14 stalls. The loss of an additional 30 stalls would bring the onsite supply to 651 stalls. Using

information contained in the initial traffic study prepared (by others) for the proposed project, even when an additional 54 “shared” parking spaces are incorporated, the site currently operates with a peak utilization of 85 percent. The 14 stall reduction with the proposed project is already anticipated to increase the peak utilization to 87 percent. Reducing the supply an additional 30 stalls with the relocation of the Stanford Ranch Road driveway to the south would further increase the peak utilization to 90 percent. Parking utilization approaching 90 percent is understood to signify a site operating at capacity⁴. Considering the documented and observed traffic congestion both onsite and in the vicinity of the project site, this additional loss of parking supply (30 stalls) is not desirable.

⁴ *Parking Generation, 4th Edition*, Institute of Transportation Engineers (ITE).

Appendices A –D to the traffic study are available for review in the Planning Division