RESOLUTION NO. 2015-P006

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF CULVER CITY, CALIFORNIA, APPROVING SITE PLAN REVIEW, SPR P-2015081, FOR THE EXPANSION OF AN EXISITNG RETAIL WAREHOUSE STORE (COSTCO) AND ASSOCIATED SITE IMPROVEMENTS AT 13463 WASHINGTON BOULEVARD IN THE COMMERCIAL REGIONAL RETAIL (CRR) ZONE.

(Site Plan Review, SPR P-2015081)

WHEREAS, on July 2, 2015, Costco Wholesale (the "Applicant") filed an application for a Site Plan Review to demolish an existing 63,213 square foot grocery store (Albertson's) and expand an existing retail warehouse store (Costco) by 31,023 square feet, as well as to construct modifications to the existing fueling station and onsite circulation (the "Project"). The Project site is more specifically described by Los Angeles County Assessor's Numbers 4236-029-003 and 4236-029-009, in the City of Culver City, County of Los Angeles, State of California; and,

WHEREAS, in order to implement the proposed Project, approval of the following application is required:

Site Plan Review, SPR P-2015081, for the construction of the proposed retail warehouse store expansion and associated improvements, to ensure the Project complies with all required standards and City ordinances, and to establish all onsite and offsite conditions of approval necessary to address the site features and ensure compatibility of the proposed Project with the development on adjacent properties and in the surrounding neighborhood, and

WHEREAS pursuant to Section 15162 of the California Environmental Quality Act (CEQA), SPR-P2015081 is within the scope of The Costco Project Final Environmental Impact Report (FEIR) (State Clearinghouse No. 96091019) certified on June 10, 1998 by the Culver

City Planning Commission, the circumstances under which the FEIR was prepared have not significantly changed and no new significant information has been found that would impact the FEIR; therefore, no new environmental analysis is required; and

WHEREAS, on October 21, 2015, after conducting a duly noticed public hearing on the subject application, including full consideration of the application, plans, staff report, environmental information and all testimony presented, the Planning Commission, by a vote of _ to _, conditionally approved Site Plan Review, SPR P-2015081.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF CULVER CITY, CALIFORNIA, RESOLVES AS FOLLOWS:

SECTION 1. Pursuant to the foregoing recitations and the provisions of Culver City Municipal Code (CCMC), the following findings are hereby made:

Site Plan Review

As outlined in CCMC Section 17.540.020, the following required findings for a Site Plan Review are hereby made:

A. The general layout of the project, including orientation and location of buildings, open space, vehicular and pedestrian access and circulation, parking and loading facilities, building setbacks and heights, and other improvements on the site, is consistent with the purpose and intent of the Zoning Code, the requirements of the zoning district in which the site is located, and with all applicable development standards and design guidelines.

The general layout of the Project is consistent with the Commercial Regional Retail (CRR) zoning district. The proposed building addition is located in conformance with the minimum required setbacks and designed to maintain a height consistent with the existing building and zoning standards. The existing site design provides vehicular access by means of existing signalized driveways along Washington Boulevard, as well as pedestrian walkways to access the various buildings on the site. The building entry/exit face the front of the property, and the general building layout and design is oriented to communicate with Washington Boulevard. The proposed setbacks exceed the Zoning Code requirements for the CRR Zone. The proposed maximum overall building height of 34 feet and six inches for the building addition is below, and in conformance with, the 56-foot maximum height limit allowed within the CRR Zone,

diminishing potential visual and compatibility impacts with the single story structures in the surrounding neighborhood and adjacent to the site.

The parking area proposed in place of the existing grocery store building, east of the building to be expanded, will be oriented in an east/west direction to provide improved pedestrian access from the parking area to the building entry. The parking area will have onsite illumination, and will be screened from the abutting residential neighborhoods by a perimeter block wall. A 12-foot wide landscaped setback will be provided along the new parking area perimeter, in excess of the minimum five feet required, in order to maximize buffering. The structure location, setbacks, and street facing landscaping maximize the site's development potential while conforming to Zoning Code development standards.

The Project provides a total of 969 parking spaces, in compliance with code required parking for a shopping center development. Proposed parking spaces, drive aisles and maneuvering areas have been designed to meet or exceed the minimum Zoning Code standards, and portions of existing circulation areas will be modified to improve existing circulation conditions. The Project will have sufficient parking and adequate vehicular and pedestrian access and the proposed configuration of the existing onsite driveways, vehicle maneuvering areas, and pedestrian access are designed in accordance with all applicable Zoning Code standards. There are no other applicable design guidelines.

B. The architectural design of the structure(s) and the materials and colors are compatible with the scale and character of surrounding development and other improvements on the site and are consistent with the purpose and intent of the Zoning Code, the requirements of the zoning district in which the site is located, and with all applicable development standards and design guidelines.

The architectural design of the structure is characterized by contemporary style, through the incorporation of elements such as flat roofs with height variation, the use of masonry walls and metal panels, and metal accents throughout, consistent with the operator's corporate design. The building addition reaches a maximum of 34 feet and six inches in height, well below the allowed maximum height of 56 feet for the CRR zone, and consistent with the existing overall building height of 36 feet. The building will incorporate multi-color block and smooth concrete on the exterior walls of all elevations, such that the new building façades will continue to match the architectural style of the existing portions of the existing building as well as the smaller commercial buildings on site, along Washington Boulevard. The architectural design of the building addition is further enhanced by the provision of a canopy over the main pedestrian access point of the building, and decorative awnings at various locations of the new façades. The roof design is flat to match the existing roof style. The building is designed to minimize the mass and visual scale of the building addition through the utilization of varying building heights, as well as through the variation of building materials and colors and incorporation of awnings along the building walls. Structures in the adjacent residential neighborhood vary from one-story to two-story in height and comprise a variety of architectural styles. Overall, the design of the proposed Project is compatible with other

surrounding architecture and is compatible with the zoning standards of the CRR Zone. Although the existing building can be described as partially utilitarian, and the proposed building design and materials will carry over some of this character, the proposed addition will provide a marked visual improvement at the site. There are no other applicable design guidelines.

C. The landscaping, including the location, type, size, color, texture, and coverage of plant materials, provisions for irrigation, and protection of landscape elements has been designed to create visual relief, complement structures, and provide an attractive environment and is consistent with the purpose and intent of the Zoning Code, the requirements of the zoning district in which the site is located, and with all applicable development standards and design guidelines.

The Project proposes various improvements to the site including new landscaping. In compliance with the Zoning Code, all front, side and rear yards not devoted to paved driveways, walkways, and open space areas not devoted to driveways, parking areas, walkways, building projections and approved hardscape areas, will be provided with landscaping. In addition, all perimeter areas between the proposed onsite parking area and the public right-of-way will be landscaped, and the parking lot area will also incorporate landscaping, including shade trees within planter islands. Landscape in the setback area between the new parking area and the public right-of-way will include a variation in plant materials and colors to soften the appearance of the proposed 10-foot high block wall and enhance the street view aesthetics of the site. The existing landscape in the existing open space area at the northeast corner of the site will be retained and augmented with additional plantings in order to strengthen this buffer and increase the visual relief it provides between the commercial character of the subject site and the adjacent residential neighborhood.

D. The design and layout of the proposed project will not interfere with the use and enjoyment of neighboring existing or future development, will not result in vehicular or pedestrian hazards, and will be in the best interest of the public health, safety, and general welfare.

The proposed building addition complies with the minimum required setbacks and is below the maximum allowed height, so as to not impact the use and enjoyment of neighboring properties, including those in the adjacent residential neighborhood. The Project has been designed to conform to all applicable development standards of the Commercial Regional Retail (CRR) Zone. The Project is compatible with surrounding commercial development, and sensitive to surrounding residential development. The site provides adequate onsite circulation and parking in compliance with all Zoning Code requirements and will not produce any vehicular or pedestrian hazards. In fact, as part of the proposed Project, the onsite circulation and access was studied and modifications are proposed to improve the existing circulation. No off-site circulation hazards are presented by the proposed Project since access points to the site are existing along Washington Boulevard, consistent with surrounding commercial development, and no new vehicular or pedestrian access points are proposed or are necessary, as the Project

will result in a reduced number of trips as noted in the traffic analysis. In addition, the Engineering Division has conditioned that the existing driveways to Washington Boulevard will be reconstructed to alleviate the dip that occurs at each cross-gutter and improve less than optimal speeds and flows at the entry points and circulation conditions on Washington Boulevard.

The use and enjoyment of neighboring development is not negatively impacted or interfered with, as the building is set back in excess of the minimum required amount from the various property lines. In fact, a much deeper setback is provided along the easterly portion of the structure, where additional off-street parking will be provided, thereby maintaining a significant physical distance from the adjacent residential street. The parking area will incorporate shade trees and lighting, and will be insulated from the neighboring residential uses by means of a proposed screen block wall and perimeter landscape on both the north and east sides of the parking area. Various landscape plantings, including trees, will be provided within this side setback area in order to also enhance the enjoyment of the streetscape and existing residential character along the abutting streets. The Project is also sensitive to neighboring development by retaining the existing open space area at the northeast corner of the site as a buffer and visual relief between the adjacent residential uses and the site. The conditions of approval and compliance with all CCMC requirements will ensure that the proposed Project will not be a detriment to the public interest, health, safety, or general welfare, or injurious to persons, property, or improvements in the vicinity and zoning district in which the property is located. Further, by reducing the net floor area of the site by 32,190 square feet, providing a revitalized building façade, and improving onsite circulation conditions, the Project serves to abate less than optimal conditions and create conditions that will be in the best interest of the public health, and general welfare.

E. The existing or proposed public facilities necessary to accommodate the proposed project (e.g., fire protection devices, parkways, public utilities, sewers, sidewalks, storm drains, street lights, traffic control devices, and the width and pavement of adjoining streets and alleys) will be available to serve the subject site.

The site is located in an existing urbanized neighborhood, and is currently developed with a multi-building shopping center development, with onsite parking and associated improvements and amenities. Therefore, public facilities to the site currently exist. It is not anticipated that the proposed Project, which will result in a net reduction in gross floor area as well as a net reduction in vehicle trips, will require new public facilities. If any upgrades to the existing facilities are required, these will be provided. For example, the Engineering Division has conditioned that the existing street light system along the Project's Washington Boulevard frontage shall be converted to low voltage induction type lighting, including the provision of new concrete poles, street light conduit, wiring, pull boxes, light fixtures, and ballast, and also requires the existing electrical service pedestal located on the sidewalk adjacent to the Valvoline building to be replaced with a 200 amp dual meter service pedestal having space for eight (8) 2-pole circuit breakers Further, the existing and proposed public service facilities necessary to accommodate the Project such as: the width and pavement of the adjoining streets, traffic control

devices, sewers, storm drains, sidewalks, street trees, fire protection devices, and public utilities are provided for adequately, as proposed and/or conditioned, as confirmed by the City agencies that reviewed the Project during the interdepartmental review process.

F. The proposed project is consistent with the General Plan and any applicable specific plan.

The proposed retail warehouse expansion, modification of the existing fueling station, and associated site improvements will result in a reduction of floor area at the site and will provide improved circulation conditions at the existing development. The existing shopping center development is consistent with the General Plan's Regional Center Land Use designation, which is intended to support commercial developments that serve a regional market area. The Project is also consistent with the goals of the General Plan, specifically, Objective 6.A, which calls for the revitalization of commercial corridors in the City through the renovation of existing structures. In addition, the proposed Project is consistent with Objective 7, which is to maintain commercial centers that serve community as well as regional markets, and in particular with Policy 7.B. This policy strives to allow existing regional and community centers to upgrade and expand to maintain economic viability. Based on review of the preliminary development plans, the proposed expansion is not anticipated to result in any significant impacts on surrounding uses or to be inconsistent with the goals of the General Plan. Furthermore, the Project serves to improve the existing conditions of the existing shopping center development. There is no applicable Specific Plan for this area.

SECTION 2. Pursuant to the foregoing recitations and findings, the Planning Commission of the City of Culver City, California, hereby approves Site Plan Review, SPR P-2015081, subject to the conditions of approval set forth in Exhibit A attached hereto and incorporated herein by this reference.

APPROVED and ADOPTED this 21st day of October, 2015.

_____

KEVIN LACHOFF - CHAIRPERSON
PLANNING COMMISSION
CITY OF CULVER CITY, CALIFORNIA

Attested by:

_____

Yvonne Hunt
Administrative Secretary

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
1.	These Conditions of Approval are being imposed on **a 31,023 sq. ft. expansion of an existing retail warehouse store (Costco)** (the "Project"), for the property located at **13463 Washington Boulevard** (the "Property").	All	Standard	
2.	A copy of the Resolution approving the Project, and a copy of these Conditions of Approval, shall be printed on the plans submitted as part of any building permit application for the Project.	Planning	Standard	
3.	All building permit applications for the Project shall include sufficient information and detail to clearly reflect compliance with all applicable requirements of the Culver City Municipal Code (the "CCMC") and with these Conditions of Approval.	Planning	Standard	
4.	The land use permit to which these Conditions of Approval apply (the "Land Use Permit') shall expire one year from the date of final approval of said Land Use Permit, if the use has not been exercised. As provided in CCMC Section 17.595.030 –"Time Limits and Extensions", an applicant may request an extension of said expiration date by filing a written request with the Planning Division prior to the expiration of the land use permit.	Planning	Standard	
5.	The Project shall be developed pursuant to CCMC Chapter 17.300 – "General Property Development and Use Standards".	Planning	Standard	
6.	All planted areas on the Property shall be landscaped and irrigated pursuant to CCMC Chapter 17.310 - "Landscaping".	Planning	Standard	
7.	All parking areas on the Property shall be developed pursuant to CCMC Chapter 17.320 - "Off-Street Parking and Loading".	Planning	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
8.	Signs proposed for the Project shall meet all applicable requirements of CCMC Chapter 17.330 - "Signs". All signs require a separate permit and approval.	Planning	Standard	
9.	No sign(s) will be installed and/or relocated prior to the approval a sign permit and/or applicable Master Sign Program amendment. A new or amended Master Sign Program will be necessary to address new sign locations.	Planning	Special	
10.	If vegetation and landscape removal is scheduled to occur during the general avian breeding season (February 15 through August 31) and/or commencement of construction activities (including but not limited to, staging, ground disturbance, grading, or construction activity) is proposed to begin during said season, and avoidance of said season is not avoidable, then measures shall be implemented to avoid take of birds or their eggs. A. Preconstruction Nesting Bird Survey. beginning thirty days prior to the initiation of project activities, a qualified biologist with experience in conducting breeding bird surveys shall conduct weekly bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days (72 hours) prior to the initiation of project activities. B. Presence of Birds and Active Nests. If a protected native bird is found, the applicant shall delay all project activities within 300 feet of on- and off-site suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31.	Planning	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
	Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, project activities within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, must be postponed until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting. An active nest is defined as a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Flagging, stakes, and/or construction fencing should be used to demarcate the inside boundary of the buffer of 300 feet (or 500 feet) between the project activities and the nest. If the biological monitor determines that a narrower buffer between the project activities and observed active nests is warranted, he/she should submit a written explanation as to why (*e.g.*, species-specific information; ambient conditions and birds' habituation to them; and the terrain, vegetation, and birds' lines of sight between the project activities and the nest and foraging areas) to the Culver City Planning Division and, upon request, the Department. Based on the submitted information, the Culver City Planning Division (and the Department of Fish and Game, if the Department requests) will determine whether to allow a narrower buffer. C. Biological Monitoring. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. The project applicant shall provide the Culver City Planning Division the results of the recommended protective measures described above to document compliance			

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
	with applicable State and Federal laws pertaining to the protection of native birds.			
11.	All permits and licenses required in connection with the development or use of the Project shall be applied for and obtained separately.	All	Standard	
12.	All work within the public right-of-way (including but not limited to curb, gutter, sidewalk, and driveways) shall be designed and completed to the satisfaction of the City Engineer.	Public Works	Standard	
13.	Street trees shall be installed, to the satisfaction of the City Engineer, in conformity with the City's approved Street Tree Master Plan including tree wells and irrigation. All new (and existing) street trees shall be supplied with irrigation water from the overall site irrigation system which shall include a timer and a rain sensor. All new (and existing) street trees, landscaping, and irrigation shall be indicated on the overall site landscaping/ irrigation plan.	Public Works	Standard	
14.	Drainage devices, concrete curbs and gutters, sidewalks, drive approaches, and roadway pavement shall be designed in conformity with all provisions of the latest edition of the American Public Works Association Standard Plans ("APWA Standards").	Public Works	Standard	
15.	At the sole cost and expense of the Property Owner, any broken or damaged curbs, gutters, sidewalks, and street pavement resulting from construction of the Project shall be repaired and reconstructed in conformity with APWA Standards.	Public Works	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
16.	The existing non-ADA compliant sidewalks along the project's frontage along Washington Boulevard, Glencoe Avenue, Walnut Avenue, and Zanja Street shall be removed and reconstructed per American Public Works Association (APWA) standards.	Public Works	Special	
17.	All non-ADA compliant curb ramps along the project's frontage on Washington Boulevard shall be reconstructed per American Public Works Association (APWA) standards.	Public Works	Special	
18.	The existing street light system along the project's frontage with Washington Boulevard shall be converted to low voltage induction type lighting. The conversion shall include, but not limited to, new concrete poles, street light conduit, wiring, pull boxes, light fixtures, and ballast. The existing electrical service pedestal located on the sidewalk adjacent to the Valvoline "Instant Oil Change" building shall be replaced with a 200 amp dual meter service pedestal having space for 8-2 pole circuit breakers.	Public Works	Special	
19.	The east and west main driveways to Washington Boulevard shall be reconstructed to alleviate the dip that occurs at each cross-gutter. The reconstruction of Washington Boulevard shall extend to the centerline of the street. Reconstruction of the cross-gutters and on-site paving may be necessary. Washington Boulevard shall be repaved in concrete. This work shall be designed and constructed to the satisfaction of the City Engineer.	Public Works	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
20.	The middle driveway that exits from the gas station to Washington Boulevard shall be widened to allow for a larger turning radius for exiting onto Washington Boulevard. The end of the low walls adjacent to this driveway shall be clipped or rounded to help prevent motorists from striking the walls. Retro-Reflective sheeting shall be placed on the face of both walls.	Public Works	Special	
21.	The egress lane assignment at the project's east driveway shall remain in its current configuration. The project's traffic consultant shall conduct a follow-up study not later than six months after occupancy of the proposed expansion to determine if a change in the lane configuration is indicated by actual field conditions. If the follow-up study determines that a change in the lane assignment is necessary, the applicant shall be fully responsible to implement this change in lane assignments and to bear the costs for any and all work for this change, including, but not limited to, restriping of the driveway and any modifications to the existing traffic signals.	Public Works	Special	
22.	All concrete used in the public right-of-way shall have a minimum strength of 3250 psi.	Public Works	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
23.	Trash enclosures shall be provided and shall each have a minimum inside dimension of 10 feet x 12 feet, a gated opening that is at least 8 feet wide, and a 6 inch high by 6 inch wide concrete curb along the inside perimeter wall. Each enclosure shall also have at least a 6 inch thick concrete slab that drains at a one percent gradient out of the enclosure. Final approval for the size, location, and type of equipment needed for the adequate storage and disposal of all solid and recyclable waste generated by the Project shall be obtained from the City's Environmental Programs and Operations Manager. A fire suppression sprinkler system shall be provided within any covered trash enclosure area as required by the Fire Marshal. All refuse containers assigned to or otherwise used by the Project shall be stored on-site in the trash enclosures.	Public Works/ Fire/ Planning	Standard	
24.	All Project related solid and recyclable waste material handling shall be in accordance with CCMC Section 5.01.010 – "Solid Waste Management", which outlines the Sanitation Division's exclusive franchise for this service.	Public Works	Standard	
25.	All buildings and structures to be constructed as part of the Project shall be designed and constructed in accordance with all applicable regulations and standards of the City's Building Code, Fire Code and any related codes as determined by the Building Official and Fire Marshal; and all other applicable provisions of the CCMC which are adopted and in effect at the time of issuance of a building permit.	Building/ Fire	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
26.	All existing life safety systems on the Costco property, interior or exterior, shall be in full compliance with the Culver City Municipal Code 9.02, CA Fire Code Chapter 3, 5, 9 and/or other applicable codes and the State adopted National Standards. These life safety systems are required to stay in compliance with the original Fire Department Conditions of Approval and installation requirements at the time of construction and more stringent requirements as they occur.	Fire	Special	
27.	All new installations or alteration of existing life safety systems shall meet or exceed (more stringent) all of the original conditions of approval. New systems shall meet the same requirements of the existing installation for system calculations, densities, spacing, locations, accessible space and access to all life safety equipment new relocated or existing. Installation of new fire hydrants will be required on the property. All equipment shall be visible, discernible and accessible.	Fire	Special	
28.	Nothing in the new construction or modification to this property shall diminish or reduce existing fire life safety or current Fire Code requirements or protection of property equipment and devices, exterior access or exiting in any way.	Fire	Special	
29.	Fire Department access shall not be blocked, obstructed or in any way hindered for fire department operations.	Fire	Special	
30.	Prior to final approval by the Culver City Fire Department, the Property owner shall provide detail showing how all provisions of the 2013 California Fire Code Chapter 9, Section 901 will be complied with.	Fire	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	GENERAL			
31.	Any new utilities shall be placed underground or enclosed within the building construction; no new overhead utilities shall be permitted.	Building/ Planning	Standard	
32.	The Project shall comply with all applicable requirement of the Culver City Green Building Program as set forth in CCMC Section 15.02.1100, et. seq. A Culver City CalGreen checklist shall be provided on the construction permit drawings.	Building	Standard	
33.	The Project shall comply with the all applicable requirements relating to solar photovoltaic requirements as set forth in CCMC Section 15.02.100, et. seq.	Building	Standard	
34.	All enclosed paths of egress shall be minimum 1 hour rated. Any trash rooms or service rooms shall be minimum 2 hour rated to all other areas.	Building	Special	
35.	Tempered or laminated glazing shall be specified at all hazardous locations.	Building	Special	
36.	Changes to the Project or use approved as part of the Land Use Permit may only be made in accordance with the provisions of CCMC Section 17.595.035 – “Changes to an Approved Project”.	Planning	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	PRIOR TO BUILDING PERMIT ISSUANCE			
37.	A covenant and agreement, on a form provided by the Planning Division and in form and substance acceptable to the City Attorney, acknowledging and agreeing to comply with all terms and conditions established herein, shall be signed by the Property Owner and recorded in the County Recorder's Office. The covenant and agreement shall run with the land and shall be binding on any subsequent owners, and tenants or occupants of the Property. After recordation, a certified copy bearing the Recorder's number and date shall be provided to the Planning Division.	Planning/ City Attorney	Standard	
38.	The Applicant and Property Owner shall indemnify and agree to defend (at the Applicant's and Property Owner's sole expense, with legal counsel approved by the City) and hold harmless the City, and its elected and appointed officials, officers, employees, agents, contractors and consultants from and against any and all loss, damages, injuries, costs, expenses, liabilities, claims, demands, lawsuits, attorneys' fees and judgments, arising from or in any manner connected to any third party challenge to the City's approval of the Project. The obligations required by this Condition shall be set forth in a written instrument in form and substance acceptable to the City Attorney and signed by the Applicant and the Property Owner.	City Attorney	Standard	
39.	The Project shall meet minimum requirements for fire lane widths, height clearance, turning radius, lane stripping, signage, curb painting for fire lanes and other items for unobstructed fire department access and use. This will include obtaining requirements from the Public Works Department, Engineering Division, allowing the Police Department to ticket and tow, which shall require a covenant on the property for enforcement.	Fire	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
PRIOR TO BUILDING PERMIT ISSUANCE				
40.	A minimum of three sets of final landscaping and irrigation plans (separate from the plans submitted for the building permit) shall be submitted to the Planning Division for review and approval.	Planning/ Parks & Rec.	Standard	
41.	A minimum of four (4) sets of lighting plans must be submitted identifying the location of all light fixtures and foot candle levels throughout the site. All exterior lighting shall be energy efficient, architecturally integrated and compatible with the building design, and installed such that lighting is directed onto the subject site and does not impact abutting uses. Timers shall be used to turn of lights during hours when lighting is not needed.	Planning	Special	
42.	Payment of New Development Impact Fees pursuant to CCMC Section 15.06.005 et. seq. shall be submitted.	Planning/ Building	Standard	
43.	A Construction Management Plan prepared by the construction contractor, which identifies the areas of construction staging, temporary power, portable toilet, and trash and material storage locations, shall be submitted to, and approved by, the Building Official. Prior to commencement of work the construction contractor shall advise the Public Works Inspector and the Building Inspector ('Inspectors") of the construction schedule and shall meet with the Inspectors.	Building/ Public Works	Standard	
44.	A phase plan shall be submitted indicating how egress is to be maintained during construction. All required means of egress shall be maintained during construction. Non-combustible materials are highly recommended for any temporary construction separations.	Building	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
PRIOR TO BUILDING PERMIT ISSUANCE				
45.	A Pedestrian Protection Plan shall be submitted to and approved by the Building Official. Such plan shall identify all areas of pedestrian protection and indicate the method of pedestrian protection or pedestrian diversion when required. When pedestrian diversion is required, the Pedestrian Protection Plan must also be approved by the Public Works Director.	Building/ Public Works	Standard	
46.	Plans submitted as part of the building permit application shall include a schedule of the special inspections anticipated, the firm proposed for the special inspections, and the resumes of all proposed special inspectors. The Building Official reserves the right to reject any special inspector at any time for the duration of the Project. All special inspection reports shall be made available to the Building Official and to any Culver City Building Safety inspector as required by the Building Official No work shall be covered without a Culver City Building Safety inspection, whether or not a special inspection was performed on such work.	Building	Standard	
47.	A Construction Traffic Management Plan shall be prepared by a traffic or civil engineer registered in the State of California. The Construction Traffic Management Plan shall be submitted to the City Engineer and Planning Manager for review and approval prior to the issuance of any Project demolition, grading, or excavation permit. The Construction Traffic Management Plan shall also be reviewed and approved by the City's Fire and Police Departments. The City Engineer and Planning Manager reserve the right to reject any engineer at any time and to require that the Plan be prepared by a different engineer. The Construction Traffic Management Plan shall contain, but not be limited to, the following: A. The name and telephone number of a contact person who can be reached 24	Planning/ Public Works	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	PRIOR TO BUILDING PERMIT ISSUANCE			
	hours a day regarding construction traffic complaints or emergency situations. B. An up-to-date list of local police, fire, and emergency response organizations and procedures for the continuous coordination of construction activity, potential delays, and any alerts related to unanticipated road conditions or delays, with local police, fire, and emergency response agencies. Coordination shall include the assessment of any alternative access routes that might be required through the Property, and maps showing access to and within the Property and to adjacent properties. C. Procedures for the training and certification of the flag persons used in implementation of the Construction Traffic Management Plan. D. The location, times, and estimated duration of any roadway closures, traffic detours, use of protective devices, warning signs, and staging or queuing areas. E. The location and travel routes of off-site staging and parking locations.			
48.	Reasonable efforts shall be used to reuse and recycle construction and demolition debris, to use environmentally friendly materials, and to provide energy efficient buildings, equipment and systems. A Demolition Debris Recycling Plan that indicates where select demolition debris is to be sent shall be provided to the Building Official prior to the issuance of a demolition permit. The Plan shall list the material to be recycled and the name, address, and phone number of the facility of organization accepting the materials.	Building	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
PRIOR TO BUILDING PERMIT ISSUANCE				
49.	A vector/pest control abatement plan prepared by a pest control specialist licensed or certified by the State of California shall be submitted for review and approval by the Planning Manager and the Building Official. Said plan shall outline all steps to be taken prior to the commencement of any demolition or construction activity in order to ensure that any and all pests (including, but not limited to, rodents, bees, ants and mosquitoes) that may populate the Property do not relocate to or impact adjoining properties.	Building/ Planning	Standard	
50.	This project is subject to the City's Sewer Facility Charge. This charge shall be paid prior to the issuance of building permits or any construction permits issued by the Engineering Division.	Public Works	Special	
51.	Prior to issuance of a building permit, notice of the Project construction schedule shall be provided to all abutting property owners and occupants. Evidence of such notification shall be provided to the Building Division. The notice shall identify the commencement date and proposed timing for all construction phases (demolition, grading, excavation/shoring, foundation, rough frame, plumbing, roofing, mechanical and electrical, and exterior finish).	Building	Standard	
52.	A construction kick-off meeting shall be held in City Hall prior to the start of construction; the field superintendent must attend that meeting.	Building	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	DURING CONSTRUCTION			
53.	During all phases of construction, a "Construction Rules Sign" that includes contact names and telephone numbers of the Applicant, Property Owner, construction contractor(s), and the City, shall be posted on the Property in a location that is visible to the public. These names and telephone numbers shall also be made available to adjacent property owners and occupants to the satisfaction of the Planning Manager and Building Official.	Building/ Planning	Standard	
54.	The biological monitor required for avoidance of take of birds or their eggs, shall be present on site during all grubbing and clearing of vegetation to ensure that these activities remain within the project footprint (i.e., outside the demarcated buffer) and that the flagging/stakes/fencing is being maintained, and to minimize the likelihood that active nests are abandoned or fail due to project activities. The biological monitor shall send weekly monitoring reports to the City of Culver City Planning Division during the grubbing and clearing of vegetation, and shall notify the Culver City Planning Division immediately if project activities damage active avian nests.	Planning	Special	
55.	The Property shall be maintained daily so that it is free of trash and litter.	Building	Standard	
56.	During construction, dust shall be controlled by regular watering or other methods as determined by the Building inspector.	Building	Standard	
57.	The Building Division may apply administrative assessments and/ or post general stop work notices for any violations of the Conditions of Approval for the Project, and any violations of the CCMC.	Building	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	DURING CONSTRUCTION			
58.	During all phases of construction, best efforts shall be used to ensure that all construction workers, contractors and others involved with the Project park on the Property or at designated offsite locations approved by the City, and not in the surrounding neighborhood.	Building	Standard	
59.	When foundation shoring and/or foundation piles will be part of the Project, the engineer of record shall use noise dampening measures such as the drilling of shoring supports and piles as determined by the Building Official and Planning Manager.	Building/ Planning	Standard	
60.	Prior to the commencement of any excavation, a temporary construction fence shall be installed around the site. The height and fence material is subject to approval by the City Engineer and the Planning Manager.	Building/ Planning/ Public Works	Standard	
61.	Hours of construction shall be limited to the following: 8:00 AM to 8:00 PM Monday through Friday; 9:00 AM to 7:00 PM Saturday; and 10:00 AM to 7:00 PM Sunday and National holidays. Dirt hauling and construction material deliveries or removal are prohibited during the morning (7:00 AM to 9:00 AM) and afternoon (4:00 PM to 6:00 PM) peak traffic periods. All construction workers shall be respectful of the surrounding neighborhood and keep non-construction related noise to a minimum prior to, during, and after permissible construction hours.	Building/ Public Works	Standard	
62.	All staging and storage of construction equipment and materials, including the construction dumpster, shall be on-site only. The Property Owner must obtain written permission from adjacent property owners for any construction staging occurring on adjacent property.	Building/ Public Works	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	DURING CONSTRUCTION			
63.	Compliance with the following noise standards shall be required with at all times: A. No construction equipment shall be operated without an exhaust muffler, and all such equipment shall have mufflers and sound control devices (i.e., intake silencers and noise shrouds) that are no less effective than those provided on the original equipment; B. All construction equipment shall be properly maintained to minimize noise emissions; C. If any construction vehicles are serviced at a location onsite, the vehicle(s) shall be setback from any street and other property lines so as to maintain the greatest distance from the public right-of-way and from Noise Sensitive Receptors; D. Noise impacts from stationary sources (i.e., mechanical equipment, ventilators, and air conditioning units) shall be minimized by proper selection of equipment and the installation of acoustical shielding as approved by the Planning Manager and the Building Official in order to comply with the City's Noise Regulations and Standards as set forth in CCMC Chapter 9.07; and E. Stationary source equipment (i.e., compressors) shall be located so as to maintain the greatest distance from the public right-of-way and from Noise Sensitive Receptors.	Building/ Planning	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	DURING CONSTRUCTION			
64.	In the event three citations are issued in connection with the Project for violations of these Conditions of Approval or for other violations of the CCMC, Project construction shall be stopped until such time that it is determined to the satisfaction of the Community Development Director, that causes of such violations have been eliminated or corrected and that the Project will be able to proceed in full compliance with these Conditions of Approval and the CCMC.	Building/ Planning	Standard	
65.	Flag persons with certified training shall be provided for work site traffic control to minimize impacts to traffic flow and to ensure the safe movement of vehicles into and out of the Property.	Building/ Public Works	Standard	
66.	During construction, trucks and other vehicles in loading and unloading queues must be parked with their engines off to reduce vehicle emissions. Construction deliveries shall be phased and scheduled to avoid emissions peaks as determined by the Building Official and discontinued during second-stage smog alerts.	Building	Standard	
67.	Construction vehicles shall not be permitted to stage or queue where they would interfere with vehicular and pedestrian traffic or block access to adjacent properties. Off-site staging shall be at locations approved by the City Engineer and shall be of sufficient length to accommodate large trucks without being unduly disruptive to traffic operations. The drivers of these trucks shall be in radio or phone communication with on-site personnel who shall advise the drivers when to proceed from the staging location to the Property. Construction-related vehicles shall not be permitted to park on public streets.	Building/ Public Works	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	DURING CONSTRUCTION			
68.	Provisions shall be made to maintain EXIT lights and EXIT signs during construction and as obstructions occur to the exiting system. Fire Department approval shall be required prior to implementing changes to previously approved exiting systems, signs and lighting.	Fire	Special	
69.	All emergency and life safety systems shall be maintained in an operating condition including all emergency access driveways. A plan shall be prepared and provided for Fire Department notification, construction supervisor contact numbers, a meeting location for all events, proper staff response to assist the Fire Department in providing assistance prior to starting construction or during the construction process.	Fire	Special	
70.	All water supplies and hydrants shall be put into service adjacent to the construction area prior to loading of construction materials. Traffic control on the lot shall be provided to maintain clear Fire Department access lanes.	Fire	Special	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
PRIOR TO CERTIFICATE OF OCCUPANCY OR FINAL INSPECTION				
71.	All provisions, and requirements set forth in these Conditions of Approval, in the Resolution approving the project, in the CCMC, or in any applicable written comments as provided by City representatives on **July 23, 2015** at the Project Review Committee meeting on the Land Use Permit application, shall be fulfilled and satisfied to the satisfaction of all City departments before the use may be established or the Project occupied.	All	Standard	
72.	A lot tie, or other appropriate method, shall be completed in order to hold Los Angeles County Assessor's Parcel Numbers 4236-029-009 (Costco) and 4236-029-003 (currently Albertson's) as one parcel.	Planning	Special	
73.	All requirements of the City's Art in Public Places Program, as set forth in CCMC Section 15.06.100, et. seq., shall be fully satisfied prior to the issuance of a certificate of occupancy; provided, that if such requirements will be satisfied by the payment of the public art in-lieu fee, the same shall be paid prior to the issuance of a building permit. Should the applicant choose to commission permanent art for the site, the applicant shall have already identified the location for the artwork, the medium (generally) and a qualified artist prior to the issuance of any building permit.	Cultural Affairs	Standard	

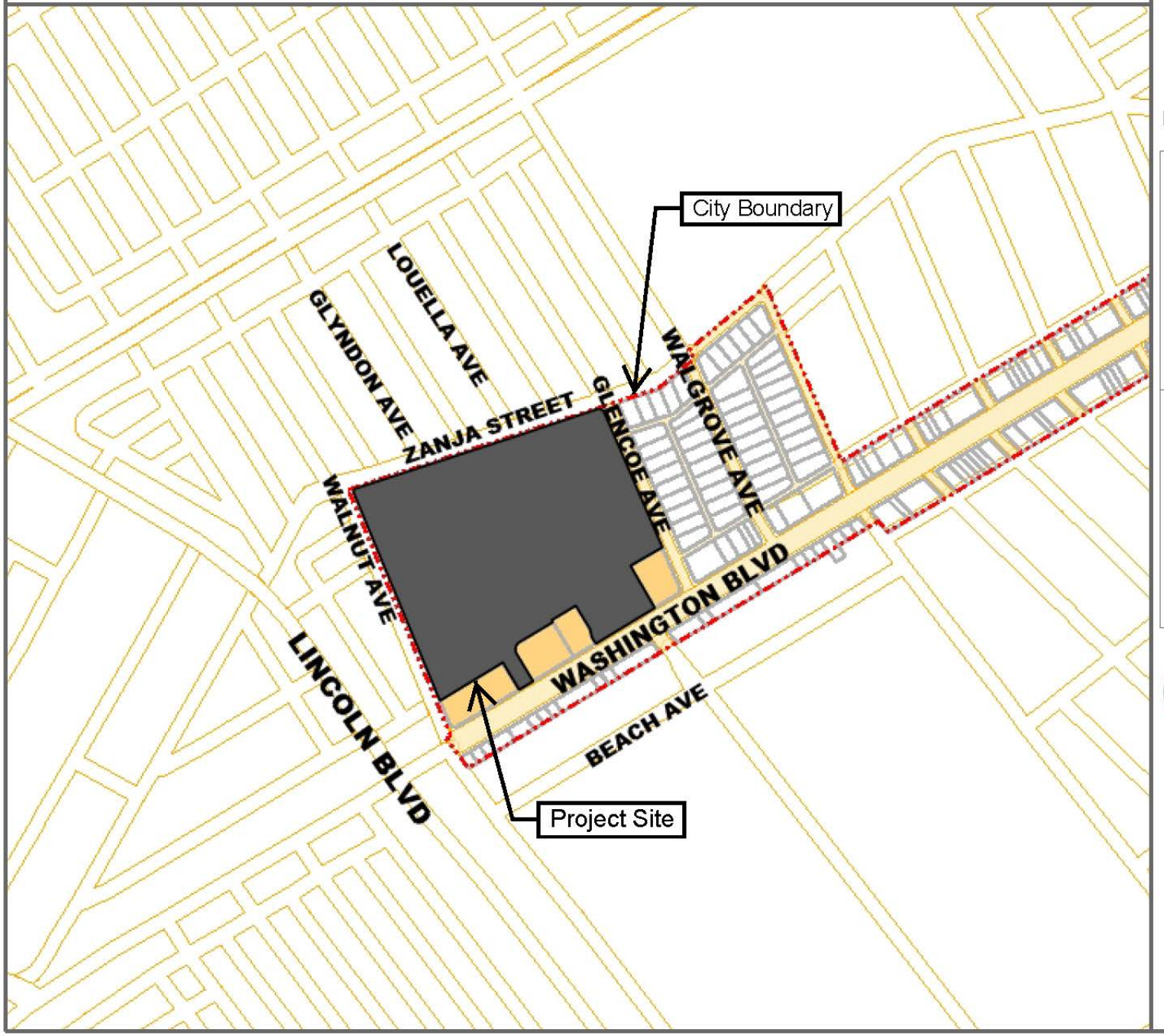
NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
PRIOR TO CERTIFICATE OF OCCUPANCY OR FINAL INSPECTION				
74.	All onsite and offsite improvements and all conditions of approval except those which are deferred pursuant to a bond or letter of credit as determined and approved by the Building Official, Fire Marshal, Planning Manager, and/or City Engineer shall be completed prior to issuance of any certificate of occupancy. Prior to issuance of any certificate of occupancy the following shall be provided to and approved by the City: A. Five full sets of as-built plans that shall include at a minimum the site plan, grading and utility plan, landscape and irrigation plan, floor plan for each level of the Project, parking structure plan, roof plan with all mechanical equipment identified as to purpose and source and all offsite improvements; and B. One set of as-built plans as described above in a digital format compatible with the City's computer system.	All	Standard	

NO.	CONDITIONS OF APPROVAL	Agency	Source	Compliance Verification
	ON-GOING			
75.	The use and development of the Property shall be in substantial conformance with the plans and materials submitted with the application for the Land Use Permit as reviewed by the Planning Commission at its meeting on **October 21, 2015**, excepted as modified by these Conditions of Approval.	Planning	Standard	
76.	Pursuant to CCMC Section 17.650.020 - "Inspection", the Property Owner and Applicant shall allow authorized City officials, or their designees, access to the Property where there is reasonable cause to believe the Property is not in compliance with these Conditions of Approval or other requirements of the CCMC.	All	Standard	
77.	The use and development of the Property shall comply with these Conditions of Approval and all applicable local, special district or authority, county, state and federal statutes, codes, standards, and regulations including, but not limited to, Building Division, Fire Department, Planning Division and Public Works Department requirements, and shall comply with all applicable CCMC requirements and all comments made during the City's building permit plan check review process. Failure to comply with said Conditions, statutes, codes, standards, and regulations may result in reconstruction work, demolition, stop work orders, withholding of certificate of occupancy, revocation of land use permit approval and/or any other lawful action the City might deem reasonable and appropriate to bring about compliance.	All	Standard	
78.	All graffiti shall be removed from the Property within 48 hours of its application.	Building/ Public Works	Standard	
79.	The Property Owner shall maintain all street trees along the property frontage at his/her sole cost and expense.	Public Works	Standard	

Attachment No. 2

Coscto

13463 Washington Boulevard



Culver CITY

Meeting Date: October 21, 2015

Site Plan Review
SPR-P2015081 for 31,482± sq. ft. expansion of an existing retail warehouse store

THE CITY OF CULVER CITY

INFORMATION TECHNOLOGY DEPARTMENT

GEOGRAPHIC INFORMATION SYSTEMS

9770 CULVER BLVD
CULVER CITY, CA 90232

TEL: 310-253-5976

Scale: 1: 7,668

0 319.49 639.0 Feet

Attachment No. 3

PROJECT SUMMARY

APPLICATION TITLE & CASE NO:

13463 Washington Boulevard, Costco Expansion: The project consists of a Site Plan Review (SPR P-2014160) for the demolition of an existing grocery store (63,213 sq. ft.) and the construction of an addition (31,023) to an existing retail warehouse store, modifications to an existing fueling station, and related site improvements.

PROJECT ADDRESS/LOCATION:	**APPLICANT INFORMATION:**
13463 Washington Boulevard (between Walnut Avenue and Glencoe Avenue)	Costco Wholesale 9 Corporate Park, Suite 230 Irvine, CA 92606

PERMIT/APPLICATION TYPE:

☐ Administrative Use Permit	☐ Tentative Parcel Map
☐ Conditional Use Permit	☐ Tentative Tract Map
☐ Administrative Site Plan Review	☐ Lot Line Adjustment
☒ Site Plan Review	☐ Zoning Code Amendment - Text
☐ Administrative Variance	☐ Zoning Code Amendment -Map
☐ Variance	☐ General Plan Amendment - Text
☐ Master Sign Program	☐ General Plan Amendment - Map
☐ Certificate of Appropriateness	☐ Planned Unit Development
☐ Certificate of Exemption	☐ Specific Plan
☐ DOBI	☐ Other: Administrative Modification

APPROVAL BODY: ☒ **Public Hearing** ☐ **Public Meeting** ☐ **Administrative**

☐ Administrative	☐ Redevelopment Agency
☒ Planning Commission	☐ Other:
☐ City Council	

ENVIRONMENTAL DETERMINATION AND NOTICING:

CEQA Determination	☐ Categorical Exemption ☐ Negative Declaration ☐ Mitigated Negative Declaration ☒ Environmental Impact Report
CEQA Noticing	☐ Notice of Exemption (w/in 5 days of decision) ☐ Notice of Intent to Adopt (21 days prior to decision) ☒ Notice of Determination (w/in 5 days of decision) ☐ Fish & Game Certificate of Fee Exemption (w/in 5 days of decision) ☐ Notice of Preparation ☐ Notice of Availability ☐ Notice of Completeness

PUBLIC NOTIFICATION:

Mailing Date: 9/30/15	☒ Property Owners ☒ Occupants ☐ Adjacent Property Owners & Occupants	☐ w/in 500' foot radius ☒ w/in 500' foot radius / extended ☐ Other: Beyond 500' radius
Posting Date: N/A	☐ Onsite ☐ Offsite	☐ Other:
Publication Date: N/A	☐ Culver City News	☐ Other:
Courtesy Date: 9/30/15	☐ City Council ☐ Commissions ☒ Master Notification List ☒ Culver City Website ☐ Cable Crawler	☐ Press Release ☐ HOA /Neighborhood Groups ☐ Culver City Organizations ☒ Other: Planning Commission and Public Notification email subscribers

PROJECT SUMMARY

GENERAL INFORMATION:	
General Plan Regional Center	**Zoning** Commercial Regional Retail (CRR)
Redevelopment Plan Former Component Area No. 4	**Overlay Zone/District** Commercial Zero Setback Overlay
Legal Description APN 4236-029-009 and 4236-029-003	**Existing Land Use** Commercial structures, occupied by a retail warehouse store (Costco), grocery store, various commercial retail and vehicle serving uses

ADJACENT ZONING AND LAND USES

Location	Zoning	Land Use
North	R1-1 and R2-1	Single- and Two-Family Residences (City of Los Angeles)
South	CG	Various Commercial (general office, retail, motel, etc.)
East	R1 and CG	Single Family Residences and Mixed-Use
West	R1-1 and C2-1-CDO	Single Family Residences and General Commercial uses (City of Los Angeles)

*Note: All adjacent uses are beyond existing public streets and the site is bound by public streets on all sides.

Project Data	Existing	Proposed	Required
Lot Area:	18.41 acres	NA	NA
Building Coverage:	225,086 s.f.	192,896 s.f.	NA
Landscaped Area:	±86,750 s.f.	±94,180 s.f.	NA

Parking	Existing	Proposed	Required
Standard	1016	969	965
Handicapped	26	30 (of 969)	20 (of 969)
Total:	**1042**	**969**	**965**

Building Height:

Existing	Proposed	Required/Allowed
33 ft.	34 ft., 6 in.	56 ft. (maximum)

Building Setbacks:

	Existing	Proposed	Required
Front	455 ft.	370 ft.	15 ft.
Rear	30 ft., 4 in.	64 ft. (at addition)	60 ft.
Side (east)	435 ft.	397 ft.	60 ft.
Side (west)	39 ft.	97 ft. (at addition)	60 ft.

ESTIMATED FEES:		
☒ New Development Impact Fee: TBD ☐ In Lieu Parkland Fee: TBD	☒ School District: TBD ☒ Art: TBD	☒ Plan Check: TBD ☒ Sewer: TBD

INTERDEPARTMENTAL REVIEW:

The Project Review Committee reviewed the project during the Preliminary Project Review phase and following the application submittal, and provided responses on March 12, 2015 and July 23, 2015. Comments have been incorporated into the plans or were made part of the recommended conditions of approval.

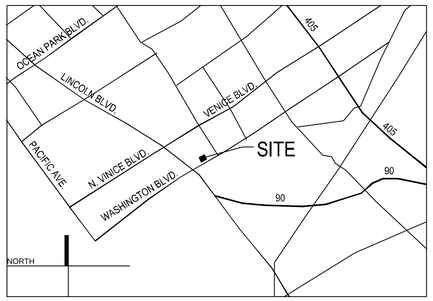
ART IN PUBLIC PLACES:

The project is subject to the City's Art in Public Places Program. Public art or a payment in-lieu shall be provided per current Ordinance.

COSTCO WHOLESALE

13463 WASHINGTON BOULEVARD
CULVER CITY, CA 90292
SITE PLAN REVIEW

VICINITY MAP



PROJECT TEAM

OWNER	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027 t: 714.987.5027 DIRECTOR OR DEVELOPMENT: JENIFER MURILLO
ARCHITECT	MG2 18200 VON KARMAN AVE SUITE 910 IRVINE, CA 92612 t: 949.705.0713 f: 949.705.0788 PROJECT MANAGER: TERRY ODLE
CIVIL ENGINEER	FUSCOE ENGINEERING, INC. 600 WILSHIRE BLVD., SUITE 1470 LOS ANGELES, CA 90017 t: 213.988.8802 f: 213.988.8803 PROJECT MANAGER: GREG MINO
LANDSCAPE ARCHITECT	CUMMINGS CURLEY ASSOCIATES, INC. 3833 LONG BEACH BLVD., SUITE 300 LONG BEACH, CA 90041 t: 562.424.8182 f: 562.424.8181 PROJECT MANAGER: ROBERT CURLEY
SITE LIGHTING/ELECTRICAL	T.E. INC. 830 N. RIVERSIDE DRIVE, SUITE 200 RENTON, wa 98057 t: 425.970.3753 f: 425.970.3756 PROJECT MANAGER: HARDY WIDJAJA
TRAFFIC ENGINEER	KITTELSON & ASSOCIATES 354 SW UPPER TERRACE DRIVE, SUITE 101 BEND, OR 97702 t: 541.312.8300 f: 562.424.8181 PROJECT MANAGER: JOE BESSMAN

SHEET INDEX

DD00-01	TITLE SHEET
DD10-23	EXISTING SITE PLAN
DD11-23	PROPOSED SITE PLAN
DD12-01	SITE DETAILS
C1.0	CONCEPT DEMOLITION PLAN
C2.0	CONCEPT GRADING PLAN
C3.0	CONCEPT UTILITY PLAN
L1.0	EXISTING TREE PLAN
L1.2	CONCEPT LANDSCAPE PLAN
SF-1	SITE LIGHTING PHOTOMETRIC PLAN - 15'-0" POLES
DD20-01	EXISTING DEMO FLOOR PLAN
DD21-13	CONCEPT FLOOR PLAN
DD21-13M	MERCHANDISING PLAN
DD22-01	CONCEPT ROOF PLAN
DD31-01	CONCEPT ELEVATIONS
EX3.1	EXISTING ELEVATIONS
	ENTRY/CORNER PERSPECTIVE
	TIRE CENTER/GAS STATION PERSPECTIVE
	ELEVATIONS
	EXISTING SITE CONTEXT PHOTOS
	VIEW SIMULATIONS - NORTHWEST CORNER
	VIEW SIMULATIONS - FROM LOUELLA AVENUE
	VIEW SIMULATION - SOUTHWEST CORNER
	VIEW SIMULATION - PROPERTY FROM GLENCOE AVE. VIEW 4
	VIEW SIMULATION - PROPERTY FROM GLENCOE AVE. VIEW 5
	VIEW SIMULATION - PROPERTY FROM GLENCOE AVE. VIEW 6
DD40-01	EXISTING ENLARGED GAS PLAN
DD41-01	PROPOSED ENLARGED GAS PLAN
DD42-01	STACKING PLAN
DD43-01	EXISTING FUEL FACILITY ELEVATIONS
DD44-01	PROPOSED FUEL FACILITY ELEVATIONS
	TRAFFIC EXHIBIT
	STORMWATER INFILTATION BENEFITS EXHIBIT

PROJECT DATA

CLIENT:	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	13463 WASHINGTON BLVD. CULVER CITY, CA
ZONING:	COMMERCIAL REGIONAL RETAIL (CRR)
SITE AREA:	18.41 ACRES (801,881 S.F.)
JURISDICTION:	CULVER CITY
SETBACKS:	20 FT. FROM ZANJA ST (NORTH) 20 FT. FROM WALNUT AVE. (WEST)

EXIST. BUILDING DATA:	
EXIST. BUILDING AREA	141,693 S.F.
EXIST. TIRE CENTER DEMOLISHED	-5,200 S.F.
EXIST. FOOD SERVICE DEMOLISHED	-1,310 S.F.
EXIST. EMPLOYEE LOCKER ROOM (MEZZANINE)	459 S.F.
TOTAL EXISTING BUILDING	135,642 S.F.
BUILDING ADDITION	30,282 S.F.
FOOD SERVICE ADDITION	1,829 S.F.
TIRE CENTER ADDITION	5,422 S.F.
TOTAL REVISED COSTCO	173,175 S.F.
EXISTING PAD A, B, C, D, E, F	82,934 S.F.
DEMO EXISTING PAD A (ALBERTSON'S)	(63,213 S.F.)
REVISED TOTAL OUT BUILDINGS	19,721 S.F.
TOTAL REVISED SITE BUILDING	192,896 S.F.

PARKING DATA:

LEGAL DESCRIPTION

PARCELS 1 AND 4 OF PARCEL MAP NO. 24587, IN THE CITY OF CULVER CITY, AS PER MAP FILED IN BOOK 284 PAGES 74 AND 75 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF LOS ANGELES COUNTY, STATE OF CALIFORNIA.

ASSESSOR PARCEL NUMBER: 4236-029-009

PROJECT NARRATIVE

SCOPE OF WORK:

CONSTRUCT NEW 35,621 S.F. BUILDING ADDITION INCLUDING NEW TIRE CENTER, FOOD SERVICE WITH OUTSIDE SEATING, EMPLOYEE LOCKER ROOM AND PUBLIC RESTROOMS. SCOPE OF WORK FOR THE WAREHOUSE ADDITION INCLUDES DEMOLITION OF EXISTING TIRE CENTER AND FOOD SERVICE AND SEATING AREA

SITE WORK INCLUDES THE DEMOLITION OF THE EXISTING 63,213 S.F. ALBERTSONS AND CONSTRUCTION NEW PARKING, LANDSCAPING, SITE LIGHTING AND UNDERGROUND UTILITIES.

EXPANSION ON THE EXISTING COSTCO FUEL FACILITY IS ALSO INCLUDED IN THIS SUBMITTAL REVIEW. THE PROJECT PROOSES ADDING 920 IN-LINE FUEL DISPENSERS TO THE EASTERLY SIDE OF THE FUEL STATION ON THE ENTRY/STACKING SIDE. A NEW 20,000 GALLONG DIESEL UNDERGROUND STORAGE TANK AND A 1,500 GALLON DIESEL ADDITIVE WILL BE INSTALLED WITH THIS EXPANSION.

COSTCO WHOLESALE

CULVER CITY, CA
479
13463 WASHINGTON BLVD.
CULVER CITY, CA 90292

MULVANNY G2 ARCHITECTURE
1110 112TH AVE. NE | SUITE 500
BELLEVUE, WA | 98004
t 425.463.2000 | f 425.463.2002
MulvannyG2.com

94-0630-31
JULY 28, 2015
TITLE SHEET

DD00.01

REQUIRED PARKING 5/1000 S.F.		
PAD "A"	63,213 S.F.	
PAD "B"	6,400 S.F.	
PAD "C"	1,692 S.F.	
PAD "D"	3,149 S.F.	
PAD "E"	3,200 S.F.	
PAD "F"	5,280 S.F.	
TOTAL PAD'S	82,934 S.F.	415 STALLS
TOTAL COSTCO	142,152 S.F.	711 STALLS
	TOTAL REQ'D	1,126 STALLS
	TOTAL PROVIDED	1,042 STALLS

PROJECT DATA

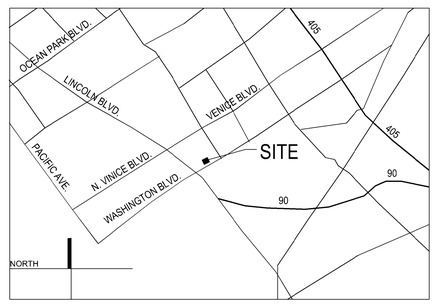
CLIENT:	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	13463 WASHINGTON BLVD. CULVER CITY, CA
ZONING:	COMMERCIAL REGIONAL RETAIL (CRR)
SITE AREA:	18.41 ACRES (801,881 S.F.)
JURISDICTION:	CULVER CITY
SETBACKS:	20 FT. FROM ZANJA ST (NORTH) 20 FT. FROM WALNUT AVE. (WEST)

EXIST. BUILDING DATA:	
EXIST. BUILDING AREA	135,183 S.F.
EXIST. TIRE CENTER DEMOLISHED	5,200 S.F.
EXIST. FOOD SERVICE DEMOLISHED	1,310 S.F.
EXIST. EMPLOYEE LOCKER ROOM (MEZZANINE)	459 S.F.
TOTAL EXISTING BUILDING	142,152 S.F.
EXISTING PAD A, B, C, D, E, F	82,934 S.F.
TOTAL BUILDING	225,086 S.F.

PARKING DATA:	
EXISTING PARKING	1,042 STALLS
CITY REQUIRED PARKING 5 / 1000	1,126 STALLS

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.

VICINITY MAP



0 20' 40' 80'
1" = 40'

COSTCO WHOLESALE
CULVER CITY, CA
#479
13463 WASHINGTON BLVD.
CULVER CITY, CA 90292

MULVANNY G2
1110 112TH AVE. NE | SUITE 500
BELLEVUE, WA | 98004
t 425.463.2000 | f 425.463.2002
MulvannyG2.com

94-0630-31
SEPTEMBER 30, 2015

EXISTING / DEMOLITION SITE PLAN

DD10-23

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

EXISTING / DEMOLITION SITE PLAN

SEPTEMBER 30, 2015

REQUIRED PARKING 5/1000 S.F.		
PAD "B"	6,400 S.F.	
PAD "C"	1,692 S.F.	
PAD "D"	3,149 S.F.	
PAD "E"	3,200 S.F.	
PAD "F"	5,280 S.F.	
TOTAL PAD'S	19,721 S.F.	99 STALLS
TOTAL COSTCO	173,175 S.F.	866 STALLS
	TOTAL REQ'D	965 STALLS
	TOTAL PROVIDED	969 STALLS

EXISTING RESIDENTIAL

ZANJA STREET (53' WIDE)

WALNUT AVENUE (40' WIDE)

GLENCOE AVENUE

WASHINGTON BOULEVARD

EXISTING COMMERCIAL

ALLEY

CITY OF LOS ANGELES / CITY OF CULVER CITY

COSTCO WHOLESALE

461' | 610.27' | 960.41' | 173'-6" | 75' EXISTING RECEIVING | EXISTING LOADING DOCK | 144'-6" | 244'-6" | 72' | 78' | 9' | 386' | 58'-8" | 31' | 41'-4" | NEW TIRE INSTALLATION | NEW TIRE SALES | 814.47' | 703.08' | 530.13' | 348.26' | 320.10' | 397' | 290.65' | 178.67' | 142.20' | 265.78' | 172.20' | 806.07' | 129.09' | 186.64' | 102.20' | 64.20' | 135.06' | 174.34' | 102.26' | 116.39' | 114.84' | 96.76' | 58.99' | 92.76' | 154.24' | 178.42' | 110'-3" | 69'-6" | 103'-1" | 47'-3" | 16'-1" | 14'-4" | 30'-4" | 66'-1" | 12'-3" | 9'-5" | 27'-4" | 25'-4" | 25'-8" | 24'-4" | 24'-3" | 24'-8" | 24'-9" | 37'-2" | 32'-7" | 7.85' | 50.73' | 24'-6" | 24'-1" | 55' | 17'-7" | 37'-11" | 24'-4" | 17'-6" | 16'-9" | 14'-8" | 0041-01

EXISTING TRANSFORMER | ASPHALT PAVEMENT | EXISTING FIRE RISERS | EXISTING SCREEN WALL | EXISTING COMPACTOR | FH SCI | RELOCATED GAS METER | EXISTING 6'-0" HIGH SCREEN WALL | 2'-0" O.H. @ PARKING TYP. | EXISTING CART CORRAL TO BE REPLACED (TYP. - 3 PLACES) | NEW WHEEL STOPS | NEW SIDEWALK | NEW PLANTER | BIKE RACKS | LINE OF EXISTING EXTERIOR WALL | NEW CART STORAGE | EXISTING ENTRANCE | NEW FOOD SERVICE | NEW SODA ALCOVE & CONDIMENT COUNTER | NEW FOOD SERVICE SEATING | ENTRANCE | EXIT | LINE OF NEW ENTRY CANOPY ROOF | 6' SQUARE SAW CUT COLORED ACCENT CONCRETE | 12" CONC. BAND TYP. | 2'-0" OVERHANG AT PARKING TYP. | EXISTING TREE WELLS TYP. | EXISTING TREE WELLS | 15' H. SITE LIGHT TO BE REPLACED (TYP.) | RELOCATED TRUNCATED DOMES ALONG THE PATH OF TRAVEL TO WAREHOUSE | NEW PAINTED TRAFFIC ARROWS | RELOCATE RECYCLING CENTER | EXISTING FIRE HYDRANT TYP. | EXISTING TRASH ENCLOSURE | NEW STOP SIGN AND STOP BAR TYP. | NEW TRASH ENCLOSURE | NEW DIESEL UST AND DIESEL ADDITIVE UST | GAS EXPANSION AREA | EXISTING CONCRETE PLANTER | EXISTING PROPERTY FOR PAD "A" | REVISING PROPERTY LINE THRU LOT LINE ADJUSTMENT | LINE OF EXISTING ALBERTSONS TO BE DEMOLISHED (PAD "A") | EXIST. 12'-0" H CMU WALL TO REMAIN - TAKE OFF TOP 2' AND REINSTALL CAP | EXIST. 10'-0" H CMU WALL TO REMAIN | ALL LANDSCAPING AND IRRIGATION IN THIS AREA TO BE PROTECTED IN PLACE | REMOVE EXISTING EXTERIOR WALL AND REPLACE WITH NEW 10'-0" H CMU WALLS TO MATCH EXISTING | NEW 10'-0" H CMU WALL TO MATCH EXISTING | DESIGNATED TIRE CENTER ONLY PARKING | CART CORRAL TYP. | 2'-0" O.H. @ PARKING TYP. | FOOTPRINT OF EXISTING ALBERTSONS TO BE DEMOLISHED | PLANTER AT PARKING TYP. | TREE WELL TYP. | NEW SCREEN WALL TYP. | ACCESSIBLE PARKING TYP. | DECORATIVE CONCRETE TYP. | NEW 15' H. LIGHT POLES (TYP.) | PLANTER | SIDEWALK | 2'-0" OVERHANG AT PLANTERS TYP. | EXISTING 2'-0" OVERHANG AT PLANTERS TYP. | EXISTING PROPERTY LINE TYP. | EXTEND EXISTING CONCRETE AT TRASH ENCLOSURE | EXISTING TRASH ENCLOSURE | EXIST. 6'-0" H CMU WALL TO REMAIN | NEW 10'-0" H CMU WALL TO MATCH EXISTING

PAD "F" 5,280 S.F. | PAD "E" 3,200 SF | PAD "D" 3,149 SF | PAD "C" 1,692 SF | PAD "B" 6,400 SF

EXISTING STREET LIGHTS BETWEEN WALNUT AVENUE AND GLENCOE AVENUE ON NORTH SIDE OF WASHINGTON BOULEVARD TO BE REPLACED PER CITY CURRENT STANDARD

WIDEN EXISTING EXIT DRIVE - REFER TO ENLARGED GAS SITE PLAN

ENLARGED GAS EXPANSION PLAN

EXISTING ACCESSIBLE PEDESTRIAN RAMPS AT PUBLIC ROW TO BE UPGRADED TO CURRENT CODE STANDARDA (TYP. - 8 PLACES)

PROJECT DATA

CLIENT:	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	13463 WASHINGTON BLVD. CULVER CITY, CA
ZONING:	COMMERCIAL REGIONAL RETAIL (CRR)
SITE AREA:	18.41 ACRES (801,881 S.F.)
JURISDICTION:	CULVER CITY
SETBACKS:	20 FT. FROM ZANJA ST (NORTH) 20 FT. FROM WALNUT AVE. (WEST)

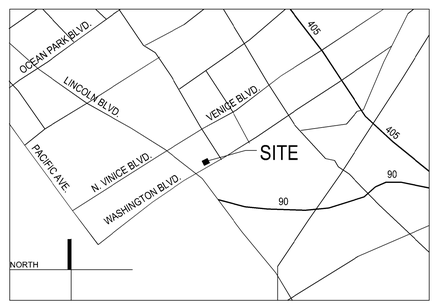
EXIST. BUILDING DATA:	
EXIST. BUILDING AREA	141,693 S.F.
EXIST. TIRE CENTER DEMOLISHED	-5,200 S.F.
EXIST. FOOD SERVICE DEMOLISHED	-1,310 S.F.
EXIST. EMPLOYEE LOCKER ROOM (MEZZANINE)	459 S.F.
TOTAL EXISTING BUILDING	135,642 S.F.
BUILDING ADDITION	30,282 S.F.
FOOD SERVICE ADDITION	1,829 S.F.
TIRE CENTER ADDITION	5,422 S.F.
TOTAL REVISED COSTCO	173,175 S.F.
EXISTING PAD A, B, C, D, E, F	82,934 S.F.
DEMO EXISTING PAD A (ALBERTSON'S)	(63,213 S.F.)
REVISED TOTAL OUT BUILDINGS	19,721 S.F.
TOTAL REVISED SITE BUILDING	192,896 S.F.

PARKING DATA:	
EXISTING PARKING	1,042 STALLS
PROPOSED PARKING:	
(#) 10' X 18' STALLS	390 STALLS
(#) 9' X 18' STALLS	459 STALLS
(#) 9' X 15' OR 9' X 17' COMPACT STALLS (EXISTING)	90 STALLS
(#) HC HANDICAP STALLS	30 STALLS
TOTAL PARKING FOR CENTER	969 STALLS
NO. OF STALLS PER 1000 S.F. OF NEW BUILDING AREA:	5.02 STALLS
CITY REQUIRED PARKING 5 / 1000	965 STALLS

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.

0 20' 40' 80'
1" = 40'

VICINITY MAP



COSTCO WHOLESALE
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BELLEVUE, WA | 98004
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MulvannyG2.com

94-0630-31
SEPTEMBER 30, 2015
CONCEPT
SITE PLAN

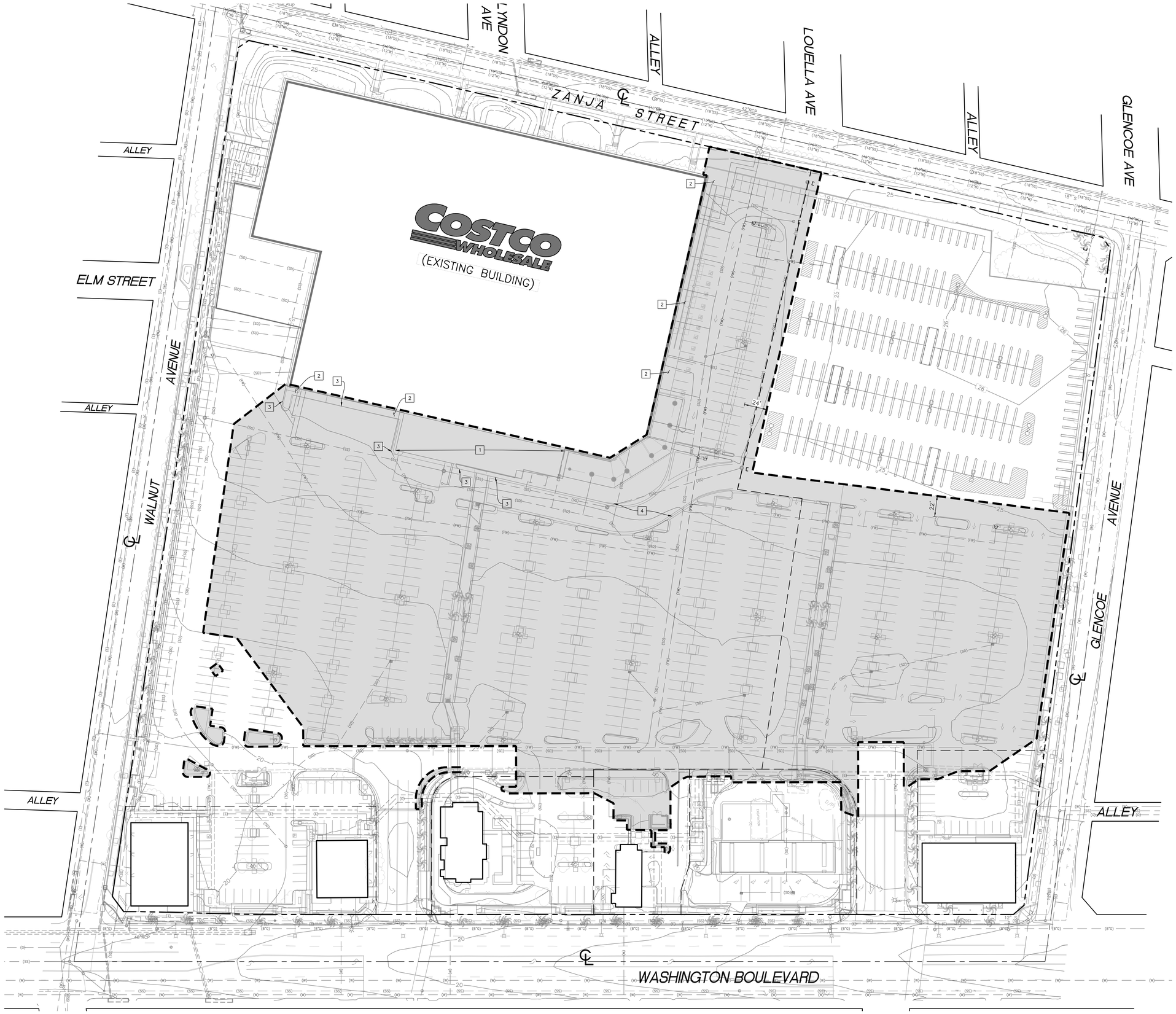
DD11-23

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

CONCEPT SITE PLAN

SEPTEMBER 30, 2015



LEGEND

- PROPERTY LINE
- (E-ESMT) EXISTING ELECTRICAL TO BE ABANDONED
- (SD) EXISTING STORM DRAIN PROTECT IN PLACE
- (FW) EXISTING FIRE WATER PROTECT IN PLACE
- (W) EXISTING DOMESTIC WATER PROTECT IN PLACE
- (SS) EXISTING SEWER PROTECT IN PLACE
- (E) EXISTING ELECTRICAL PROTECT IN PLACE
- EXISTING ELECTRIC EASEMENT
- EXISTING LOT LINE
- LIMITS OF DEMOLITION WORK
- EXISTING BUILDING TO BE DEMOLISHED PER ARCHITECTURAL PLAN AND SEPARATE PERMIT
- EXISTING PAVEMENT TO BE DEMOLISHED

DEMOLITION NOTES

1. REMOVE PORTION OF EXISTING BUILDING AND PAD.
2. REMOVE EXISTING CONCRETE SIDEWALK.
3. REMOVE EXISTING CURB.
4. REMOVE EXISTING DECORATIVE CONCRETE PAVEMENT.
5. REMOVE EXISTING ASPHALT PAVEMENT.
6. REMOVE EXISTING CURB AND GUTTER.
7. REMOVE EXISTING HANDICAP ACCESS RAMP.
8. REMOVE EXISTING LANDSCAPE ISLAND.
9. REMOVE EXISTING CROSS GUTTER.
10. REMOVE EXISTING TRASH ENCLOSURE.
11. SAWCUT EXISTING PAVEMENT.
12. REMOVE EXISTING SEWER CLEANOUT STRUCTURE.
13. REMOVE EXISTING GREASE INTERCEPTOR.
14. ABANDON EXISTING 12" PVC STORM DRAIN PIPE BY PLUGGING WITH SLURRY.
15. PLUG EXISTING 3" DOMESTIC WATER SERVICE 15' FROM EXISTING METER AND REMOVE THE PORTION BEYOND.
16. REMOVE EXISTING BOLLARD.
17. PROTECT EXISTING ASPHALT PAVEMENT.
18. PROTECT EXISTING WALL.
19. PROTECT EXISTING SITE LIGHT.
20. PROTECT EXISTING SEWER MANHOLE.
21. PROTECT EXISTING STORM DRAIN MANHOLE.
22. PROTECT EXISTING 3"ø CURB DRAIN OUTLET.
23. PROTECT EXISTING 3"X24" RECTANGULAR CURB DRAIN.
24. PROTECT EXISTING PIV.
25. PROTECT EXISTING FIRE HYDRANT.
26. PROTECT EXISTING 4-WAY FDC.
27. PROTECT EXISTING 8" FIRE WATER SERVICE.
28. PROTECT EXISTING LADWP WATER METER.
29. COORDINATE WITH CULVER CITY FIRE PREVENTION OFFICE TO REMOVE EXISTING 8" FIRE WATER SERVICE.

PROGRESS SET

FUSCOE ENGINEERING
600 Wilshire Boulevard, Suite 1470
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tel 213.988.8802 ◦ fax 213.988.8803
www.fuscoe.com

PROJECT TRUE

0 20' 40' 80'
1" = 40'-0"

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CONCEPT
DEMOLITION PLAN

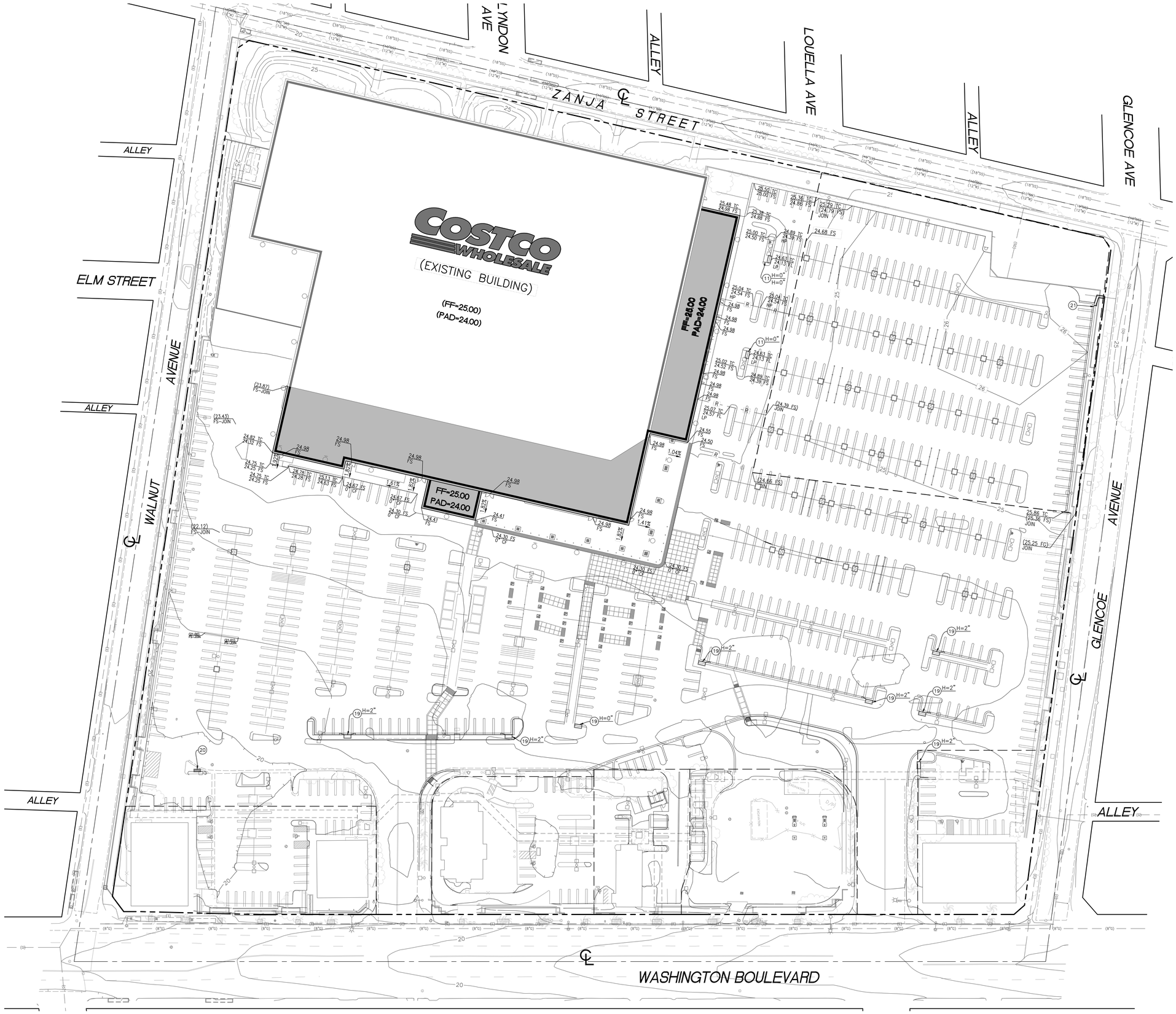
C1.0

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

CONCEPT DEMOLITION PLAN

SEPTEMBER 30, 2015



LEGEND

- PROPERTY LINE
- EXISTING LOT LINE
- LIMIT OF PHASE 1 IMPROVEMENT

GRADING CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" AGGREGATE BASE PER SOIL REPORT'S RECOMMENDATION.
2. CONSTRUCT 6" A.C. PAVEMENT OVER 12" AGGREGATE BASE PER SOIL REPORT'S RECOMMENDATION.
3. COLDPLANE AND GRIND THE TOP 2" OF EXISTING AC PAVEMENT AND REPLACE WITH OVERLAYING WITH NEW AC.
4. CONSTRUCT SPECIAL DECORATIVE CONCRETE PAVEMENT PER ARCHITECTURAL PLAN.
5. CONSTRUCT 4" P.C.C. SIDEWALK WITH COLOR/TEXTURE PER ARCHITECTUAL PLAN.
6. CONSTRUCT 3' WIDE CROSS GUTTER PER DETAIL 4 SHOWN ON SHEET C8.0.
7. CONSTRUCT 6" HIGH CURB PER DETAIL 3 SHOWN ON SHEET C8.0.
8. CONSTRUCT 6" HIGH CURB AND GUTTER PER SPPWC STD. PLAN 120-2, A2-6.
9. CONSTRUCT ACCESS RAMP PER DETAIL 5 SHOWN ON SHEET C8.0.
10. PROTECT EXISTING AC PAVEMENT.
11. SAWCUT AND JOIN EXISTING AC PAVEMENT.
12. PROVIDE 3' WIDE OPENING FOR DRAINAGE.
13. CONSTRUCT CART CORRAL PER ARCHITECTURAL PLAN.
14. CONSTRUCT SITE LIGHT PER ARCHITECTURAL PLAN.
15. CONSTRUCT TRASH ENCLOUSURE AREA PER ARCHITECTURAL PLAN.
16. CONSTRUCT TREEWELL PER LANDSCAPE ARCHITECTURAL PLAN.
17. CONSTRUCT 10' HIGH CMU BLOCK WALL TO MATCH EXISTING WALL'S SPECIFICATIONS.
18. PROTECT IN PLACE EXISTING WALL AND CUT DOWN TO 10' HIGH. INSTALL 2" WALL CAP TO MATCH EXISTING WALL'S SPECIFICATIONS.
19. CONSTRUCT CURB OPENING CATCH BASIN PER SPPWC STD. PLAN 300-3, W=7', V=5', H=PER PLAN, t=t_G=6", AND A=70'. SEE DETAIL 7 ON SHEET C8.0.
20. CONSTRUCT CURBSIDE GRATING CATCH BASIN PER SPPWC STD. PLAN 303-3, W=6'-4 ¾", V=5.25', H=0", t=8", AND A=64.54'. SEE DETAIL 8 ON SHEET C8.0.
21. CONSTRUCT 24" WIDE PARKWAY CULVERT PER STORM DRAIN PLAN ON SHEET C4.0.

PROGRESS SET

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PROJECT TRUE

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SEPTEMBER 30, 2015
CONCEPT
GRADING PLAN

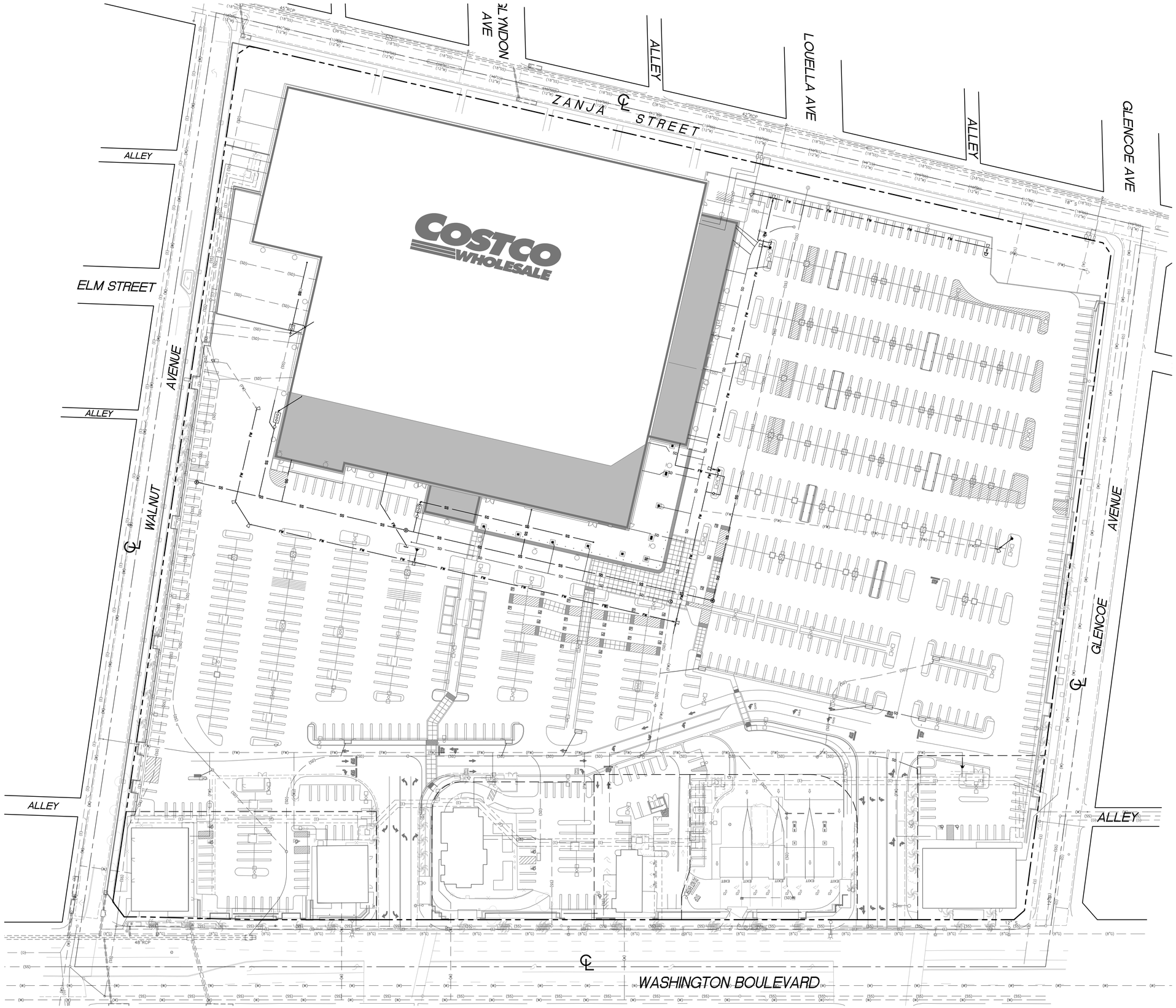
C 2.0

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

CONCEPT GRADING PLAN

SEPTEMBER 30, 2015



LEGEND

- PROPERTY LINE
- SD — PROPOSED STORM DRAIN
- FW — PROPOSED FIRE WATER
- SS — PROPOSED SEWER
- (SD) — EXISTING STORM DRAIN
- (W) — EXISTING DOMESTIC WATER
- (FW) — EXISTING FIRE WATER
- (E) — EXISTING ELECTRIC LINE
- (G) — EXISTING GAS LINE
- (SS) — EXISTING SEWER
- (FW-DEMO) — EXISTING FIRE WATER TO BE REMOVED
- (SD-DEMO) — EXISTING STORM DRAIN TO BE REMOVED
- (SS-DEMO) — EXISTING SEWER TO BE REMOVED
- EXISTING ELECTRIC EASEMENT
- EXISTING LOT LINE
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT
- PROPOSED FIRE DEPARTMENT CONNECTION (FDC)
- PROPOSED POST INDICATIVE VALVE (PIV)
- LIMIT OF PHASE 1 IMPROVEMENT

PROGRESS SET

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PROJECT TRUE

0 20' 40' 80'
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94-0630-31
SEPTEMBER 30, 2015
CONCEPT
UTILITY PLAN

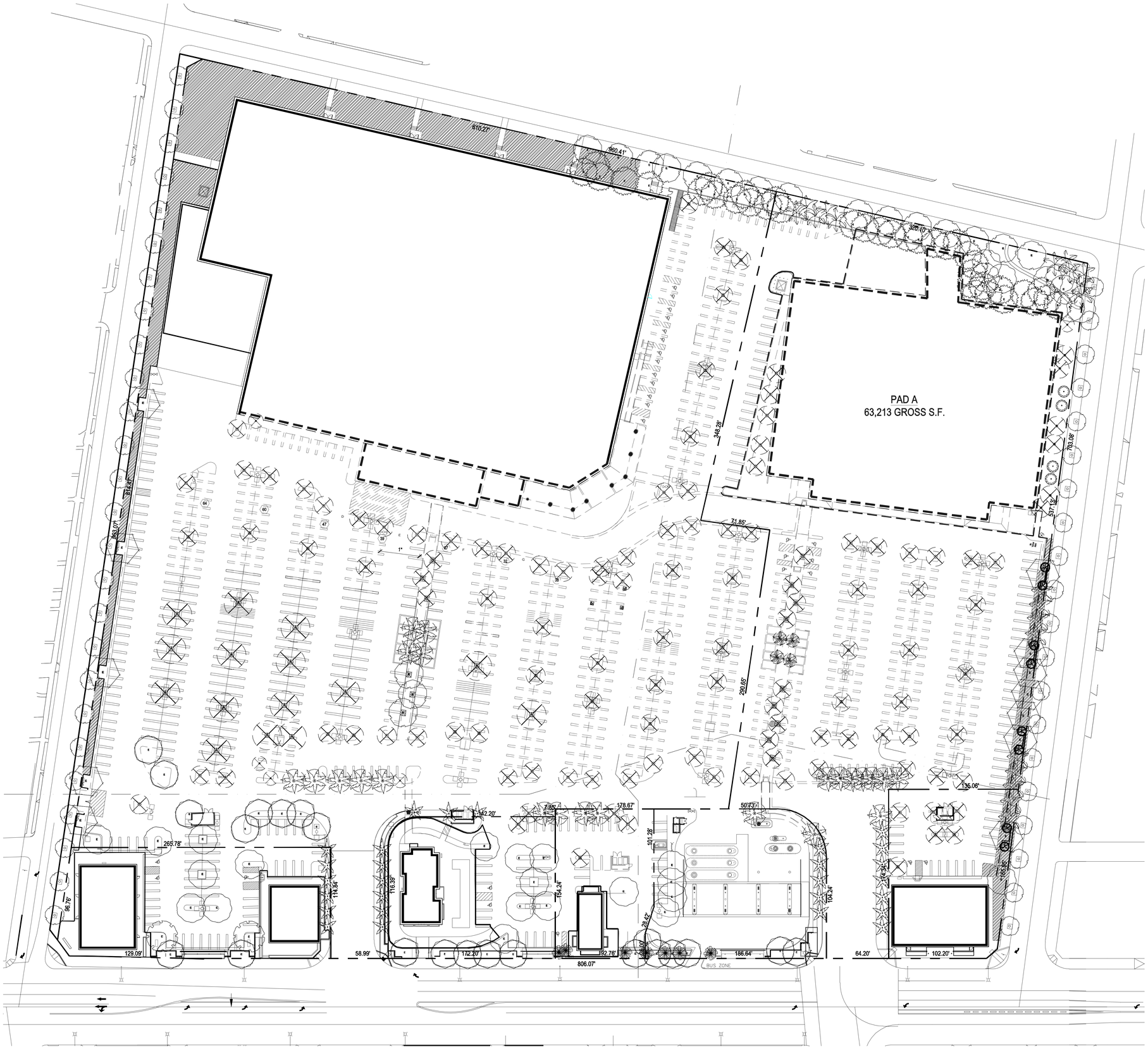
C3.0

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

CONCEPT UTILITY

SEPTEMBER 30, 2015



PLANT SCHEDULE

EXISTING TREES	BOTANICAL NAME	COMMON NAME	CONT	QTY
	Archontophoenix cunninghamiana	King Palm	Existing to Remain	27
	Cupressus sempervirens	Italian Cypress	Existing to Remain	8
	Eucalyptus nicholii	Nichol`s Willow-leafed Peppermint	Existing to Remain	12
	Koelreuteria bipinnata	Chinese Flame Tree	Existing to Remain	18
	Pinus canariensis	Canary Island Pine	Existing to Remain	37
	Pistacia chinensis	Chinese Pistache	Existing to Remain	22
	Syagrus romanzoffiana	Queen Palm	Existing to Remain	20
	Tabebuia impetiginosa	Pink Trumpet Tree	Existing to Remain	2
	Trachycarpus fortunei	Windmill Palm	Existing to Remain	7
	Zelkova serrata `Village Green`	Sawleaf Zelkova	Existing to Remain	28

RELOCATED TREES	BOTANICAL NAME	COMMON NAME	CONT	QTY
	Archontophoenix cunninghamiana Box, Store and relocate	King Palm	Existing Relocated	23
	Syagrus romanzoffiana Box, Store and relocate	Queen Palm	Existing Relocated	4

REMOVED TREES	BOTANICAL NAME	COMMON NAME	CONT	QTY
	Bauhinia x blakeana	Hong Kong Orchid Tree	Existing to be Removed	4
	Cupressus sempervirens	Italian Cypress	Existing to be Removed	1
	Koelreuteria bipinnata	Chinese Flame Tree	Existing to be Removed	18
	Pinus canariensis	Canary Island Pine	Existing to be Removed	1
	Pinus halepensis	Allepo Pine	Existing to be Removed	6
	Pistacia chinensis	Chinese Pistache	Existing to be Removed	55
	Trachycarpus fortunei	Windmill Palm	Existing to be Removed	4
	Zelkova serrata `Village Green`	Sawleaf Zelkova	Existing to be Removed	58

STREET TREES	BOTANICAL NAME	COMMON NAME	CONT	QTY
	Tristania conferta Existing to remain	Brisbane Box	Existing City Street Tree	46

GROUND COVERS	BOTANICAL NAME	COMMON NAME
	Existing Lanscape Area to remain and be protected	

0 20' 40' 80'
1" = 40'

COSTCO WHOLESALE

CULVER CITY, CA
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94-0630-31
SEPTEMBER 21, 2015

CONCEPT
LANDSCAPE
PLAN

L1.0

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

EXISTING TREE PLAN

SEPTEMBER 21, 2015

PLANT SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	CONT	QTY
	Bauhinia x blakeana	Hong Kong Orchid Tree	36" Box	17
	Cupressus sempervirens	Italian Cypress	24" Box	4
	Eucalyptus nicholii	Nichol`s Willow-leafed Peppermint	24" Box	4
	Pinus canariensis	Canary Island Pine	36" Box	3
	Pistacia chinensis	Chinese Pistache	36" Box	64
	Trachycarpus fortunei	Windmill Palm	12` Brown Trunk	2
	Zelkova serrata `Village Green`	Sawleaf Zelkova	36" Box	65

RELOCATED TREES	BOTANICAL NAME	COMMON NAME	CONT	QTY
	Archontophoenix cunninghamiana Existing Relocated	King Palm	Existing Relocated	23
	Syagrus romanzoffiana Box, Store and relocate	Queen Palm	Existing Relocated	4
	Syagrus romanzoffiana Existing relocated	Queen Palm	Existing Relocated	7
	Trachycarpus fortunei Existing Relocated	Windmill Palm	Existing Relocated	4

SHRUBS	BOTANICAL NAME	COMMON NAME	CONT
	Abelia x grandiflora `Edward Goucher`	Glossy Abelia	5 gal
	Grevillea x `Noellii`	Grevillea	5 gal
	Heteromeles arbutifolia	Toyon	5 gal
	Lantana montevidensis	Trailing Lantana	5 gal
	Leptospermum scoparium `Ruby Glow`	Red New Zealand Tea Tree	5 gal
	Mahonia aquifolium	Oregon Grape	5 gal
	Moraea iridioides	Butterfly Iris	5 gal
	Phormium tenax `Maori Queen`	New Zealand Flax	5 gal
	Pittosporum tobira `Variegata`	Variegated Mock Orange	5 gal
	Rhaphiolepis indica `Ballerina`	Ballerina Indian Hawthorn	5 gal
	Rhaphiolepis indica `Springtime` TM	Springtime Indian Hawthorne	5 gal
	Xylosma congestum	Shiny Xylosma	5 gal

GROUND COVERS	BOTANICAL NAME	COMMON NAME
	Agromin Bark Mulch 3" Layer	ES2 Mulch
	Existing Lanscape Area to remain and be protected	
	Lantana montevidensis `White Lightnin`	Trailing Lantana
	Pelargonium peltatum	Ivy Geranium
	Rosmarinus officinalis `Huntington Blue`	Rosemary
	Trachelospermum jasminoides `Star`	Star Jasmine

0 20' 40' 80'
1" = 40"

COSTCO WHOLESALE

CULVER CITY, CA
#479

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CULVER CITY, CA 90292

CUMMINGS CURLEY AND ASSOCIATES, INC
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LONG BEACH, CALIFORNIA 90041
TEL. 562.424.8182 ◇ FAX 562.424.8181

94-0630-31
SEPTEMBER 21, 2015

CONCEPT
LANDSCAPE
PLAN

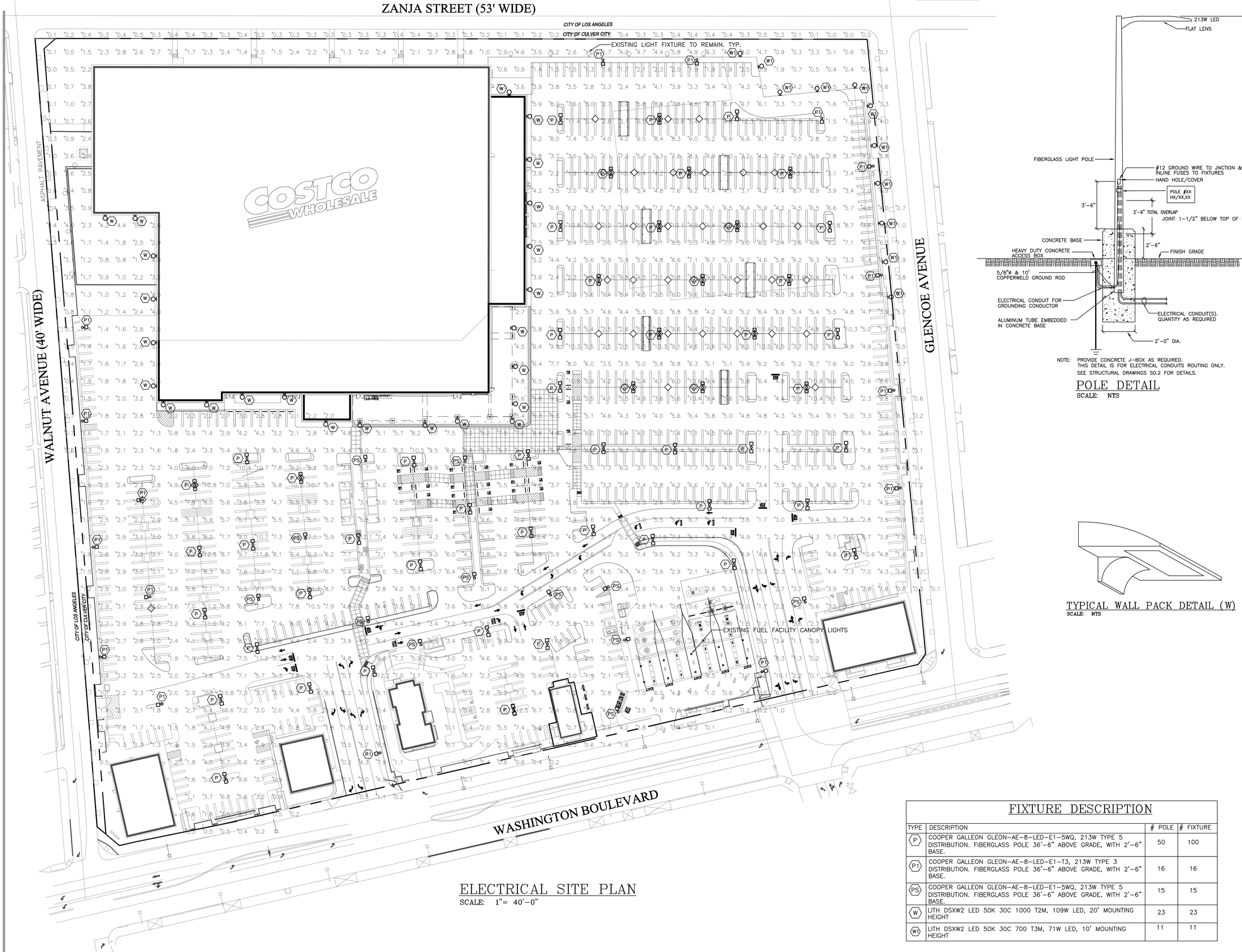
L1.2

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

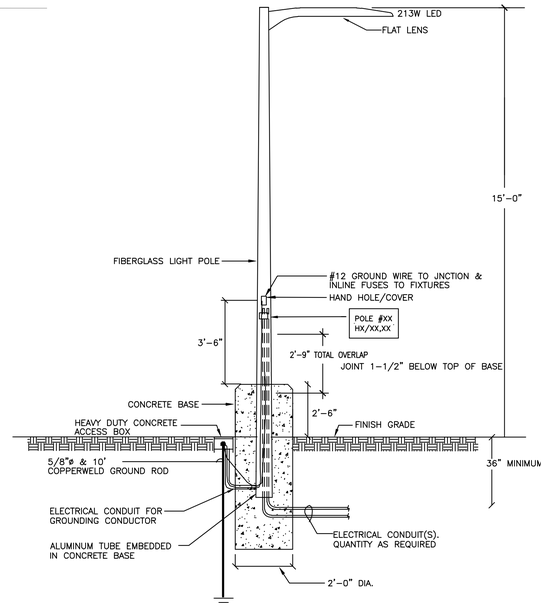
CONCEPT LANDSCAPE PLAN

SEPTEMBER 21, 2015



ELECTRICAL SITE PLAN

SCALE: 1"= 40'-0"



NOTE: PROVIDE CONCRETE J-BOX AS REQUIRED.
THIS DETAIL IS FOR ELECTRICAL CONDUITS ROUTING ONLY.
SEE STRUCTURAL DRAWINGS S0.2 FOR DETAILS.

POLE DETAIL

SCALE: NTS

TYPICAL WALL PACK DETAIL (W)

SCALE: NTS

FIXTURE DESCRIPTION

TYPE	DESCRIPTION	# POLE	# FIXTURE
P	COOPER GALLEON GLEON-AE-8-LED-E1-5WQ, 213W TYPE 5 DISTRIBUTION. FIBERGLASS POLE 36'-6" ABOVE GRADE, WITH 2'-6" BASE.	50	100
P1	COOPER GALLEON GLEON-AE-8-LED-E1-T3, 213W TYPE 3 DISTRIBUTION. FIBERGLASS POLE 36'-6" ABOVE GRADE, WITH 2'-6" BASE.	16	16
PS	COOPER GALLEON GLEON-AE-8-LED-E1-5WQ, 213W TYPE 5 DISTRIBUTION. FIBERGLASS POLE 36'-6" ABOVE GRADE, WITH 2'-6" BASE.	15	15
W	LITH DSXW2 LED 50K 30C 1000 T2M, 109W LED, 20' MOUNTING HEIGHT	23	23
W1	LITH DSXW2 LED 50K 30C 700 T3M, 71W LED, 10' MOUNTING HEIGHT	11	11

CHECKED: ANT/JGM
DRAWN: HW
REVISION DATE:
ISSUE DATE: OCTOBER 2014
ARCHITECT REFERENCE NO:
PROJECT NO:14-574

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SITE LIGHTING PLAN

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830 N. RIVERSIDE DRIVE
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RENTON, WA 98057
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FAX: 425-970-3756

ADDTION DD
WAREHOUSE #479
13463 WASHINGTON BOULEVARD
CULVER CITY, CA 90292

COSTCO WHOLESALE

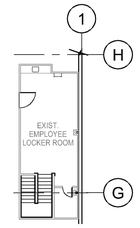
SE-1

PROJECT DATA

EXIST. BUILDING DATA:	
EXIST. BUILDING AREA	135,183 S.F.
EXIST. TIRE CENTER	5,200 S.F.
EXIST. FOOD SERVICE	1,310 S.F.
EXIST. EMPLOYEE LOCKER ROOM (MEZZANINE)	459 S.F.
TOTAL EXIST. BUILDING	142,152 S.F.
EXIST. EXTERIOR SEATING AREA	3,050 S.F.

EXIST. RACK COUNT:	
EXIST. GROCERY RACKS	216
EXIST. CENTER SECTION	17,048 S.F.
EXIST. HARDLINE RACKS	144

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.



MEZZANINE PLAN

SCALE: 1/16" = 1'-0"

0 4' 8' 16' 32'

13463 WASHINGTON BLVD.
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MULVANNY G2 ARCHITECTURE

1110 112TH AVE. NE | SUITE 500
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SEPTEMBER 30, 2015

EXISTING / DEMO FLOOR PLAN

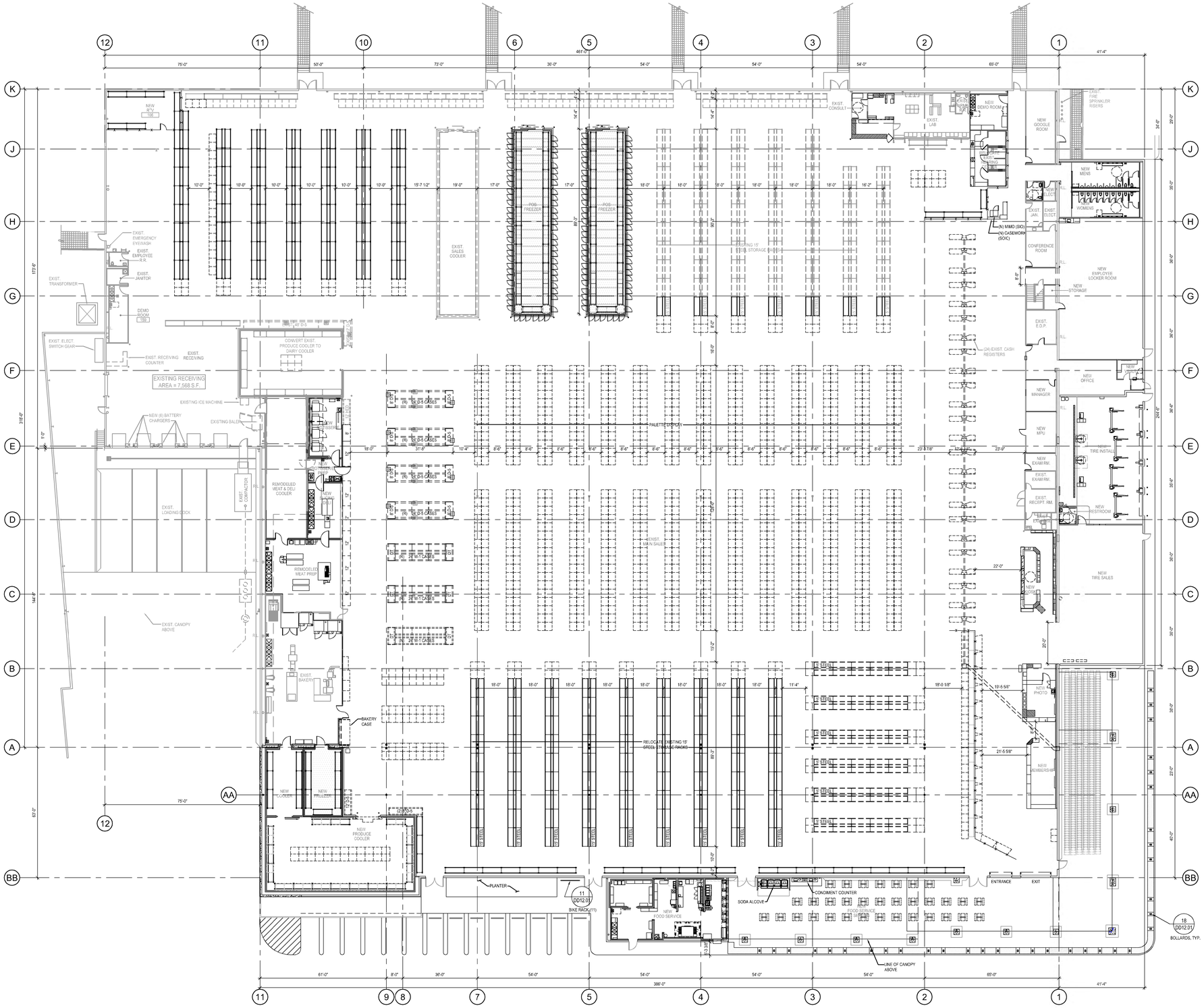
DD20-01

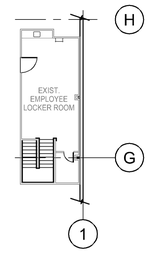
COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

EXISTING / DEMO FLOOR PLAN

SEPTEMBER 30, 2015





MEZZANINE PLAN

SCALE: 1/16" = 1'-0"

PROJECT DATA

EXIST. BUILDING DATA:	
EXIST. BUILDING AREA	141,693 S.F.
EXIST. TIRE CENTER DEMOLISHED	-5,200 S.F.
EXIST. FOOD SERVICE DEMOLISHED	-1,310 S.F.
EXIST. EMPLOYEE LOCKER ROOM (MEZZANINE)	459 S.F.
TOTAL EXISTING BUILDING	135,642 S.F.
BUILDING ADDITION	30,282 S.F.
FOOD SERVICE ADDITION	1,829 S.F.
TIRE CENTER ADDITION	5,422 S.F.
TOTAL REVISED COSTCO	173,175 S.F.
PROPOSED EXTERIOR SEATING AREA	1,830 S.F.

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.

0 10' 20' 40'
1" = 20'

COSTCO WHOLESALE

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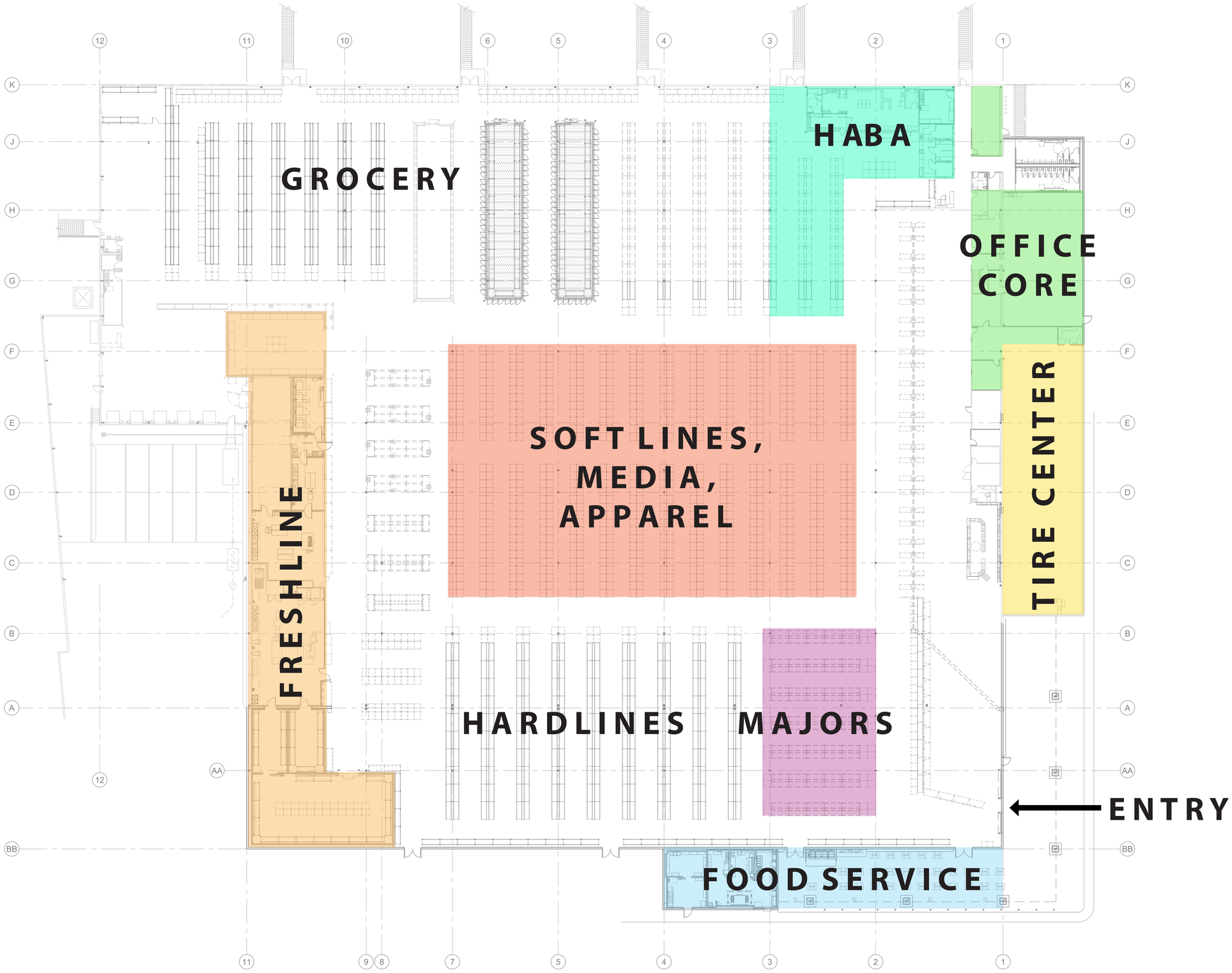
CONCEPT FLOOR PLAN

SEPTEMBER 30, 2015



0 10' 20' 40'
1" = 20'

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CONCEPT
FLOOR PLAN

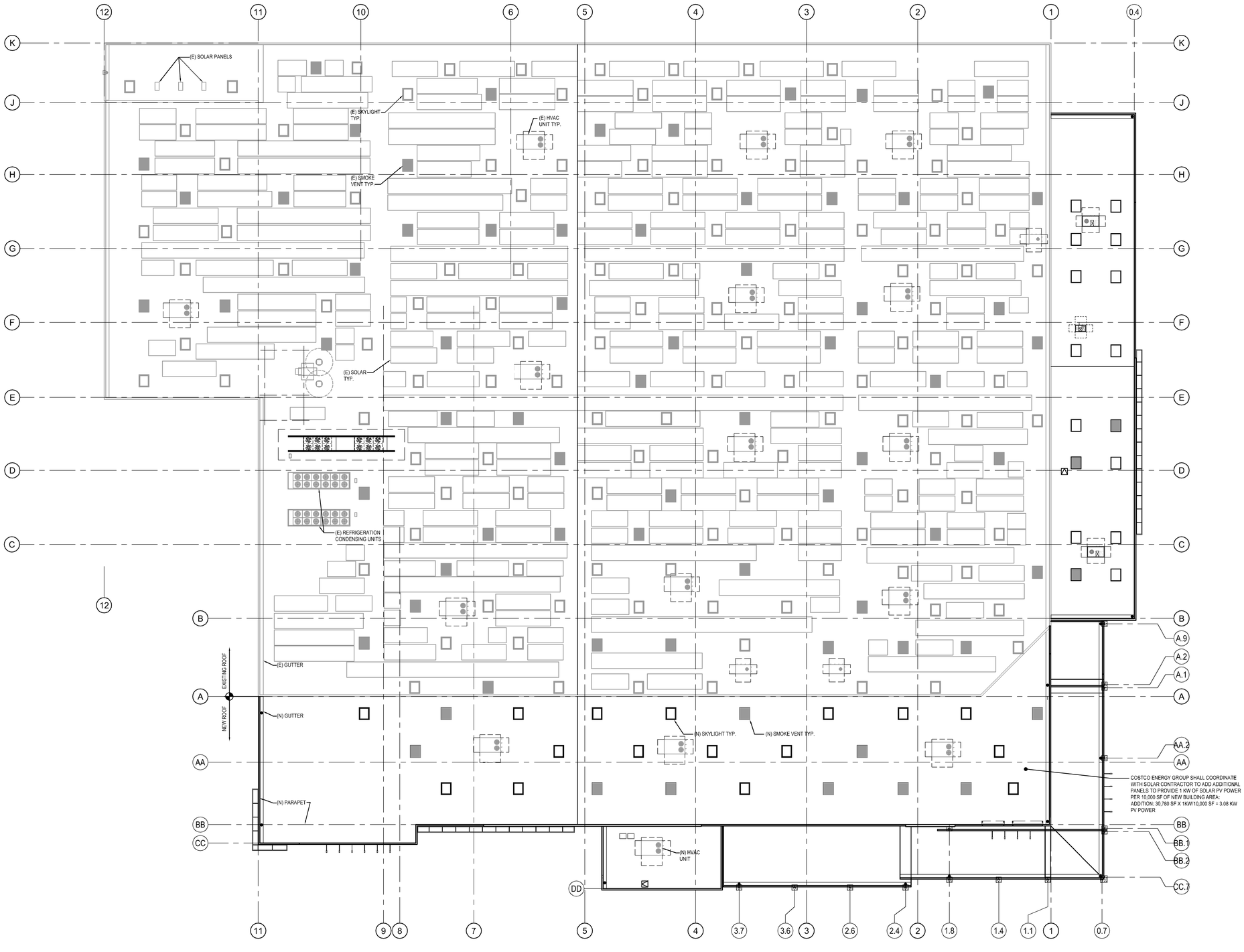
DD21-13M

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

MERCHANDISING PLAN

JUNE 18, 2015



0 10' 20' 40'
1" = 20'-0"

COSTCO WHOLESALE

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MULVANNY G2 ARCHITECTURE

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CONCEPT
ROOF PLAN

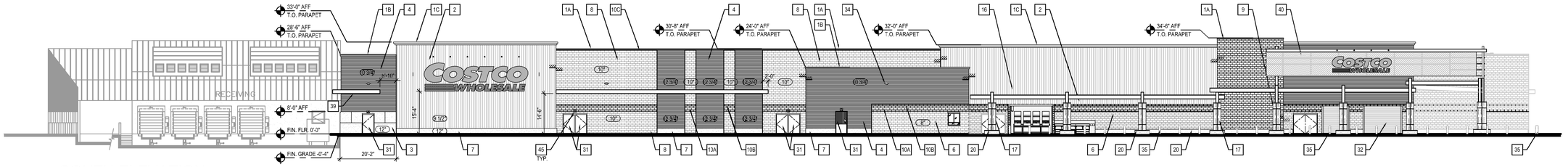
DD22-01

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

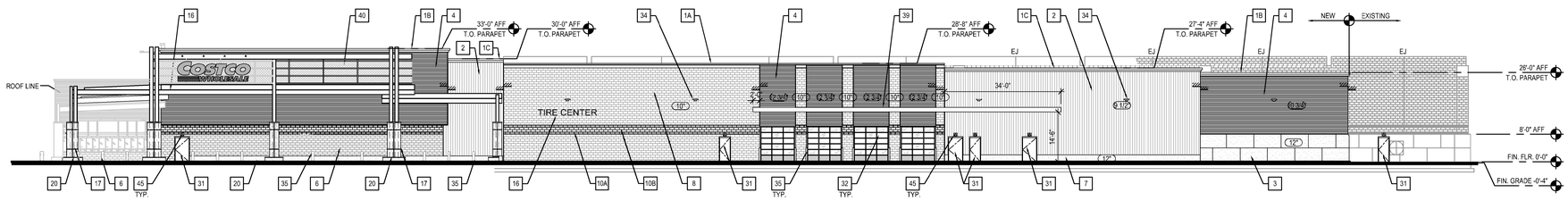
CONCEPT ROOF PLAN

SEPTEMBER 30, 2015



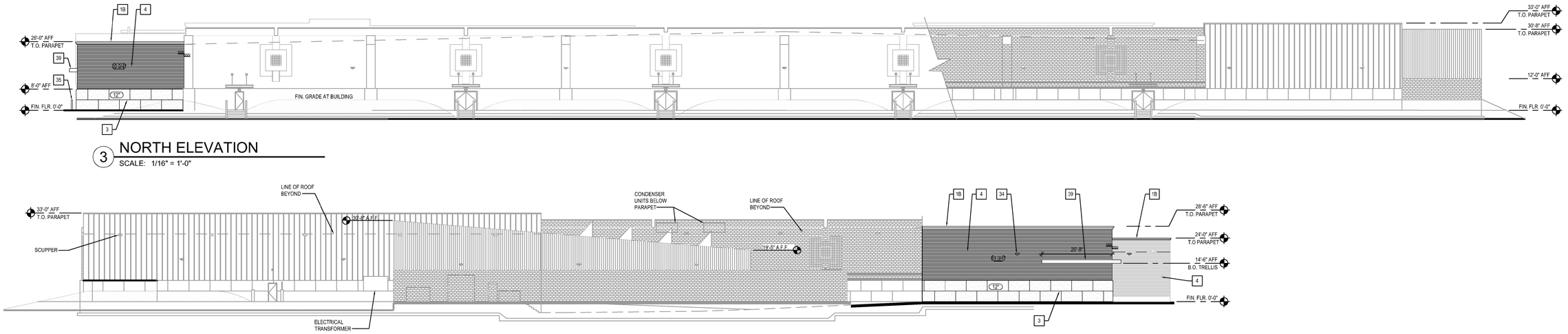
1 SOUTH ELEVATION

SCALE: 1/16" = 1'-0"



2 EAST ELEVATION

SCALE: 1/16" = 1'-0"

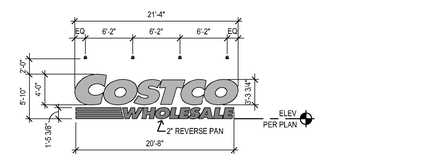


3 NORTH ELEVATION

SCALE: 1/16" = 1'-0"

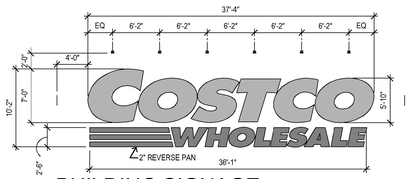
4 WEST ELEVATION

SCALE: 1/16" = 1'-0"



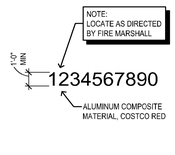
5 CANOPY SIGNAGE

SCALE: 1/8" = 1'-0" (SUPPLIED AND INSTALLED BY MBS) 0614



6 BUILDING SIGNAGE

SCALE: 1/8" = 1'-0" (SUPPLIED AND INSTALLED BY MBS) 0311



7 ADDRESS

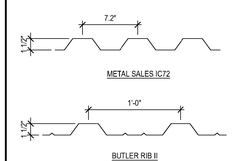
SCALE: NOT TO SCALE 0214

8 LOCATION SIGNAGE

(SUPPLIED AND INSTALLED BY MBS)

SCALE: 1/8" = 1'-0" 0214

SIDING PROFILE



EXTERIOR FINISH SCHEDULE

	#	ITEM	MATERIAL	FINISH	COLOR	MANUFACTURER \ NOTES
WALLS (1-10)	1A	COPING 1X6	MCELROY METAL	KYNAR 500	CHARCOAL	BY MBS
	1B	CORNICE 2X4	MCELROY METAL	KYNAR 500	CHARCOAL	BY MBS
	1C	CORNICE 4X6	MCELROY METAL	KYNAR 500	CHARCOAL	BY MBS
	2	METAL PANEL	METAL SALES IC72 VERTICAL	PRE-FINISHED	METALLIC SILVER	BY MBS
	3	LOWER WALL	CONCRETE	SEALED	NATURAL	
	4	METAL PANEL	METAL SALES IC72 HORIZONTAL	PRE-FINISHED	MISTIQUE PLUS	BY MBS
	6	LOWER WALL	8" CMU	SPLIT FACE	CHAMPAGNE, OAK, WARM GRAY	ANGELUS
	7	CONCRETE BASE	CONCRETE	SEALED	NATURAL	
	8	FULL HEIGHT WALL	10" CMU	SPLIT FACE	CHAMPAGNE, OAK, WARM GRAY	ANGELUS
	9	FULL HEIGHT WALL	12" CMU	SMOOTH FACE	SANDSTONE	ANGELUS
	10A	SOLDIER COURSE	8" CMU	SMOOTH FACE	COOL GRAY	ANGELUS
	10B	SOLDIER COURSE	8" CMU	SMOOTH FACE	CARNIVAL	ANGELUS
	10C	SOLDIER COURSE	10" CMU	SMOOTH FACE	WARM GRAY	ANGELUS
CANOPY (16-30)	16	CANOPY	METAL, BY MBS	PAINT, BY GC	COOL GRAY STONE	SHERWIN WILLIAMS
	17	COLUMN	CONCRETE	SEALED	NATURAL	-
	18	COLUMN	STEEL	PAINT, BY GC	COOL GRAY STONE	
	20	BENCH	CONCRETE	SEALED	NATURAL	

MISCELLANEOUS (31-40)	#	ITEM	MATERIAL	FINISH	COLOR	MANUFACTURER \ NOTES
	31	EGRESS DOOR AND FRAME	METAL	FIELD PAINT, BY GC	IRON ORE SW 7069	DOOR AND FRAME, BY MBS
	32	GLAZED OVERHEAD SECTIONAL DOORS	ALUMINUM	PRE-FINISHED	CLEAR ANOD	
	33	LIGHTING FIXTURE	METAL	PRE-FINISHED	TECHLIGHT BRONZE	SEE ELECTRICAL
	34	WALLPACK LIGHTING FIXTURE	METAL	PRE-FINISHED		SEE ELECTRICAL
	35	BOLLARD	STEEL POST, MBS	PLASTIC SLEEVE, BY MBS	RED	
	36	METAL GATE	METAL	FIELD PAINT BY GC CAULK BY GC	IRON ORE SW 7069	
	37	JOINT COVER	METAL	PRE-FINISHED	COLOR TO MATCH WALL	
	38	SCUPPER	METAL, BY MBS	FIELD PAINT, BY GC CAULK, BY GC	IRON ORE SW 7069	
	39	16" TRELLIS	STEEL	PAINT, BY GC	IRON ORE SW 7069	SHERWIN WILLIAMS
	40	EXPANDED STEEL MESH	STEEL	GALVANIZED	-	BY MBS
	45	EMERGENCY LIGHT				SUPPORT BRACKET - MATCH WALL, BY MBS

0 8' 16' 32'

1/16" = 1'-0"

COSTCO WHOLESALE

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94-0630-31
SEPTEMBER 30, 2015
CONCEPT ELEVATIONS

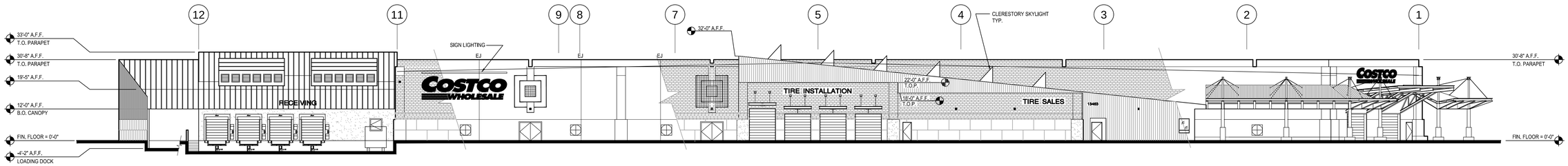
DD31-01

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

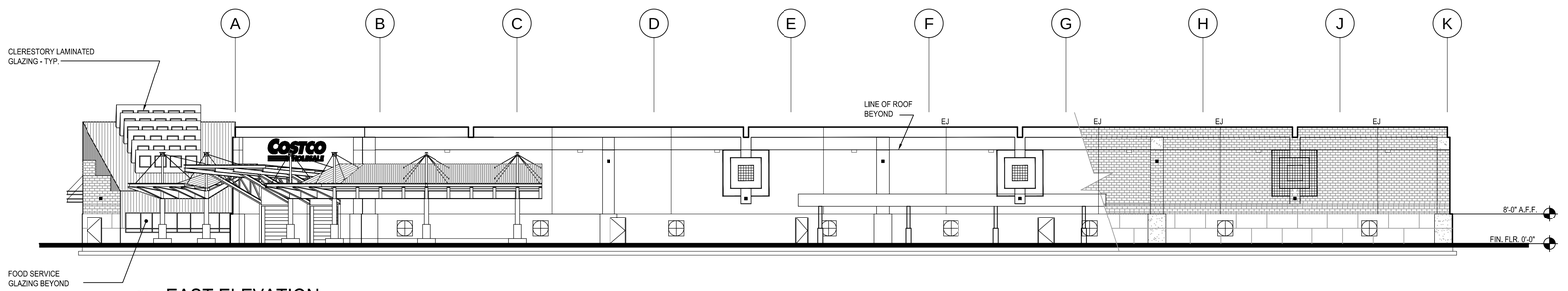
CONCEPT ELEVATIONS

SEPTEMBER 30, 2015

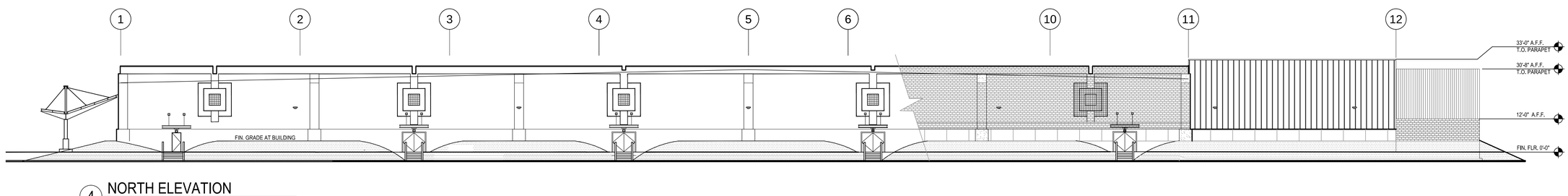


1 SOUTH ELEVATION
1/16" = 1'-0"

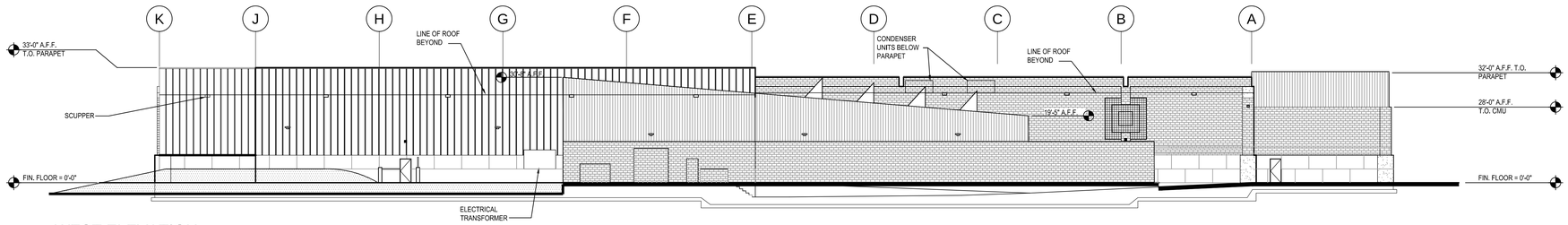
2 ENTRY ELEVATION
1/16" = 1'-0"



3 EAST ELEVATION
1/16" = 1'-0"



4 NORTH ELEVATION
1/16" = 1'-0"



5 WEST ELEVATION
1/16" = 1'-0"

0 4' 8' 16' 32'

COSTCO WHOLESALE

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94-0630
FEBRUARY 07, 2013

EXISTING
EXTERIOR
ELEVATIONS

EX3.1

COSTCO WHOLESALE

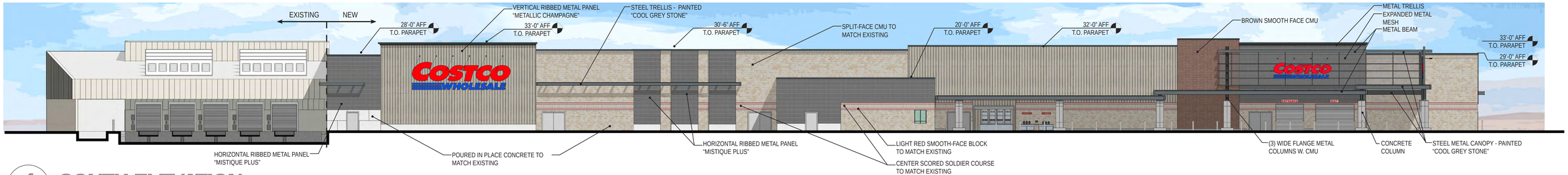
CULVER CITY, CALIFORNIA

EXISTING ELEVATIONS

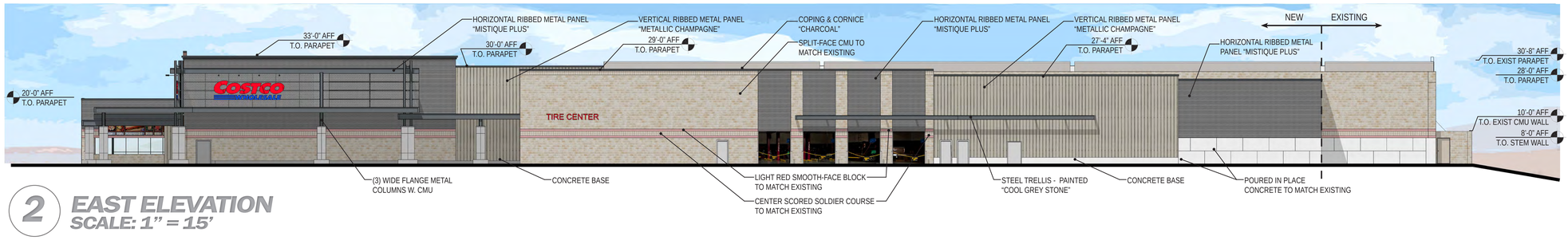
FEBRUARY 07, 2013

ENTRY PERSPECTIVE

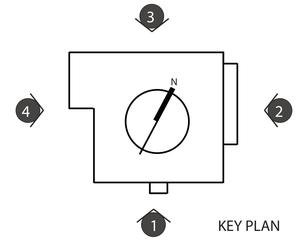
CORNER PERSPECTIVE



1 SOUTH ELEVATION
SCALE: 1" = 15'



2 EAST ELEVATION
SCALE: 1" = 15'



KEY PLAN

COSTCO WHOLESALE

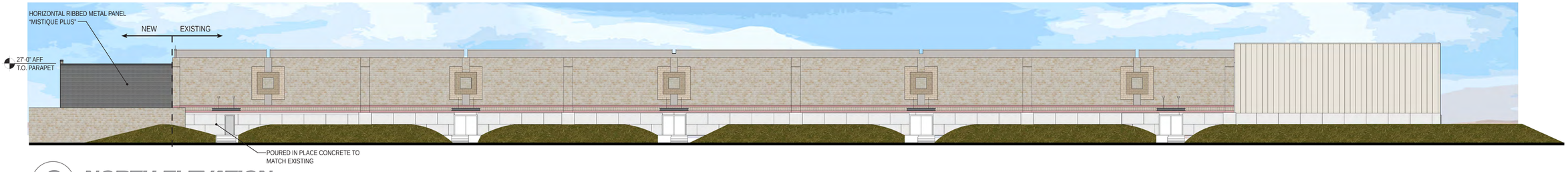
JUNE 18, 2015
#94-0630-31
CULVER CITY, CA

ENTRY/CORNER PERSPECTIVE

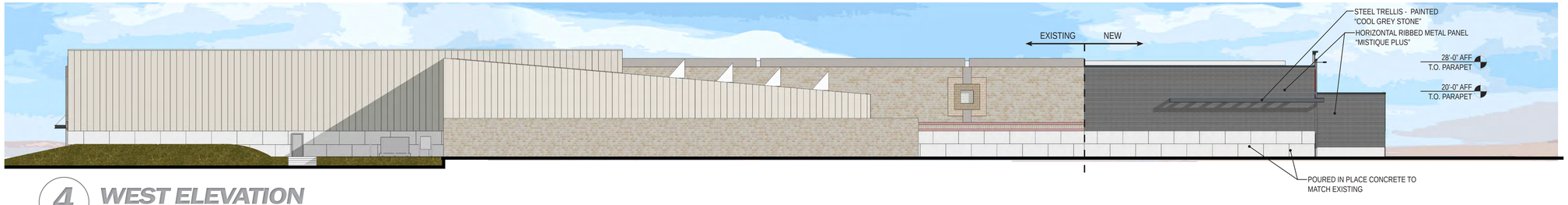
MG2

TIRE CENTER PERSPECTIVE

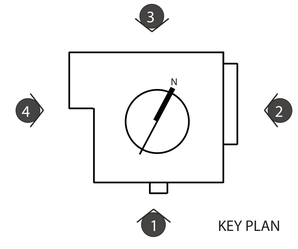
GAS STATION PERSPECTIVE



3 NORTH ELEVATION
SCALE: 1" = 15'



4 WEST ELEVATION
SCALE: 1" = 15'



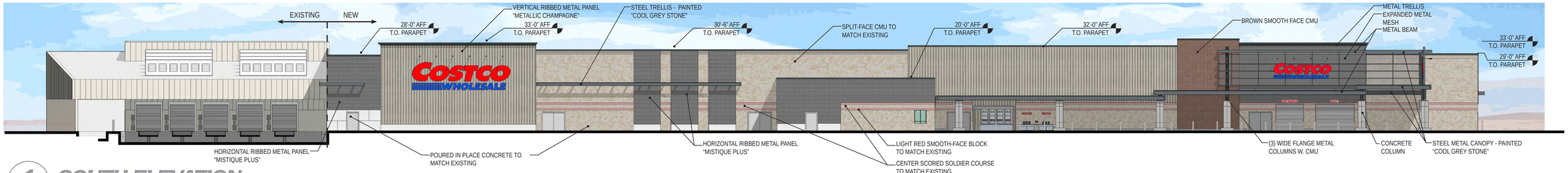
KEY PLAN

COSTCO WHOLESALE

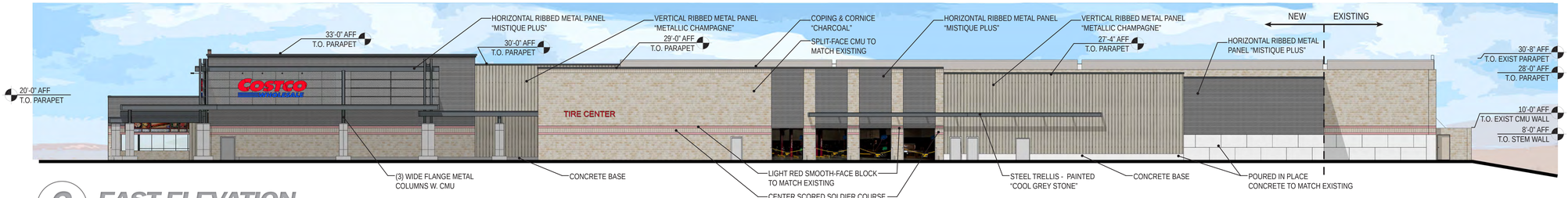
JUNE 18, 2015
#94-0630-31
CULVER CITY, CA

TIRE CENTER/GAS STATION PERSPECTIVE

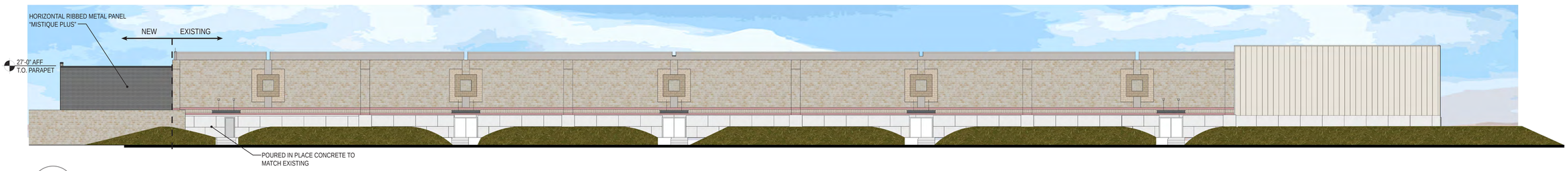
MG2



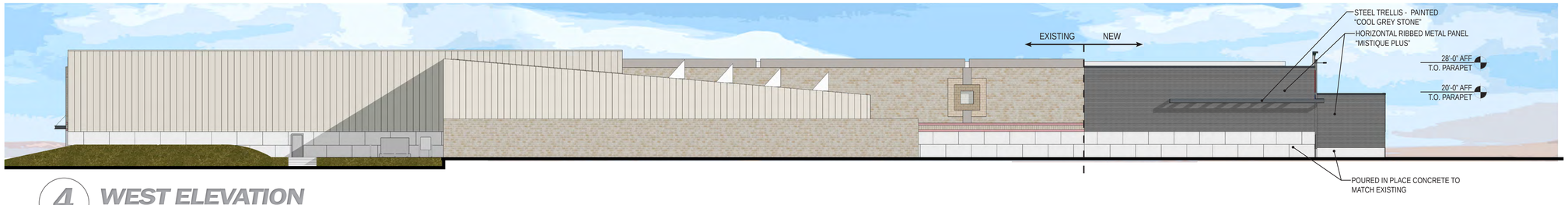
1 SOUTH ELEVATION
SCALE: 1" = 15'



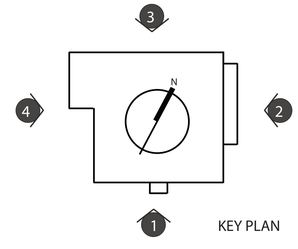
2 EAST ELEVATION
SCALE: 1" = 15'

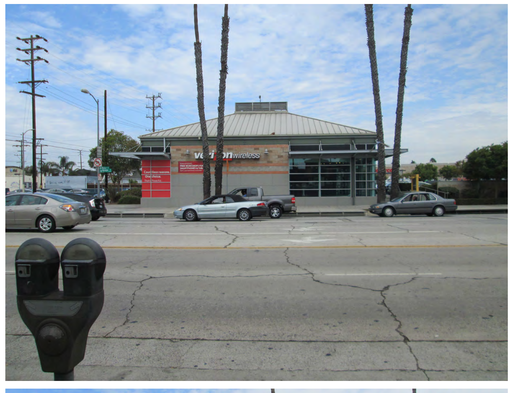


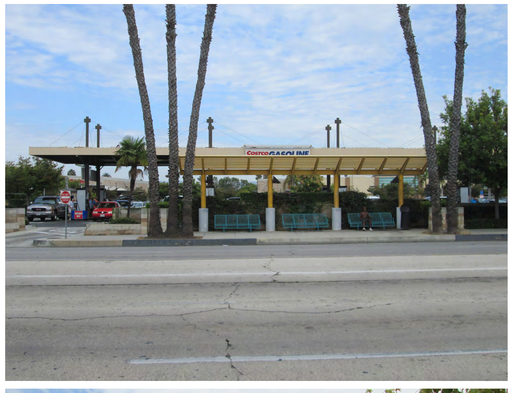
3 NORTH ELEVATION
SCALE: 1" = 15'



4 WEST ELEVATION
SCALE: 1" = 15'





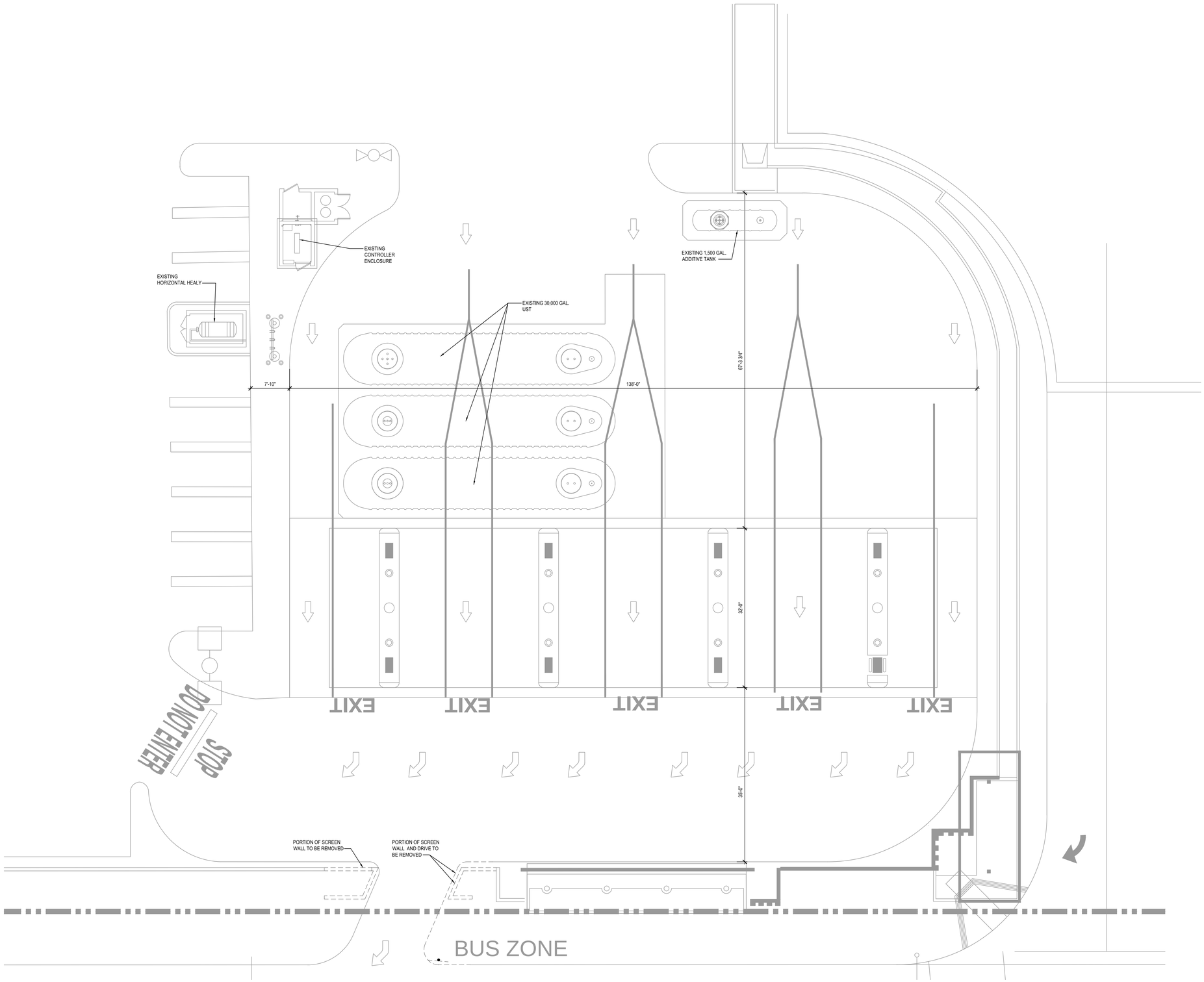


COSTCO WHOLESALE

JUNE 18, 2015
#94-0630-31
CULVER CITY, CA

EXISTING SITE CONTEXT PHOTOS

MG2



COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

EXISTING ENLARGED GAS PLAN

JULY 28, 2015

0 4' 8' 16'

1/8" = 1'-0"

COSTCO WHOLESALE

CULVER CITY, CA
#479

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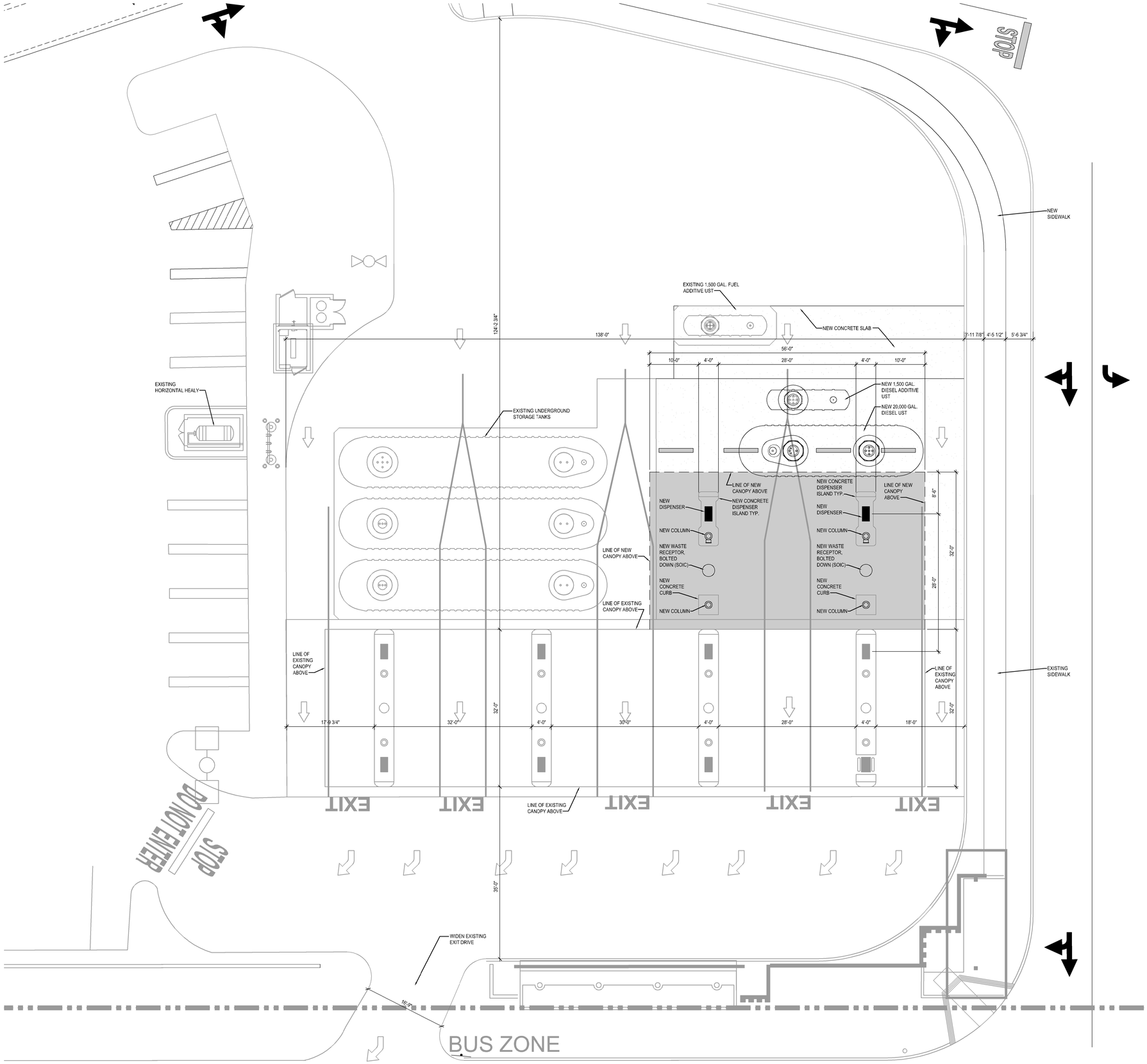
94-0630-31
JULY 28, 2015

EXISTING ENLARGED GAS PLAN

DD40-01



0 4' 8' 16'

1/8" = 1'-0"

COSTCO WHOLESALE

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94-0630-31
JULY 28, 2015

PROPOSED ENLARGED GAS PLAN

DD41-01

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

PROPOSED ENLARGED GAS PLAN

JULY 28, 2015

0 4' 8' 16'
1/8" = 1'-0"

COSTCO WHOLESALE

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94-0630-31
JULY 28, 2015
STACKING PLAN

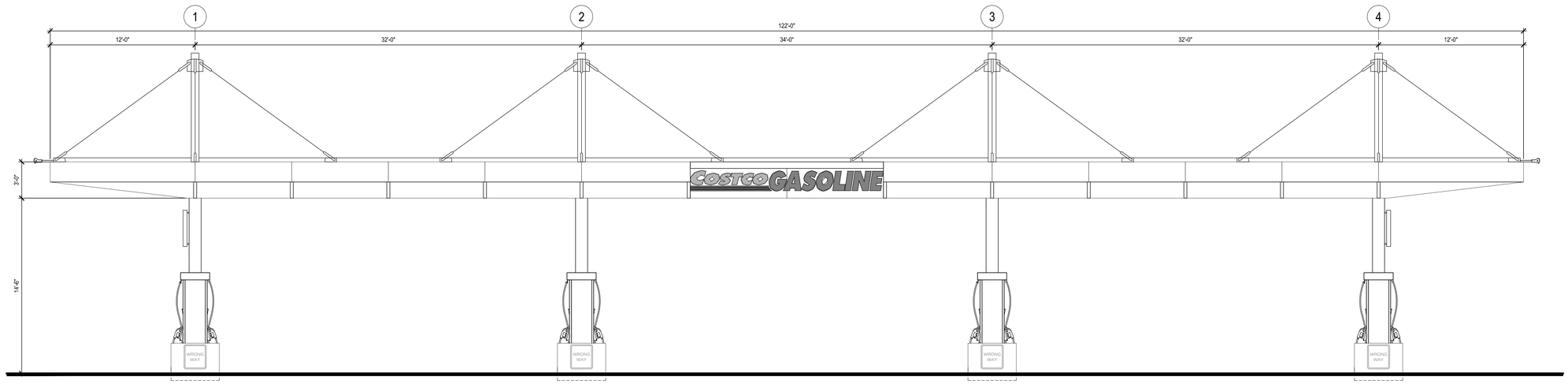
DD42-01

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

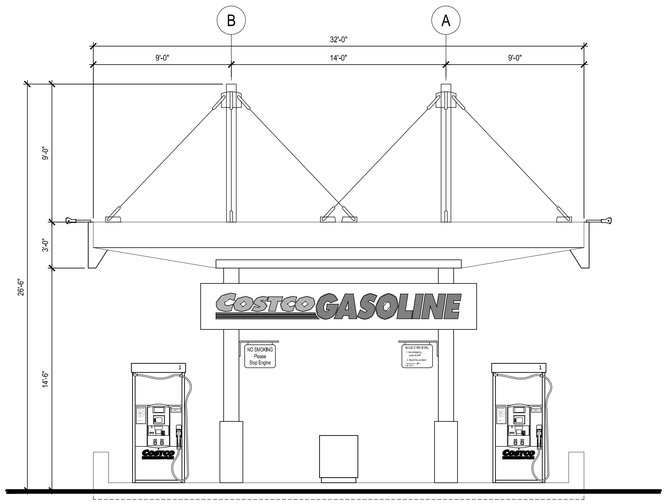
STACKING PLAN

JULY 28, 2015



1 EXISTING NORTH AND SOUTH ELEVATIONS

SCALE: 1/4" = 1'-0"



2 EXISTING EAST AND WEST ELEVATIONS

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

1/4" = 1'-0"

COSTCO WHOLESALE

CULVER CITY, CA
#479

13463 WASHINGTON BLVD.
CULVER CITY, CALIFORNIA 90292

MULVANNY G2 ARCHITECTURE

1110 112TH AVE. NE | SUITE 500
BELLEVUE, WA | 98004
t 425.463.2000 | f 425.463.2002

MulvannyG2.com

94-0630-31
JUNE 18, 2015

EXISTING
FUEL FACILITY
ELEVATIONS

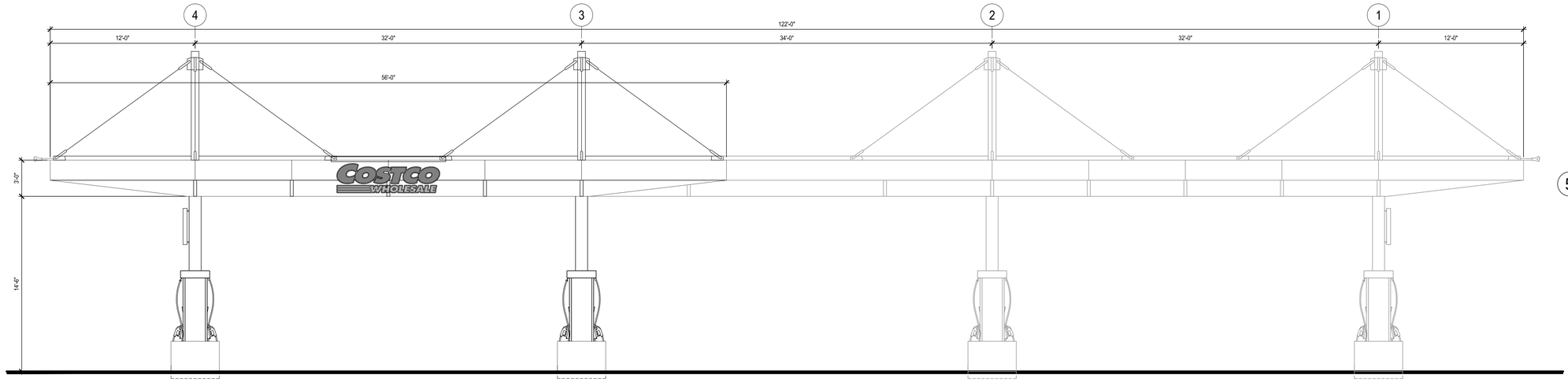
DD43-01

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

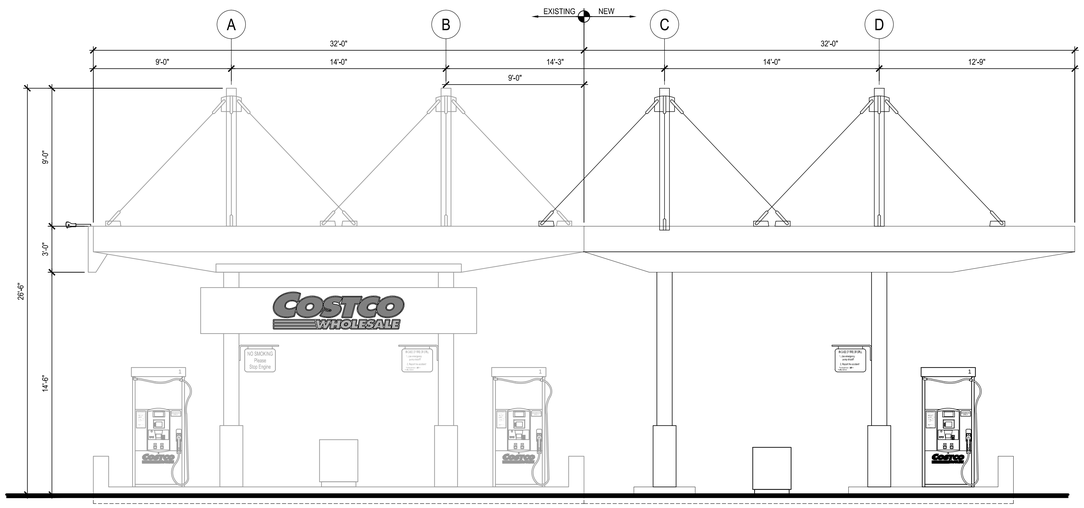
EXISTING FUEL FACILITY ELEVATIONS

JUNE 18, 2015



1 PROPOSED NORTH ELEVATION

SCALE: 1/4" = 1'-0"



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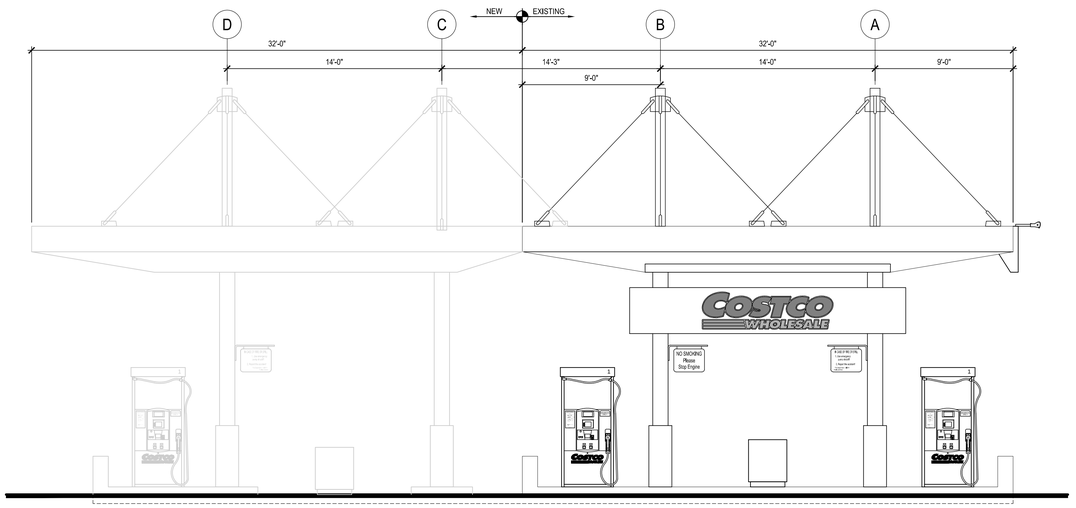
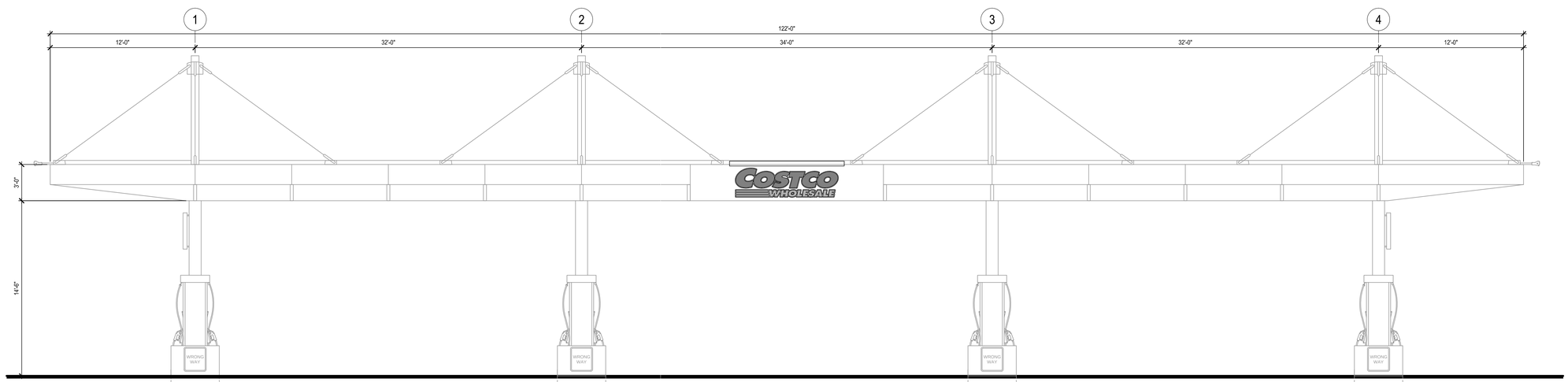
SCALE: 1/4" = 1'-0"



3 PROPOSED EAST ELEVATION

SCALE: 1/4" = 1'-0"



4 PROPOSED SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

5 CANOPY SIGN

SCALE: 1/2" = 1'-0"

COSTCO WHOLESALE PROPOSED FUEL FACILITY ELEVATIONS

CULVER CITY, CALIFORNIA

JUNE 18, 2015

0 2' 4' 8'

1/4" = 1'-0"

COSTCO WHOLESALE

CULVER CITY, CA
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94-0630-31
JUNE 18, 2015

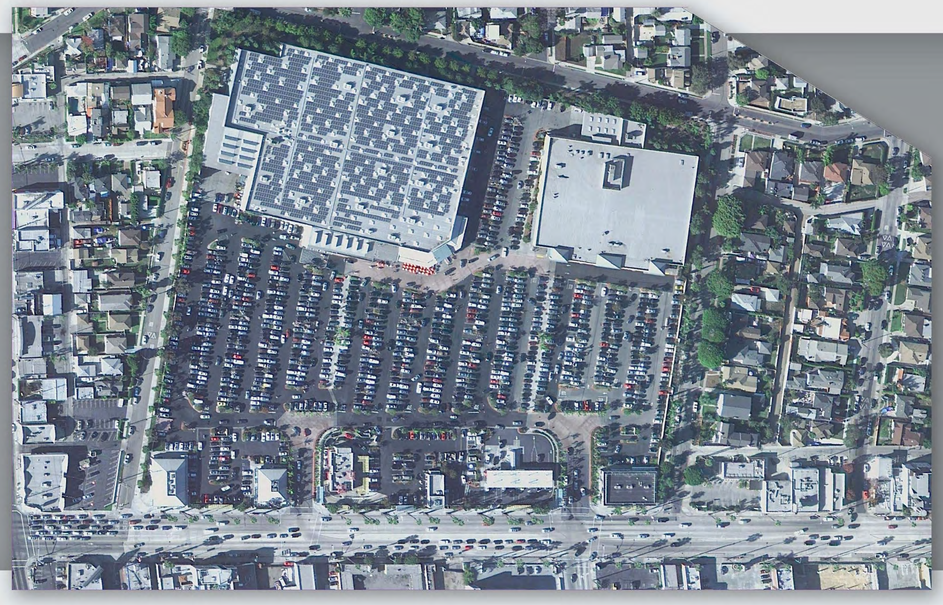
PROPOSED
FUEL FACILITY
ELEVATIONS

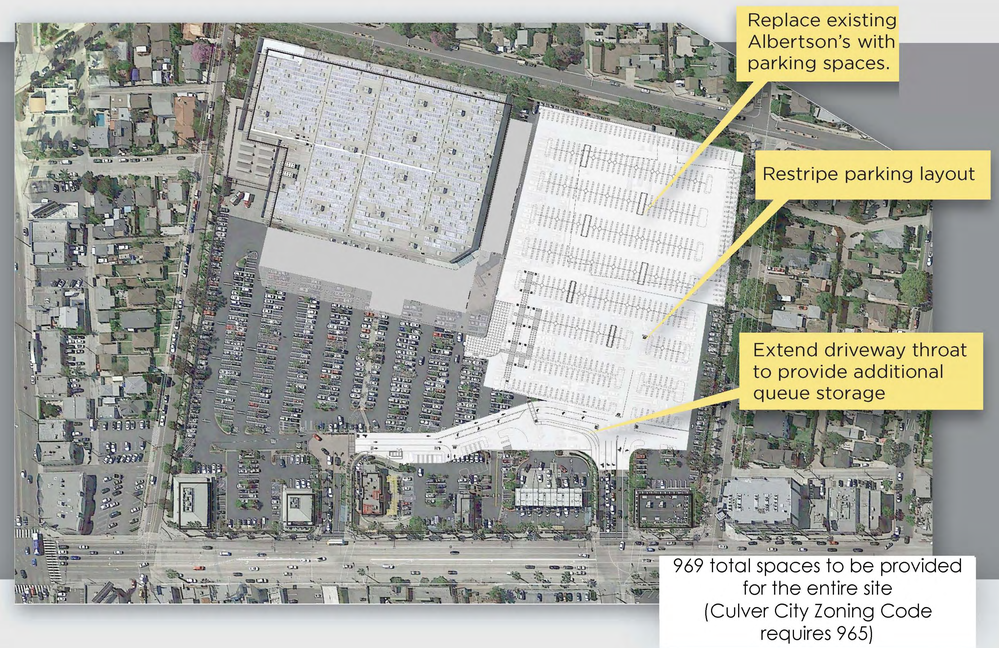
DD44-01

Existing Culver City Costco

Culver City Costco with Proposed Modifications

Parking



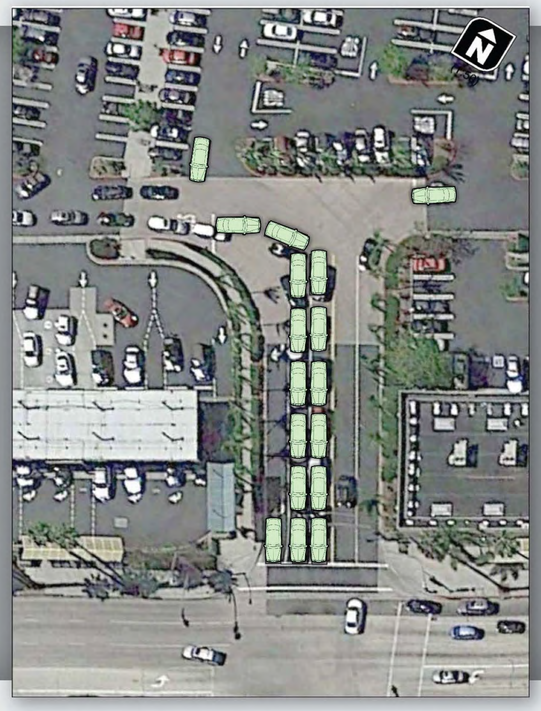


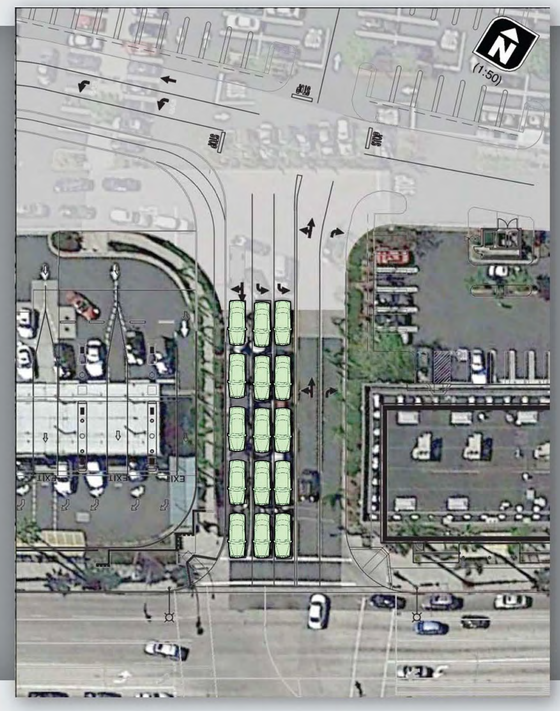
Access

2 Signals on Washington Blvd.

No New Access Proposed

Queues





Giroux & Associates
Environmental Consultants

June 3, 2015

Costco Wholesale
Attn: Jenifer Murillo
9 Corporate Park, Suite 230
Irvine, CA 92606

Subject: Culver City Warehouse Expansion Noise Impact Study
Our Reference No. P15-015

Dear Ms. Murillo:

As per your request, we have evaluated the noise implications of site modifications to the existing Culver City Warehouse facility. We understand that the warehouse building footprint will be expanded, the tire center will be relocated, the former Albertson's store building will be demolished, and the parking lot will be slightly reconfigured. For sake of directional simplicity, we have assumed that Washington Blvd. and Zanja Street are east-west streets and that Walnut and Glencoe run north-south. The only proposed action that might have operational noise impact implications would be the relocation of the tire center from its current south-facing orientation to the eastern façade of the remodeled building. Whereas the warehouse building now shields line-of-sight to the closest homes along Zanja Street, the tire center would be relocated somewhat closer and would have a 90-degree field of view to the nearest homes. The relocated tire center would directly face the closest homes on Glencoe, but would maintain almost 500 feet of distance separation in addition to a 10-foot high block wall at the site property line.

Secondary noise impacts may be created by construction activities, particularly the demolition of the former Albertson's store. The existing 10-foot high perimeter wall along the Zanja and Glencoe site frontage is expected to reduce temporary noise impacts during construction/demolition. Minor additional noise would be created by added roof-top HVAC units to serve increased building square footage. The number of units to be added is small and they are shielded from line-of-sight by the roof edge parapet wall.

The analytical approach for the acoustic impact analysis was to establish baseline noise conditions for the existing site configuration, monitor a series of tire change operations at the existing tire center, superimpose the tire center noise footprint upon the baseline, adjust the noise contours for orientation, distance and barrier effects, and compare the analyzed "with project" values to the applicable noise standards for Culver City and/or Los Angeles. It should be noted that a predicted violation of noise ordinance standards for the relocated facility would be considered a significant impact under CEQA that would require mitigation, if feasible. Conversely, meeting the ordinance standard is not conclusive evidence of a less than significant impact. It is possible that a project may create a substantial increase in noise levels above a quiet

baseline without exceeding standards. Both the change in "with project" noise levels as well as the final magnitude of the future noise levels therefore must be considered.

Relative to the applicable noise ordinance standard, residences to the west and north of the project site are located in the City of Los Angeles. Residences to the east are within Culver City. The City of Culver City has no specific noise limitations in its Municipal Code. However, the Noise Element of the City's General Plan, at page N-23, has clear property line noise standards for residential uses. The City of Los Angeles Municipal Code, at Section 112.04, restricts noise increases to no more than +5 dB above the presumed ambient level. The Code further allows for some deviation from this threshold for progressively shorter periods. If one presumes that the "default" residential ambient noise level is 50 dB, the daytime standards in the Culver City General Plan and the City of Los Angeles Municipal Code are almost identical as follows:

Levels not to be exceeded for more than 30 minutes in any hour	-	55 dBA
Levels not to be exceeded for more than 15 minutes in any hour	-	60 dBA
Levels not to be exceeded for more than 5 minutes in any hour	-	65 dBA
Level not to be exceeded at any time	-	75 dBA

By way of reference, an increase in noise levels of +10 dBA is perceived by human ears as being twice as loud. The following are typical noise levels that one might experience in the course of normal living:

Rural landscape with a slight breeze	-	30 dBA
Bedroom with sleeping occupants	-	40 dBA
Quiet office with muted conversations	-	50 dBA
School classroom during a Q&A session	-	60 dBA
Sidewalk along a busy street	-	70 dBA

Existing baseline noise levels at homes close to the Costco site, as well as on the site before warehouse opening time, are relatively low. Daytime traffic volumes on site perimeter streets except Washington Blvd. are low, and homes experience additional shielding benefit from large buildings and the existing 8 – 10 feet high site perimeter wall. Measured noise levels from 8:30 – 9:30 a.m. on Saturday morning (Costco and the tire center open at 9:30) were as follows:

Measurement Location	Avg. LEQ	Max. $L_{max.}$	Min. $L_{min.}$	5-Minute L_{08}	15-Min. L_{25}	30-Min. L_{50}
Tire Center–Pre-Open	50	55	47	51	50	49
Zanja/Louella	46	52	40	49	44	43
Zanja/Glencoe	48	56	43	50	47	45
Adopted Std.	--	75	--	65	60	55

At 9:30 a.m., four vehicles waiting for tire installation were pulled into the four tire center bays and old tire removal and new tire installation began almost immediately on three vehicles with five air guns in intermittent operation. Measurements were made at 70 feet from the open roll-up doors during the busiest 5-minute period of tire center operations. The measured noise level, minus the pre-opening background levels, became the reference noise "footprint" for a busy tire center upon relocation to the eastern warehouse façade as follows:

Operational Condition	Avg. LEQ	Max. $L_{max.}$	Min. $L_{min.}$	5-Minute L_{08}	15-Min. L_{25}	30-Min. L_{50}
Tire Center–Pre-Open	50	55	47	51	50	49
5 Air Guns Working	53	67	48	56	51	50
Operational Noise	50	67	48	54	44	43
Adopted Std.	--	75	--	65	60	55

The measured reference noise generation at 70 feet from the building façade was assigned to the new tire center location and then allowed to decay through distance propagation, site perimeter wall shielding and emissions directivity where applicable. Residual noise levels were calculated at the closest home north of the tire center on Zanja Street, and the closest home to the east on Glencoe Avenue. Noise level adjustments included the following (dBA):

Noise Level Adjustment	Zanja Street	Glencoe Avenue
Distance decay vs. 70' reference measurement	-8	-16
10' high site perimeter wall	-9	-9
Directivity (faces receiver vs. 90^o field of view	-5	0

Residual noise levels after all adjustment, combined with the measured background levels, demonstrate that there will be a large margin of safety relative to the adopted standards, for the relocated facility seen as follows (dBA)

Location/Scenario	5-Minute Level	15-minute Level	30-Minute Level
70’ from Tire Center Roll-Up Door			
Background Level Only	51	50	49
Tire Center Only	54	44	43
Tire Center + Background	56	51	50
Zanja Street			
Background Level Only	49	44	43
Tire Center Only (adj.)	32	29	28
Tire Center + Background	49	44	43
Glencoe Avenue			
Background Level Only	50	47	45
Tire Center Only (adj.)	29	26	25
Tire Center + Background	50	47	45
Adopted Standard	65	60	55

These findings are shown graphically in the attached bar graphs. Because decibels are on a logarithmic scale, representation in a linear format such as a table or bar graph hides the large margin of safety that will continue to exist after fire center relocation. As noted above, the superposition of tire center operational noise will not measurably change the ambient acoustic environment because the addition of two noise levels that differ by more than 10 dB do not increase the larger value by more than 0.4 dB (not measurable).

Construction activities, particularly the demolition of the Albertson’s building, will generate short-term noise levels that may be temporarily intrusive at the nearest residences. Both the Culver City and City of Los Angeles municipal codes exempt such activities from compliance with the numerical noise performance standard if they occur during hours of lesser sensitivity (not at night or early morning hours). The City of Los Angeles code specifies a noise performance standard of 75 dB at the nearest residence unless it is technically infeasible to meet that threshold.

Construction equipment noise is typically in the mid-80 dB range at 50 feet from the source during peak power operations. The noise attenuation of a 10-foot high perimeter wall is near 10 dB. The noise reduction with distance between on-site and off-site residences is 5-10 dB, depending upon separation distance. Combined effects of a barrier wall and distance spreading losses will reduce peak construction activity noise to around 70 dB at the nearest residence. Such levels are not considered to have a significant impact if they are restricted to the following hours per Section 9.09.035 of the Culver City Municipal Code:

8 a.m. – 8 p.m.	Monday-Friday
9 a.m. – 7 p.m.	Saturday

10 a.m. – 7 p.m. Sunday

Sunday construction involving heavy equipment would be highly unusual. The following measures are recommended to reduce possible noise nuisance (beyond compliance with the municipal code):

1. Heavy equipment operations on Sundays or major holidays should only be performed with prior written concurrence of the Building Official, and
2. Demolition of the Albertson's store building should proceed from SW to NE to preserve the northern and eastern building walls to act as additional sound barriers as long as possible.

Roof-top HVAC equipment will be added near the southern warehouse building to serve the new space created by vacation of the tire center and new construction of approximately 30,000 square feet of retail space. The relocated tire center operates with open doors and will not have much new mechanical equipment. The new added HVAC equipment will be located 500 feet away from existing homes and will be additionally shielded by the northern parapet wall on the existing building. No equipment audibility would occur with such distance separation and shielding effects.

The most important conclusions to be reached from the above analysis are:

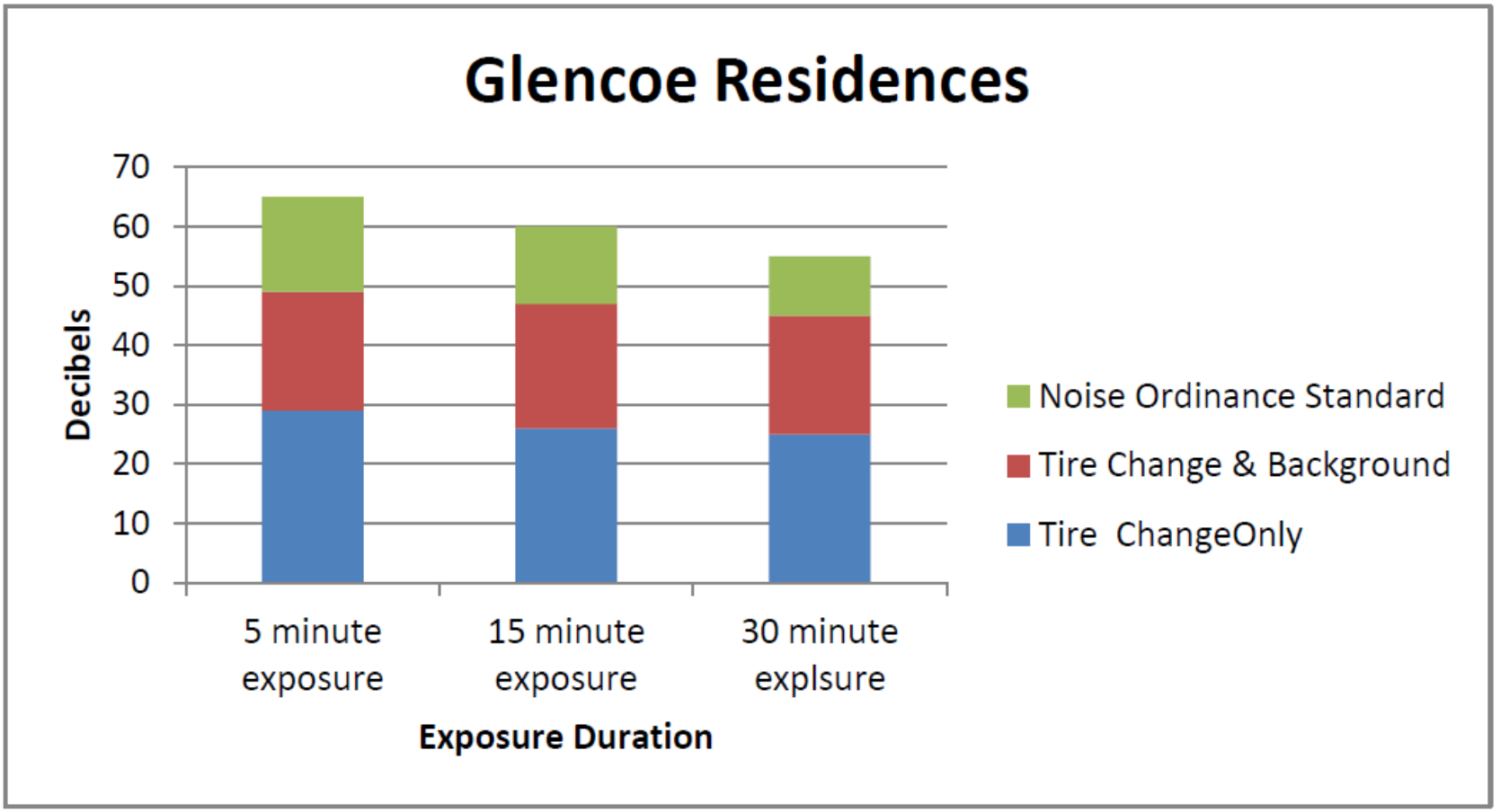
- The adopted noise standard is already met on-site at 70 feet from the tire center bay entry doors with a direct line of sight. With distance spreading, a perimeter sound wall and possible directional effects, the standard is guaranteed to be met at the closest homes.

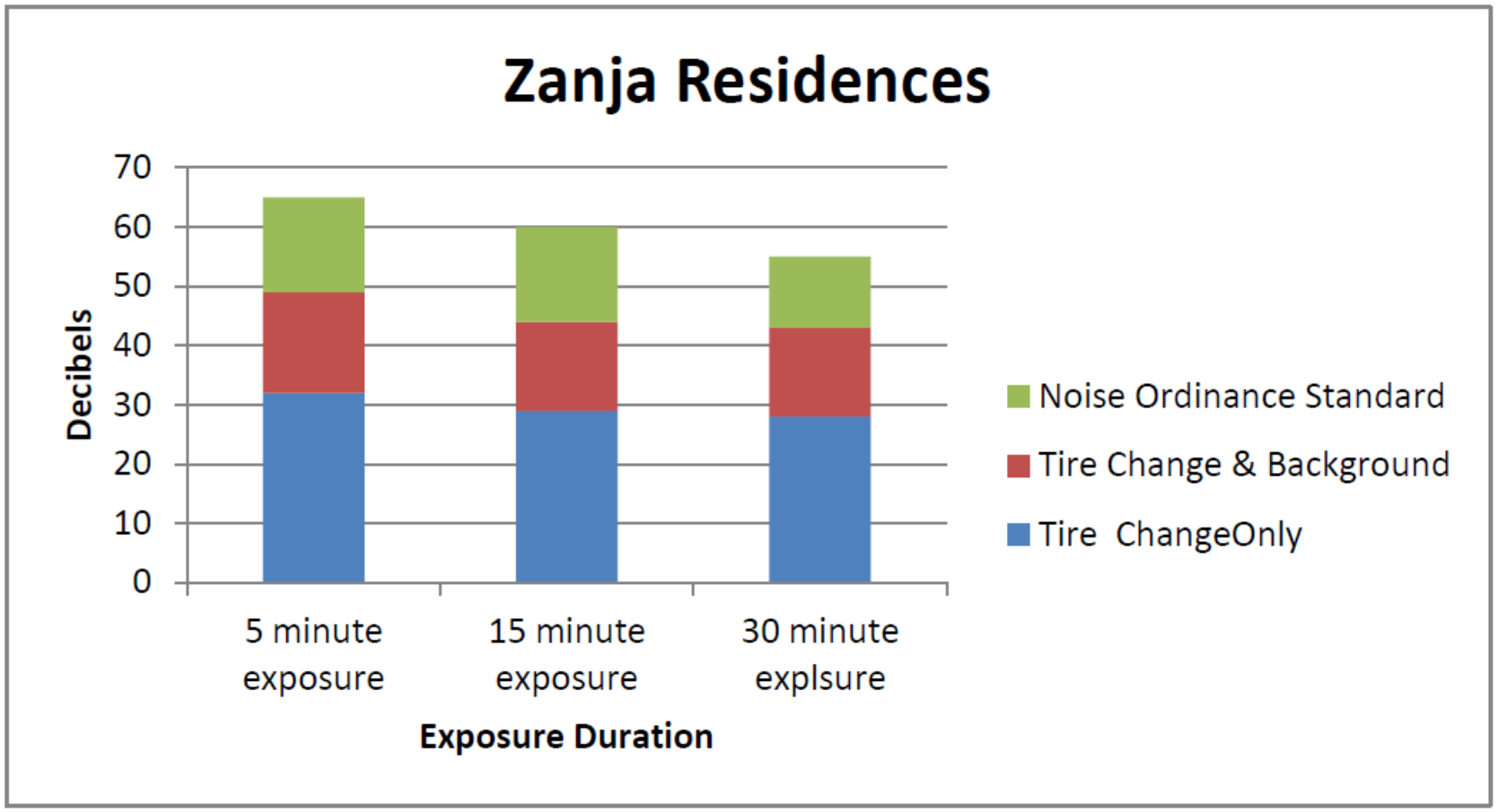
- The tire center noise footprint, with standard adjustment factors, is not sufficient to increase the relatively quiet baseline, by even 0.5 dBA except in close proximity to the tire changing operations themselves.

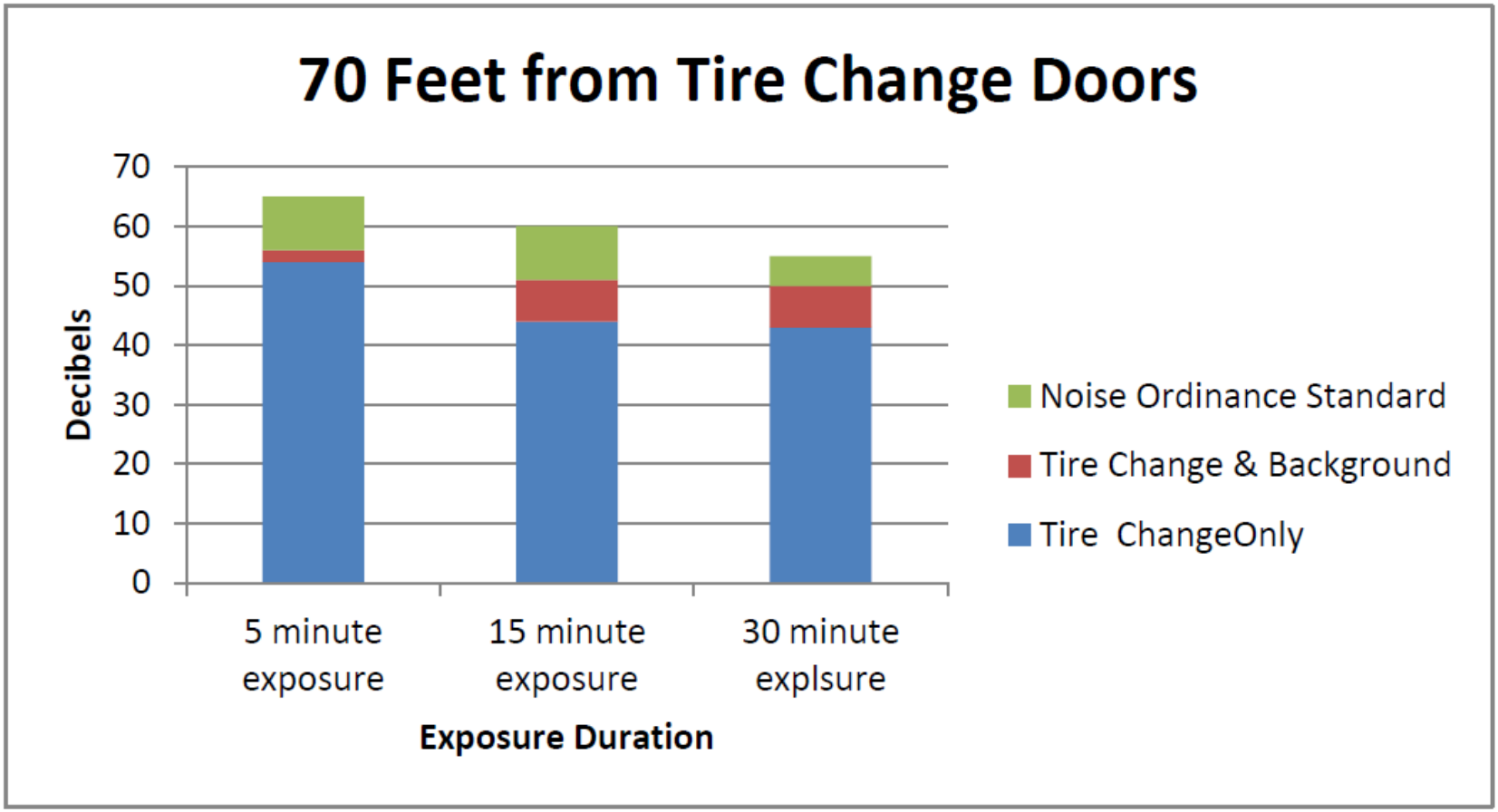
The test for noise impact significance is to not exceed adopted standards and to not create a substantial increase. As noted above, the adopted standards derived from the Culver City General Plan and the City of Los Angeles Municipal Code are met at the closest homes with a large margin of safety. Tire center operational noise at the closest homes will not change the normally quiet background by any measurable amount. Tire center relocation and other activities will not impact the closest neighbors because of noise. Please call me with any questions.

Sincerely,

Hans D. Giroux
Senior Analyst
Giroux & Associates


Glencoe Residences
70
60
50
40
30
20
10
0
Decibels
5 minute exposure
15 minute exposure
30 minute explsure
Exposure Duration
Noise Ordinance Standard
Tire Change & Background
Tire ChangeOnly


Zanja Residences
70
60
50
40
30
20
10
0
Decibels
5 minute exposure
15 minute exposure
30 minute explsure
Exposure Duration
Noise Ordinance Standard
Tire Change & Background
Tire ChangeOnly


70 Feet from Tire Change Doors
Decibels
70
60
50
40
30
20
10
0
5 minute exposure
15 minute exposure
30 minute explsure
Exposure Duration
Noise Ordinance Standard
Tire Change & Background
Tire ChangeOnly

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
354 SW Upper Terrace Drive, Suite 101, Bend, Oregon 97702 P 541.312.8300 F 541.312.4585

CULVER CITY COSTCO TRAFFIC ANALYSIS

Date:	October 14, 2015	Project #: 18075.0
To:	Barry Kurtz, PE and John Fisher, PE City of Culver City Transportation Engineering	
From:	Casey Bergh and Joe Bessman, KAI	
Cc:	Jenifer Murillo, Costco Wholesale and Terry Odle, MG2	

Kittelson & Associates, Inc. (KAI) has assessed the transportation impacts associated with the proposed expansion of the existing Culver City Costco warehouse on the 18.41-acre lot located on Washington Boulevard. The proposed project includes demolition of the adjacent 63,000 square foot Albertson's grocery store in order to expand the existing Costco by 29,111 square feet. The store will include a new tire center, food center addition, and warehouse expansion. Along with the building changes, parking and circulation improvements are planned to address internal traffic circulation and congestion. The revised layout maintains a similar number of parking stalls while improving the drive aisles, storage space, and circulation routes. The proposed project is expected to decrease site trips, reduce internal congestion, and reduce delays at the two signalized accesses onto Washington Boulevard.

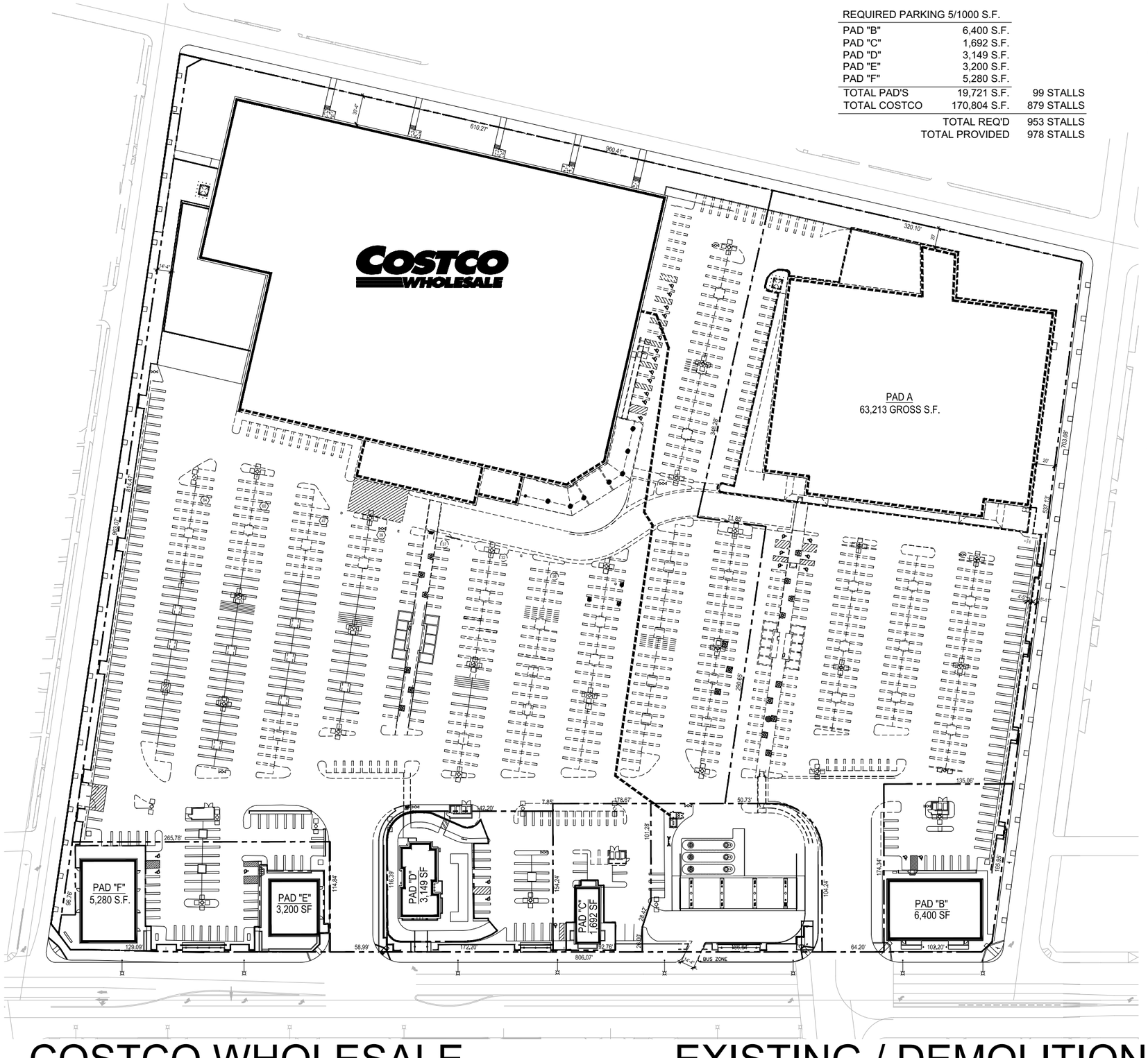
This report provides an update to the original analysis including additional details that address staff and public comments. This report summarizes the overall site changes, anticipated trip impacts to the transportation system, recommended mitigation measures, and a review of neighborhood traffic calming.

EXISTING ACCESS AND SITE PLAN

The Culver City Costco is located on Washington Boulevard, just east of Lincoln Boulevard (US 1). Two signalized intersections on Washington Boulevard provide full access to the Culver City Costco and the adjacent Albertson's. A right-out egress is provided from the Costco fuel station onto Washington Boulevard between the two signalized driveways. The western signalized access is a three-legged ("T") intersection. The eastern signalized access is aligned with Glencoe Avenue, creating a four-legged intersection.

Immediately north of the traffic signals, internal intersections are stop-controlled on the east-west approaches requiring traffic to yield right-of-way to inbound traffic. These internal intersections are located approximately 175 feet north of the traffic signals. During peak times, store staff direct traffic at the internal intersections to prevent gridlock or backups onto Washington Boulevard. The existing layout of the site showing adjacent roadways, access points, and buildings is shown in Figure 1.

REQUIRED PARKING 5/1000 S.F.		
PAD "B"	6,400 S.F.	
PAD "C"	1,692 S.F.	
PAD "D"	3,149 S.F.	
PAD "E"	3,200 S.F.	
PAD "F"	5,280 S.F.	
TOTAL PAD'S	19,721 S.F.	99 STALLS
TOTAL COSTCO	170,804 S.F.	879 STALLS
	TOTAL REQ'D	953 STALLS
	TOTAL PROVIDED	978 STALLS



PROJECT DATA

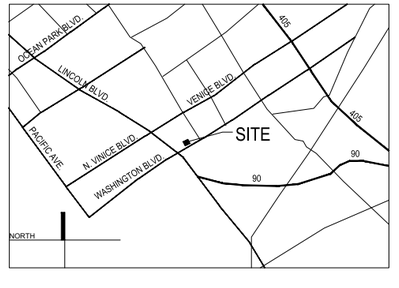
CLIENT:	COSTCO WHOLESALE 999 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	13463 WASHINGTON BLVD. CULVER CITY, CA
ZONING:	COMMERCIAL REGIONAL RETAIL (CRR)
SITE AREA:	18.41 ACRES (801,881 S.F.)
JURISDICTION:	CULVER CITY
SETBACKS:	20 FT. FROM ZANJA ST (NORTH) 20 FT. FROM WALNUT AVE. (WEST)

EXIST. BUILDING DATA:	
EXIST. BUILDING AREA	141,693 S.F.
EXIST. TIRE CENTER DEMOLISHED	-5,200 S.F.
EXIST. FOOD SERVICE DEMOLISHED	-1,310 S.F.
TOTAL EXISTING BUILDING	135,183 S.F.
BUILDING ADDITION	28,370 S.F.
FOOD SERVICE ADDITION	1,829 S.F.
TIRE CENTER ADDITION	5,422 S.F.
TOTAL REVISED COSTCO	170,804 S.F.
EXISTING PAD A, B, C, D, E, F	83,024 S.F.
DEMO EXISTING PAD A (ALBERTSON'S)	(63,213 S.F.)
REVISED TOTAL OUT BUILDINGS	19,811 S.F.
TOTAL REVISED SITE BUILDING	190,615 S.F.

PARKING DATA:	
EXISTING PARKING	1,042 STALLS
PROPOSED PARKING:	
ⓟ 10' WIDE STALLS	500 STALLS
ⓟ 9' WIDE STALLS	365 STALLS
ⓟ 9' WIDE COMPACT STALLS	84 STALLS
ⓟ HC HANDICAP STALLS	29 STALLS
TOTAL PARKING FOR CENTER	978 STALLS
NO. OF STALLS PER 1000 S.F. OF NEW BUILDING AREA:	5.13 STALLS
CITY REQUIRED PARKING 5 / 1000	953 STALLS

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.

VICINITY MAP



0 20' 40' 80'
1" = 40'

COSTCO WHOLESALE
CULVER CITY, CA
#479
13463 WASHINGTON BLVD.
CULVER CITY, CA 90292

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t 425.463.2000 | f 425.463.2002
MulvannyG2.com

94-0630-31
MAy 20, 2015

EXISTING / DEMOLITION SITE PLAN

DD10-23

COSTCO WHOLESALE

CULVER CITY, CALIFORNIA

EXISTING / DEMOLITION SITE PLAN

MAY 20, 2015

TRIP GENERATION

Trip generation estimates are commonly prepared using the standard reference *Trip Generation, 9th Edition,* published by the Institute of Transportation Engineers. This reference provides trip generation information collected nationally at suburban stand-alone locations. The land use code most commonly applied to Costco warehouse sites is the *Discount Club*, ITE Land Use Code 857. This land use was first introduced within the 8th Edition of the manual in 2008. The land use description states the following:

> *A discount club is a discount store or warehouse where shoppers pay a membership fee in order to take advantage of discounted prices on a wide variety of items such as food, clothing, tires and appliances; many items are sold in large quantities or in bulk.*

The 9th Edition *Trip Generation* manual notes the peak of these uses occurs between 11:00 a.m. and 2:00 p.m., and trip data that comprises this classification was collected between the 1980's and 2000's. This land use does not distinguish between sites with or without fueling centers, but notes the importance to include this information in future studies. ITE also notes the weekday AM peak hour trip information is based on a small sample size and cautions the user about application of the data.

Based on numerous site-specific surveys we have conducted or compiled nationally at Costco warehouses, we have prepared a trip generation database that more accurately describes store characteristics than the *Trip Generation, 9th Edition*. The trip generation database we have compiled catalogs the overall building size, presence of fuel centers, carwash, and many other site characteristics. *Costco-specific trip generation study data are provided in Attachment A.*

Tables 1 and 2 provide a comparison of the Costco-specific trip generation data to *Discount Club* data within *Trip Generation, 9th Edition*. As shown, the Costco-specific trip generation data indicates Costco generates more trips than a typical *Discount Club*. However, many of the Costco trips are classified as *diverted* or *pass-by* because of the fuel center, food court, typical location along major roadways, and product mix. Therefore, the impacts associated with new trips at the site access points is limited as many customers are motorists that divert from their existing routes.

At the request of City staff, our study area focused only on the access points; *pass-by and diverted trip reductions are not accounted for in this analysis,* as summarized in Table 1. This provides for consistent comparison between the Costco and the adjacent supermarket; however, this approach over-represents system transportation and emissions impacts of adjacent intersections.

The trip estimates shown in Table 1 only include trips associated with the Costco, Albertson's, and fuel center. No changes are proposed to other outparcel buildings on the site, so their impact was excluded. The Saturday peak hour of Costco traffic was summarized in Table 2. The Saturday peak hour generates more traffic than the Sunday peak hour per the Costco-specific trip generation data.

Table 1. Estimated Weekday Trip Generation Potential

Land Use	Size	Weekday Daily Trips		Weekday PM Peak Hour of Adjacent Traffic					
		Costco-Specific Trip Generation	ITE 9th Edition Trip Generation	Costco-Specific Trip Generation			ITE 9th Edition Trip Generation		
				Total	In	Out	Total	In	Out
Costco Expansion									
Existing Warehouse US Costco Warehouse with Fuel	141,693 SF 16 Fueling Positions	(10,256)	(5,923)	(1,013)	(491)	(522)	(592)	(296)	(296)
Proposed Expansion US Costco Warehouse with Fuel	170,804 SF 16 Fueling Positions	12,364	7,140	1,221	591	630	714	357	357
Net Difference		***+2,108***	***+1,217***	***+208***	***+100***	***+108***	***+122***	***+61***	***+61***
Albertsons Demolition									
Albertson's Demolition Supermarket (850)	63,000 SF	(6,462)		(599)	(305)	(294)	(599)	(305)	(294)
Trip Difference (Proposed Uses - Existing Uses)									
Trip Difference		**(4,354)**	**(5,245)**	**(391)**	**(205)**	**(186)**	**(477)**	**(244)**	**(233)**

Table 2. Estimated Saturday Trip Generation Potential

Land Use	Size	Saturday Daily Trips		Saturday Peak Hour of Generator					
		Costco-Specific Trip Generation	ITE 9th Edition Trip Generation	Costco-Specific Trip Generation			ITE 9th Edition Trip Generation		
				Total	In	Out	Total	In	Out
Costco Expansion									
Existing Warehouse US Costco Warehouse with Fuel	141,693 SF 16 Fueling Positions	N/A	(5,447)	(1,349)	(686)	(663)	(902)	(442)	(460)
Proposed Expansion US Costco Warehouse with Fuel	170,804 SF 16 Fueling Positions	N/A	6,566	1,626	827	799	1,088	533	555
Net Difference		***N/A***	***+1,119***	***+277***	***+141***	***+136***	***+186***	***+91***	***+95***
Albertsons Demolition									
Albertson's Demolition Supermarket (850)	63,000 SF	(11,188)		(673)	(343)	(330)	(673)	(343)	(330)
Trip Difference (Proposed Uses - Existing Uses)									
Trip Difference		**N/A**	**(10,069)**	**(396)**	**(202)**	**(194)**	**(487)**	**(252)**	**(235)**

As shown in Tables 1 and 2, removing the supermarket and expanding the existing Costco will reduce overall site trips during all assessment periods.

EXISTING TRAFFIC CONDITIONS AND SITE CIRCULATION

While trip generation for the site is reduced during all analysis periods, KAI prepared operational analysis and reviewed internal site circulation to identify opportunities to optimize traffic flow to, from, and within the site. This was largely in response to observed peak period congestion.

Data Collection

KAI collected turning movement volume counts and obtained video of traffic flow during a typical midday Saturday peak period (11:00 a.m. to 2:00 p.m.) on July 19, 2014 at the two signalized driveways. Costco sales data and Costco-specific trip generation data indicate the period from 11 a.m. to 2:00 p.m. is the peak period for an average Saturday. *Traffic count worksheets are provided in Attachment B.*

Signal timing sheets were initially obtained from the City of Culver City on July 24, 2014 and used to conduct simulated intersection operations analysis for the Saturday peak hour that were compared to field observations. It was noted that while the simulation models showed acceptable operations and low overall delays, site observations noted that factors related to internal circulation, site-specific uses and activities, signal timing, and signal hardware resulted in poorer field conditions.

The analysis results and comparison to field conditions were discussed with Culver City staff on September 22, 2014. Based on these discussions, City signal staff immediately reviewed traffic signal detection problems and made additional modifications to the signal timing. Revised signal timing sheets reflecting these changes were obtained from the City of Culver City on December 15, 2014. *Signal timing sheets are provided in Attachment C.*

The initial data collection and analysis was focused on peak Saturday conditions (referred to as the *peak of generator*) to highlight maximum parking demands and internal trips. Findings from this initial review showed that the existing lane configuration and signal phasing were not optimal for serving the traffic flows. This finding required additional analyses during the weekday evening commute peak to ensure that changes to the lane configurations would also serve the commute period traffic patterns.

Additional turning movement counts were collected during a weekday evening peak period (4:00 p.m. to 6:00 p.m.) on Thursday, November 20, 2014 at the two signalized intersections and two downstream unsignalized intersections (Washington Boulevard/Glencoe Avenue and Washington Boulevard/Walgrove Avenue). This time of year reflects higher retail sales and grocery sales in preparation for the holiday season.

Based on review of the original traffic City staff noted differences between the November 20, 2014 counts and older counts from 2010. Because the traffic counts were videotaped we were able to recount the videos and confirmed that the count data was correct (comparison of the counts showed less than a 1% difference in volumes), and note that the volume differences from the 2010 counts may reflect seasonal, economic, or data collection accuracy variations.

Existing Traffic Operations on Washington Boulevard

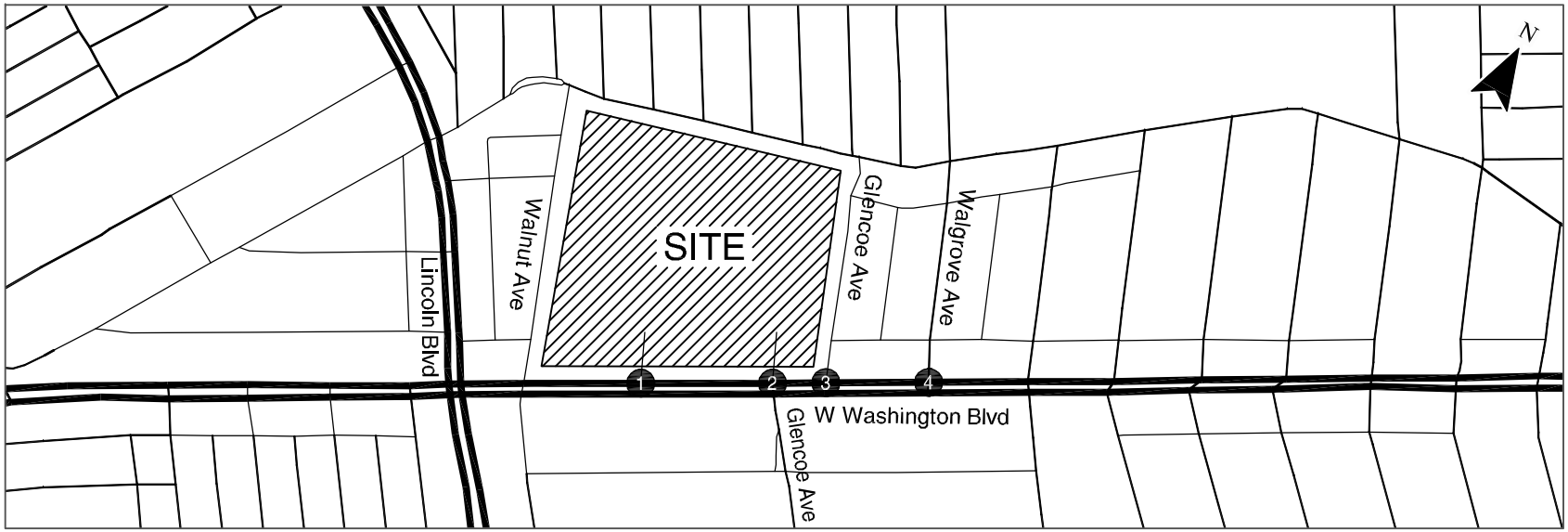
KAI prepared an operational analysis using the *Highway Capacity Manual 2000* methodology and reflecting the weekday evening commute peak hour volumes and signal timing data as provided by the City. Figure 2 illustrates the existing lane configurations and traffic control devices and Figure 3 summarizes existing traffic operations. As shown in Figure 3, the existing signalized intersections operate at Level of Service "C" or better during the weekday p.m. peak hour and Saturday midday peak hours. Based on field review we did note that adjacent intersections can cause queuing and delay which backs up through the Costco signals.

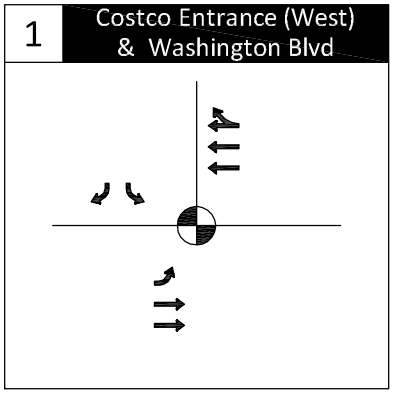
The revised analysis also assessed conditions at the adjacent unsignalized intersections of Walgrove Avenue/Washington Boulevard and Glencoe Avenue (East)/Washington Boulevard. Glencoe Avenue (East) is restricted to right-in, right-out movements due to its proximity to the signalized and offset Glencoe (West) intersection, and Walgrove Avenue provides full-access maneuvers. Results of the operational analysis showed that under existing conditions the Walgrove Avenue/Washington Boulevard intersection experiences Level of Service "F" for the critical stop-controlled southbound left-turn maneuver. However, given the existing local street connections to the signalized Redwood Avenue intersection one block to the east, no mitigation is recommended.

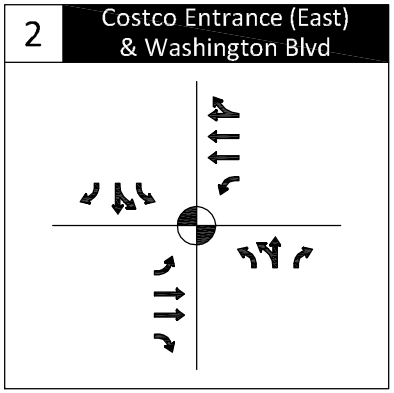
Existing Signalized Queueing Analysis

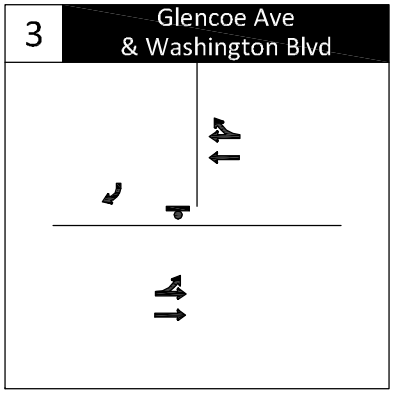
Signalized queues at the two access intersections are summarized in Table 3. The analysis shows signalized 95th percentile queues exceed available storage on the southbound approach (outbound Costco) at the East Driveway traffic signal today (specifically on the through/left and left-turn lane) but are generally within the available storage at the western access. This was confirmed based on field observations.

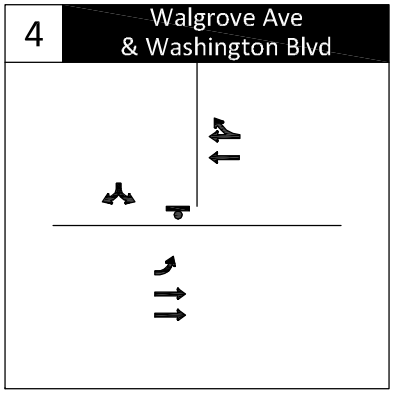
Existing conditions worksheets are included in Attachment "D".











- STOP SIGN

- TRAFFIC SIGNAL

EXISTING LANE CONFIGURATION
& TRAFFIC CONTROL DEVICES
CULVER CITY, CALIFORNIA

Figure
2

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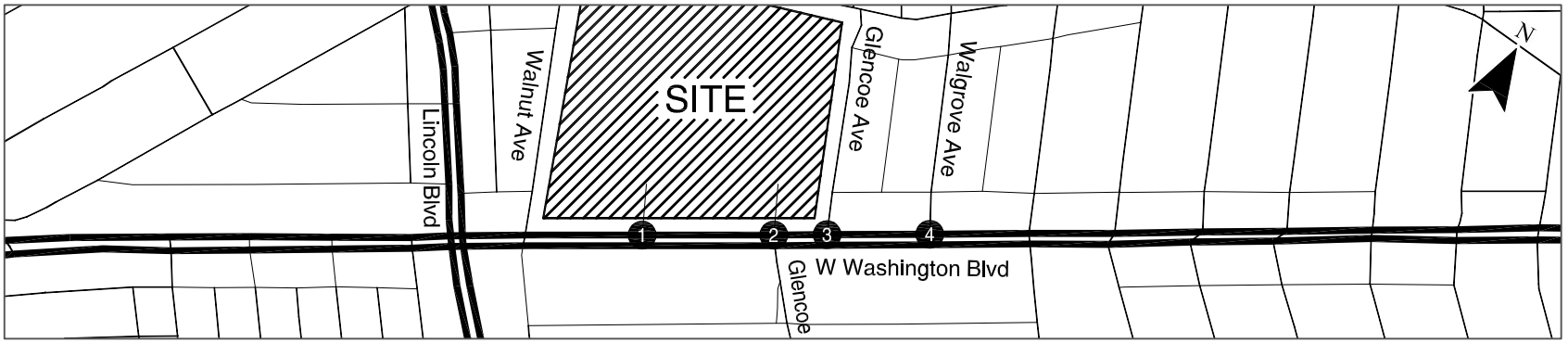
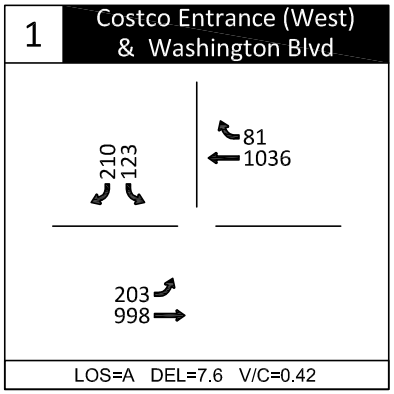
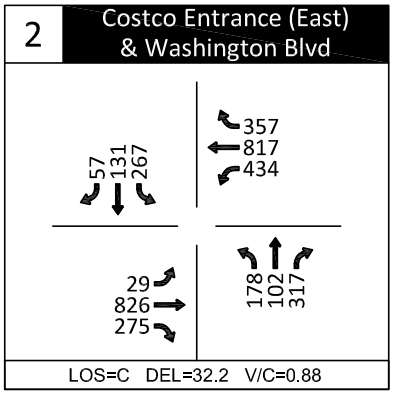
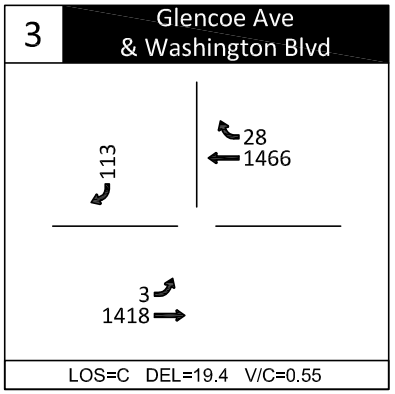
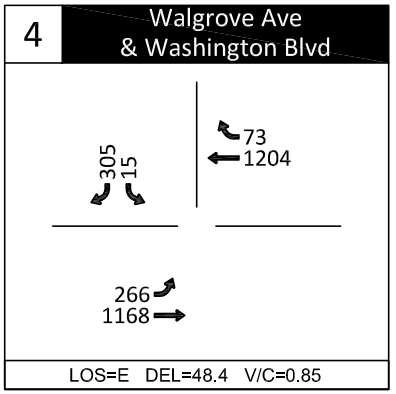


WEEKDAY

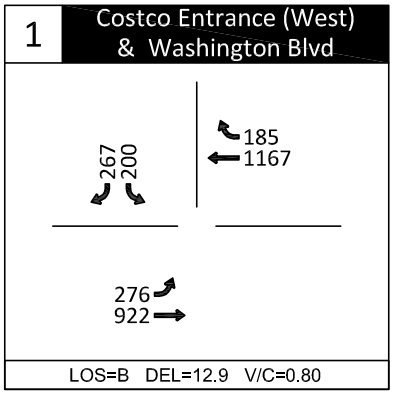


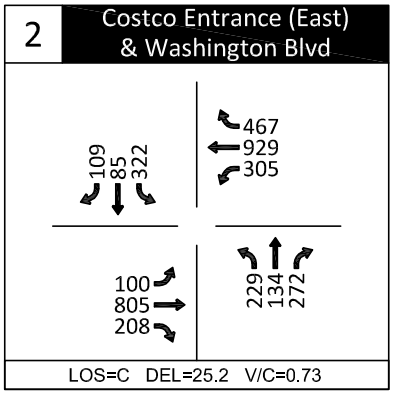






SATURDAY





LOS = INTERSECTION LEVEL OF SERVICE
Del = INTERSECTION AVERAGE CONTROL DELAY
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

EXISTING TRAFFIC CONDITIONS
WEEKDAY PM AND SATURDAY MIDDAY PEAK HOURS
CULVER CITY, CALIFORNIA

Figure
3

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Table 3. Existing 95th Percentile Queuing Analysis

Intersection/ Movement	Weekday PM Peak Hour		Saturday Midday Peak Hour		Adequate?
	Existing Queue (ft)	Storage Length (ft)	Existing Queue (ft)	Storage Length (ft)	
Washington Blvd/ West Driveway					
Southbound left	112	175	**176**	175	**No**
Southbound right	124	175	156	175	Yes
Eastbound left	62	125	**161**	125	**No**
Eastbound through	160	325	146	325	Yes
Westbound through/right	76	325	110	325	Yes
Washington Blvd/ East Driveway (Glencoe Avenue)					
Southbound left	**256**	140	264	140	**No**
Southbound through	**263**	140	264	140	**No**
Southbound right	1	140	36	140	Yes
Eastbound left	13	325	72	325	Yes
Eastbound through	347	425	318	425	Yes
Eastbound right	112	125	63	125	Yes
Westbound left	**469**	325	254	325	**No**
Westbound through/right	227	450	281	450	Yes
Northbound left	131	125	**167**	125	**No**
Northbound through	135	200	171	200	Yes
Northbound right	110	200	88	200	Yes

Site Circulation Observations

Three separate site visits were conducted during different time periods to observe site operations. KAI made the following observations based on these visits, discussions with store management, and review of the data collection videotapes:

- Queues at the In-N-Out drive-through lane are backing onto the east-west drive-aisle and the inbound travel lane from the west signalized driveway. These queues create additional internal confusion and congestion for patrons.
- Internal congestion occurs at both of the stop-controlled intersections located immediately north of the traffic signals. The congestion is influenced by the presence of offset drive-aisle intersections, conflicts with inbound traffic, and southbound signalized queuing. Costco has positioned employees at the internal intersections to help facilitate traffic flow and prevent blockage of the intersections.
- Westbound queues on Washington Boulevard extended from the intersection with US 1 through the west signalized driveway. This appears to limit southbound right-turn capacity at the west driveway and further increases queuing and congestion.
- There is a steep grade change exiting the Costco onto Washington Boulevard and pavement condition concerns, as shown in Figure 4.

Figure 4. Valley gutter slopes and pavement conditions exiting Costco. *Photo courtesy of Barry Kurtz.*

- The Costco fuel station exit onto Washington Boulevard is narrow and descends approximately three feet to the street grade, as shown in Figure 5. Damage to the adjacent retaining walls indicates that some widening of this access may be helpful to accommodate the exit maneuver for larger vehicles. Retro-reflective sheeting should be installed on the walls; yellow on left, white on right. The retaining walls and landscaping should also be reviewed to ensure clear sight lines of the sidewalk for exiting motorists, particularly given its location adjacent to a transit stop.

Figure 5. Right-out Fuel Center Exit to Washington Boulevard.

PROPOSED TRAFFIC CONDITIONS AND SITE CIRCULATION

The trip generation estimates indicate the proposed project is expected to reduce trips to the site. Although no traffic impacts are expected, KAI assessed operations at the study intersections and identified opportunities to improve traffic flow at the signalized driveways on Washington Boulevard and within the site.

Many of the traffic issues noted above are related to the internal site layout and are further complicated by separate parcel ownership and lease agreements. To the extent practical, we have worked with the Costco development team and City staff to incorporate improvements that will address these issues.

The primary site circulation modifications are shown in the revised site plan in Figure 6. This site plan was developed collaboratively with City staff and includes the following modifications:

1. Increased the queue storage at the fuel station;
2. Increased the throat depth from 140 to 185 feet at the eastern access to provide additional queue storage for southbound vehicles;
3. Provides a three-lane cross-section on the east-west internal connection road between the two accesses. This provides a center turn lane and a right-turn storage lane for the In-N-Out drive-through queue near the west driveway;
4. Relocates the In-N-Out driveway farther east to increase storage area;
5. Eliminates offset intersections near the accesses to simplify maneuvers and reduce conflicts;
6. The new parking lot layout provides a fourth leg to the internal intersection at the east entrance, which improves traffic flow in the parking lot; and,
7. Widens the fuel station exit onto Washington Boulevard and removes the sight line obstructions.

Signalized Intersection Modifications at East Signalized Driveway (Glencoe Avenue)

The traffic study assessed the possibility of modifying the lane configuration of the east driveway from its present configuration of left, left/through, and right-turn lanes to explore whether better outbound utilization could be accommodated with dual southbound left-turns. Based on field observations, the right-turn lane is poorly utilized, whereas the through and left-turn lane queues exceed the available storage space. In order to make this intersection operate more efficiently, we considered whether two dedicated left-turn lanes and a shared through/right-turn lane would be more efficient. While the analysis showed an incremental improvement, there are several assumptions related to the estimated trip generation changes and seasonal fluctuations, off-peak changes in travel patterns that were not assessed, and impacts the realignment would have on roadways within the jurisdiction of Los Angeles.

Accordingly, based on discussions and review with City staff we determined that conducting a follow-up assessment approximately six months following completion of the remodel would provide the most prudent approach. This more detailed data collection and analysis effort will more fully consider queuing and operational impacts during the peak and off-peak periods. If Culver City staff (and Los Angeles to the extent affected) determine that the benefits of the reconfiguration could provide a substantive benefit to the system, the applicant shall be responsible for all work, including modification to the traffic signals to implement the change.

WASHINGTON BOULEVARD VALLEY GUTTER IMPROVEMENTS

City staff noted that the slopes for Costco patrons accessing Washington Boulevard are relatively severe and result in reduced speeds and flows. In addition, the pavement conditions near the access are poor, with the roads experiencing potholes and several patches (as shown in Figure 4). From our

discussions with City staff Fuscoe Engineering will review these slopes and pavement conditions and prepare improvement plans to address these needs as part of the construction drawings. Costs for these improvements will be the responsibility of Costco and plans and construction will be reviewed and approved by the City.

NEIGHBORHOOD TRAFFIC CONCERNS

A public open house was held on May 12, 2015 to understand neighborhood concerns associated with the Costco modifications. Most of the comments related to the volume and speed of "cut-through trips using the neighborhood roads bordering the Costco site. We collected additional traffic data to better understand the severity of these issues and the effectiveness of the existing channelization treatments.

Traffic Volumes on Walnut Avenue and Elm Street

In order to assess concerns about cut-through traffic, data was collected over a 24-hour period on Thursday, May 19, 2015 to reflect typical traffic conditions on Walnut Street and Elm Street. The data collected includes traffic volumes and speeds by direction, along with videotapes that were collected for further review. For reference, the data collected is provided in Attachment "E".

Based on comments received at the public meeting, vehicles using the neighborhood streets as a cut-through route were most likely westbound trips on Washington Boulevard. These motorists could avoid the congestion at the Washington Boulevard/Lincoln Boulevard - Pacific Coast Highway traffic signal by turning north onto Walnut Avenue, turning west onto Elm Street, and turning north to continue on Lincoln Boulevard. The cut-through route is illustrated in Figure 6.

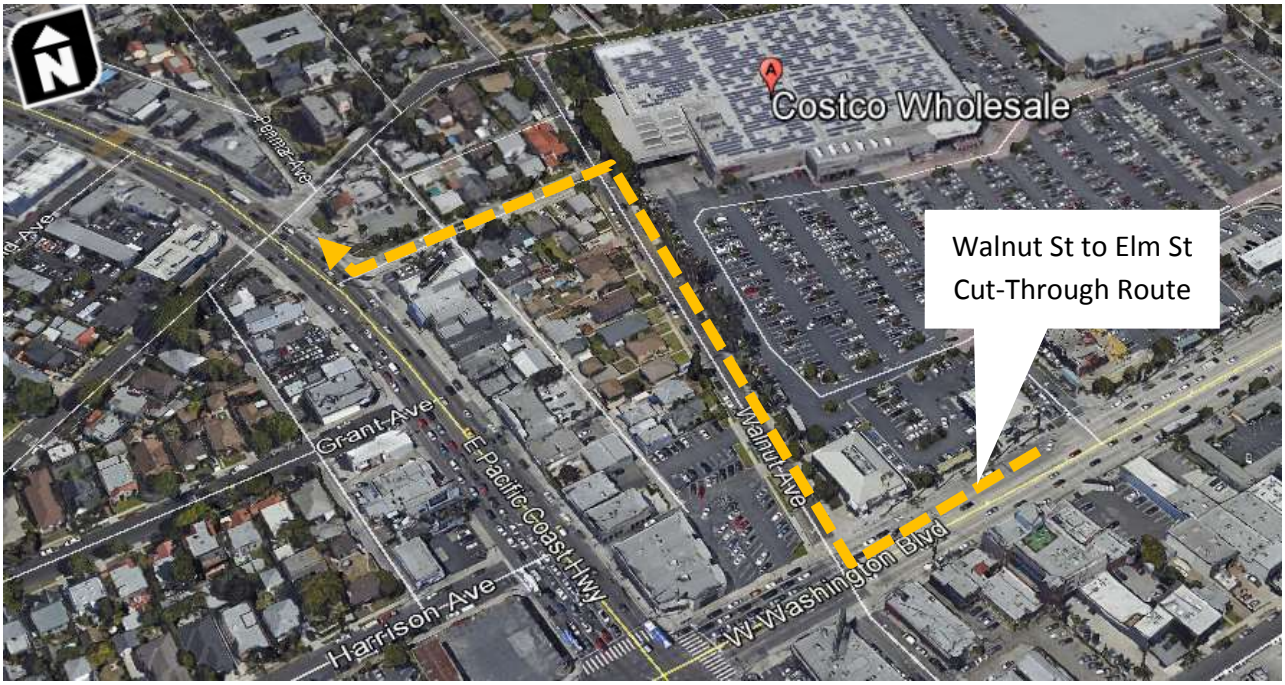


Figure 6. Potential Cut-Through Route.

Hourly traffic volumes are provided in Figure 7. It was noted that over the course of a day, nearly twice as many vehicles travel south on Walnut Avenue compared to the number traveling north. This is likely a result of the channelization at the Walnut Avenue/Elm Street intersection that restricts travel north of Elm Street as we would otherwise expect daily inbound and outbound traffic to be relatively equal throughout a 24-hour period. A sharp spike in traffic was noted within the peak commute hours within the daily volume profile. While the volume of traffic easily remains within the capacity of a local street, these volumes are well beyond the traffic associated with the adjacent homes served by these roads.

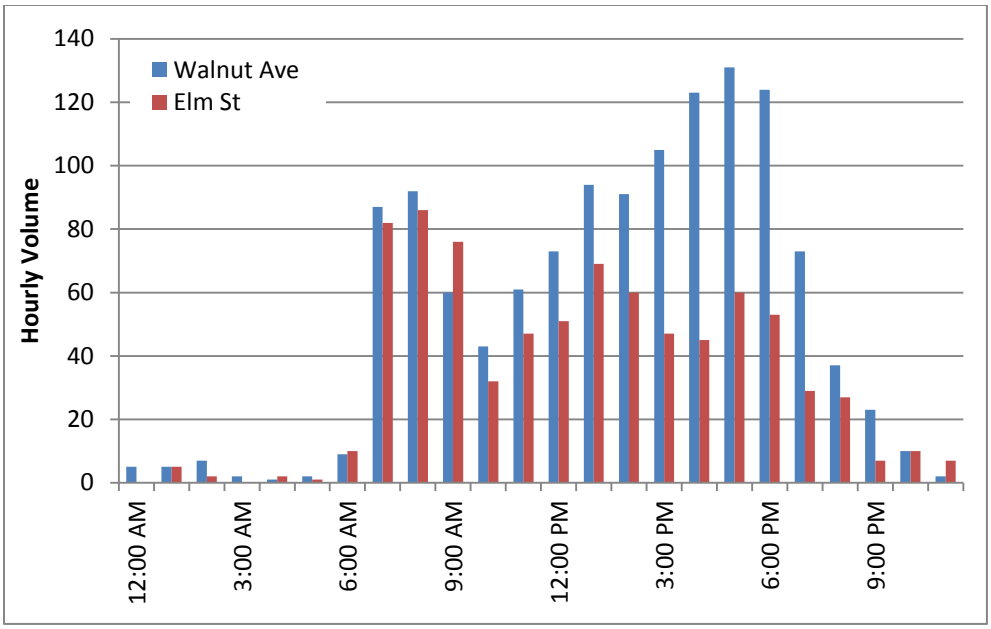


Figure 7. Vehicle Volume for Walnut Avenue and Elm Street over 24-hour Period.

Turning movement counts were also collected at several intersections on Washington Boulevard. Through movement data for Costco West Driveway/Washington Boulevard and the Lincoln Boulevard (Pacific Coast Highway)/Washington Boulevard intersection is illustrated in Figure 8. Traffic count data was evaluated on a typical weekday in May 2015 during the weekday p.m. peak period (4:00 – 6:00 p.m.). These counts show that during the peak hour (when congestion is likely to be highest) from 5:00 to 6:00 p.m. there were 52 vehicles that turned onto Walnut Avenue between the western Costco access and Lincoln Boulevard. This traffic flow represents four percent of the westbound vehicles, and reflects a combination of vehicles turning on to Walnut Avenue to access residences along the corridor, turning south on Del Rey Avenue, accessing businesses along Washington Boulevard, and using the cut-through route. This does not indicate an excessive number of trips given the potential destinations.

Figure 8. Westbound Volumes on Washington Boulevard

Speeds of Vehicles on Walnut Avenue and Elm Street

The most significant concern to area residents was speeds of vehicles on Walnut and Elm Street within these residential areas. We measured speeds on both roadways with automated tubes. It was noted that there are no posted speed limit signs on Walnut Avenue and Elm Street; accordingly, Los Angeles has designated a 25 miles per hour (mph) speed limit for residential streets unless otherwise specified that would apply.

The measured 85th percentile speed is the speed that 85 percent of all vehicles are traveling at or below. This concept is generally used for establishing the posted roadway speed, and is a good indicator of how a reasonable driver interprets the roadway context. Over the course of the day, drivers travelling north on Walnut exhibit an 85th percentile speed of 31 mph northbound and 28 mph southbound. We noted that this difference may be due to lack of on-street parking on the east side of the road, which has been shown to serve as a traffic calming measure. Figures 9 and 10 illustrate the speed of vehicles on Walnut Avenue and Elm Street over a 24-hour period. While it should be noted that there are factors that can influence speeds on tube counters (such as multiple-axle vehicles and other anomalies), all occurrences of vehicles traveling over 40 miles per hour were recorded between 7:30 a.m. and 5:45 p.m.

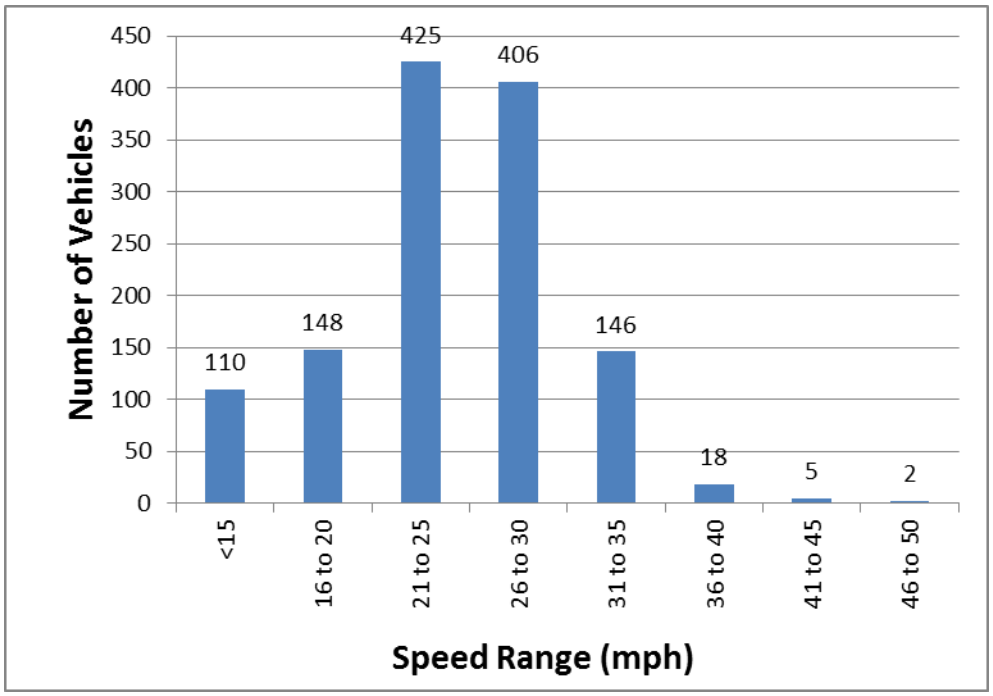


Figure 9. Speed of Vehicles on Walnut Avenue (combined northbound/southbound)

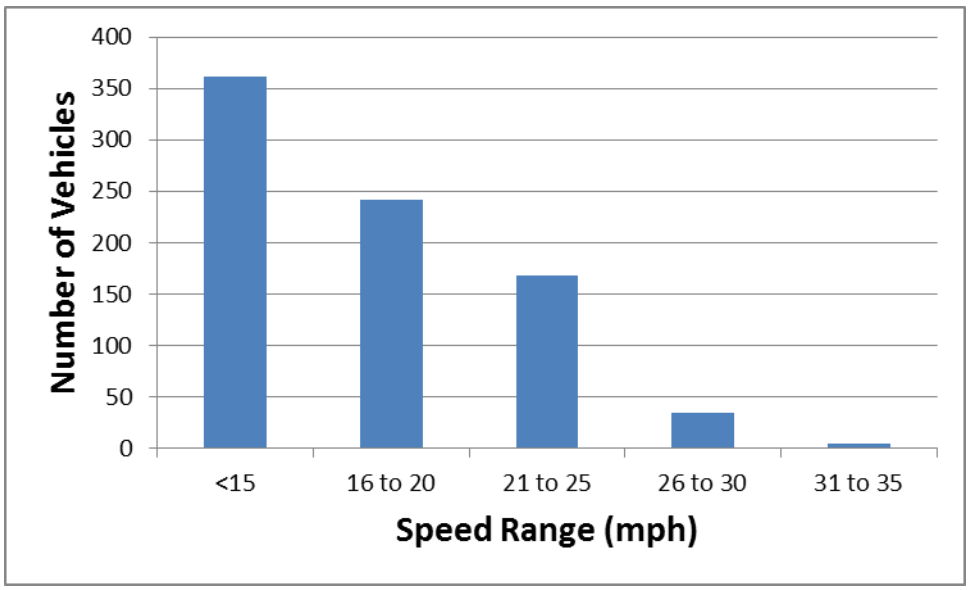


Figure 10. Speed of Vehicles on Elm Street (combined northbound/southbound)

The daily 85th percentile speed for Elm Street is 22 mph in both directions, generally consistent with a typical local street speed. The speed data was collected near the middle of Elm Street to avoid the impact of vehicles accelerating and decelerating. Lower speeds on Elm Street could be a result of the short length of the street, which does not provide time for vehicles to accelerate between the start and end of the street. However, it was noted that the sound of accelerating vehicles, particularly on a road as short as Elm Street, may cause speeds to appear higher than on a longer roadway.

Effectiveness of Channelization

At the intersection of Walnut Avenue and Elm Street there is raised channelization that requires northbound vehicles on Walnut Avenue turn left, and vehicles on Elm Street to only turn right. Figure 11 illustrates the channelization.

Figure 11. Channelization at Walnut Avenue and Elm Street Intersection.
Image Source: maps.google.com.

Videotape footage of this intersection was taken over a 24-hour period. Observations from the 5:00 p.m. to 6:00 p.m. peak hour showed 5 vehicles on Walnut Avenue performing an illegal maneuver and continuing straight on Walnut instead of turning left. There was also one vehicle observed during this time period that was traveling east on Elm Street and illegally turned left onto Walnut Avenue. Overall, the channelization appears to be effective.

Potential Mitigation Measures

Based on this review, the key findings from review of the surrounding local streets and cut-through traffic concerns were as follows:

- The volume of traffic using Walnut Avenue and Elm Street is higher than would be expected based on the number of homes these roads serve. However, the volumes are well below the carrying capacity of a local street. This indicates that the roads are being used as a cut-through route.
- 85th percentile speeds on Walnut Avenue are higher than a typical residential speed of 25 miles per hour.

- The 85th percentile speeds on Elm Street are consistent with local street speeds, but there were several vehicles that had a much higher speed during the study period.

Based on this review and the findings, we recommend consideration of treatments that address the excessive speeds. If overall speeds are better managed consistent with a neighborhood speed of 25 miles per hour or less, the desirability of this cut-through route would be lessened. Recorded speeds are higher along the longer length of Walnut Avenue that may make treatments more effective on this road. Potential options are as follows:

- Provide posted speed signs on Walnut Avenue, particularly in the northbound direction.
- Speed tables on Walnut Avenue near the residential transition.
- Speed tables on Elm Street near the alley (approximate midway point of the road).

As the cut-through issues are not associated with the Costco site, these neighborhood traffic calming materials were provided to the City of Los Angeles as the road authority to review and comment on. As of the date of this report no comments have been received.

FINDINGS AND RECOMMENDATIONS

As summarized herein, the proposed demolition of the Albertson's and expansion of the Costco will result in an overall decrease in vehicular trips to the site. However, several improvements are recommended to improve parking, circulation, and reduce congestion. The revised site plan contains several plan elements that were developed in coordination with the City and team.

In addition to the changes shown, a follow-up assessment of the Washington Boulevard/Glencoe intersection is proposed following completion of the Costco expansion and remodel. The scope of this assessment will be coordinated with City staff, and if staff determines that the lane configuration and realignment changes would be beneficial to the system, the costs associated with the modification will be at Costco's expense.

Please let us know if you have any questions on this memorandum or if any additional information is required to complete your review.

ATTACHMENTS

Attachment A: Trip Generation Study Data

Attachment B: Traffic Count Worksheets

Attachment C: Signal Timing Worksheets

Attachment D: Existing Traffic Operations Worksheets

Attachment E: Neighborhood Traffic Data Collection

Attachment A
Trip Generation Study Data

Record #	Country	State/ Province	County	City	Count Year	Store Size (SF)	Store Type	Number of Fueling Positions?
79	USA	AZ	Maricopa	Scottsdale	2011		Warehouse	20
78	USA	WA	King	Issaquah	2009	150585	Warehouse	12
77	USA	WA	King	Issaquah	2009	150585	Warehouse	12
76	USA	WA	King	Issaquah	2009	150585	Warehouse	12
75	USA	WA	Clark	Vancouver	2010	155465	Warehouse	16
37	USA	WA	Spokane	Spokane	2001	156987	Warehouse	16
36	USA	CA	Ventura	Simi Valley	2001	136296	Warehouse	12
35	USA	FL	Seminole	Altamonte Springs	2001	135229	Warehouse	12
34	USA	CO	Arapahoe	Aurora	2001	133711	Warehouse	12
33	USA	VA	West Henrico		2001	126976	Warehouse	
32	USA	CA	Solano	Vallejo	2001	125434	Warehouse	16
31	USA	NY	Richmond	Staten Island	2001	121216	Warehouse	12
30	USA	OR	Lane	Eugene	2001	140700	Warehouse	16
29	USA	OR	Jackson	Medford	2001	136144	Warehouse	12
28	USA	WA	Thurston	Tumwater	2001	120000	Warehouse	12
16	USA	AZ	Maricopa	Glendale	2009	153876	Warehouse	16
17	USA	CA	San Francisco	South San Francisco	2009	138468	Warehouse	16
18	USA	OR	Multnomah	Portland	2008	162115	Warehouse	16
19	USA	MT	Lewis & Clark	Helena	2008	146217	Warehouse	12
20	USA	MT	Missoula	Missoula	2008	122528	Warehouse	12
21	USA	OR	Linn	Albany	2008	148161	Warehouse	12
22	USA	UT	Salt Lake	Salt Lake City	2006	135444	Warehouse	12
23	USA	CA	San Diego	Morena	2006	161674	Warehouse	16
24	USA	OR	Marion	Salem	2005	145363	Warehouse	12
25	USA	CA	Orange	Laguna Niguel	2004	149705	Warehouse	12
26	USA	CA	Santa Clara		2002/2004	135444	Warehouse	12
27	USA	UT	Salt Lake	Sandy	2002	161600	Warehouse	12

COSTCO TRIP GENERATION DATA

Surveys conducted at established Costco sites have shown that Costco Warehouses typically generate higher traffic volumes than other land uses with similar building sizes. An overview of weekday p.m. peak hour trip generation characteristics is provided that has been collected between 2001 and 2011 at Costco Wholesale locations containing fuel stations. The rates shown for the sites include the fuel station as part of the calculated trip rate. In addition to the driveway trip rates, customer survey information has been included to provide the percentage of primary, pass-by, and diverted trips, as further described below.

- *Primary Trips* (an entirely new trip on the roadway system for the express purpose of driving to and from Costco);
- *Pass-by Trips* (existing trips that are on roadways adjacent to the site which allow the motorist to turn into the Costco development, and then continue on to their ultimate destination when their shopping is concluded); and
- *Diverted-Linked Trips* (existing trips on nearby roadways in which the motorist makes a decision to drive out-of-direction for a distance to stop at Costco, and when their shopping is concluded, continue on their trip to the ultimate destination).

Trip Characteristics Application

The analysis models prepared for the Torrance site should explicitly account for pass-by and diverted trip impacts at the study intersections. Typically, pass-by trips would have an impact only at the site-access driveways, whereas the impact of diverted trips could extend throughout the study area intersections (these would be modeled similar to net new trips at many or all of the study area intersections in the operations models). The key difference between inclusion and omission of the diverted trips is related to the overall vehicle miles traveled (VMT), as diverted trips do not create the same system impacts (air quality, noise, and freeway impacts) that entirely new trips to the system could create.

The previously surveyed Costco buildings are sited in a variety of locations, some adjacent to freeways/arterials, others a couple blocks away. This variation in store locations results in differences in diverted and pass-by trips from store to store. For example, sites adjacent to major arterial roadways tend to exhibit a high percentage of pass-by trips and a lower percentage of diverted trips. Similarly, Costco facilities located a block or two away from a freeway tend to experience a higher percentage of diverted trips. Given these factors, diverted and pass-by trips should be considered together, with engineering judgment used to identify how these two trip characteristics should be applied.

Trip Generation Estimate

Trip generation studies were conducted at Costco Wholesale sites located across the country using industry standard engineering practices consistent with guidance within the Institute of Transportation Engineers (ITE) standard reference, *Trip Generation Handbook, 2nd Edition.* These surveys were conducted between 2001 and 2011, and include surveys of twenty-seven Costco Warehouses with fuel centers[3]. The Costco Wholesale buildings surveyed range in size between 122,528 square-feet and 162,115 square-feet, with an average size of 143,869 square-feet. The fuel centers in the sample range between 12 and 20 fueling positions. The trip generation rates are correlated to the overall warehouse size regardless of the number of fueling positions as trip generation studies are conducted at the site entrances. Table A1 summarizes the average trip rates recorded; additional details on these sites are included at the end of this appendix.

Table A1

Average Trip Characteristics for a Costco Warehouse with Fuel Center

Land Use	Weekday Daily Trip Rate (per KSF)	Weekday AM Peak Hour of Adjacent Street Traffic Trip Rate (per KSF)			Weekday PM Peak Hour of Adjacent Street Traffic Trip Rate (per KSF)		
		Total	In	Out	Total	In	Out
Costco With Fuel Center	72.39	2.38	55%	45%	7.15	48%	52%
Pass-by Trips	*No Data*		34%			35%	
Diverted Trips	*No Data*		43%			32%	

COSTCO FUEL CENTER CHARACTERISTICS

The Costco Wholesale trip generation rates shown in Tables 1, 2, and A1 inherently account for fuel station trips within the overall rate. However, supplemental information on the fuel centers from isolated studies is provided to describe the fuel center characteristics separately. This information was collected to highlight the trip characteristics of adding fuel centers to existing Costco Wholesale sites, but the isolated fuel center data can also be considered applicable to the Torrance site during the weekday a.m. peak hour, when the Costco warehouse is closed.

Information related to internal trip capture and pass-by trip percentages was collected by interviewing Costco Gasoline customers about their trip patterns as they are purchasing fuel. Because Costco member cards are also scanned as part of fuel center and Costco purchases, transaction data was also matched up to identify internalization rates.

[3] Daily trip data was collected at eight of the sites, weekday a.m. peak hour data was collected at two sites, and weekday p.m. peak hour data was collected at 27 sites.

COSTCO FUEL STATION TRIP CHARACTERISTICS

The data collected at existing Costco Gasoline sites indicate the following general trip generation characteristics:

- Costco Gasoline fuel stations are an ancillary use for the warehouse and there is a large proportion of shared trips between the two.
- The fuel stations are member-only and require a membership card for pump activation.
- Credit/debit card is the only method of payment at the fuel stations and they do not provide any other services (automotive or convenience) besides gas.
- The fuel stations are staffed by a minimum of one attendant who is trained to help members operate the pumps and direct waiting vehicles to open pumps to manage on-site queuing and circulation.

The unique nature of Costco operations and its membership requirements result in different trip characteristics than those observed at the standard fuel stations summarized in ITE *Trip Generation*. The percentage of pass-by trips at Costco fuel stations is considerably lower than that reported in ITE *Trip Generation* for typical fuel stations. Correspondingly, membership requirements also have a significant effect on trip internalization (or sharing of trips) between the warehouse and the fuel station. Fewer people exclusively visit a Costco fuel station during the evening commute period (in comparison to a typical stand-alone station) because they have another primary purpose for visiting the site (that being a trip to the warehouse).

Internal Fuel Station Trips

A key finding from the driver surveys conducted at Costco facilities is the fact that approximately 50 percent of the weekday p.m. peak hour trips to and from Costco fueling stations are internal capture trips. Internal capture trips account for those customers who patronize both the warehouse and the gasoline pumps during a single visit to the Costco site. As such, although they account for a trip to both the warehouse and the fuel station, they only result in one overall vehicle trip to the site and on the surrounding transportation system. On average, 50 percent of the customers buying gas during the weekday p.m. peak hour are customers whose main purpose to the site is to visit the Costco warehouse. At some sites this number ranges as high as 75 percent but for the purposes of analysis a conservative average estimate is typically used.

Attachment B
Traffic Count Worksheets

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Walgrove Ave -- W Washington Blvd

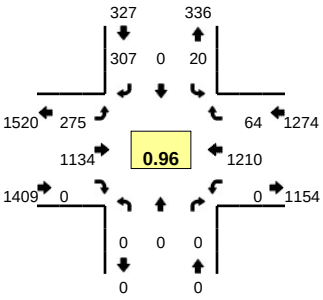
QC JOB #: 13151505

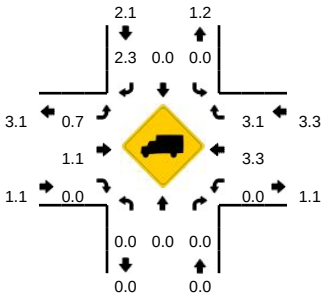
CITY/STATE: Culver City, CA

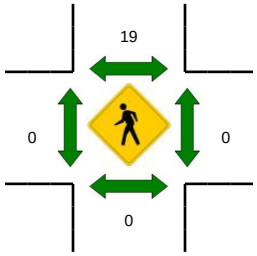
DATE: Thu, Nov 20 2014

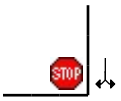
Peak-Hour: 5:00 PM -- 6:00 PM

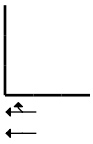
Peak 15-Min: 5:35 PM -- 5:50 PM

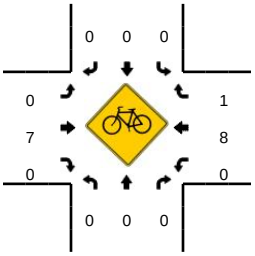


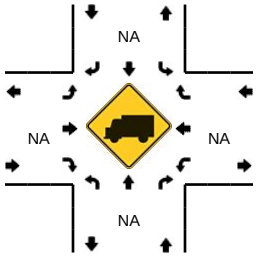


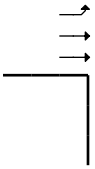


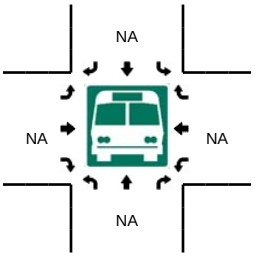












5-Min Count Period Beginning At	Walgrove Ave (Northbound)				Walgrove Ave (Southbound)				W Washington Blvd (Eastbound)				W Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	3	0	26	0	15	92	0	0	0	97	7	0	240	
4:05 PM	0	0	0	0	1	0	33	0	18	97	0	0	0	105	7	0	261	
4:10 PM	0	0	0	0	2	0	28	0	24	86	0	0	0	86	4	0	230	
4:15 PM	0	0	0	0	0	0	24	0	18	93	0	0	0	94	3	0	232	
4:20 PM	0	0	0	0	1	0	23	0	16	106	0	0	0	103	5	0	254	
4:25 PM	0	0	0	0	4	0	21	0	19	85	0	0	0	106	6	0	241	
4:30 PM	0	0	0	0	1	0	26	0	21	87	0	0	0	88	5	0	228	
4:35 PM	0	0	0	0	1	0	26	0	21	92	0	0	0	90	4	0	234	
4:40 PM	0	0	0	0	1	0	34	0	20	80	0	0	0	88	1	0	224	
4:45 PM	0	0	0	0	5	0	25	0	19	105	0	0	0	81	4	0	239	
4:50 PM	0	0	0	0	0	0	19	0	18	97	0	1	0	122	7	0	264	
4:55 PM	0	0	0	0	0	0	22	0	20	103	0	0	0	89	7	0	241	2888
5:00 PM	0	0	0	0	4	0	25	0	10	101	0	1	0	110	7	0	258	2906
5:05 PM	0	0	0	0	2	0	34	0	28	114	0	0	0	88	5	0	271	2916
5:10 PM	0	0	0	0	2	0	30	0	32	89	0	0	0	80	4	0	237	2923
5:15 PM	0	0	0	0	3	0	23	0	16	99	0	1	0	96	8	0	246	2937
5:20 PM	0	0	0	0	0	0	27	0	24	86	0	0	0	98	3	0	238	2921
5:25 PM	0	0	0	0	1	0	22	0	24	95	0	0	0	106	7	0	255	2935
5:30 PM	0	0	0	0	1	0	31	0	22	96	0	0	0	79	8	0	237	2944
5:35 PM	0	0	0	0	1	0	26	0	20	97	0	0	0	106	6	0	256	2966
5:40 PM	0	0	0	0	1	0	20	0	26	104	0	0	0	115	4	0	270	3012
5:45 PM	0	0	0	0	0	0	26	0	22	87	0	1	0	115	7	0	258	3031
5:50 PM	0	0	0	0	3	0	16	0	22	91	0	0	0	116	2	0	250	3017
5:55 PM	0	0	0	0	2	0	27	0	26	75	0	0	0	101	3	0	234	3010

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	8	0	288	0	272	1152	0	4	0	1344	68	0	3136
Heavy Trucks	0	0	0		0	0	8		4	8	0		0	64	4		88
Pedestrians		0				20				0				0			20
Bicycles	0	0	0		0	0	0		0	1	0		0	3	1		5
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/28/2014 4:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Lincoln Blvd -- W Washington Blvd

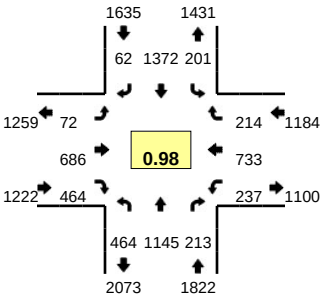
QC JOB #: 13151504

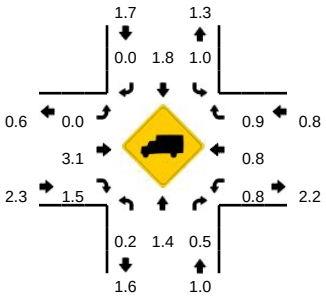
CITY/STATE: Los Angeles, CA

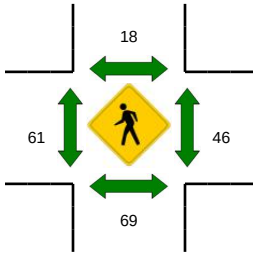
DATE: Thu, Nov 20 2014

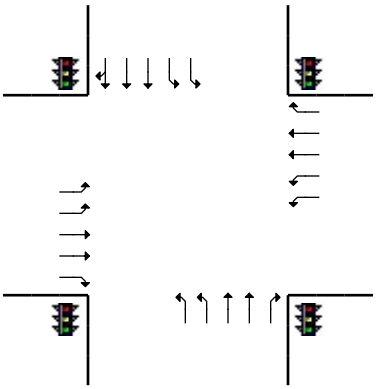
Peak-Hour: 5:00 PM -- 6:00 PM

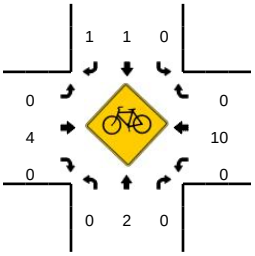
Peak 15-Min: 5:35 PM -- 5:50 PM

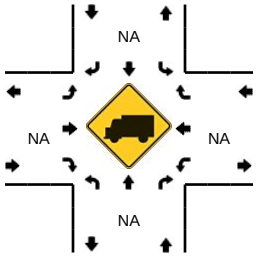


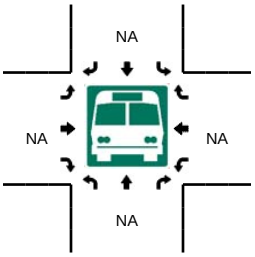












5-Min Count Period Beginning At	Lincoln Blvd (Northbound)				Lincoln Blvd (Southbound)				W Washington Blvd (Eastbound)				W Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	35	94	17	0	12	113	11	0	6	57	41	0	22	52	17	0	477	
4:05 PM	42	98	19	0	15	121	4	0	9	55	32	0	17	49	27	0	488	
4:10 PM	36	98	20	0	14	124	4	0	13	57	23	0	64	25	23	0	501	
4:15 PM	36	92	22	0	17	111	4	0	6	57	41	0	21	63	20	0	490	
4:20 PM	34	111	17	0	17	131	8	0	9	54	27	0	31	50	21	0	510	
4:25 PM	32	79	12	0	14	107	5	0	8	52	23	0	18	57	30	0	437	
4:30 PM	40	95	19	1	15	117	6	0	9	53	42	0	22	68	17	0	504	
4:35 PM	44	96	12	0	15	126	8	0	6	56	45	0	20	51	27	0	506	
4:40 PM	44	99	18	0	16	129	5	0	6	58	49	0	19	50	21	0	514	
4:45 PM	37	103	18	0	9	114	7	0	10	54	32	0	27	68	19	0	498	
4:50 PM	45	96	14	0	13	96	6	0	7	57	40	0	23	55	20	0	472	
4:55 PM	41	93	18	0	11	104	8	0	4	55	26	0	31	54	10	0	455	5852
5:00 PM	39	91	15	0	18	113	5	0	8	62	36	0	16	60	17	0	480	5855
5:05 PM	40	89	19	0	18	111	7	0	6	58	43	0	28	50	23	0	492	5859
5:10 PM	41	90	21	0	19	101	1	0	1	54	27	0	20	50	22	0	447	5805
5:15 PM	34	101	21	0	16	121	6	0	7	56	39	0	21	62	17	0	501	5816
5:20 PM	37	111	15	0	12	116	5	0	5	59	33	0	21	48	14	0	476	5782
5:25 PM	38	85	24	0	12	110	7	0	9	57	38	0	22	51	17	0	470	5815
5:30 PM	32	72	20	0	22	120	6	0	10	59	42	0	17	52	22	0	474	5785
5:35 PM	33	110	16	0	14	121	4	0	4	60	43	0	19	62	18	0	504	5783
5:40 PM	40	117	20	0	13	109	5	0	5	58	44	0	18	71	13	0	513	5782
5:45 PM	38	73	13	0	23	116	9	0	5	55	41	0	17	69	24	0	483	5767
5:50 PM	46	106	11	0	21	120	3	0	12	56	36	0	20	49	9	0	489	5784
5:55 PM	46	100	18	0	13	114	4	0	0	52	42	0	18	109	18	0	534	5863

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	444	1200	196	0	200	1384	72	0	56	692	512	0	216	808	220	0	6000
Heavy Trucks	0	16	0		4	16	0		0	12	0		4	4	4		60
Pedestrians		40				8				76				52			176
Bicycles	0	1	0		0	1	1		0	1	0		0	2	0		6
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/28/2014 4:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Costco West Dwy -- W Washington Blvd

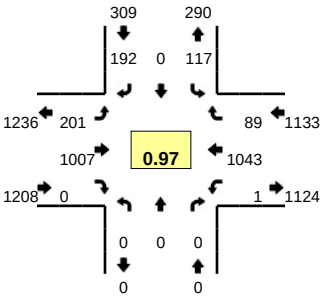
QC JOB #: 13151503

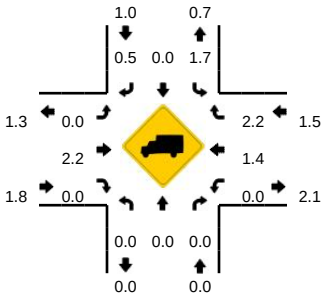
CITY/STATE: Culver City, CA

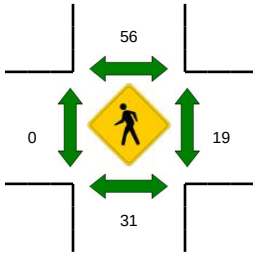
DATE: Thu, Nov 20 2014

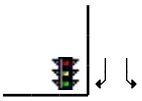
Peak-Hour: 5:00 PM -- 6:00 PM

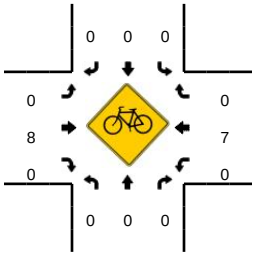
Peak 15-Min: 5:35 PM -- 5:50 PM

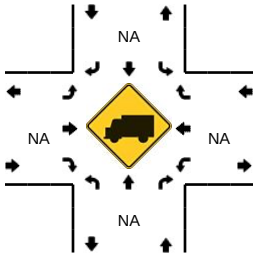


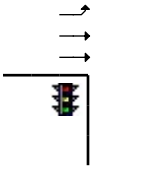


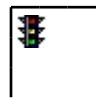


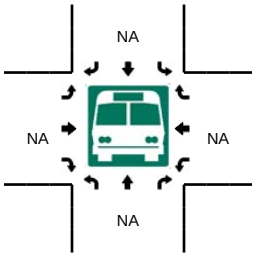












5-Min Count Period Beginning At	Costco West Dwy (Northbound)				Costco West Dwy (Southbound)				W Washington Blvd (Eastbound)				W Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	7	0	25	0	20	73	0	0	0	91	12	0	228	
4:05 PM	0	0	0	0	15	0	23	0	20	79	0	0	0	71	11	0	219	
4:10 PM	0	0	0	0	14	0	17	0	20	81	0	0	0	85	10	0	227	
4:15 PM	0	0	0	0	13	0	27	0	12	87	0	0	0	94	6	0	239	
4:20 PM	0	0	0	0	11	0	20	0	20	78	0	0	0	87	13	2	231	
4:25 PM	0	0	0	0	8	0	19	0	14	71	0	0	0	103	9	0	224	
4:30 PM	0	0	0	0	11	0	28	0	20	79	0	0	0	74	6	0	218	
4:35 PM	0	0	0	0	13	0	14	0	12	74	0	0	0	81	7	0	201	
4:40 PM	0	0	0	0	7	0	15	0	19	72	0	0	0	87	8	0	208	
4:45 PM	0	0	0	0	8	0	22	0	10	77	0	0	0	87	11	0	215	
4:50 PM	0	0	0	0	16	0	20	0	16	77	0	0	0	88	3	0	220	
4:55 PM	0	0	0	0	13	0	23	0	18	73	0	0	0	75	7	0	209	2639
5:00 PM	0	0	0	0	7	0	13	0	18	93	0	0	0	97	11	1	240	2651
5:05 PM	0	0	0	0	10	0	23	0	21	73	0	0	0	77	2	0	206	2638
5:10 PM	0	0	0	0	11	0	16	0	16	89	0	1	0	84	6	0	223	2634
5:15 PM	0	0	0	0	17	0	22	0	14	80	0	0	0	95	9	0	237	2632
5:20 PM	0	0	0	0	10	0	17	0	12	78	0	0	0	73	11	0	201	2602
5:25 PM	0	0	0	0	9	0	14	0	16	87	0	0	0	88	4	0	218	2596
5:30 PM	0	0	0	0	7	0	9	0	23	88	0	0	0	82	7	0	216	2594
5:35 PM	0	0	0	0	11	0	16	0	12	82	0	0	0	89	5	0	215	2608
5:40 PM	0	0	0	0	7	0	23	0	25	97	0	0	0	80	5	0	237	2637
5:45 PM	0	0	0	0	5	0	14	0	11	81	0	0	0	108	11	0	230	2652
5:50 PM	0	0	0	0	13	0	16	1	14	83	0	0	0	63	5	0	195	2627
5:55 PM	0	0	0	0	9	0	9	0	18	76	0	0	0	107	13	0	232	2650

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	92	0	212	0	192	1040	0	0	0	1108	84	0	2728
Heavy Trucks	0	0	0		4	0	0		0	8	0		0	8	0		20
Pedestrians		40				36				0				4			80
Bicycles	0	0	0		0	0	0		0	1	0		0	4	0		5
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/28/2014 4:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

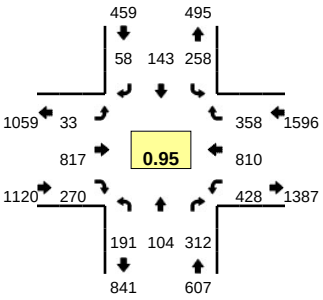
Method for determining peak hour: Total Entering Volume

LOCATION: Costco East Dwy -- W Washington Blvd

QC JOB #: 13151502

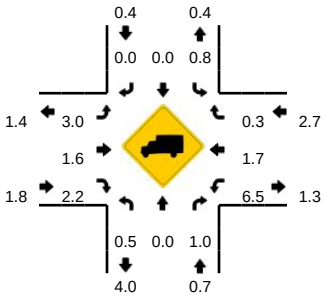
CITY/STATE: Culver City, CA

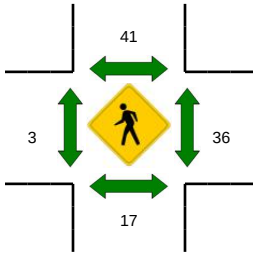
DATE: Thu, Nov 20 2014

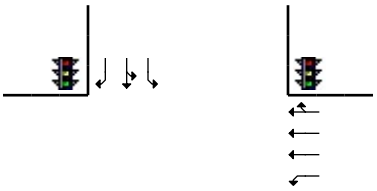


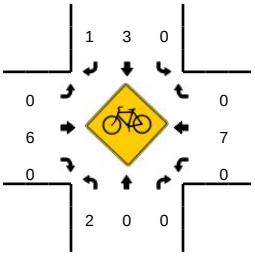
Peak-Hour: 5:00 PM -- 6:00 PM

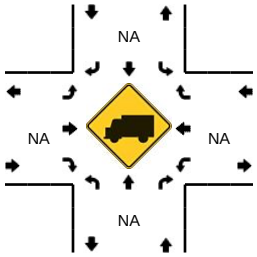
Peak 15-Min: 5:35 PM -- 5:50 PM

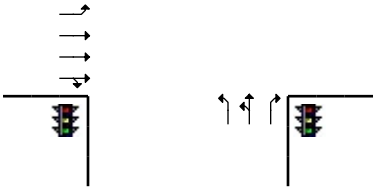


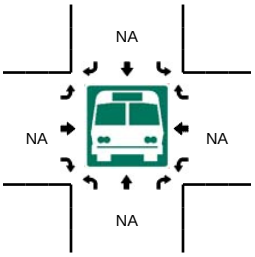












5-Min Count Period Beginning At	Costco East Dwy (Northbound)				Costco East Dwy (Southbound)				W Washington Blvd (Eastbound)				W Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	14	18	24	0	23	3	4	0	4	59	24	0	32	65	26	0	296	
4:05 PM	11	9	21	0	33	12	5	0	1	57	22	0	35	59	42	0	307	
4:10 PM	13	5	16	0	26	7	7	0	5	67	20	0	32	72	38	0	308	
4:15 PM	15	14	20	0	23	9	5	0	5	74	22	0	33	62	35	0	317	
4:20 PM	19	16	24	0	34	13	7	0	8	61	14	0	32	63	25	0	316	
4:25 PM	15	9	13	0	25	9	6	0	1	67	22	0	30	83	38	0	318	
4:30 PM	11	7	19	0	29	12	5	0	9	66	27	0	24	57	35	0	301	
4:35 PM	13	10	17	0	27	11	5	0	4	67	20	0	32	64	36	0	306	
4:40 PM	18	8	14	0	20	7	8	0	4	66	15	0	34	65	21	0	280	
4:45 PM	11	14	26	0	33	6	7	0	4	58	20	0	28	64	27	0	298	
4:50 PM	15	9	22	0	32	15	7	0	2	59	15	0	26	60	22	0	284	
4:55 PM	9	6	25	0	27	5	5	0	2	70	24	0	43	79	28	0	323	3654
5:00 PM	15	12	23	0	20	5	6	0	4	68	24	0	38	69	31	0	315	3673
5:05 PM	7	10	28	0	33	12	2	0	2	70	16	0	38	67	24	0	309	3675
5:10 PM	22	4	34	0	18	11	5	0	3	77	25	0	36	68	23	0	326	3693
5:15 PM	15	10	22	0	19	13	4	0	1	69	33	0	31	67	27	0	311	3687
5:20 PM	13	5	26	0	28	14	4	0	2	55	20	0	38	68	29	0	302	3673
5:25 PM	15	9	18	0	19	6	3	0	3	84	20	0	29	58	34	0	298	3653
5:30 PM	19	14	24	0	20	14	6	0	4	66	19	0	37	54	26	0	303	3655
5:35 PM	17	7	27	0	23	17	10	0	1	63	18	0	35	68	33	0	319	3668
5:40 PM	8	4	29	0	20	15	6	0	2	84	23	0	41	78	34	0	344	3732
5:45 PM	19	15	34	0	17	11	3	0	1	63	35	0	28	66	39	0	331	3765
5:50 PM	19	6	27	0	23	8	3	0	4	57	18	0	40	75	29	0	309	3790
5:55 PM	22	8	20	0	18	17	6	0	6	61	19	0	37	72	29	0	315	3782

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	176	104	360	0	240	172	76	0	16	840	304	0	416	848	424	0	3976
Heavy Trucks	0	0	12		0	0	0		0	4	8		44	8	4		80
Pedestrians		20				24				4				52			100
Bicycles	0	0	0		0	1	1		0	1	0		0	4	0		7
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/28/2014 4:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Glencoe Ave -- W Washington Blvd

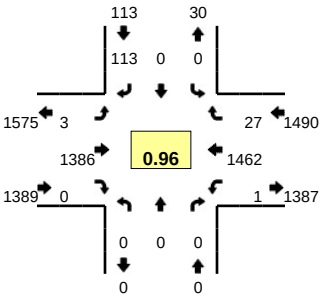
QC JOB #: 13151501

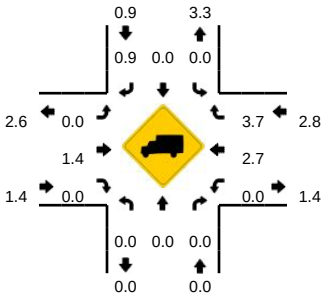
CITY/STATE: Culver City, CA

DATE: Thu, Nov 20 2014

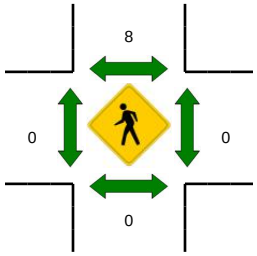
Peak-Hour: 5:00 PM -- 6:00 PM

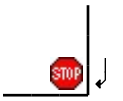
Peak 15-Min: 5:35 PM -- 5:50 PM

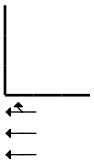


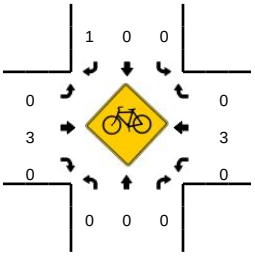


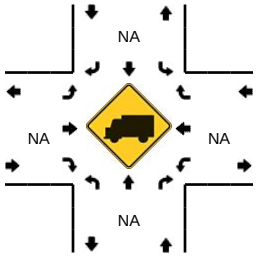
Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

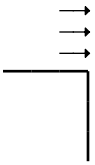


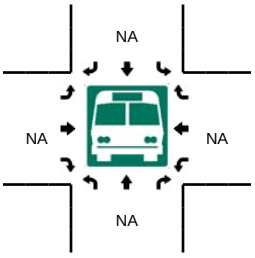












5-Min Count Period Beginning At	Glencoe Ave (Northbound)				Glencoe Ave (Southbound)				W Washington Blvd (Eastbound)				W Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	7	0	0	104	0	0	0	119	1	0	231	
4:05 PM	0	0	0	0	0	0	10	0	0	112	0	0	0	131	0	0	253	
4:10 PM	0	0	0	0	0	0	14	0	0	113	0	0	0	119	2	0	248	
4:15 PM	0	0	0	0	0	0	11	0	0	108	0	0	0	116	0	0	235	
4:20 PM	0	0	0	0	0	0	12	0	1	118	0	0	0	112	4	0	247	
4:25 PM	0	0	0	0	0	0	13	0	0	109	0	0	0	131	3	0	256	
4:30 PM	0	0	0	0	0	0	11	0	0	111	0	0	0	115	0	0	237	
4:35 PM	0	0	0	0	0	0	13	0	0	106	0	0	0	113	2	0	234	
4:40 PM	0	0	0	0	0	0	6	0	0	105	0	0	0	120	2	0	233	
4:45 PM	0	0	0	0	0	0	13	0	0	118	0	0	0	105	2	0	238	
4:50 PM	0	0	0	0	0	0	7	0	0	108	0	0	0	120	3	0	238	
4:55 PM	0	0	0	0	0	0	9	0	0	124	0	0	0	120	3	0	256	2906
5:00 PM	0	0	0	0	0	0	10	0	1	110	0	0	0	128	4	0	253	2928
5:05 PM	0	0	0	0	0	0	10	0	0	132	0	0	0	124	2	1	269	2944
5:10 PM	0	0	0	0	0	0	10	0	0	128	0	0	0	107	1	0	246	2942
5:15 PM	0	0	0	0	0	0	11	0	0	112	0	0	0	110	4	0	237	2944
5:20 PM	0	0	0	0	0	0	11	0	0	105	0	0	0	116	4	0	236	2933
5:25 PM	0	0	0	0	0	0	9	0	0	121	0	0	0	128	2	0	260	2937
5:30 PM	0	0	0	0	0	0	7	0	0	113	0	0	0	108	0	0	228	2928
5:35 PM	0	0	0	0	0	0	12	0	1	118	0	0	0	118	1	0	250	2944
5:40 PM	0	0	0	0	0	0	9	0	0	135	0	0	0	135	3	0	282	2993
5:45 PM	0	0	0	0	0	0	7	0	0	110	0	0	0	134	0	0	251	3006
5:50 PM	0	0	0	0	0	0	8	0	1	100	0	0	0	138	4	0	251	3019
5:55 PM	0	0	0	0	0	0	9	0	0	102	0	0	0	116	2	0	229	2992

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	112	0	4	1452	0	0	0	1548	16	0	3132
Heavy Trucks	0	0	0		0	0	0		0	16	0		0	60	0		76
Pedestrians		0				12				0				0			12
Bicycles	0	0	0		0	0	0		0	1	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/28/2014 4:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Costco Center West Dwy -- Washington Blvd

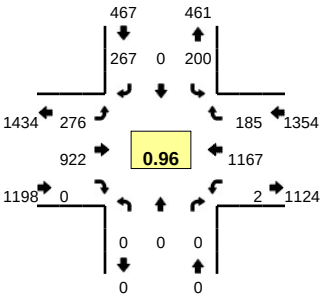
QC JOB #: 12743504

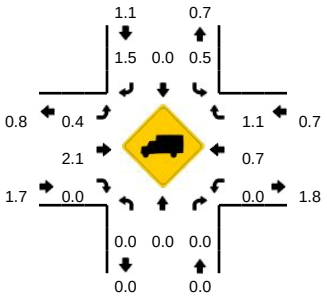
CITY/STATE: Culver City, CA

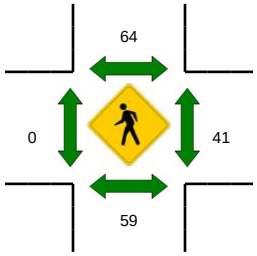
DATE: Sat, Jul 19 2014

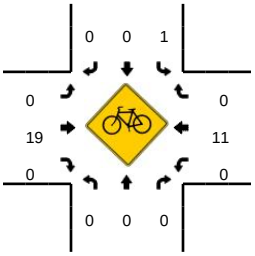
Peak-Hour: 12:40 PM -- 1:40 PM

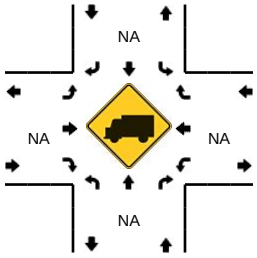
Peak 15-Min: 1:25 PM -- 1:40 PM

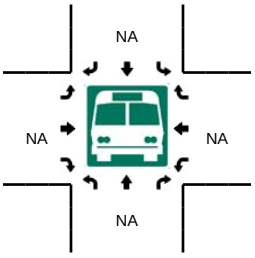












5-Min Count Period Beginning At	Costco Center West Dwy (Northbound)				Costco Center West Dwy (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 PM	0	0	0	0	14	0	25	0	24	86	0	0	0	97	19	0	265	2874
12:05 PM	0	0	0	0	18	0	30	0	21	77	0	2	0	110	9	0	267	2905
12:10 PM	0	0	0	0	14	0	27	0	25	81	0	0	0	117	14	0	278	2952
12:15 PM	0	0	0	0	13	0	25	0	23	75	0	0	0	80	16	0	232	2949
12:20 PM	0	0	0	0	20	0	27	0	20	66	0	0	0	101	12	0	246	2975
12:25 PM	0	0	0	0	9	0	20	0	21	69	0	1	0	107	21	0	248	2974
12:30 PM	0	0	0	0	14	0	17	0	27	70	0	0	0	71	10	0	209	2947
12:35 PM	0	0	0	0	18	0	26	0	41	68	0	0	0	52	12	0	217	2922
12:40 PM	0	0	0	0	13	0	21	0	15	81	0	0	0	120	19	0	269	2959
12:45 PM	0	0	0	0	19	0	26	0	25	83	0	0	0	90	18	0	261	2971
12:50 PM	0	0	0	0	16	0	22	0	21	78	0	0	0	86	14	1	238	2985
12:55 PM	0	0	0	0	15	0	16	0	22	82	0	0	0	125	13	0	273	3003
1:00 PM	0	0	0	0	19	0	25	0	28	70	0	0	0	87	16	0	245	2983
1:05 PM	0	0	0	0	17	0	27	0	25	66	0	0	0	72	21	0	228	2944
1:10 PM	0	0	0	0	16	0	18	0	22	84	0	0	0	100	9	0	249	2915
1:15 PM	0	0	0	0	15	0	18	0	18	78	0	0	0	74	19	0	222	2905
1:20 PM	0	0	0	0	21	0	31	0	32	65	0	0	0	83	12	0	244	2903
1:25 PM	0	0	0	0	14	0	14	0	16	83	0	0	0	135	16	0	278	2933
1:30 PM	0	0	0	0	21	0	29	0	27	67	0	0	0	78	14	0	236	2960
1:35 PM	0	0	0	0	14	0	20	0	25	85	0	0	0	117	14	1	276	3019
1:40 PM	0	0	0	0	16	0	24	0	20	83	0	0	0	99	10	0	252	3002
1:45 PM	0	0	0	0	16	0	25	0	16	64	0	0	0	97	16	0	234	2975
1:50 PM	0	0	0	0	18	0	12	0	33	86	0	0	0	100	9	0	258	2995
1:55 PM	0	0	0	0	12	0	22	0	15	84	0	0	0	109	20	0	262	2984

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	196	0	252	0	272	940	0	0	0	1320	176	4	3160
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	16	0		28
Pedestrians		36				48				0				20			104
Bicycles	0	0	0		0	0	0		0	6	0		0	3	0		9
Railroad																	
Stopped Buses																	

Comments:

Report generated on 7/22/2014 8:13 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Glencoe Ave -- Washington Blvd

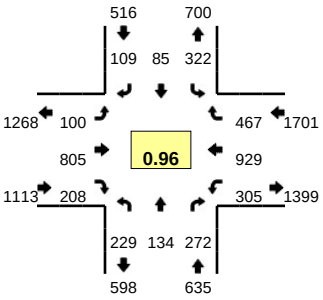
CITY/STATE: Culver City, CA

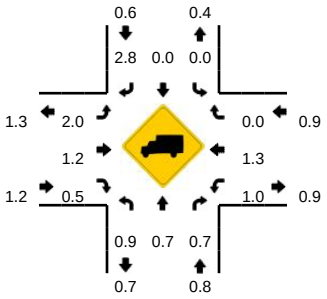
QC JOB #: 12743503

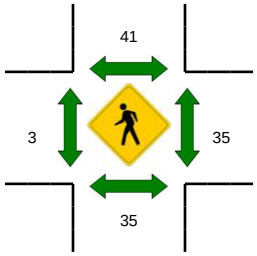
DATE: Wed, Jun 18 2014

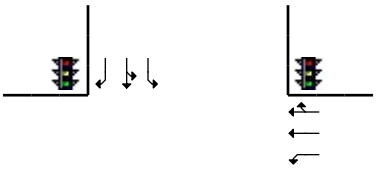
Peak-Hour: 11:55 AM -- 12:55 PM

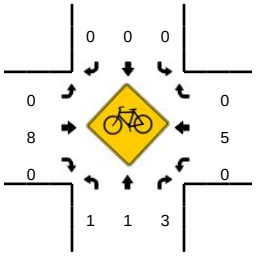
Peak 15-Min: 12:00 PM -- 12:15 PM

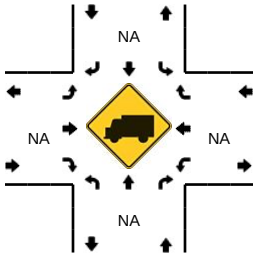


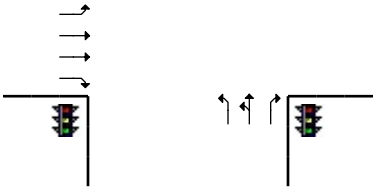


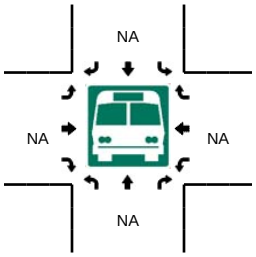












5-Min Count Period Beginning At	Glencoe Ave (Northbound)				Glencoe Ave (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:25 AM	15	13	12	0	22	6	8	0	10	61	14	1	22	75	38	0	297	
11:30 AM	11	13	17	0	23	12	9	0	9	66	10	0	13	61	39	0	283	
11:35 AM	19	12	14	0	21	6	6	0	11	73	14	0	22	67	45	0	310	
11:40 AM	14	16	17	0	25	8	12	0	4	59	19	0	12	67	40	0	293	
11:45 AM	13	20	14	0	35	6	10	0	7	79	11	0	18	69	47	0	329	
11:50 AM	11	7	13	0	26	11	7	0	6	77	18	0	32	78	35	0	321	
11:55 AM	15	6	19	0	17	9	13	0	3	67	17	0	29	72	47	0	314	3711
12:00 PM	21	11	23	0	25	12	8	0	14	59	21	0	21	82	34	0	331	3737
12:05 PM	18	8	26	0	28	6	8	0	9	81	19	0	30	92	49	0	374	3781
12:10 PM	23	13	26	0	25	7	5	0	5	66	18	0	20	80	42	0	330	3812
12:15 PM	22	13	27	0	34	5	10	0	6	62	15	1	25	64	35	0	319	3816
12:20 PM	21	9	20	0	29	3	14	0	10	67	15	0	26	94	36	0	344	3845
12:25 PM	20	17	25	0	25	8	8	0	8	53	13	0	31	76	43	0	327	3875
12:30 PM	16	19	22	0	28	9	8	0	9	56	23	0	18	61	28	0	297	3889
12:35 PM	14	9	21	0	24	6	7	0	11	71	21	0	28	71	39	0	322	3901
12:40 PM	15	11	29	0	26	7	13	0	8	67	13	0	22	71	34	0	316	3924
12:45 PM	18	11	15	0	32	11	12	0	6	69	15	0	29	71	44	0	333	3928
12:50 PM	26	7	19	0	29	2	3	0	10	87	18	0	26	95	36	0	358	3965
12:55 PM	16	16	22	0	25	4	8	0	6	69	15	0	19	71	36	0	307	3958
1:00 PM	13	12	31	0	30	11	9	0	4	71	16	0	17	77	38	0	329	3956
1:05 PM	15	10	23	0	24	6	8	0	4	84	14	0	22	95	41	0	346	3928
1:10 PM	22	12	24	0	25	5	12	0	4	72	12	0	24	61	41	0	314	3912
1:15 PM	20	12	19	0	34	5	7	0	3	75	18	0	18	65	29	0	305	3898
1:20 PM	14	11	23	0	28	6	13	0	4	75	16	0	30	71	41	0	332	3886

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	248	128	300	0	312	100	84	0	112	824	232	0	284	1016	500	0	4140
Heavy Trucks	0	0	0		0	0	0		0	8	4		8	12	0		32
Pedestrians		44				28				0				40			112
Bicycles	0	0	0		0	0	0		0	1	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 7/22/2014 8:13 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Attachment C
Signal Timing Worksheets

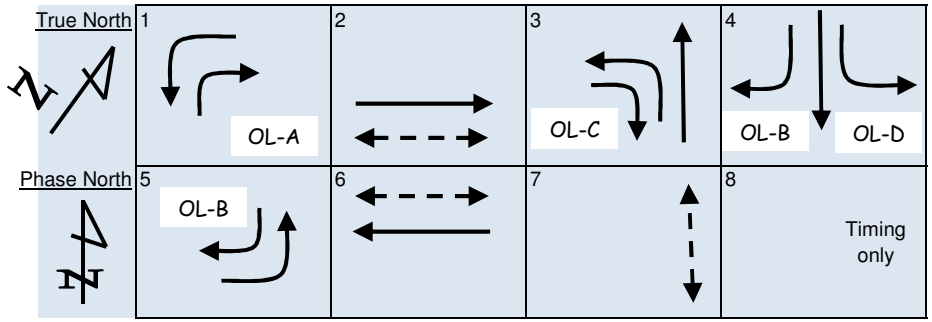
CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Mitchell	Checked By:		Field Installed By:	
Date:	11/08/00	Date:		Date:	

Asset No.	Intersection Name
2	**Wash Bl&Glencoe**
Channel No.	Comm/Drop Address
CHAN 09	**3**

PHASE DIAGRAM / INFO



Phase	
1	WBL
	Washington Bl WB LT
2	EBT
	Washington Bl EB & SS Ped Xing
3	NBT
	Glencoe Ave NB & NB LT
4	SBT
	Costco Dwy SB
5	EBL
	Washington Bl EB LT
6	WBT
	Washington Bl WB & NS Ped Xing
7	
	ES Ped Xing
8	
	Timing Only
Overlap	
A	
	Glencoe Av NB RT
B	
	Costco Dwy SB RT
C	
	Washington Bl EB RT
D	
	Costco Dwy SB LT
E	
F	
G	
H	

Page Name	Last Change
Assignable Inputs	8/5/2009 11:06
Assignable Outputs	8/5/2009 11:06
Basic Timing Phase Bank 1	3/2/2012 13:18
Basic Timing Phase Bank 2	8/5/2009 11:06
Basic Timing Phase Bank3	8/5/2009 11:06
Configuration Parameters	8/5/2009 11:06
Configuration Setup	12/29/2011 10:18
Configuration Timers	8/5/2009 11:06
Coordination All Plans	6/15/2011 13:03
Coordination Parameters	6/15/2011 13:00
Coordination Timing	2/7/2011 16:56
Detector Parameters	8/5/2009 11:06
Detectors	8/5/2009 11:06
Holiday Dates	8/5/2009 11:06
Holiday Events	8/5/2009 11:06
Holiday TOD Functions	8/5/2009 11:06
Overlaps	2/16/2011 7:34
Preemption Parameters	8/5/2009 11:06
Preemption Special Events Table 1	8/5/2009 11:06
Preemption Special Events Table 2	8/5/2009 11:06
Redirect Outputs	8/5/2009 11:06
TOD Functions	8/5/2009 11:06
TOD Schedule	12/19/2011 13:36

Last System Update By: alex.georgiev Last System Update Date: 3/2/2012

NOTES and COMMENTS

1. OLD is omitted during phase 7.
2. Phases 1 & 5 call phase 3, and phase 7 calls phases 3 & 4.

EMERGENCY VEHICLE PREEMPTION

1. When preemption is initiated, hold E.V. clearance phases. If E.V. clearance phases are not green, advance to them after timing the conflicting ped & vehicle clearance intervals.
2. After preemption, resume normal operation from current position.
3. E.V. clearance phasea are phases 2 & 6 for both EVA & EVB.

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Mitchell	Checked By:		Field Installed By:	
Date:	11/08/00	Date:		Date:	

Asset No.	Intersection Name
2	**Wash Bl&Glencoe**
Channel No.	Comm/Drop Address
CHAN 09	**3**

PHASE TIMING

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	7	0	0	0	7	5	0
1	DONT WALK	0	12	0	0	0	12	18	0
2	MIN INITIAL	5	10	5	10	5	10	0	5
3	TYPE 3 LIMIT	0	27	0	0	0	27	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	3.0	5.0	2.5	2.5	2.5	5.0	3.0	0.0
6	MAX GAP	3.0	5.0	2.5	2.5	2.5	5.0	3.0	0.0
7	MIN GAP	3.0	3.0	2.5	3.0	2.5	3.0	3.0	0.0
8	MAX LIMIT	20	40	20	15	15	40	20	0
9	MAXIMUM 2	10	30	10	10	10	30	20	0
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	MIN PED CLR	0	0	0	0	0	0	0	0
C	COND SRV MIN	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
E	YELLOW	3.6	3.9	3.2	3.2	3.6	3.9	3.0	3.0
F	RED CLEAR	0.8	0.9	0.8	0.8	0.8	0.9	1.0	0.0

PHASE BANK 1 **< C + 0 + F = 1 >**

		ALTERNATE TIMING 9 Maximum Initial	A Alternate Walk	B Alternate FDW	C Alternate Initial	D Alternate Extension
1	Ph. 1	0	0	0	0	0
2	Ph. 2	20	0	0	0	0
3	Ph. 3	0	0	0	0	0
4	Ph. 4	20	0	0	0	0
5	Ph. 5	0	0	0	0	0
6	Ph. 6	20	0	0	0	0
7	Ph. 7	0	0	0	0	0
8	Ph. 8	20	0	0	0	0

ALL RED START: <F/ + C + 0> = **6.0**
RED REVERT: <F/ 1 + 0 + F> = **3.0**
FLASH START: <F/ 1 + 0 + E> = **0.0**

	PREEMPT		PHASE FUNCTION FLAGS Column F		
	RR1 DLY	0	0	PERMIT	12345678
	RR1 CLR	0	1	RED LOCK	
	EVA DLY	0	2	YELLOW LOCK	
	EVA CLR	10	3	VEH MIN CALL	2 6
	EVB DLY	0	4	PED RECALL	
	EVB CLR	10	5	PEDESTRIANS	2 67
	EVC DLY	0	6	REST IN WALK	
	EVC CLR	0	7	RED REST	
	EVD DLY	0	8	DOUBLE ENTRY	4 8
	EVD CLR	0	9	VEH MAX CALL	
	RR2 DLY	0	A	SOFT RECALL	
	RR2 CLR	0	B	MAXIMUM 2	
			C	COND SERVICE	
			D	MAN CONT CALL	
			E	YELLOW START	
			F	FIRST PHASES	2 6

< C + 0 + F = 1 >

SPECIALS Column F		Controller Intervals
0 FAST GRN FLH		0 = Walk
1 GREEN FLSH		1 = FDW
2 FLASH WALK		2 = MIN. Green
3 GUAR PASS		3 =
4 SIMUL GAP	12345678	4 = Var. Initial
5 SEQ TIMING		5 = Extension
6 ADV WALK		6 =
7 DELAY WALK		7 = Reduce Gap
8 EXT RECALL		8 = Red Rest
9 START OPV GRN		9 = Preempt
A MAX EXTEN		A = Stop Time
B INH PED RSRV		B = Red Revrt
C SEMI ACTUA.		C = Gap Term.
D O'LAP STRT UP		D = MAX Term.
E STRT VEH CALL	12345678	E = Forceoff
F STRT PED CALL	2 67	F = Red Clear.

Specials <C + 0 + F = 2>

MANUAL PLAN SELECT:
(C/0 + A + 1) = 0
AUTO = 0 FREE = 62
PLAN = 1 - 12 FLASH= 63

MANUAL OFFSET SELECT:
(C/0 + B + 1) =
AUTO = 0
OFFSET A = 1

COMM/DROP ADDRESS:
(C/0 + 0 + 0) =

ZONE NUMBER:
(C/0 + 0 + 1) =

AREA NUMBER:
(C/0 + 0 + 2) =

AREA ADDRESS:
(C/0 + 0 + 3) =

EXCL. PED. OPERATION:
WALK:
(F/1+0+0) = 0
DONT WALK:
(F/1+0+1) = 0
RED CLEAR:
(F/1+0+2) = 0.0

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
6 = International Ped.
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash/Free
5 = Simplex Master
7 = 7 Wire Master
8 = Offset Interruptor

CONTROLLER CONFIGURATION FLAGS

	Column E		Column F		EXTRA 2
0	EXCLUSIVE		EXT PERMIT 0		1 = AWB On during Phase Initial
1	RR 1 CLEAR		EXT PERMIT 1		
2	RR 2 CLEAR		EXT PERMIT 2		
3	RR 2 LTD SRV		EXCLU PED		2 = LMU installed
4	PROT/PERM	1 5	PE NON-LOCK	12345678	
5	FLH TO PREMT		PED 2 P OUT	2	FLASH TO PREMPT
6	FLASH ENTRY		PED 6 P OUT	6	
7	DSABL MIN YEL		PED 4 P OUT		1 = EV A
8	DSABL OVP YEL		PED 8 P OUT	7	2 = EV B
9	OVP FLH YEL		FLH YELLOW		3 = EV C
A	EM. VEH. A	2 6	LOW PRL A		4 = EV D
B	EM. VEH. B	2 6	LOW PRL B		5 = RR 1
C	EM. VEH. C		LOW PRL C		6 = RR2
D	EM. VEH. D		LOW PRL D		7 = SE 1
E	EXTRA 1	1 3 5	RESTRICTED		8 = SE 2
F	IC SELECT	2	EXTRA 2		

< C + 0 + E = 125 > **< C + 0 + E = 125 >**

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >
2) Key stroke: PAGE + COLUMN + ROW

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero >

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Mitchell	Checked By:		Field Installed By:	
Date:	11/08/00	Date:		Date:	

Asset No.	Intersection Name
2	**Wash Bl&Glencoe**
Channel No.	Comm/Drop Address
CHAN 09	**3**

DETECTOR TIMING

DESCRIPTION	COL->	DELAY 1	CARRY OVER 3	Standard 332 CABINET LOCATION	Column 0 C1 PIN No.	Column 1 ATTRIBUTES 1 2 3 4 5 6 7 8	Column 2 PHASE(S) 1 2 3 4 5 6 7 8	Column 3 ASSIGNMENTS 1 2 3 4 5 6 7 8
	0	15.0	0.0	I-1U&L	0 56	X X X	X	X X X X
	1	0.0	0.0	I-2U	1 39	X X X	X	X X X X
	2	0.0	0.0	I-2L	2 43	X X X	X	X X X X
	3	0.0	0.0	I-3U	3 63	X X X	X	X X X X
	4	0.0	0.0	I-3L	4 76	X X X	X	X X X X
	5	0.0	2.0	I-4U&L	5 47	X X	X	X X X X
	6	0.0	0.0	I-5U&L	6 58	X X X	X	X X X X
	7	0.0	0.0	I-6U	7 41	X X X	X	X X X X
	8	0.0	0.0	I-6L	8 45	X X X	X	X X X X
	9	0.0	0.0	I-7U	9 65	X X X		X X X X
	A	0.0	0.0	I-7L	A 78	X X X		X X X X
	B	0.0	0.0	I-8U&L	B 49	X X X	X	X X X X
	C	0.0	0.0	I-9U	C 60	X X X	X	X X X X
	D	0.0	0.0	I-9L	D 62	X X X	X	X X X X
	E	0.0	0.0	I-12U	E 67	X	X	X X X X
	F	0.0	0.0	I-12L	F 69	X	X	X X X X

< C + 0 + D = 0 > **DETECTOR ASSIGNMENTS, < C + O + E = 126 >**

DESCRIPTION	COL->	DELAY 2	CARRY OVER 4	Standard 332 CABINET LOCATION	Column 4 C1 PIN No.	Column 5 ATTRIBUTES 1 2 3 4 5 6 7 8	Column 6 PHASE(S) 1 2 3 4 5 6 7 8	Column 7 ASSIGNMENTS 1 2 3 4 5 6 7 8
	0	15.0	0.0	J-1U&L	0 55	X X X	X	X X X X
	1	0.0	0.0	J-2U	1 40	X X X		X X X X
	2	0.0	0.0	J-2L	2 44	X X X		X X X X
	3	0.0	0.0	J-3U	3 64	X X X		X X X X
	4	0.0	0.0	J-3L	4 77	X X X		X X X X
	5	0.0	2.0	J-4U&L	5 48	X X	X	X X X X
	6	0.0	0.0	J-5U&L	6 57	X X X	X	X X X X
	7	0.0	0.0	J-6U	7 42	X X X		X X X X
	8	0.0	0.0	J-6L	8 46	X X X		X X X X
	9	0.0	0.0	J-7U	9 66	X X X		X X X X
	A	0.0	0.0	J-7L	A 79	X X X		X X X X
	B	0.0	0.0	J-8U&L	B 50	X X X		X X X X
	C	0.0	0.0	J-9U	C 59	X X X		X X X X
	D	0.0	0.0	J-9L	D 61	X X X		X X X X
	E	0.0	0.0	J-13U	E 68	X	X	X X X X
	F	0.0	0.0	J-13L	F 70	X	X	X X X X

< C + 0 + D = 0 > **DETECTOR ASSIGNMENTS, < C + O + E = 126 >**

NOTE: PLEASE DO NOT CLEAR DEFAULT SETTINGS UNLESS SHOWN OTHERWISE!

Legend: "•" = Default Settings; "X" = New Settings; "O" = Cleared Default Settings

Detector Monitor			1	2	3	4	5	6	7	8	
MAX OFF:	0	LOAD SW #	9	10	11	8	0	0	0	0	0
(D/0 + 0 + 1) = 20			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
MAX ON:	1	VEH SET 1	X	X X	X	X					1
(D/0 + 0 + 2) = 7	2	VEH SET 2									2
	3	VEH SET 3									3
Power Cycle	4	NEG. VEH.	X X	X X	X X X X	X X X X					4
Correction Factors	5	NEG. PED.	X X	X X	X X	X X X					5
LONG FAILURE:	6	GREEN OMIT	X	X							6
(F/1 + 0 + 6) = 0.7	7	GRN CLR OMIT									7
SHORT FAILURE:	8										8
(F/1 + 0 + 7) = 0.7	D	GREEN CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
NOTE:	E	YELLOW	3.2	0.2	3.2	3.2	0.0	0.0	0.0	0.0	E
Do Not Set To Zero	F	RED CLEAR	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	F
Default Value = 0.5 Sec			**OVERLAP ASSIGNMENTS**		**< C + 0 + E = 29 >**						

DETECTOR ATTRIBUTES
1= Full Time Delay
2 = Pedestrian Call
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

DETECTOR ASSIGNMENTS
1 = Det. Set # 1
2 = Det. Set # 2
3 = Det. Set # 3
6 = MIN Recall On Failure
7 = MAX Recall On Failure
8 = Report On Failure

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Mitchell	Checked By:		ield Installed By:	
Date:	11/08/00	Date:		Date:	

Asset No.	Intersection Name
2	**Wash Bl&Glencoe**
Channel No.	Comm/Drop Address
CHAN 09	**3**

COORDINATION TIMING

		PLAN NUMBER											
		1	2	3	4	5	6	7	8	9	10	11	12
0	CYCLE	90	90	0	0	0	0	90	90	0	0	90	90
1	FORCE 1	54	60	0	0	0	0	54	60	0	0	54	60
2	FORCE 2	0	0	0	0	0	0	0	0	0	0	0	0
3	FORCE 3	23	27	0	0	0	0	23	27	0	0	23	27
4	FORCE 4	35	41	0	0	0	0	35	41	0	0	35	41
5	FORCE 5	46	50	0	0	0	0	46	50	0	0	46	50
6	FORCE 6	0	0	0	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	0	0	0	0	0	0	0	0	0	0	0
8	FORCE 8	0	0	0	0	0	0	0	0	0	0	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0	0	0	0
A	OFFSET 1	35	8	0	0	0	0	35	8	0	0	35	8
B	SYNC	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6		2 6	2 6
C	LAG	2 4 6 8	2 4 6 8	2 4 6 8	2 4 6 8	2 4 6 8	2 4 6 8	2 4 6 8	2 4 6 8	2 4 6 8		2 4 6 8	2 4 6 8
D	END PERM 1	1	1	0	0	0	0	1	1	0	0	1	1
E	HOLD RELEASE	255	255	255	255	255	255	255	255	255	0	255	255
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

COLUMN 2 Coord Min.

10
22
10
10
10
24
26
10

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 0.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU X.4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > = 0

7-WIRE SYNC TIME:
< C/5 + 1 + C > = 0.0

Low Priority Channel:
< E/125 + C + 8 > = 0.0
1 - Channel A
2 - Channel B
3 - Channel C
4 - Channel D

COORDINATION EXTRA:
1- Programmed Walk Time for SYNC Phases

< C/5 +1+B >

Plan # -->	1	2	3	4	5	6	7	8	9	10	11	12	
0	PED ADJUS	0	0	0	0	0	0	0	0	0	0	0	0	0
1	STRT PERM	0	0	0	0	0	0	0	0	0	0	0	0	1
2	END PERM	0	0	0	0	0	0	0	0	0	0	0	0	2
3	STRT PERM	0	0	0	0	0	0	0	0	0	0	0	0	3
4	END PERM	0	0	0	0	0	0	0	0	0	0	0	0	4
5	SERVE TI	0	0	0	0	0	0	0	0	0	0	0	0	5
6	RSERVE PH													6
7														7
8	PRETIMED													8
9	MAX RECALL													9
A	PERM 1 VE	X	X	X	X	X	X	X	X	X		X	X	A
B	PERM 1 PE	X	X	X	X	X	X	X	X	X		X	X	B
C	PERM 2 VEH													C
D	PERM 2 PED													D
E	PERM 3 VEH													E
F	PERM 3 PED													F

COORDINATION PAGE 2 < C + 0 + C = 2 >

Ext Lag <F/1+E+E>
2 4 6 8

Lag Free<F/1+E+F>
2 4 6 8

Daylight Savings Time

Begin Month	<C/5+2+A>	3
Begin Week	<C/5+2+B>	2
End Month	<C/5+2+C>	11
End Week	<C/5+2+D>	1

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

Min Green Before PE Force Off

Min Time, sec.	<F/1+0+8>	4

Max Preemt Time Before Failure

Max Time, min.	<F/1+0+9>	255

Min Time Bet.Same Preempts
(Does Not Apply To Railroad Preempt)

Min Time, sec.	<F/1+0+A>	0

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Mitchell	Checked By:		Field Installed By:	
Date:	11/08/00	Date:		Date:	

Asset No.	Intersection Name
2	**Wash Bl&Glencoe**
Channel No.	Comm/Drop Address
CHAN 09	**3**

TOD FUNCTIONS AND PLANS

		Column D 1	2	3	4	5	6	7	8
0									
1	OUT PORT 1								
2	OUT PORT 2								
3	OUT PORT 3								
4	OUT PORT 4								
5	OUT PORT 5								
6	OUT PORT 6								
7	OUT PORT 7								

Dimming<C + 0 + E = 125>

Display Locations

Manual Plan	= C/0+A+1
Master Plan	= C/0+A+2
Current Plan	= C/0+A+3
Next Plan	= C/0+A+4
TOD Plan	= C/0+A+5
Master Cycle	= C/0+A+0
Ring A Cycle	= C/0+B+0
Ring B Cycle	= C/0+D+0
MIN Cycle	= C/0+A+E
MAX Cycle	= C/0+B+E
CALCULATED CYCLE	= C/0+B+F
Phase HOLD	= C/0+F+D
Phase Next	= C/0+F+E
Force Off	= C/0+F+F

Interval Timer Display
Ring A = F/0 + A + Interval
Ring B = F/0 + B + Interval

		PED/PHASE/OVERLAP 1	2	3	4	5	6	7	8
0	WALK	0	0	0	0	0	0	0	0
1	DON'T WALK	0	0	0	0	0	0	0	0
2	PHASE GREEN	0	0	0	0	0	0	0	0
3	PHAZE YELLOW	0	0	0	0	0	0	0	0
4	PHASE RED	0	0	0	0	0	0	0	0
5	OV'LAP GREEN	35	36	0	0	0	0	0	0
6	OV'LAP YELLOW	37	38	0	0	0	0	0	0
7	OV'LAP RED	0	0	0	0	0	0	0	0

REDIRECT PHASE OUTPUTS < C+0+E = 127>

ENABLE/DISABLE PHASE REDIRECTION CABINET TYPE:
(E/125+D+0)= **30**
CABINET TYPE:
30 = TYPE 303/330 CABINET
(TO ENABLE REDIRECTION)
0 = ALL OTHER TYPES
(TO DISABLE REDIRECTION)

412C Memory Module Battery:
IF E/112 + 0 + A = 84, battery is bad
IF E/112 + 0 + A = 85, battery is OK.

CONTINUOUS MEMORY ERROR MONITORING

"bAdA" -ERROR WAS DETECTED IN THE CPU'S RAM OR A NEW PROGRAM HAS BEEN INSTALLED ON THE MEMORY MODULE OFTEN CAUSED BY A BAD CONTROL LER "GEL-CELL" BATTERY.

"bAdB" - ERROR WAS DETECTED IN THE MEMORY MODULE'S RAM. OFTEN CAUSED BY BAD "LITHIUM" BATTERY ON THE MEMORY MODULE.

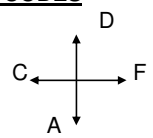
"bAdE" - AN ERROR WAS DETECTED IN THE EPROM.

"bAdF" - AN ERROR WAS DETECTED IN THE Z-RAM (DALLAS CHIP) ON THE MEMORY MODULE.

Enable "E" Page:
F/1+9+E= Not Zero

DISPLAY MOVEMENT CODES

A = Advance ROW
D = Decrement ROW
C = COLUMN Back
F = Forward COLUMN.



LOGIC DELAY GATE
DELAY TIMER DIS
DELAY A Timer=C/0+9+A
DELAY B Timer=C/0+9+B
"thru" "thru"
DELAY F Timer=C/0+9+F

TOD COORD (9 Key)

	TIME HHMM	PLAN	DAY OF WEE S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	0100	62	X	X	X	X	X	X	X
1	600	1	X	X	X	X	X	X	X
2	1000	1		X	X	X	X	X	
3	1500	2	X	X	X	X	X	X	X
4	1900	2		X	X	X	X	X	
5	2100	62	X	X	X	X	X	X	X
6	0600	1							
7	2100	62							
8	0000	0							
9	0000	0							
A	0000	0							
B	0000	0							
C	0000	0							
D	0000	0							
E	0000	0							
F	0000	0							

< C + 0 + 9 = 0.1 >

TOD FUNCT (7 KEY)

	TIME	Func	DAY OF WEE S	M	T	W	T 5	F	S
0	0000	0							
1	0000	0							
2	0000	0							
3	0000	0							
4	0000	0							
5	0000	0							
6	0000	0							
7	0000	0							
8	0000	0							
9	0000	0							
A	0000	0							
B	0000	0							
C	0000	0							
D	0000	0							
E	0000	0							
F	0000	0							

< C + 0 + 7 = 0.1 >

Column 4 PHASES / BITS

				4				

< C + 0 + E = 27 >

PREEMPT PRIORITY

		Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1	0	4
RR-2	0	5
SE-1	0	6
SE-2	0	7

< C + 0 + E = 125 >

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Mitchell	Checked By:		Field Installed By:	
Date:	11/08/00	Date:		Date:	

Asset No.	Intersection Name
2	**Wash Bl&Glencoe**
Channel No.	Comm/Drop Address
CHAN 09	**3**

INPUT / OUTPUT ASSIGNMENTS - SPECIAL EVENTS

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		
0	SPF 1	0	NOT-3	0	MAX 2	0	PRE TIM	0	x Perm0	0	DIAL 2	0	SIM TRM	0	0
1	SPF 2	0	NOT-4	0	SY DET 1	0	Plan 1		x Perm1	0	DIAL 3	0	EV A	71	1
2	SPF 3	0	OR-4 (a)	0	SY DET 2	0	Plan 2		x Perm2	0	OFF 1	0	EV B	72	2
3	SPF 4	0	OR-4 (b)	0	SY DET 3	0	Plan 3		WK DAY	0	OFF 2	0	EV C	73	3
4	NAND-3	0	OR-5 (a)	0	SY DET 4	0	Plan 4		X Clock	0	OFF 3	0	EV D	74	4
5	NAND-3	0	OR-5 (b)	0	SY DET 5	0	Plan 5		ST Time	82	FREE	0	RR 1	51	5
6	NAND-4	0	OR-6 (a)	0	SY DET 6	0	Plan 6		FL SENS	81	FLASH	0	RR 2	52	6
7	NAND-4	0	OR-6 (b)	0	SY DET 7	0	Plan 7		ENABLE	0	XPD OMT	0	SP 1	0	7
8	OR 7 (a)	0	Fig 3 Dia.	0	SY DET 8	0	Plan 8		ADVANCE	0	NOT 1	0	SP 2	0	8
9	OR 7 (b)	0	Fig 4 Dia.	0	MX INIBT	0	Plan 9		ALARM	0	NOT 2	0	X LAG	0	9
A	OR 7 (c)	0	AND4 (a)	0	FORCE A	0	DELAY-A	0	PH BNK 2	0	OR 1	0	AND 1	0	A
B	OR 7 (d)	0	AND4 (b)	0	FORCE B	0	DELAY-B	0	PH BNK 3	0	OR 1	0	AND 1	0	B
C	OR 8 (a)	0	NAND1(a)	0	CNA	0	DELAY-C	0	OL SET 2	0	OR 2	0	AND 2	0	C
D	OR 8 (b)	0	NAND1(b)	0	HOLD	0	DELAY-D	0	OL SET 3	0	OR 2	0	AND 2	0	D
E	OR-8 (c)	0	NAND2(a)	0	VEH CALL	0	DELAY-E	0	DET ST 2	0	OR 3	0	AND 3	0	E
F	OR-8 (d)	0	NAND2(b)	0	RECALL	0	DELAY-F	0	DET ST 3	0	OR 3	0	AND 3	0	F

ASSIGNABLE INPUTS < C + 0 + E = 126 >

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		
0	Fz ON - 1	0	PrEmp FI	0	FLHR 0	0	FREE	0	NOT 1	0	TOD 1	0	DIAL 2	0	0
1	Fz ON - 2	0	SP EV 1	0	FLHR 1	0	Plan 1		OR 1	0	TOD 2	0	DIAL 3	0	1
2	Fz ON - 3	0	SP EV 2	0	F FLHR	0	Plan 2		OR 2	0	TOD 3	0	OFF 1	0	2
3	Fz ON - 4	0	SP EV 3	0	Fig 3 Dia.	0	Plan 3		OR 3	0	TOD 4	0	OFF 2	0	3
4	Fz ON - 5	0	SP EV 4	0	Fig 4 Dia.	0	Plan 4		AND 1	0	TOD 5	0	OFF 3	0	4
5	Fz ON - 6	0	SP EV 5	0			Plan 5		AND 2	0	TOD 6	0	FREE	0	5
6	Fz ON - 7	0	SP EV 6	0			Plan 6		AND 3	0	TOD 7	0	FLASH	0	6
7	Fz ON - 8	0	SP EV 7	0			Plan 7		NOT 2	0	TOD 8	0	PREMPT	0	7
8	Fz Ck - 1	0	SP EV 8	0	NOT 3	0	Plan 8		EV A	0	WARN 1	0	Priority A	0	8
9	Fz Ck - 2	0			NOT 4	0	Plan 9		EV B	0	WARN 2	0	Priority B	0	9
A	Fz Ck - 3	0	DET FAIL	0	OR 4	0			EV C	0	DELAY A	0	Priority C	0	A
B	Fz Ck - 4	0			OR 5	0			EV D	0	DELAY B	0	Priority D	0	B
C	Fz Ck - 5	0			OR 6	0	NAND 3	0	RR 1	0	DELAY C	0			C
D	Fz Ck - 6	0	CNT CTL	0	AND 4	0	NAND 4	0	RR 2	0	DELAY D	0			D
E	Fz Ck - 7	0	XDWALK	0	NAND 1	0	OR 7	0	SP 1	0	DELAY E	0			E
F	Fz Ck - 8	0	X WALK	0	NAND 2	0	OR 8	0	SP 2	0	DELAY F	0			F

ASSIGNABLE OUTPUTS < C + 0 + E =127>

	6 CLEAR	7 TIME	8 PED CALL	9 HOLD	A ADVANCE	B FORCE OFF	C CALL	D PERMIT	E PED OMIT	F OUTPUT
	1 2 3 4 5 6 7 8		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8
0		0000								0
1		0000								1
2		0000								2
3		0000								3
4		0000								4
5		0000								5
6		0000								6
7		0000								7
8		0000								8
9		0000								9
A		0000								A
B		0000								B
C		0000								C
D		0000								D
E		0000								E
F		0000								F

SPECIAL EVENT SCHEDULE < C + 0 + E = 27 >

COLUMN B

A	DELAY A	0
B	DELAY B	0
C	DELAY C	0
D	DELAY D	0
E	DELAY E	0
F	DELAY F	0

<C+ 0 + D = 0>
LOGIC **DELAY** TIMES

FOR SPECIAL EVENT Table 1:
LIMITED SERVICE INTERVAL:
< E/27+5+ F > = 0

FOR SPECIAL EVENT TABLE #2:
<C+0+E=28> And use same key strokes as table 1 to access table.

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Mitchell	Checked By:		Field Installed By:	
Date:	11/08/00	Date:		Date:	

Asset No.	Intersection Name
2	**Wash Bl&Glencoe**
Channel No.	Comm/Drop Address
CHAN 09	**3**

BSP Timing

Row	Time	Day of Week	Approach	Time*
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

BSP Time of Day <C+0+9=2.1>

Time value is between 0 and 15 only

<C/0+0+Row >	
City Code	
Address	

Headway Time	
Delay Time	
Early Green Max	
Extension Max	

Bus Priority Settings

<C+0+E=125>	
Low A Phase	
Low B Phase	
Low C Phase	
Low D Phase	

Bus Phases

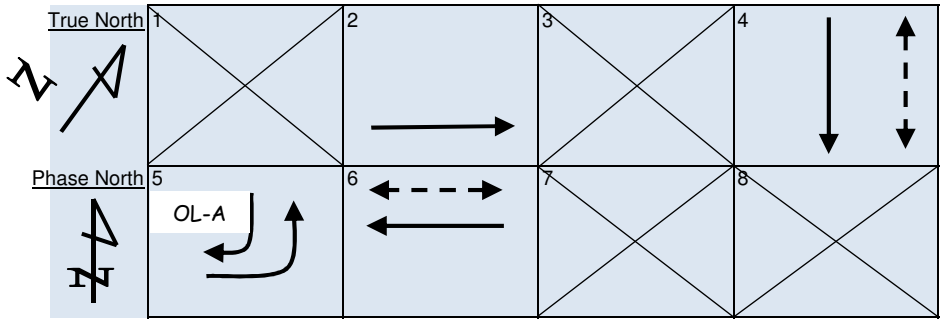
CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Barnett	Checked By:		Field Installed By:	
Date:	06/07/99	Date:		Date:	6/17/2004

Asset No.	Intersection Name
1	**Wash Bl&Costco**
Channel No.	Comm/Drop Address
CHAN 09	**4**

PHASE DIAGRAM / INFO



Phase	
1	
2	EBT
	Washington Bl EB
3	
4	SBT
	Costco Dwy SB, EB Ped Xing
5	EBL
	Washington Bl EB LT
6	WBT
	Washington Bl WB & NS Ped Xing
7	
8	
Overlap	
A	
	Costco Dwy SB RT
B	
C	
D	
E	
F	
G	
H	

Page Name	Last Change
Assignable Inputs	10/18/2010 8:00
Assignable Outputs	10/18/2010 8:00
Basic Timing Phase Bank 1	10/23/2014 8:07
Basic Timing Phase Bank 2	10/18/2010 8:00
Basic Timing Phase Bank3	10/18/2010 8:00
Bus Priority	10/18/2010 8:00
Configuration Parameters	10/18/2010 8:00
Configuration Setup	12/29/2011 10:16
Configuration Timers	10/18/2010 8:00
Coordination All Plans	6/15/2011 13:00
Coordination Parameters	6/15/2011 12:59
Coordination Timing	2/8/2011 15:05
Detector Parameters	10/18/2010 8:00
Detectors	10/18/2010 8:00
Holiday Dates	10/18/2010 8:00
Holiday Events	10/18/2010 8:00
Holiday TOD Functions	10/18/2010 8:00
Overlaps	2/16/2011 7:31
Preemption Parameters	10/18/2010 8:00
Preemption Special Events Table 1	10/18/2010 8:00
Preemption Special Events Table 2	10/18/2010 8:00
Redirect Outputs	10/18/2010 8:00
TOD Functions	10/18/2010 8:00
TOD Schedule	12/19/2011 13:10

Last System Update By: alex.georgiev Last System Update Date: ########

NOTES and COMMENTS

EMERGENCY VEHICLE PREEMPTION

1. When preemption is initiated, hold E.V. clearance phases. If E.V. clearance phases are not green, advance to them after timing the conflicting ped & vehicle clearance intervals.
2. After preemption, resume normal operation from current position.
3. E.V. clearance phases are phases 2 & 6 for both EVA & EVB.

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Barnett	Checked By:		Field Installed By:	
Date:	06/07/99	Date:		Date:	06/17/04

Asset No.	Intersection Name
1	Wash Bl&Costco
Channel No.	Comm/Drop Address
CHAN 09	4

PHASE TIMING

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	0	0	5	0	7	0	0
1	DONT WALK	0	0	0	18	0	11	0	0
2	MIN INITIAL	0	10	0	5	5	10	0	0
3	TYPE 3 LIMIT	0	0	0	0	0	0	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	0.0	5.0	0.0	2.5	2.0	5.0	0.0	0.0
6	MAX GAP	0.0	5.0	0.0	2.5	2.0	5.0	0.0	0.0
7	MIN GAP	0.0	3.0	0.0	2.5	2.0	3.0	0.0	0.0
8	MAX LIMIT	0	40	0	20	16	40	0	0
9	MAXIMUM 2	0	30	0	15	10	30	0	0
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	MIN PED CLR	0	0	0	0	0	0	0	0
C	COND SRV MIN	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
E	YELLOW	0.0	3.9	0.0	3.2	3.6	3.9	0.0	0.0
F	RED CLEAR	0.0	0.9	0.0	0.8	0.9	0.9	0.0	0.0

PHASE BANK 1 **< C + 0 + F = 1 >**

		ALTERNATE TIMING 9	A	B	C	D
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension
1	Ph. 1	0	0	0	0	0
2	Ph. 2	20	0	0	0	0
3	Ph. 3	0	0	0	0	0
4	Ph. 4	20	0	0	0	0
5	Ph. 5	0	0	0	0	0
6	Ph. 6	20	0	0	0	0
7	Ph. 7	0	0	0	0	0
8	Ph. 8	20	0	0	0	0

ALL RED START: <F/ + C + 0> = **6.0**
RED REVERT: <F/ 1 + 0 + F> = **2.0**
FLASH START: <F/ 1 + 0 + E> = **0.0**

	PREEMPT		PHASE FUNCTION FLAGS Column F		
	RR1 DLY	0	0	PERMIT	2 456
	RR1 CLR	0	1	RED LOCK	
	EVA DLY	0	2	YELLOW LOCK	
	EVA CLR	10	3	VEH MIN CALL	2 6
	EVB DLY	0	4	PED RECALL	
	EVB CLR	0	5	PEDESTRIANS	4 6
	EVC DLY	0	6	REST IN WALK	
	EVC CLR	10	7	RED REST	
	EVD DLY	0	8	DOUBLE ENTRY	
	EVD CLR	0	9	VEH MAX CALL	
	RR2 DLY	0	A	SOFT RECALL	
	RR2 CLR	0	B	MAXIMUM 2	
			C	COND SERVICE	
			D	MAN CONT CALL	
			E	YELLOW START	
			F	FIRST PHASES	2 6

< C + 0 + F = 1 >

	SPECIALS Column F		Controller Intervals
0	FAST GRN FLH		0 = Walk
1	GREEN FLSH		1 = FDW
2	FLASH WALK		2 = MIN. Green
3	GUAR PASS		3 =
4	SIMUL GAP	12345678	4 = Var. Initial
5	SEQ TIMING		5 = Extension
6	ADV WALK		6 =
7	DELAY WALK		7 = Reduce Gap
8	EXT RECALL		8 = Red Rest
9	START OPV GRN		9 = Preempt
A	MAX EXTEN		A = Stop Time
B	INH PED RSRV		B = Red Revrt
C	SEMI ACTUA.		C = Gap Term.
D	O'LAP STRT UP		D = MAX Term.
E	STRT VEH CALL	12345678	E = Forceoff
F	STRT PED CALL	4 6	F = Red Clear.

Specials <C + 0 + F = 2>

MANUAL PLAN SELECT:
(C/0 + A + 1) = 0
AUTO = 0 FREE = 62
PLAN = 1 - 12 FLASH= 63

MANUAL OFFSET SELECT:
(C/0 + B + 1) =
AUTO = 0
OFFSET A = 1

COMM/DROP ADDRESS:
(C/0 + 0 + 0) =

ZONE NUMBER:
(C/0 + 0 + 1) =

AREA NUMBER:
(C/0 + 0 + 2) =

AREA ADDRESS:
(C/0 + 0 + 3) =

EXCL. PED. OPERATION:
WALK:
(F/1+0+0) = 0
DONT WALK:
(F/1+0+1) = 0
RED CLEAR:
(F/1+0+2) = 0.0

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
6 = International Ped.
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash/Free
5 = Simplex Master
7 = 7 Wire Master
8 = Offset Interruptor

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >
2) Key stroke: PAGE + COLUMN + ROW

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero >

CONTROLLER CONFIGURATION FLAGS

	Column E		Column F		EXTRA 2
0	EXCLUSIVE		EXT PERMIT 0		1 = AWB On during Phase Initial
1	RR 1 CLEAR		EXT PERMIT 1		
2	RR 2 CLEAR		EXT PERMIT 2		
3	RR 2 LTD SRV		EXCLU PED		2 = LMU installed
4	PROT/PERM	5	PE NON-LOCK	12345678	
5	FLH TO PREMT		PED 2 P OUT		FLASH TO PREMPT
6	FLASH ENTRY		PED 6 P OUT	6	
7	DSABL MIN YEL		PED 4 P OUT	4	1 = EV A
8	DSABL OVP YEL		PED 8 P OUT		2 = EV B
9	OVP FLH YEL		FLH YELLOW		3 = EV C
A	EM. VEH. A	2 5	LOW PRL A		4 = EV D
B	EM. VEH. B	2	LOW PRL B		5 = RR 1
C	EM. VEH. C	6	LOW PRL C		6 = RR2
D	EM. VEH. D		LOW PRL D		7 = SE 1
E	EXTRA 1	1 3 5	RESTRICTED		8 = SE 2
F	IC SELECT	2	EXTRA 2		

< C + 0 + E = 125 > **< C + 0 + E = 125 >**

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Barnett	Checked By:		Field Installed By:	
Date:	06/07/99	Date:		Date:	06/17/04

Asset No.	Intersection Name
1	**Wash Bl&Costco**
Channel No.	Comm/Drop Address
CHAN 09	**4**

DETECTOR TIMING

DESCRIPTION	COL->	DELAY 1	CARRY OVER 3	Standard 332 CABINET LOCATION	Column 0 C1 PIN No.	Column 1 ATTRIBUTES 1 2 3 4 5 6 7 8	Column 2 PHASE(S) 1 2 3 4 5 6 7 8	Column 3 ASSIGNMENTS 1 2 3 4 5 6 7 8
	0	0.0	0.0		0 56	X X X	X	X X X X
	1	0.0	0.0		1 39			X X X X
	2	0.0	0.0		2 43			X X X X
	3	0.0	0.0		3 63			X X X X
	4	0.0	0.0		4 76			X X X X
	5	0.0	0.0		5 47	X X X	X	X X X X
	6	0.0	0.0		6 58	X X X	X	X X X X
	7	0.0	0.0		7 41			X X X X
	8	0.0	0.0		8 45			X X X X
	9	0.0	0.0		9 65			X X X X
	A	0.0	0.0		A 78			X X X X
	B	10.0	0.0		B 49	X X X	X	X X X X
	C	0.0	0.0		C 60	X X X	X	X X X X
	D	0.0	0.0		D 62	X X X	X	X X X X
	E	0.0	0.0		E 67	X	X	X X X X
	F	0.0	0.0		F 69	X	X	X X X X

< C + 0 + D = 0 > **DETECTOR ASSIGNMENTS, < C + O + E = 126 >**

DESCRIPTION	COL->	DELAY 2	CARRY OVER 4	Standard 332 CABINET LOCATION	Column 4 C1 PIN No.	Column 5 ATTRIBUTES 1 2 3 4 5 6 7 8	Column 6 PHASE(S) 1 2 3 4 5 6 7 8	Column 7 ASSIGNMENTS 1 2 3 4 5 6 7 8
	0	15.0	0.0		0 55	X X X	X	X X X X
	1	0.0	0.0		1 40			X X X X
	2	0.0	0.0		2 44			X X X X
	3	0.0	0.0		3 64			X X X X
	4	0.0	0.0		4 77			X X X X
	5	0.0	0.0		5 48	X X X	X	X X X X
	6	0.0	0.0		6 57	X X X	X	X X X X
	7	0.0	0.0		7 42	X X X		X X X X
	8	0.0	0.0		8 46	X X X		X X X X
	9	0.0	0.0		9 66	X X X		X X X X
	A	0.0	0.0		A 79	X X X		X X X X
	B	0.0	0.0		B 50	X X X		X X X X
	C	0.0	0.0		C 59	X X X		X X X X
	D	0.0	0.0		D 61	X X X		X X X X
	E	0.0	0.0		E 68	X	X	X X X X
	F	0.0	0.0		F 70	X	X	X X X X

< C + 0 + D = 0 > **DETECTOR ASSIGNMENTS, < C + O + E = 126 >**

NOTE: PLEASE DO NOT CLEAR DEFAULT SETTINGS UNLESS SHOWN OTHERWISE!

Legend: "•" = Default Settings; "X" = New Settings; "O" = Cleared Default Settings

Detector Monitor			1	2	3	4	5	6	7	8	
MAX OFF:	0	LOAD SW #	7	0	0	0	0	0	0	0	0
(D/0 + 0 + 1) = 20			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
MAX ON:	1	VEH SET 1	X X								1
(D/0 + 0 + 2) = 7	2	VEH SET 2									2
	3	VEH SET 3									3
Power Cycle	4	NEG. VEH.	X								4
Correction Factors	5	NEG. PED.	X								5
LONG FAILURE:	6	GREEN OMIT	X								6
(F/1 + 0 + 6) = 0.7	7	GRN CLR OMIT									7
SHORT FAILURE:	8										8
(F/1 + 0 + 7) = 0.7	D	GREEN CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
NOTE:	E	YELLOW	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
Do Not Set To Zero	F	RED CLEAR	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F
Default Value = 0.5 Sec			**OVERLAP ASSIGNMENTS**	**< C + 0 + E = 29 >**							

DETECTOR ATTRIBUTES
1= Full Time Delay
2 = Pedestrian Call
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

DETECTOR ASSIGNMENTS
1 = Det. Set # 1
2 = Det. Set # 2
3 = Det. Set # 3
6 = MIN Recall On Failure
7 = MAX Recall On Failure
8 = Report On Failure

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Barnett	Checked By:		ield Installed By:	
Date:	06/07/99	Date:		Date:	06/17/04

Asset No.	Intersection Name
1	**Wash Bl&Costco**
Channel No.	Comm/Drop Address
CHAN 09	**4**

COORDINATION TIMING

		PLAN NUMBER 1	2	3	4	5	6	7	8	9	10	11	12
0	CYCLE	90	90	0	0	0	0	90	90	0	0	90	90
1	FORCE 1	0	0	0	0	0	0	0	0	0	0	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	0	0	0	0	0	0	0	0	0	0	0
4	FORCE 4	25	25	0	0	0	0	25	25	0	0	25	25
5	FORCE 5	46	50	0	0	0	0	46	50	0	0	46	50
6	FORCE 6	0	0	0	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	0	0	0	0	0	0	0	0	0	0	0
8	FORCE 8	0	0	0	0	0	0	0	0	0	0	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0	0	0	0
A	OFFSET 1	48	0	0	0	0	0	48	0	0	0	48	0
B	SYNC	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6	2 6		2 6	2 6
C	LAG	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6	2 4 6		2 4 6	2 4 6
D	END PERM 1	1	1	0	0	0	0	1	1	0	0	1	1
E	HOLD RELEASE	255	255	255	255	255	255	255	255	255	0	255	255
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

COLUMN 2 Coord Min.

0
10
0
24
10
21
0
0

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 0.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU X.4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > = 0

7-WIRE SYNC TIME:
< C/5 + 1 + C > = 0.0

Low Priority Channel:
< E/125 + C + 8 > : 0.0
1 - Channel A
2 - Channel B
3 - Channel C
4 - Channel D

COORDINATION EXTRA:
1- Programmed Walk Time for SYNC Phases

< C/5 +D+0 >

Ext Lag <F/1+E+E>
2 4 6 8

Lag Free<F/1+E+E>
2 4 6

Daylight Savings Time

Begin Month	<C/5+2+A>	3
Begin Week	<C/5+2+B>	2
End Month	<C/5+2+C>	11
End Week	<C/5+2+D>	1

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

Min Green Before PE Force Off

Min Time, sec.	<F/1+0+8>	4

Max Preemt Time Before Failure

Max Time, min.	<F/1+0+9>	255

Min Time Bet.Same Preempts
(Does Not Apply To Railroad Preempt)

Min Time, sec.	<F/1+0+A>	0

Plan # -->	1	2	3	4	5	6	7	8	9	10	11	12	
0	PED ADJUS	0	0	0	0	0	0	0	0	0	0	0	0
1	STRT PERM	0	0	0	0	0	0	0	0	0	0	0	0
2	END PERM	0	0	0	0	0	0	0	0	0	0	0	0
3	STRT PERM	0	0	0	0	0	0	0	0	0	0	0	0
4	END PERM	0	0	0	0	0	0	0	0	0	0	0	0
5	RSERVE TI	0	0	0	0	0	0	0	0	0	0	0	0

6	RSERVE PH	6
7		7
8	PRETIMED	8
9	MAX RECALL	9
A	PERM 1 VE	A
B	PERM 1 PE	B
C	PERM 2 VEH	C
D	PERM 2 PED	D
E	PERM 3 VEH	E
F	PERM 3 PED	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Barnett	Checked By:		Field Installed By:	
Date:	06/07/99	Date:		Date:	06/17/04

Asset No.	Intersection Name
1	**Wash Bl&Costco**
Channel No.	Comm/Drop Address
CHAN 09	**4**

TOD FUNCTIONS AND PLANS

		Column D 1	2	3	4	5	6	7	8
0									
1	OUT PORT 1								
2	OUT PORT 2								
3	OUT PORT 3								
4	OUT PORT 4								
5	OUT PORT 5								
6	OUT PORT 6								
7	OUT PORT 7								

Dimming<C + 0 + E = 125>

Enable "E" Page:
F/1+9+E= Not Zero

Display Locations

Manual Plan	= C/0+A+1
Master Plan	= C/0+A+2
Current Plan	= C/0+A+3
Next Plan	= C/0+A+4
TOD Plan	= C/0+A+5
Master Cycle	= C/0+A+0
Ring A Cycle	= C/0+B+0
Ring B Cycle	= C/0+D+0
MIN Cycle	= C/0+A+E
MAX Cycle	= C/0+B+E
CALCULATED CYCLE	= C/0+B+F
Phase HOLD	= C/0+F+D
Phase Next	= C/0+F+E
Force Off	= C/0+F+F

Interval Timer Display
Ring A = F/0 + A + Interval
Ring B = F/0 + B + Interval

		PED/PHASE/OVERLAP 1	2	3	4	5	6	7	8
0	WALK	0	0	0	0	0	0	0	0
1	DON'T WALK	0	0	0	0	0	0	0	0
2	PHASE GREEN	0	0	0	0	0	0	0	0
3	PHAZE YELLOW	0	0	0	0	0	0	0	0
4	PHASE RED	0	0	0	0	0	0	0	0
5	OV'LAP GREEN	0	0	0	0	0	0	0	0
6	OV'LAP YELLOW	0	0	0	0	0	0	0	0
7	OV'LAP RED	0	0	0	0	0	0	0	0

REDIRECT PHASE OUTPUTS < C+0+E = 127>

ENABLE/DISABLE PHASE REDIRECTION CABINET TYPE:
(E/125+D+0)= **0**
CABINET TYPE:
30 = TYPE 303/330 CABINET (TO ENABLE REDIRECTION)
0 = ALL OTHER TYPES (TO DISABLE REDIRECTION)

412C Memory Module Battery:
IF E/112 + 0 + A = 84, battery is bad
IF E/112 + 0 + A = 85, battery is OK.

CONTINUOUS MEMORY ERROR MONITORING

"bAdA" -ERROR WAS DETECTED IN THE CPU'S RAM OR A NEW PROGRAM HAS BEEN INSTALLED ON THE MEMORY MODULE OFTEN CAUSED BY A BAD CONTROL LER "GEL-CELL" BATTERY.

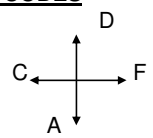
"bAdB" - ERROR WAS DETECTED IN THE MEMORY MODULE'S RAM. OFTEN CAUSED BY BAD "LITHIUM" BATTERY ON THE MEMORY MODULE.

"bAdE" - AN ERROR WAS DETECTED IN THE EPROM.

"bAdF" - AN ERROR WAS DETECTED IN THE Z-RAM (DALLAS CHIP) ON THE MEMORY MODULE.

DISPLAY MOVEMENT CODES

A = Advance ROW
D = Decrement ROW
C = COLUMN Back
F = Forward COLUMN.



LOGIC DELAY GATE
DELAY TIMER DIS
DELAY A Timer=C/0+9+A
DELAY B Timer=C/0+9+B
"thru" "thru"
DELAY F Timer=C/0+9+F

TOD COORD (9 Key)

	TIME HHMM	PLAN	DAY OF WEEK S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	0100	62	X	X	X	X	X	X	X
1	600	1	X	X	X	X	X	X	X
2	1000	1		X	X	X	X	X	
3	1500	2	X	X	X	X	X	X	X
4	1900	2		X	X	X	X	X	
5	2100	62	X	X	X	X	X	X	X
6	0600	1							
7	2100	62							
8	0000	0							
9	0000	0							
A	0000	0							
B	0000	0							
C	0000	0							
D	0000	0							
E	0000	0							
F	0000	0							

< C + 0 + 9 = 0.1 >

TOD FUNCT (7 KEY)

	TIME	Func	DAY OF WEEK S	M	T	W	T 5	F	S
0	0000	0							
1	0000	0							
2	0000	0							
3	0000	0							
4	0000	0							
5	0000	0							
6	0000	0							
7	0000	0							
8	0000	0							
9	0000	0							
A	0000	0							
B	0000	0							
C	0000	0							
D	0000	0							
E	0000	0							
F	0000	0							

< C + 0 + 7 = 0.1 >

Column 4
PHASES / BITS

				4				

< C + 0 + E = 27 >

PREEMPT PRIORITY

		Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1	0	4
RR-2	0	5
SE-1	0	6
SE-2	0	7

< C + 0 + E = 125 >

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Barnett	Checked By:		Field Installed By:	
Date:	06/07/99	Date:		Date:	06/17/04

Asset No.	Intersection Name
1	**Wash Bl&Costco**
Channel No.	Comm/Drop Address
CHAN 09	**4**

INPUT / OUTPUT ASSIGNMENTS - SPECIAL EVENTS

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		
0	SPF 1	0	NOT-3	0	MAX 2	0	PRE TIM	0	x Perm0	0	DIAL 2	0	SIM TRM	0	0
1	SPF 2	0	NOT-4	0	SY DET 1	0	Plan 1		x Perm1	0	DIAL 3	0	EV A	71	1
2	SPF 3	0	OR-4 (a)	0	SY DET 2	0	Plan 2		x Perm2	0	OFF 1	0	EV B	72	2
3	SPF 4	0	OR-4 (b)	0	SY DET 3	0	Plan 3		WK DAY	0	OFF 2	0	EV C	73	3
4	NAND-3	0	OR-5 (a)	0	SY DET 4	0	Plan 4		X Clock	0	OFF 3	0	EV D	74	4
5	NAND-3	0	OR-5 (b)	0	SY DET 5	0	Plan 5		ST Time	82	FREE	0	RR 1	51	5
6	NAND-4	0	OR-6 (a)	0	SY DET 6	0	Plan 6		FL SENS	81	FLASH	0	RR 2	52	6
7	NAND-4	0	OR-6 (b)	0	SY DET 7	0	Plan 7		ENABLE	0	XPD OMT	0	SP 1	0	7
8	OR 7 (a)	0	Fig 3 Dia.	0	SY DET 8	0	Plan 8		ADVANCE	0	NOT 1	0	SP 2	0	8
9	OR 7 (b)	0	Fig 4 Dia.	0	MX INIBT	0	Plan 9		ALARM	0	NOT 2	0	X LAG	0	9
A	OR 7 (c)	0	AND4 (a)	0	FORCE A	0	DELAY-A	0	PH BNK 2	0	OR 1	0	AND 1	0	A
B	OR 7 (d)	0	AND4 (b)	0	FORCE B	0	DELAY-B	0	PH BNK 3	0	OR 1	0	AND 1	0	B
C	OR 8 (a)	0	NAND1(a)	0	CNA	0	DELAY-C	0	OL SET 2	0	OR 2	0	AND 2	0	C
D	OR 8 (b)	0	NAND1(b)	0	HOLD	0	DELAY-D	0	OL SET 3	0	OR 2	0	AND 2	0	D
E	OR-8 (c)	0	NAND2(a)	0	VEH CALL	0	DELAY-E	0	DET ST 2	0	OR 3	0	AND 3	0	E
F	OR-8 (d)	0	NAND2(b)	0	RECALL	0	DELAY-F	0	DET ST 3	0	OR 3	0	AND 3	0	F

ASSIGNABLE INPUTS < C + 0 + E = 126 >

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		
0	Fz ON - 1	0	PrEmp FI	0	FLHR 0	0	FREE	0	NOT 1	0	TOD 1	0	DIAL 2	0	0
1	Fz ON - 2	0	SP EV 1	0	FLHR 1	0	Plan 1		OR 1	0	TOD 2	0	DIAL 3	0	1
2	Fz ON - 3	0	SP EV 2	0	F FLHR	0	Plan 2		OR 2	0	TOD 3	0	OFF 1	0	2
3	Fz ON - 4	0	SP EV 3	0	Fig 3 Dia.	0	Plan 3		OR 3	0	TOD 4	0	OFF 2	0	3
4	Fz ON - 5	0	SP EV 4	0	Fig 4 Dia.	0	Plan 4		AND 1	0	TOD 5	0	OFF 3	0	4
5	Fz ON - 6	0	SP EV 5	0			Plan 5		AND 2	0	TOD 6	0	FREE	0	5
6	Fz ON - 7	0	SP EV 6	0			Plan 6		AND 3	0	TOD 7	0	FLASH	0	6
7	Fz ON - 8	0	SP EV 7	0			Plan 7		NOT 2	0	TOD 8	0	PREMPT	0	7
8	Fz Ck - 1	0	SP EV 8	0	NOT 3	0	Plan 8		EV A	35	WARN 1	0	Priority A	0	8
9	Fz Ck - 2	0			NOT 4	0	Plan 9		EV B	37	WARN 2	0	Priority B	0	9
A	Fz Ck - 3	0	DET FAIL	0	OR 4	0			EV C	36	DELAY A	0	Priority C	0	A
B	Fz Ck - 4	0			OR 5	0			EV D	38	DELAY B	0	Priority D	0	B
C	Fz Ck - 5	0			OR 6	0	NAND 3	0	RR 1	0	DELAY C	0			C
D	Fz Ck - 6	0	CNT CTL	0	AND 4	0	NAND 4	0	RR 2	0	DELAY D	0			D
E	Fz Ck - 7	0	XDWALK	0	NAND 1	0	OR 7	0	SP 1	0	DELAY E	0			E
F	Fz Ck - 8	0	X WALK	0	NAND 2	0	OR 8	0	SP 2	0	DELAY F	0			F

ASSIGNABLE OUTPUTS < C + 0 + E =127>

	6 CLEAR	7 TIME	8 PED CALL	9 HOLD	A ADVANCE	B FORCE OFF	C CALL	D PERMIT	E PED OMIT	F OUTPUT	
	1 2 3 4 5 6 7 8		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
0		0000									0
1		0000									1
2		0000									2
3		0000									3
4		0000									4
5		0000									5
6		0000									6
7		0000									7
8		0000									8
9		0000									9
A		0000									A
B		0000									B
C		0000									C
D		0000									D
E		0000									E
F		0000									F

SPECIAL EVENT SCHEDULE < C + 0 + E = 27 >

COLUMN B		
A	DELAY A	0
B	DELAY B	0
C	DELAY C	0
D	DELAY D	0
E	DELAY E	0
F	DELAY F	0

<C+ 0 + D = 0>
LOGIC **DELAY** TIMES

FOR SPECIAL EVENT Table 1:
LIMITED SERVICE INTERVAL:
< E/27+5+ F > = 0

FOR SPECIAL EVENT TABLE #2:
<C+0+E=28> And use same key strokes as table 1 to access table.

CITY OF CULVER CITY
Public Works Department

BiTran 233CC Type 170 Program

Prepared By:	D Barnett	Checked By:		Field Installed By:	
Date:	06/07/99	Date:		Date:	06/17/04

Asset No.	Intersection Name
1	**Wash Bl&Costco**
Channel No.	Comm/Drop Address
CHAN 09	**4**

BSP Timing

Row	Time	Day of Week	Approach	Time*
0	**00 00**	_____	**A**	**0**
1	**00 00**	_____	**A**	**0**
2	**00 00**	_____	**A**	**0**
3	**00 00**	_____	**A**	**0**
4	**00 00**	_____	**A**	**0**
5	**00 00**	_____	**A**	**0**
6	**00 00**	_____	**A**	**0**
7	**00 00**	_____	**A**	**0**
8	**00 00**	_____	**A**	**0**
9	**00 00**	_____	**A**	**0**
A	**00 00**	_____	**A**	**0**
B	**00 00**	_____	**A**	**0**
C	**00 00**	_____	**A**	**0**
D	**00 00**	_____	**A**	**0**
E	**00 00**	_____	**A**	**0**
F	**00 00**	_____	**A**	**0**

BSP Time of Day <C+0+9=2.1>

Time value is between 0 and 15 only

<C/0+0+Row >	
City Code	**0**
Address	**0**

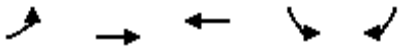
Headway Time	**0**
Delay Time	**0**
Early Green Max	**0**
Extension Max	**0**

Bus Priority Settings

<C+0+E=125>	
Low A Phase	_____
Low B Phase	_____
Low C Phase	_____
Low D Phase	_____

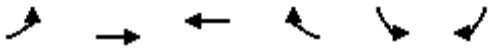
Bus Phases

Attachment D
Existing Traffic Operations Worksheets



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	209	1029	1152	127	216
v/c Ratio	0.53	0.41	0.38	0.45	0.43
Control Delay	9.2	5.6	6.9	37.8	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	5.6	6.9	37.8	22.6
Queue Length 50th (ft)	27	90	61	67	86
Queue Length 95th (ft)	62	160	76	112	124
Internal Link Dist (ft)		580	345	536	
Turn Bay Length (ft)	125			140	140
Base Capacity (vph)	521	2507	3006	383	644
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	69	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.42	0.38	0.33	0.34

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	203	998	1036	81	123	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.8	4.8		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.97	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1799	3396	5006		1724	1599
Flt Permitted	0.19	1.00	1.00		0.95	1.00
Satd. Flow (perm)	362	3396	5006		1724	1599
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	209	1029	1068	84	127	216
RTOR Reduction (vph)	0	0	7	0	0	21
Lane Group Flow (vph)	209	1029	1145	0	127	195
Confl. Peds. (#/hr)	67			67	22	
Confl. Bikes (#/hr)				7		
Heavy Vehicles (%)	0%	1%	1%	2%	2%	1%
Parking (#/hr)		0				
Turn Type	pm+pt	NA	NA		Perm	pt+ov
Protected Phases	5	2	6			4 5
Permitted Phases	2				4	
Actuated Green, G (s)	66.5	66.5	54.0		14.7	26.7
Effective Green, g (s)	66.5	66.5	54.0		14.7	26.7
Actuated g/C Ratio	0.74	0.74	0.60		0.16	0.30
Clearance Time (s)	4.5	4.8	4.8		4.0	
Vehicle Extension (s)	2.0	5.0	5.0		2.5	
Lane Grp Cap (vph)	395	2509	3003		281	474
v/s Ratio Prot	c0.05	0.30	0.23			c0.12
v/s Ratio Perm	c0.34				0.07	
v/c Ratio	0.53	0.41	0.38		0.45	0.41
Uniform Delay, d1	4.7	4.4	9.3		34.0	25.4
Progression Factor	1.00	1.00	0.63		1.00	1.00
Incremental Delay, d2	0.6	0.5	0.3		0.8	0.4
Delay (s)	5.3	4.9	6.2		34.9	25.8
Level of Service	A	A	A		C	C
Approach Delay (s)		5.0	6.2		29.1	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

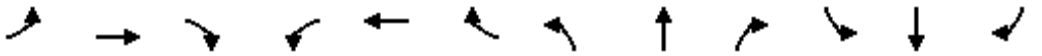
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	31	869	289	457	1236	144	150	334	205	214	60
v/c Ratio	0.15	0.86	0.36	1.05	0.55	0.49	0.49	0.53	0.85	0.85	0.12
Control Delay	12.5	37.7	7.5	84.1	17.9	38.1	37.8	12.3	69.3	68.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	37.7	7.5	84.1	17.9	38.1	37.8	12.3	69.3	68.8	0.5
Queue Length 50th (ft)	6	250	54	~281	179	73	76	63	122	128	0
Queue Length 95th (ft)	m13	#347	112	#469	227	131	135	110	#256	#263	1
Internal Link Dist (ft)		345			117		284			355	
Turn Bay Length (ft)	325		125	350		100			140		140
Base Capacity (vph)	210	1016	875	436	2229	377	394	633	242	252	479
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.86	0.33	1.05	0.55	0.38	0.38	0.53	0.85	0.85	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

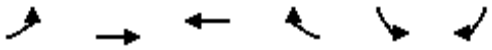
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	826	275	434	817	357	178	102	317	267	131	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.8	4.0	4.4	4.8		4.0	4.0	4.4	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.96		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1747	3574	1529	1703	4698		1698	1774	1563	1698	1767	1615
Flt Permitted	0.21	1.00	1.00	0.13	1.00		0.95	0.99	1.00	0.95	0.98	1.00
Satd. Flow (perm)	394	3574	1529	239	4698		1698	1774	1563	1698	1767	1615
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	869	289	457	860	376	187	107	334	281	138	60
RTOR Reduction (vph)	0	0	95	0	80	0	0	0	43	0	0	46
Lane Group Flow (vph)	31	869	194	457	1156	0	144	150	291	205	214	14
Confl. Peds. (#/hr)	43		15	15		43	3		33	33		3
Confl. Bikes (#/hr)			8			6						2
Heavy Vehicles (%)	3%	1%	2%	6%	2%	0%	1%	0%	1%	1%	0%	0%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pt+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	4 5
Permitted Phases	2		2	6					3			
Actuated Green, G (s)	29.6	25.6	41.2	48.8	40.4		15.6	15.6	34.4	12.8	12.8	20.8
Effective Green, g (s)	29.6	25.6	41.2	48.8	40.4		15.6	15.6	34.4	12.8	12.8	20.8
Actuated g/C Ratio	0.33	0.28	0.46	0.54	0.45		0.17	0.17	0.38	0.14	0.14	0.23
Clearance Time (s)	4.4	4.8	4.0	4.4	4.8		4.0	4.0	4.4	4.0	4.0	
Vehicle Extension (s)	2.5	5.0	2.5	3.0	5.0		2.5	2.5	3.0	2.5	2.5	
Lane Grp Cap (vph)	189	1016	699	435	2108		294	307	597	241	251	373
v/s Ratio Prot	0.01	0.24	0.05	c0.22	0.25		c0.08	0.08	0.10	0.12	c0.12	0.01
v/s Ratio Perm	0.05		0.08	c0.35					0.08			
v/c Ratio	0.16	0.86	0.28	1.05	0.55		0.49	0.49	0.49	0.85	0.85	0.04
Uniform Delay, d1	20.6	30.4	15.2	25.6	18.1		33.6	33.6	21.1	37.7	37.7	26.8
Progression Factor	0.88	0.93	1.44	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	8.7	0.1	57.0	1.0		0.9	0.9	0.6	23.6	23.1	0.0
Delay (s)	18.4	37.0	22.0	82.6	19.2		34.5	34.5	21.7	61.3	60.8	26.9
Level of Service	B	D	C	F	B		C	C	C	E	E	C
Approach Delay (s)		32.8			36.3			27.7			56.7	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

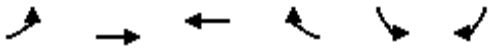
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	3	1418	1466	28	0	113
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	3	1477	1527	29	0	118
Pedestrians					8	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	TWLTL			
Median storage veh)			2			
Upstream signal (ft)		197				
pX, platoon unblocked					0.77	
vC, conflicting volume	1564				2294	786
vC1, stage 1 conf vol					1550	
vC2, stage 2 conf vol					745	
vCu, unblocked vol	1564				2083	786
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	65
cM capacity (veh/h)	425				156	335

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	495	985	1018	538	118
Volume Left	3	0	0	0	0
Volume Right	0	0	0	29	118
cSH	425	1700	1700	1700	335
Volume to Capacity	0.01	0.58	0.60	0.32	0.35
Queue Length 95th (ft)	1	0	0	0	38
Control Delay (s)	0.2	0.0	0.0	0.0	21.5
Lane LOS	A				C
Approach Delay (s)	0.1		0.0		21.5
Approach LOS					C

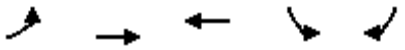
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	266	1168	1204	73	15	305
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	274	1204	1241	75	15	314
Pedestrians					22	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					2	
Right turn flare (veh)						
Median type		TWLTL	None			
Median storage veh)		2				
Upstream signal (ft)		536				
pX, platoon unblocked					0.80	
vC, conflicting volume	1338				2451	680
vC1, stage 1 conf vol					1301	
vC2, stage 2 conf vol					1151	
vCu, unblocked vol	1338				2311	680
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	46				88	19
cM capacity (veh/h)	507				129	386

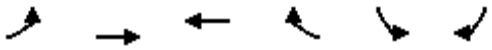
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	274	602	602	827	489	330
Volume Left	274	0	0	0	0	15
Volume Right	0	0	0	0	75	314
cSH	507	1700	1700	1700	1700	353
Volume to Capacity	0.54	0.35	0.35	0.49	0.29	0.93
Queue Length 95th (ft)	80	0	0	0	0	244
Control Delay (s)	20.2	0.0	0.0	0.0	0.0	67.6
Lane LOS	C					F
Approach Delay (s)	3.7			0.0		67.6
Approach LOS						F

Intersection Summary			
Average Delay	8.9		
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	288	960	1409	208	278
v/c Ratio	0.76	0.40	0.53	0.67	0.47
Control Delay	25.6	5.9	9.5	44.6	21.5
Queue Delay	0.0	0.0	0.1	0.0	0.0
Total Delay	25.6	5.9	9.6	44.6	21.5
Queue Length 50th (ft)	68	94	87	111	109
Queue Length 95th (ft)	161	146	110	176	156
Internal Link Dist (ft)		321	345	527	
Turn Bay Length (ft)	125			140	140
Base Capacity (vph)	448	2423	2647	381	664
Starvation Cap Reductn	0	0	300	0	0
Spillback Cap Reductn	0	68	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.41	0.60	0.55	0.42

Intersection Summary



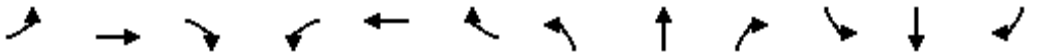
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	276	922	1167	185	200	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.8	4.8		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.95	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1803	3362	4904		1718	1599
Flt Permitted	0.12	1.00	1.00		0.95	1.00
Satd. Flow (perm)	233	3362	4904		1718	1599
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	288	960	1216	193	208	278
RTOR Reduction (vph)	0	0	20	0	0	12
Lane Group Flow (vph)	288	960	1389	0	208	266
Confl. Peds. (#/hr)	64			64	41	
Confl. Bikes (#/hr)				11		
Heavy Vehicles (%)	0%	2%	1%	1%	0%	1%
Parking (#/hr)		0				
Turn Type	pm+pt	NA	NA		Perm	pt+ov
Protected Phases	5	2	6			4 5
Permitted Phases	2				4	
Actuated Green, G (s)	64.9	64.9	48.3		16.3	32.4
Effective Green, g (s)	64.9	64.9	48.3		16.3	32.4
Actuated g/C Ratio	0.72	0.72	0.54		0.18	0.36
Clearance Time (s)	4.5	4.8	4.8		4.0	
Vehicle Extension (s)	2.0	5.0	5.0		2.5	
Lane Grp Cap (vph)	379	2424	2631		311	575
v/s Ratio Prot	c0.10	0.29	0.28			0.17
v/s Ratio Perm	c0.45				c0.12	
v/c Ratio	0.76	0.40	0.53		0.67	0.46
Uniform Delay, d1	14.5	4.9	13.5		34.3	22.1
Progression Factor	1.00	1.00	0.61		1.00	1.00
Incremental Delay, d2	7.6	0.5	0.6		4.8	0.4
Delay (s)	22.0	5.4	8.9		39.2	22.5
Level of Service	C	A	A		D	C
Approach Delay (s)		9.2	8.9		29.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	104	839	217	318	1454	186	193	283	211	213	114
v/c Ratio	0.55	0.71	0.24	0.83	0.70	0.61	0.61	0.50	0.85	0.85	0.23
Control Delay	26.9	30.5	4.6	37.7	21.3	41.7	41.4	12.3	69.7	67.7	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	30.5	4.6	37.7	21.3	41.7	41.4	12.3	69.7	67.7	6.0
Queue Length 50th (ft)	21	243	15	115	226	97	101	49	126	127	0
Queue Length 95th (ft)	#72	#318	63	#254	281	167	171	88	#264	#264	36
Internal Link Dist (ft)		345			430		408			345	
Turn Bay Length (ft)	325		125	250		100			140		140
Base Capacity (vph)	190	1175	949	399	2088	377	391	579	247	252	489
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.71	0.23	0.80	0.70	0.49	0.49	0.49	0.85	0.85	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	805	208	305	929	467	229	134	272	322	85	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.8	4.0	4.4	4.8		4.0	4.0	4.4	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	0.96		1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1768	3574	1519	1787	4699		1698	1763	1554	1715	1754	1568
Flt Permitted	0.14	1.00	1.00	0.15	1.00		0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	252	3574	1519	273	4699		1698	1763	1554	1715	1754	1568
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	104	839	217	318	968	486	239	140	283	335	89	114
RTOR Reduction (vph)	0	0	107	0	96	0	0	0	46	0	0	86
Lane Group Flow (vph)	104	839	110	318	1358	0	186	193	237	211	213	28
Confl. Peds. (#/hr)	41		35	35		41	3		35	35		3
Confl. Bikes (#/hr)			8			5			1			
Heavy Vehicles (%)	2%	1%	0%	1%	1%	0%	1%	1%	1%	0%	0%	3%
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		Split	NA	pm+ov	Split	NA	pt+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	4 5
Permitted Phases	2		2	6					3			
Actuated Green, G (s)	34.9	29.5	45.8	47.9	38.1		16.3	16.3	30.3	13.0	13.0	22.4
Effective Green, g (s)	34.9	29.5	45.8	47.9	38.1		16.3	16.3	30.3	13.0	13.0	22.4
Actuated g/C Ratio	0.39	0.33	0.51	0.53	0.42		0.18	0.18	0.34	0.14	0.14	0.25
Clearance Time (s)	4.4	4.8	4.0	4.4	4.8		4.0	4.0	4.4	4.0	4.0	
Vehicle Extension (s)	2.5	5.0	2.5	3.0	5.0		2.5	2.5	3.0	2.5	2.5	
Lane Grp Cap (vph)	188	1171	773	380	1989		307	319	523	247	253	390
v/s Ratio Prot	0.03	0.23	0.03	c0.13	0.29		c0.11	0.11	0.07	c0.12	0.12	0.02
v/s Ratio Perm	0.18		0.05	c0.31					0.08			
v/c Ratio	0.55	0.72	0.14	0.84	0.68		0.61	0.61	0.45	0.85	0.84	0.07
Uniform Delay, d1	18.5	26.6	11.7	18.8	21.0		33.9	33.9	23.4	37.6	37.5	25.9
Progression Factor	1.07	0.95	2.71	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	3.5	0.1	14.7	1.9		2.8	2.7	0.6	23.6	21.3	0.1
Delay (s)	22.5	28.9	31.8	33.5	23.0		36.7	36.6	24.0	61.1	58.8	25.9
Level of Service	C	C	C	C	C		D	D	C	E	E	C
Approach Delay (s)		28.8			24.9			31.2			52.8	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.2
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Attachment E
Neighborhood Traffic Data Collection

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: NB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
1:15 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	1
1:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
2:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: NB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	26-35	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
6:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	26-35	1
7:00 AM	0	0	1	4	0	0	0	0	0	0	0	0	0	0	5	21-30	5
7:15 AM	0	**1**	3	4	4	0	0	0	0	0	0	0	0	0	12	26-35	8
7:30 AM	0	0	**8**	5	9	1	0	0	0	0	0	0	0	0	23	26-35	14
7:45 AM	1	0	2	**16**	**10**	1	0	0	0	0	0	0	0	0	**30**	26-35	26
8:00 AM	0	1	8	11	7	**3**	0	0	0	0	0	0	0	0	30	21-30	19
8:15 AM	1	0	3	2	1	0	0	0	0	0	0	0	0	0	7	21-30	5
8:30 AM	0	1	1	4	1	0	0	0	0	0	0	0	0	0	7	21-30	5
8:45 AM	2	0	2	7	6	1	0	0	0	0	0	0	0	0	18	26-35	12
9:00 AM	0	0	0	6	1	1	0	0	0	0	0	0	0	0	8	26-35	6
9:15 AM	0	0	1	2	1	1	0	0	0	0	0	0	0	0	5	26-35	3
9:30 AM	1	0	5	5	2	0	0	0	0	0	0	0	0	0	13	21-30	10
9:45 AM	1	1	2	1	2	0	0	0	0	0	0	0	0	0	7	26-35	3
10:00 AM	0	1	1	1	2	0	0	0	0	0	0	0	0	0	5	26-35	3
10:15 AM	**3**	0	0	1	1	0	0	0	0	0	0	0	0	0	5	26-35	2
10:30 AM	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	8-17	1
10:45 AM	1	0	0	5	0	0	0	0	0	0	0	0	0	0	6	21-30	5
11:00 AM	0	1	1	3	0	0	0	0	0	0	0	0	0	0	5	21-30	4
11:15 AM	0	0	1	5	1	0	0	0	0	0	0	0	0	0	7	21-30	6
11:30 AM	1	0	1	2	1	1	**1**	0	0	0	0	0	0	0	7	26-35	3
11:45 AM	1	1	8	3	0	0	0	0	0	0	0	0	0	0	13	21-30	11
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: NB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	0	1	3	2	2	0	0	0	0	0	0	0	0	0	8	21-30	5
12:15 PM	2	0	1	3	3	0	0	0	0	0	0	0	0	0	9	27-36	5
12:30 PM	0	**4**	2	1	0	0	0	0	0	0	0	0	0	0	7	16-25	6
12:45 PM	1	1	2	**7**	0	0	0	0	0	0	0	0	0	0	11	21-30	9
1:00 PM	**4**	2	4	1	1	0	**1**	0	0	0	0	0	0	0	13	16-25	6
1:15 PM	1	0	5	3	1	0	1	0	0	0	0	0	0	0	11	22-31	7
1:30 PM	2	0	2	2	0	0	0	0	0	0	0	0	0	0	6	21-30	4
1:45 PM	3	1	5	4	1	0	0	0	0	0	0	0	0	0	**14**	21-30	9
2:00 PM	0	0	1	1	1	0	1	**1**	0	0	0	0	0	0	5	41-50	2
2:15 PM	0	0	0	3	2	0	0	0	0	0	0	0	0	0	5	26-35	5
2:30 PM	0	3	3	4	1	0	0	0	0	0	0	0	0	0	11	21-30	7
2:45 PM	1	0	2	3	1	0	0	1	0	0	0	0	0	0	8	25-34	4
3:00 PM	0	3	1	3	**4**	0	0	0	0	0	0	0	0	0	11	26-35	7
3:15 PM	0	0	1	2	0	**1**	0	0	0	0	0	0	0	0	4	21-30	3
3:30 PM	1	0	6	1	0	0	0	0	0	0	0	0	0	0	8	21-30	6
3:45 PM	2	3	3	2	2	0	0	0	0	0	0	0	0	0	12	21-30	5
4:00 PM	2	0	1	4	0	0	0	0	0	0	0	0	0	0	7	21-30	5
4:15 PM	0	0	3	4	0	0	0	0	0	0	0	0	0	0	7	21-30	7
4:30 PM	0	0	**7**	1	2	0	0	0	0	0	0	0	0	0	10	21-30	7
4:45 PM	0	0	1	3	0	1	0	0	0	0	0	0	0	0	5	21-30	4
5:00 PM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	5	22-31	4
5:15 PM	0	1	3	0	1	0	0	0	0	0	0	0	0	0	5	16-25	4
5:30 PM	0	0	1	5	2	1	0	0	0	0	0	0	0	0	9	26-35	7
5:45 PM	0	2	2	3	2	0	0	0	0	0	0	0	0	0	9	26-35	5
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
QC JOB #: 13397503
SPECIFIC LOCATION: 0 ft from
DIRECTION: NB
CITY/STATE: Culver City, CA
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 PM	0	2	3	4	1	0	0	0	0	0	0	0	0	0	10	21-30	7
6:15 PM	0	0	4	2	1	0	0	0	0	0	0	0	0	0	7	21-30	6
6:30 PM	0	0	3	1	1	0	0	0	0	0	0	0	0	0	5	21-30	4
6:45 PM	1	3	3	3	1	0	0	0	0	0	0	0	0	0	11	23-32	5
7:00 PM	1	0	1	5	0	0	0	0	0	0	0	0	0	0	7	21-30	6
7:15 PM	0	1	2	1	1	0	0	0	0	0	0	0	0	0	5	21-30	3
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
7:45 PM	2	0	3	3	2	0	0	0	0	0	0	0	0	0	10	26-35	5
8:00 PM	0	0	5	0	1	0	0	0	0	0	0	0	0	0	6	16-25	5
8:15 PM	0	1	1	4	0	0	0	0	0	0	0	0	0	0	6	21-30	5
8:30 PM	0	2	3	1	0	0	0	0	0	0	0	0	0	0	6	20-29	4
8:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
9:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
9:15 PM	1	0	1	0	1	0	0	0	0	0	0	0	0	0	3	16-25	1
9:30 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	4	21-30	3
9:45 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	4	16-25	2
10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
10:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
10:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total	44	40	148	181	88	12	4	2	0	0	0	0	0	0	519	21-30	329
Percent	8.5%	7.7%	28.5%	34.9%	17.0%	2.3%	0.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 519																	
AM Peak	10:15 AM	7:15 AM	7:30 AM	7:45 AM	7:45 AM	8:00 AM	11:30 AM								7:45 AM		
Volume	3	1	8	16	10	3	1								30		
PM Peak	1:00 PM	12:30 PM	4:30 PM	12:45 PM	3:00 PM	3:15 PM	1:00 PM	2:00 PM							1:45 PM		
Volume	4	4	7	7	4	1	1	1							14		

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

SUMMARY - Tube Count - Speed Data

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: NB
DATE: May 20 2015 - May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	44	40	148	181	88	12	4	2	0	0	0	0	0	0	519	21-30	329
Percent	8.5%	7.7%	28.5%	34.9%	17.0%	2.3%	0.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	8.5%	16.2%	44.7%	79.6%	96.5%	98.8%	99.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT 519

85th Percentile 31 MPH

Mean Speed(Average) 24 MPH

Median 25 MPH
Mode: 28 MPH

Comments:

Report generated on 5/27/2015 4:54 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd

QC JOB #: 13397504

SPECIFIC LOCATION: 0 ft from

DIRECTION: SB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			0			0			0	
12:15 AM			0			0			0	
12:30 AM			0			0			0	
12:45 AM			0			0			0	
1:00 AM			0			0			0	
1:15 AM			3			3			3	
1:30 AM			1			1			1	
1:45 AM			0			0			0	
2:00 AM			0			0			0	
2:15 AM			1			1			1	
2:30 AM			0			0			0	
2:45 AM			0			0			0	
3:00 AM			0			0			0	
3:15 AM			0			0			0	
3:30 AM			0			0			0	
3:45 AM			0			0			0	
4:00 AM			2			2			2	
4:15 AM			0			0			0	
4:30 AM			0			0			0	
4:45 AM			0			0			0	
5:00 AM			0			0			0	
5:15 AM			0			0			0	
5:30 AM			0			0			0	
5:45 AM			0			0			0	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Elm St between Walnut Ave and Lincoln Blvd

QC JOB #: 13397504

SPECIFIC LOCATION: 0 ft from

DIRECTION: SB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			1			1			1	
6:15 AM			0			0			0	
6:30 AM			2			2			2	
6:45 AM			3			3			3	
7:00 AM			5			5			5	
7:15 AM			12			12			12	
7:30 AM			22			22			22	
7:45 AM			31			31			31	
8:00 AM			**34**			**34**			**34**	
8:15 AM			11			11			11	
8:30 AM			13			13			13	
8:45 AM			14			14			14	
9:00 AM			16			16			16	
9:15 AM			11			11			11	
9:30 AM			18			18			18	
9:45 AM			11			11			11	
10:00 AM			3			3			3	
10:15 AM			5			5			5	
10:30 AM			4			4			4	
10:45 AM			9			9			9	
11:00 AM			2			2			2	
11:15 AM			10			10			10	
11:30 AM			8			8			8	
11:45 AM			11			11			11	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd

QC JOB #: 13397504

SPECIFIC LOCATION: 0 ft from

DIRECTION: SB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			11			11			11	
12:15 PM			9			9			9	
12:30 PM			6			6			6	
12:45 PM			6			6			6	
1:00 PM			15			15			15	
1:15 PM			7			7			7	
1:30 PM			9			9			9	
1:45 PM			16			16			16	
2:00 PM			6			6			6	
2:15 PM			5			5			5	
2:30 PM			11			11			11	
2:45 PM			13			13			13	
3:00 PM			7			7			7	
3:15 PM			10			10			10	
3:30 PM			8			8			8	
3:45 PM			10			10			10	
4:00 PM			6			6			6	
4:15 PM			7			7			7	
4:30 PM			12			12			12	
4:45 PM			9			9			9	
5:00 PM			6			6			6	
5:15 PM			8			8			8	
5:30 PM			10			10			10	
5:45 PM			11			11			11	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
QC JOB #: 13397504
SPECIFIC LOCATION: 0 ft from
DIRECTION: SB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			11			11			11	
6:15 PM			5			5			5	
6:30 PM			5			5			5	
6:45 PM			**18**			**18**			**18**	
7:00 PM			6			6			6	
7:15 PM			4			4			4	
7:30 PM			3			3			3	
7:45 PM			7			7			7	
8:00 PM			4			4			4	
8:15 PM			8			8			8	
8:30 PM			5			5			5	
8:45 PM			1			1			1	
9:00 PM			0			0			0	
9:15 PM			2			2			2	
9:30 PM			1			1			1	
9:45 PM			1			1			1	
10:00 PM			4			4			4	
10:15 PM			1			1			1	
10:30 PM			1			1			1	
10:45 PM			2			2			2	
11:00 PM			2			2			2	
11:15 PM			1			1			1	
11:30 PM			0			0			0	
11:45 PM			1			1			1	
Day Total			574			574			574	
% Weekday Average			100.0%							
% Week Average			100.0%			100.0%				
AM Peak			8:00 AM			8:00 AM			8:00 AM	
Volume			34			34			34	
PM Peak			6:45 PM			6:45 PM			6:45 PM	
Volume			18			18			18	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:15 AM	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	15-24	1
1:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total																	
Percent																	
AM Peak																	
Volume																	
PM Peak																	
Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
6:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
6:45 AM	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	8-17	1
7:00 AM	2	1	1	1	0	0	0	0	0	0	0	0	0	0	5	21-30	2
7:15 AM	5	3	3	1	0	0	0	0	0	0	0	0	0	0	12	18-27	5
7:30 AM	10	8	3	1	0	0	0	0	0	0	0	0	0	0	22	16-25	11
7:45 AM	9	**15**	6	1	0	0	0	0	0	0	0	0	0	0	31	16-25	21
8:00 AM	**11**	13	**9**	1	0	0	0	0	0	0	0	0	0	0	**34**	16-25	21
8:15 AM	5	3	2	1	0	0	0	0	0	0	0	0	0	0	11	16-25	5
8:30 AM	7	2	4	0	0	0	0	0	0	0	0	0	0	0	13	16-25	6
8:45 AM	3	7	3	1	0	0	0	0	0	0	0	0	0	0	14	16-25	10
9:00 AM	6	4	5	1	0	0	0	0	0	0	0	0	0	0	16	16-25	9
9:15 AM	4	3	3	1	0	0	0	0	0	0	0	0	0	0	11	18-27	5
9:30 AM	8	4	4	**2**	0	0	0	0	0	0	0	0	0	0	18	16-25	8
9:45 AM	9	1	1	0	0	0	0	0	0	0	0	0	0	0	11	8-17	5
10:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6-15	2
10:15 AM	0	2	3	0	0	0	0	0	0	0	0	0	0	0	5	18-27	4
10:30 AM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8-17	2
10:45 AM	5	3	1	0	0	0	0	0	0	0	0	0	0	0	9	15-24	4
11:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	11-20	2
11:15 AM	7	2	1	0	0	0	0	0	0	0	0	0	0	0	10	12-21	4
11:30 AM	1	4	2	1	0	0	0	0	0	0	0	0	0	0	8	16-25	6
11:45 AM	5	4	2	0	0	0	0	0	0	0	0	0	0	0	11	16-25	6
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	3	5	3	0	0	0	0	0	0	0	0	0	0	0	11	16-25	7
12:15 PM	5	3	1	0	0	0	0	0	0	0	0	0	0	0	9	15-24	4
12:30 PM	1	3	2	0	0	0	0	0	0	0	0	0	0	0	6	16-25	5
12:45 PM	2	1	2	1	0	0	0	0	0	0	0	0	0	0	6	21-30	3
1:00 PM	8	**6**	0	0	**1**	0	0	0	0	0	0	0	0	0	15	12-21	8
1:15 PM	2	3	1	1	0	0	0	0	0	0	0	0	0	0	7	16-25	4
1:30 PM	5	2	2	0	0	0	0	0	0	0	0	0	0	0	9	16-25	4
1:45 PM	5	6	2	**3**	0	0	0	0	0	0	0	0	0	0	16	16-25	8
2:00 PM	3	1	1	0	1	0	0	0	0	0	0	0	0	0	6	16-25	2
2:15 PM	2	1	0	1	1	0	0	0	0	0	0	0	0	0	5	26-35	2
2:30 PM	3	4	4	0	0	0	0	0	0	0	0	0	0	0	11	16-25	8
2:45 PM	3	3	4	2	1	0	0	0	0	0	0	0	0	0	13	16-25	7
3:00 PM	4	2	1	0	0	0	0	0	0	0	0	0	0	0	7	16-25	3
3:15 PM	3	2	**5**	0	0	0	0	0	0	0	0	0	0	0	10	16-25	7
3:30 PM	3	3	1	1	0	0	0	0	0	0	0	0	0	0	8	11-20	4
3:45 PM	1	5	3	1	0	0	0	0	0	0	0	0	0	0	10	17-26	7
4:00 PM	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6	11-20	4
4:15 PM	4	0	3	0	0	0	0	0	0	0	0	0	0	0	7	16-25	3
4:30 PM	5	3	1	3	0	0	0	0	0	0	0	0	0	0	12	17-26	4
4:45 PM	4	2	2	1	0	0	0	0	0	0	0	0	0	0	9	16-25	4
5:00 PM	3	1	2	0	0	0	0	0	0	0	0	0	0	0	6	16-25	3
5:15 PM	5	1	2	0	0	0	0	0	0	0	0	0	0	0	8	16-25	3
5:30 PM	8	1	1	0	0	0	0	0	0	0	0	0	0	0	10	6-15	5
5:45 PM	2	6	2	1	0	0	0	0	0	0	0	0	0	0	11	16-25	8
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 PM	3	3	5	0	0	0	0	0	0	0	0	0	0	0	11	16-25	8
6:15 PM	3	0	2	0	0	0	0	0	0	0	0	0	0	0	5	6-15	2
6:30 PM	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5	11-20	3
6:45 PM	**13**	3	2	0	0	0	0	0	0	0	0	0	0	0	**18**	8-17	8
7:00 PM	1	4	1	0	0	0	0	0	0	0	0	0	0	0	6	17-26	4
7:15 PM	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	11-20	2
7:30 PM	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	15-24	1
7:45 PM	0	4	3	0	0	0	0	0	0	0	0	0	0	0	7	17-26	6
8:00 PM	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
8:15 PM	5	2	1	0	0	0	0	0	0	0	0	0	0	0	8	16-25	3
8:30 PM	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5	11-20	3
8:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
9:15 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
9:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
9:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
10:00 PM	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	11-20	2
10:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
10:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
10:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
11:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
11:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
Day Total	245	179	117	29	4	0	0	0	0	0	0	0	0	0	574	16-25	295
Percent	42.7%	31.2%	20.4%	5.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 574																	
AM Peak Volume	8:00 AM 11	7:45 AM 15	8:00 AM 9	9:30 AM 2											8:00 AM 34		
PM Peak Volume	6:45 PM 13	1:00 PM 6	3:15 PM 5	1:45 PM 3	1:00 PM 1										6:45 PM 18		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: SB
DATE: May 20 2015 - May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	245	179	117	29	4	0	0	0	0	0	0	0	0	0	574	16-25	295
Percent	42.7%	31.2%	20.4%	5.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	42.7%	73.9%	94.3%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT
574

85th Percentile 22 MPH

Mean Speed(Average) 14 MPH

Median 16 MPH
Mode: 8 MPH

Comments:

Report generated on 5/27/2015 4:54 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
QC JOB #: 13397504
SPECIFIC LOCATION: 0 ft from
DIRECTION: NB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			0			0			0	
12:15 AM			0			0			0	
12:30 AM			0			0			0	
12:45 AM			0			0			0	
1:00 AM			0			0			0	
1:15 AM			1			1			1	
1:30 AM			0			0			0	
1:45 AM			0			0			0	
2:00 AM			0			0			0	
2:15 AM			1			1			1	
2:30 AM			0			0			0	
2:45 AM			0			0			0	
3:00 AM			0			0			0	
3:15 AM			0			0			0	
3:30 AM			0			0			0	
3:45 AM			0			0			0	
4:00 AM			0			0			0	
4:15 AM			0			0			0	
4:30 AM			0			0			0	
4:45 AM			0			0			0	
5:00 AM			0			0			0	
5:15 AM			1			1			1	
5:30 AM			0			0			0	
5:45 AM			0			0			0	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd

QC JOB #: 13397504

SPECIFIC LOCATION: 0 ft from

DIRECTION: NB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			0			0			0	
6:15 AM			4			4			4	
6:30 AM			0			0			0	
6:45 AM			0			0			0	
7:00 AM			0			0			0	
7:15 AM			2			2			2	
7:30 AM			6			6			6	
7:45 AM			4			4			4	
8:00 AM			5			5			5	
8:15 AM			3			3			3	
8:30 AM			1			1			1	
8:45 AM			5			5			5	
9:00 AM			4			4			4	
9:15 AM			5			5			5	
9:30 AM			4			4			4	
9:45 AM			**7**			**7**			**7**	
10:00 AM			2			2			2	
10:15 AM			3			3			3	
10:30 AM			5			5			5	
10:45 AM			1			1			1	
11:00 AM			5			5			5	
11:15 AM			2			2			2	
11:30 AM			2			2			2	
11:45 AM			7			7			7	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
QC JOB #: 13397504
SPECIFIC LOCATION: 0 ft from
DIRECTION: NB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			8			8			8	
12:15 PM			7			7			7	
12:30 PM			1			1			1	
12:45 PM			3			3			3	
1:00 PM			4			4			4	
1:15 PM			7			7			7	
1:30 PM			7			7			7	
1:45 PM			4			4			4	
2:00 PM			9			9			9	
2:15 PM			5			5			5	
2:30 PM			7			7			7	
2:45 PM			4			4			4	
3:00 PM			4			4			4	
3:15 PM			4			4			4	
3:30 PM			3			3			3	
3:45 PM			1			1			1	
4:00 PM			2			2			2	
4:15 PM			0			0			0	
4:30 PM			4			4			4	
4:45 PM			5			5			5	
5:00 PM			8			8			8	
5:15 PM			3			3			3	
5:30 PM			**11**			**11**			**11**	
5:45 PM			3			3			3	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
QC JOB #: 13397504
SPECIFIC LOCATION: 0 ft from
DIRECTION: NB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			5			5			5	
6:15 PM			4			4			4	
6:30 PM			2			2			2	
6:45 PM			3			3			3	
7:00 PM			1			1			1	
7:15 PM			3			3			3	
7:30 PM			4			4			4	
7:45 PM			1			1			1	
8:00 PM			2			2			2	
8:15 PM			0			0			0	
8:30 PM			4			4			4	
8:45 PM			3			3			3	
9:00 PM			0			0			0	
9:15 PM			1			1			1	
9:30 PM			2			2			2	
9:45 PM			0			0			0	
10:00 PM			1			1			1	
10:15 PM			1			1			1	
10:30 PM			0			0			0	
10:45 PM			0			0			0	
11:00 PM			1			1			1	
11:15 PM			2			2			2	
11:30 PM			0			0			0	
11:45 PM			0			0			0	
Day Total			234			234			234	
% Weekday Average			100.0%							
% Week Average			100.0%			100.0%				
AM Peak			9:45 AM			9:45 AM			9:45 AM	
Volume			7			7			7	
PM Peak			5:30 PM			5:30 PM			5:30 PM	
Volume			11			11			11	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: NB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total																	
Percent																	
AM Peak																	
Volume																	
PM Peak																	
Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: NB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
6:15 AM	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	11-20	2
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
7:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
7:30 AM	**5**	1	0	0	0	0	0	0	0	0	0	0	0	0	6	8-17	3
7:45 AM	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	6-15	2
8:00 AM	4	0	1	0	0	0	0	0	0	0	0	0	0	0	5	8-17	2
8:15 AM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	15-24	2
8:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
8:45 AM	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5	12-21	2
9:00 AM	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	6-15	2
9:15 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6-15	3
9:30 AM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8-17	2
9:45 AM	4	1	2	0	0	0	0	0	0	0	0	0	0	0	**7**	16-25	3
10:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
10:15 AM	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	15-24	1
10:30 AM	2	0	**3**	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
10:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
11:00 AM	3	0	2	0	0	0	0	0	0	0	0	0	0	0	5	6-15	2
11:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
11:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
11:45 AM	1	**3**	3	0	0	0	0	0	0	0	0	0	0	0	7	17-26	5
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: NB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	**4**	2	2	0	0	0	0	0	0	0	0	0	0	0	8	16-25	4
12:15 PM	3	1	3	0	0	0	0	0	0	0	0	0	0	0	7	16-25	4
12:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
12:45 PM	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	15-24	1
1:00 PM	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
1:15 PM	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7	12-21	4
1:30 PM	3	**4**	0	0	0	0	0	0	0	0	0	0	0	0	7	11-20	5
1:45 PM	0	3	0	**1**	0	0	0	0	0	0	0	0	0	0	4	11-20	3
2:00 PM	4	1	**4**	0	0	0	0	0	0	0	0	0	0	0	9	16-25	5
2:15 PM	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5	15-24	3
2:30 PM	2	4	1	0	0	0	0	0	0	0	0	0	0	0	7	17-26	4
2:45 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	16-25	4
3:00 PM	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4	15-24	2
3:15 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8-17	2
3:30 PM	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	15-24	1
3:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
4:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:30 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	4
4:45 PM	2	2	1	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
5:00 PM	4	0	3	1	0	0	0	0	0	0	0	0	0	0	8	21-30	4
5:15 PM	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	8-17	1
5:30 PM	4	3	4	0	0	0	0	0	0	0	0	0	0	0	**11**	16-25	7
5:45 PM	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	8-17	1
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: NB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 PM	3	1	0	1	0	0	0	0	0	0	0	0	0	0	5	11-20	2
6:15 PM	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	6-15	2
6:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
6:45 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
7:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
7:15 PM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3	16-25	2
7:30 PM	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
7:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
8:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
8:30 PM	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	2
8:45 PM	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	8-17	1
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
9:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
9:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
10:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
10:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
11:15 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total	116	62	51	5	0	0	0	0	0	0	0	0	0	0	234	16-25	112
Percent	49.6%	26.5%	21.8%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 234																	
AM Peak Volume	7:30 AM 5	11:45 AM 3	10:30 AM 3												9:45 AM 7		
PM Peak Volume	12:00 PM 4	1:30 PM 4	2:00 PM 4	1:45 PM 1											5:30 PM 11		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: Elm St between Walnut Ave and Lincoln Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397504
DIRECTION: NB
DATE: May 20 2015 - May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	116	62	51	5	0	0	0	0	0	0	0	0	0	0	234	16-25	112
Percent	49.6%	26.5%	21.8%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	49.6%	76.1%	97.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT
234

85th Percentile 22 MPH

Mean Speed(Average) 13 MPH

Median 15 MPH
Mode: 8 MPH

Comments:

Report generated on 5/27/2015 4:54 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd

QC JOB #: 13397503

SPECIFIC LOCATION: 0 ft from

DIRECTION: SB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			2			2			2	
12:15 AM			0			0			0	
12:30 AM			0			0			0	
12:45 AM			2			2			2	
1:00 AM			0			0			0	
1:15 AM			1			1			1	
1:30 AM			0			0			0	
1:45 AM			0			0			0	
2:00 AM			4			4			4	
2:15 AM			1			1			1	
2:30 AM			0			0			0	
2:45 AM			0			0			0	
3:00 AM			1			1			1	
3:15 AM			0			0			0	
3:30 AM			0			0			0	
3:45 AM			0			0			0	
4:00 AM			0			0			0	
4:15 AM			0			0			0	
4:30 AM			0			0			0	
4:45 AM			0			0			0	
5:00 AM			0			0			0	
5:15 AM			1			1			1	
5:30 AM			0			0			0	
5:45 AM			0			0			0	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd

QC JOB #: 13397503

SPECIFIC LOCATION: 0 ft from

DIRECTION: SB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			1			1			1	
6:15 AM			3			3			3	
6:30 AM			2			2			2	
6:45 AM			1			1			1	
7:00 AM			4			4			4	
7:15 AM			5			5			5	
7:30 AM			5			5			5	
7:45 AM			3			3			3	
8:00 AM			6			6			6	
8:15 AM			**14**			**14**			**14**	
8:30 AM			3			3			3	
8:45 AM			7			7			7	
9:00 AM			4			4			4	
9:15 AM			6			6			6	
9:30 AM			10			10			10	
9:45 AM			7			7			7	
10:00 AM			6			6			6	
10:15 AM			8			8			8	
10:30 AM			7			7			7	
10:45 AM			3			3			3	
11:00 AM			6			6			6	
11:15 AM			5			5			5	
11:30 AM			8			8			8	
11:45 AM			10			10			10	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
QC JOB #: 13397503
SPECIFIC LOCATION: 0 ft from
DIRECTION: SB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			12			12			12	
12:15 PM			17			17			17	
12:30 PM			5			5			5	
12:45 PM			4			4			4	
1:00 PM			17			17			17	
1:15 PM			13			13			13	
1:30 PM			13			13			13	
1:45 PM			7			7			7	
2:00 PM			17			17			17	
2:15 PM			12			12			12	
2:30 PM			13			13			13	
2:45 PM			20			20			20	
3:00 PM			12			12			12	
3:15 PM			19			19			19	
3:30 PM			11			11			11	
3:45 PM			28			28			28	
4:00 PM			25			25			25	
4:15 PM			17			17			17	
4:30 PM			26			26			26	
4:45 PM			26			26			26	
5:00 PM			29			29			29	
5:15 PM			19			19			19	
5:30 PM			**30**			**30**			**30**	
5:45 PM			25			25			25	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
QC JOB #: 13397503
SPECIFIC LOCATION: 0 ft from
DIRECTION: SB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			27			27			27	
6:15 PM			18			18			18	
6:30 PM			23			23			23	
6:45 PM			23			23			23	
7:00 PM			9			9			9	
7:15 PM			16			16			16	
7:30 PM			17			17			17	
7:45 PM			9			9			9	
8:00 PM			7			7			7	
8:15 PM			2			2			2	
8:30 PM			3			3			3	
8:45 PM			6			6			6	
9:00 PM			3			3			3	
9:15 PM			4			4			4	
9:30 PM			4			4			4	
9:45 PM			0			0			0	
10:00 PM			5			5			5	
10:15 PM			0			0			0	
10:30 PM			1			1			1	
10:45 PM			0			0			0	
11:00 PM			1			1			1	
11:15 PM			0			0			0	
11:30 PM			0			0			0	
11:45 PM			0			0			0	
Day Total			741			741			741	
% Weekday Average			100.0%							
% Week Average			100.0%			100.0%				
AM Peak			8:15 AM			8:15 AM			8:15 AM	
Volume			14			14			14	
PM Peak			5:30 PM			5:30 PM			5:30 PM	
Volume			30			30			30	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	16-25	1
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:00 AM	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	2
2:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
5:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
6:15 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	21-30	2
6:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	26-35	1
6:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
7:00 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	4	21-30	3
7:15 AM	0	1	2	1	1	0	0	0	0	0	0	0	0	0	5	21-30	3
7:30 AM	0	2	3	0	0	0	0	0	0	0	0	0	0	0	5	18-27	4
7:45 AM	0	0	1	1	0	**1**	0	0	0	0	0	0	0	0	3	21-30	2
8:00 AM	3	1	2	0	0	0	0	0	0	0	0	0	0	0	6	16-25	3
8:15 AM	0	0	**7**	**4**	**2**	1	0	0	0	0	0	0	0	0	**14**	21-30	11
8:30 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	3	26-35	2
8:45 AM	**4**	0	1	2	0	0	0	0	0	0	0	0	0	0	7	21-30	3
9:00 AM	1	1	2	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
9:15 AM	0	0	2	4	0	0	0	0	0	0	0	0	0	0	6	21-30	6
9:30 AM	1	**6**	2	1	0	0	0	0	0	0	0	0	0	0	10	16-25	8
9:45 AM	0	0	4	2	1	0	0	0	0	0	0	0	0	0	7	21-30	6
10:00 AM	1	1	3	1	0	0	0	0	0	0	0	0	0	0	6	16-25	4
10:15 AM	0	4	3	1	0	0	0	0	0	0	0	0	0	0	8	17-26	6
10:30 AM	0	1	3	3	0	0	0	0	0	0	0	0	0	0	7	22-31	5
10:45 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	21-30	2
11:00 AM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	6	23-32	4
11:15 AM	1	1	1	1	1	0	0	0	0	0	0	0	0	0	5	26-35	2
11:30 AM	1	2	3	1	0	1	0	0	0	0	0	0	0	0	8	20-29	4
11:45 AM	2	0	4	4	0	0	0	0	0	0	0	0	0	0	10	21-30	8
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	2	1	4	2	3	0	0	0	0	0	0	0	0	0	12	21-30	6
12:15 PM	2	5	5	4	1	0	0	0	0	0	0	0	0	0	17	16-25	10
12:30 PM	0	3	0	2	0	0	0	0	0	0	0	0	0	0	5	11-20	3
12:45 PM	2	0	1	1	0	0	0	0	0	0	0	0	0	0	4	21-30	2
1:00 PM	1	4	7	4	1	0	0	0	0	0	0	0	0	0	17	21-30	11
1:15 PM	1	3	5	3	0	0	**1**	0	0	0	0	0	0	0	13	16-25	8
1:30 PM	**4**	1	5	3	0	0	0	0	0	0	0	0	0	0	13	21-30	7
1:45 PM	1	1	3	1	1	0	0	0	0	0	0	0	0	0	7	16-25	4
2:00 PM	3	2	6	4	2	0	0	0	0	0	0	0	0	0	17	21-30	10
2:15 PM	0	2	3	3	3	**1**	0	0	0	0	0	0	0	0	12	28-37	5
2:30 PM	1	4	4	2	2	0	0	0	0	0	0	0	0	0	13	16-25	8
2:45 PM	1	3	11	3	2	0	0	0	0	0	0	0	0	0	20	21-30	14
3:00 PM	4	1	2	5	0	0	0	0	0	0	0	0	0	0	12	21-30	7
3:15 PM	1	1	8	7	2	0	0	0	0	0	0	0	0	0	19	21-30	14
3:30 PM	2	2	2	3	2	0	0	0	0	0	0	0	0	0	11	26-35	5
3:45 PM	2	3	11	10	2	0	0	0	0	0	0	0	0	0	28	21-30	21
4:00 PM	1	2	6	12	3	1	0	0	0	0	0	0	0	0	25	22-31	17
4:15 PM	2	2	7	6	0	0	0	0	0	0	0	0	0	0	17	21-30	12
4:30 PM	2	3	8	10	3	0	0	0	0	0	0	0	0	0	26	21-30	18
4:45 PM	2	3	9	9	3	0	0	0	0	0	0	0	0	0	26	21-30	18
5:00 PM	2	3	9	12	3	0	0	0	0	0	0	0	0	0	29	21-30	20
5:15 PM	3	1	8	5	2	0	0	0	0	0	0	0	0	0	19	21-30	13
5:30 PM	0	2	**12**	**15**	1	0	0	0	0	0	0	0	0	0	**30**	21-30	27
5:45 PM	1	1	12	7	3	1	0	0	0	0	0	0	0	0	25	21-30	18
Day Total																	
Percent																	
AM Peak Volume																	
PM Peak Volume																	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
SPECIFIC LOCATION: 0 ft from
CITY/STATE: Culver City, CA

QC JOB #: 13397503
DIRECTION: SB
DATE: May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
6:00 PM	0	4	10	8	**5**	0	0	0	0	0	0	0	0	0	27	21-30	18
6:15 PM	0	1	8	7	2	0	0	0	0	0	0	0	0	0	18	21-30	14
6:30 PM	2	0	6	12	3	0	0	0	0	0	0	0	0	0	23	22-31	17
6:45 PM	1	**7**	10	5	0	0	0	0	0	0	0	0	0	0	23	16-25	17
7:00 PM	0	0	6	3	0	0	0	0	0	0	0	0	0	0	9	21-30	9
7:15 PM	1	2	8	5	0	0	0	0	0	0	0	0	0	0	16	21-30	13
7:30 PM	1	4	9	3	0	0	0	0	0	0	0	0	0	0	17	16-25	13
7:45 PM	0	3	3	3	0	0	0	0	0	0	0	0	0	0	9	22-31	5
8:00 PM	0	1	5	1	0	0	0	0	0	0	0	0	0	0	7	16-25	6
8:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	21-30	2
8:30 PM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	21-30	2
8:45 PM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	16-25	6
9:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
9:15 PM	1	1	1	1	0	0	0	0	0	0	0	0	0	0	4	21-30	2
9:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	4	11-20	2
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
10:00 PM	2	1	0	2	0	0	0	0	0	0	0	0	0	0	5	21-30	2
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
10:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total	66	108	277	225	58	6	1	0	0	0	0	0	0	0	741	21-30	502
Percent	8.9%	14.6%	37.4%	30.4%	7.8%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 741																	
AM Peak	8:45 AM	9:30 AM	8:15 AM	8:15 AM	8:15 AM	7:45 AM									8:15 AM		
Volume	4	6	7	4	2	1									14		
PM Peak	1:30 PM	6:45 PM	5:30 PM	5:30 PM	6:00 PM	2:15 PM	1:15 PM								5:30 PM		
Volume	4	7	12	15	5	1	1								30		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: Walnut Ave between Elm St and Washington Blvd
QC JOB #: 13397503
SPECIFIC LOCATION: 0 ft from
DIRECTION: SB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	66	108	277	225	58	6	1	0	0	0	0	0	0	0	741	21-30	502
Percent	8.9%	14.6%	37.4%	30.4%	7.8%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	8.9%	23.5%	60.9%	91.2%	99.1%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT 741

85th Percentile 28 MPH

Mean Speed(Average) 22 MPH

Median 23 MPH

Mode: 23 MPH

Comments:

Report generated on 5/27/2015 4:54 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
QC JOB #: 13397503
SPECIFIC LOCATION: 0 ft from
DIRECTION: NB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM			1			1			1	
12:15 AM			0			0			0	
12:30 AM			0			0			0	
12:45 AM			0			0			0	
1:00 AM			1			1			1	
1:15 AM			2			2			2	
1:30 AM			1			1			1	
1:45 AM			0			0			0	
2:00 AM			1			1			1	
2:15 AM			1			1			1	
2:30 AM			0			0			0	
2:45 AM			0			0			0	
3:00 AM			0			0			0	
3:15 AM			1			1			1	
3:30 AM			0			0			0	
3:45 AM			0			0			0	
4:00 AM			1			1			1	
4:15 AM			0			0			0	
4:30 AM			0			0			0	
4:45 AM			0			0			0	
5:00 AM			0			0			0	
5:15 AM			1			1			1	
5:30 AM			0			0			0	
5:45 AM			0			0			0	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd

QC JOB #: 13397503

SPECIFIC LOCATION: 0 ft from

DIRECTION: NB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 AM			1			1			1	
6:15 AM			0			0			0	
6:30 AM			0			0			0	
6:45 AM			1			1			1	
7:00 AM			5			5			5	
7:15 AM			12			12			12	
7:30 AM			23			23			23	
7:45 AM			**30**			**30**			**30**	
8:00 AM			30			30			30	
8:15 AM			7			7			7	
8:30 AM			7			7			7	
8:45 AM			18			18			18	
9:00 AM			8			8			8	
9:15 AM			5			5			5	
9:30 AM			13			13			13	
9:45 AM			7			7			7	
10:00 AM			5			5			5	
10:15 AM			5			5			5	
10:30 AM			3			3			3	
10:45 AM			6			6			6	
11:00 AM			5			5			5	
11:15 AM			7			7			7	
11:30 AM			7			7			7	
11:45 AM			13			13			13	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd

QC JOB #: 13397503

SPECIFIC LOCATION: 0 ft from

DIRECTION: NB

CITY/STATE: Culver City, CA

DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 PM			8			8			8	
12:15 PM			9			9			9	
12:30 PM			7			7			7	
12:45 PM			11			11			11	
1:00 PM			13			13			13	
1:15 PM			11			11			11	
1:30 PM			6			6			6	
1:45 PM			**14**			**14**			**14**	
2:00 PM			5			5			5	
2:15 PM			5			5			5	
2:30 PM			11			11			11	
2:45 PM			8			8			8	
3:00 PM			11			11			11	
3:15 PM			4			4			4	
3:30 PM			8			8			8	
3:45 PM			12			12			12	
4:00 PM			7			7			7	
4:15 PM			7			7			7	
4:30 PM			10			10			10	
4:45 PM			5			5			5	
5:00 PM			5			5			5	
5:15 PM			5			5			5	
5:30 PM			9			9			9	
5:45 PM			9			9			9	
Day Total										
% Weekday Average										
% Week Average										
AM Peak Volume										
PM Peak Volume										

Comments:

Quality Counts TRANSPORTATION DATA COLLECTION

LOCATION: Walnut Ave between Elm St and Washington Blvd
QC JOB #: 13397503
SPECIFIC LOCATION: 0 ft from
DIRECTION: NB
CITY/STATE: Culver City, CA
DATE: May 20 2015 - May 20 2015

Start Time	Mon	Tue	Wed 20-May-15	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
6:00 PM			10			10			10	
6:15 PM			7			7			7	
6:30 PM			5			5			5	
6:45 PM			11			11			11	
7:00 PM			7			7			7	
7:15 PM			5			5			5	
7:30 PM			0			0			0	
7:45 PM			10			10			10	
8:00 PM			6			6			6	
8:15 PM			6			6			6	
8:30 PM			6			6			6	
8:45 PM			1			1			1	
9:00 PM			1			1			1	
9:15 PM			3			3			3	
9:30 PM			4			4			4	
9:45 PM			4			4			4	
10:00 PM			1			1			1	
10:15 PM			1			1			1	
10:30 PM			0			0			0	
10:45 PM			2			2			2	
11:00 PM			0			0			0	
11:15 PM			1			1			1	
11:30 PM			0			0			0	
11:45 PM			0			0			0	
Day Total			519			519			519	
% Weekday Average			100.0%							
% Week Average			100.0%			100.0%				
AM Peak			7:45 AM			7:45 AM			7:45 AM	
Volume			30			30			30	
PM Peak			1:45 PM			1:45 PM			1:45 PM	
Volume			14			14			14	

Comments:

Quality Counts
TRANSPORTATION DATA COLLECTION

MG2
18200 Von Karman Ave, Ste 910
Irvine, CA 92612
949 705 0700
MG2.com

MEETING MINUTES

Meeting Date	**May 12, 2015**
Attendees	Costco and consultant team
Distribution	Culver City Planning and Attendees
Location	Community Center 4162 Wade Street Culver City, CA
Subject	Costco Addition Project Presentation
Next Meeting	TBD if Required

Date	5.26.15
Project	Costco - Culver City, CA
Project Number	94-0630-31

Item No	Item	Response
SITE PLAN Scheme DD11-23		
1	Neighbor raised issue regarding loss of existing landscape area at northeast corner of site that provides and meandering walking path	Revised site plan shows retention of this area in its current configuration. Resolved.
2	Neighbor raised issue requesting the Albertson's structure remain as buffer to neighborhood to the north	Keeping the existing Albertsons is not an option as it is more area than is needed and not feasible to operate two separate facilities. Costco is proposing raising the existing 8' high masonry wall adjacent to Zanja St. between the Costco and Albertsons to 10' and constructing a new 10' wall to extend east 20' from property line on north, 7' from eastern property line to match existing wall
3	Neighbor raised issues about sufficient on-site parking	It was explained that although the total parking is reduced from the existing 1,042 total stalls, to 977 stalls, the total parking for Costco will increase by 251 stalls.
4	Neighbor asked about bike racks	Costco will provide bike racks to accommodate (11) bikes. The rack is located near the west end of the Food Service

Item No	Item	Response
LANDSCAPE DESIGN		
	No comments were raised by the neighbors at the meeting	
EXTERIOR DESIGN		
	No comments were raised by the neighbors at the meeting	
SITE LIGHTING	A concern was voiced regarding the lighting spill over at north property line when existing Albertsons is demolished and replaced with parking lot	<u>Lighting</u> · In keeping with our on-going sustainability initiatives, all existing 15' tall metal halide lights will be replaced with much more energy efficient LED light fixtures. LEDs are inherently directional and offer better control than traditional metal halide or sodium lamps; additionally, this form of lighting effectively reduces regional light pollution. With fewer total lumens, LED luminaires can produce appropriate light levels on parking lot surfaces with virtually no light spill at the property line. We are excited to implement this change. · As part of our studies, we prepared photometric modeling showing lighting levels on the property and immediately adjacent property. Based on the design, all lighting levels are less than 0.2 foot candles (FC) at the property line at Zanja Street, 0.1 FC by the middle of Glencoe and 0 FC at the first residential property line. · The proposed LED lighting fixtures (indicated by P, P1 or PS) allows the existing perimeter lighting along the new and existing screen walls adjacent to Glencoe and Zanja to be eliminated, further reducing any potential spill onto adjacent streets. Although taller, the new poles move interior to the site, away from the neighborhood and create safe light levels within the lot with less spill. We believe the proposal balances interests to allow peaceful enjoyment in the neighborhood as well as safety and security of all properties in a sensitive manner.

Item No	Item	Response
TRAFFIC		
	One resident to the north requested a controlled/locked pedestrian access to the store. This would eliminate having to either drive onto Washington Boulevard or walk around the Costco. Other neighbors to the north stated they did not want any access from the north side of the Costco site. They preferred the separation from the retail use and did not mind walking around.	Because the majority of residents prefer the separation between the retail and residential uses, the Costco team will continue this historical separation by not providing reciprocal pedestrian access. Should Staff request this change, we would be open to discussion.
	Several neighbors voiced concern if the project was proposing any new site access from Walnut, St, Zanja St., or Glencoe Ave.	Costco team response was that no new site access is proposed as part of this project
	Several people noted congestion and limited parking at the site today. Generally they voiced support for the proposed improvements, particularly the additional turn lane along the internal east-west drive aisle	Costco team discussed the tradeoffs between maximizing parking supply and improving flow and conflicts. They explained that the project proposed widening the existing on-site main east-west drive to provide a longer drive thru lane for In and Out as well as a shared left turn lane where possible to reduce on-site congestion. Those in attendance generally agreed that both issues needed to be addressed.
	Neighbors along Elm Street expressed concerns about speeds and volume of traffic cutting through neighborhoods and making prohibited turns around traffic barriers to bypass area congestion.	Costco team noted concerns about cut-through traffic and speeds within the neighborhoods. The team suggested that attendees contact the roadway authority (City of LA). While the Costco team doesn't believe this issue is related to Costco, Costco authorized their traffic team to collect additional traffic the week of 5/20/15 to better understand the severity of this issue. The Costco team will share this information with the City of LA and Culver City once it is compiled and summarized
OPERATIONS		
	Neighbors voiced concern about the picking up of Costco carts within the neighborhood	Costco Management stated they would work on this to improve the standards for cart retrieval.

Item No	Item	Response
NOISE/ SOUND ATTENUATION		
	Neighbors living to the north of the site voiced issues about the noise from the new Tire Center proposed on the east side of the Costco warehouse	· The new tire center will be a similar configuration and distance from the residential properties on Zanja Street, as it is currently located on Walnut Avenue; however, it will be surrounded by a 10-foot wall rather than the 6-foot wall which currently exists on Walnut Avenue. · We prepared a Noise Study, which is available for review. The noise study indicates that the tire center will not increase the normally quiet ambient noise level in the closest residential area by any measurable amount. · As technology evolves, the operators will be receiving newer, quieter tire center equipment in the coming weeks. This will further reduce the likelihood of any noise impact. Once the new equipment arrives, we will perform a noise simulation on Walnut Avenue at a comparable distance from the proposed tire center (on Zanja Street), witnessed by City staff. Noise readings will be reported in the revised Noise Study.
	Neighbors living to the west of the site raised issues about the late night noises and vibrations coming from the existing loading dock area.	· Although no changes are proposed to the existing loading dock. We are currently working with our acoustical engineer and architect to address noise mitigation measures to reduce vibration and noise within the existing loading dock. These results will also be reported to staff and any identified, available mitigation will be installed as part of the project.
STORM WATER/ CIVIL		
	No comments from the neighbors attending the meeting	

These minutes are an accurate account of the items discussed to the best of my knowledge. If you observe any discrepancies or have any questions, contact me immediately at (949) 705-0713.

From:	War dell
To:	Silva, Gabriela
Subject:	No to Costco"s plans for expansion
Date:	October 06, 2015 6:13:31 PM

Dear Gabriela Silva,

I received the letter from the Culver City Planning Commission regarding the planned expansion of Costco on Washington Blvd.
I am unable to attend the public hearing on October 21, so I chose to write you a letter instead to express my opinion.
I am a home owner. I have lived here at 2445 Glencoe Ave for the last 10 years.
One of the primary reasons that I bought this property ten years ago was that I loved the block where this house is located.
With the proposed expansion sought by Costco, I feel that my block would dramatically change for the worse.

The end of my block marks the corner of the enormous Costco complex: the corner of Glencoe Ave and Zanja St.
What makes living on my block behind the enormous Costco complex tolerable, is that there's a huge building, that once housed Albertsons, located on that same corner of Glencoe And Zanja St, at the end of my block.
The Albertsons building acts as a tremendous "buffer" between the noise and light of the Costco complex and my block and neighborhood.
From what I understand, Costco wants to tear down the Albertsons building to expand the parking lot.
I am completely OPPOSED to this plan.
If the Albertsons building was removed, my little block and neighborhood would suddenly be exposed to a tremendous increase in noise and light pollution.
The 10 foot wall that Costco is proposing to build where the Albertsons building once stood, is entirely INADEQUATE.
A 10 foot wall provides no where near the same blockage of noise pollution from the parking lot and light pollution from all the light posts that the 40 foot tall Albertsons building provides.
I bought this house 10 years ago knowing that the Albertsons building blocks noise and light pollution from that enormous complex at the corner of my block and now Costco wants to take it away. That is completely unacceptable and unfair.
This neighborhood home owner votes: NO to Costco's planned expansion.

In addition, I am very concerned about Costco's plans to move their tire center to a new location in the complex that is right in front of Zanja St.
The tire center is presently located off Walnut Ave.
The move of the tire center would bring the very disturbing noise of the machines that take on and off tires from vehicles, all day long, to the doorstep of my block.
The proposed move of Coscto's tire center would greatly affect my block and neighborhood negatively and I am opposed to this plan.

Gabriela, please enforce the will of the homeowners in the affected neighborhood and help stop this proposed expansion by Costco.

Please keep me up to date with the next steps in this process.
If there is another public hearing, I would like to attend.
If there is another letter that I could send that would help to explain my position,

please let me know and I will send it out.

Thank you for your time and your help Gabriela.

Sincerely,

Wardell Eisner
310-497-5933
2445 Glencoe Ave
maphawk@gmail.com

RESOLUTION NO. 2015-P005

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF CULVER CITY, CALIFORNIA, RECOMMENDING TO THE CITY COUNCIL APPROVAL OF ZONING CODE AMENDMENT, ZCA P-2015-0103-ZCA AMENDING TITLE 17, ZONING, OF THE CULVER CITY MUNICIPAL CODE (CCMC), SECTION 17.210.020 TABLE 2-3 – RESIDENTIAL DISTRICTS DEVELOPMENT STANDARDS AND SECTION 17.700.010 – DEFINITIONS AS SET FORTH IN EXHIBIT "A" ATTACHED HERETO.

(Zoning Code Amendment P-2015-0103-ZCA)

WHERES, on June 8, 2015, the City Council directed staff to prepare a report to Planning Commission addressing public comments received expressing concerns regarding the size and design of new and remodeled large single family developments in the City; and

WHEREAS, on July 22, 2015, August 26, 2015, and September 15, 2015 the Planning Commission conducted study sessions (collectively, "Study Sessions") during which it received substantial public testimony and provided direction to staff on potential Zoning Code amendments to address the practice of replacing older, smaller homes with the largest home permitted under the City's Zoning Code, which are much larger than surrounding dwellings and which, because of their size, change the scale and character of a neighborhood (known as "Mansionization"); and

WHEREAS, at the Study Sessions, the Planning Commission discussed 25 potential changes to the Zoning Code and/or permit and construction process. Of the 25 items, 10 were recommended for Zoning Code or Municipal Code text amendments. The proposed changes are intended to address issues of building massing, privacy, design, height, construction, permit and public notification. The regulations proposed to be changed relate to front, side, rear and second story setbacks, building coverage, Floor Area Ratio (FAR), and corner lots. The Commission decided the proposed changes were wide ranging

and that applying them to properties other than R-1 properties could result in negative impacts and unintended consequences. The Planning Commission also determined that the regulations being recommended would, by application, address concerns of shade and shadow; therefore, shade and shadow studies were unnecessary. The Planning Commission also felt that it had timely addressed the need to get new regulations in place. In addition, after taking into consideration concerns expressed by the public at each of the Study Sessions, the Planning Commission conveyed its opinion that a moratorium and use of outside consultants were unwarranted and would be ineffective; and

WHEREAS, on October 21, 2015, after conducting a duly noticed public hearing on City-initiated Zoning Code Amendment, ZCA P-2015-0103-ZCA regarding changes to Residential Single Family (R1) Zone District Development Standards, including full consideration of all reports, studies, testimony, and environmental information presented, the Planning Commission determined by a vote of __ to __ to recommend to the City Council approval of Zoning Code Amendment, ZCA P-2015-0103-ZCA, as set forth herein below.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF CULVER CITY, CALIFORNIA, RESOLVES AS FOLLOWS:

SECTION 1. Pursuant to the foregoing recitations and the provisions of the Culver City Municipal Code (CCMC), Title 17, Section 17.620,030, the following findings for a Zoning Code Amendment are hereby made:

1. **The proposed amendment ensures and maintains internal consistency with the goals, policies and strategies of all elements of the General Plan and will not create any inconsistencies with this Title, in the case of a Zoning Code Amendment.**

ZCA P-2015-0103-ZCA ensures and maintains internal consistency with the goals, policies, and strategies of the General Plan and will not create any inconsistencies with the Zoning Code. The amendments to Zoning Code Section 17.210.020 TABLE 2-3 regarding R1 development standards will reduce the overall size of single family homes, addressing areas of concern included privacy, building massing, building height, and building size consistent with General Plan Land Use Element Policy 1.E - "Support a balanced respect for the character of existing residences with new and potentially unique design in new or remodeled structures", and General Plan Housing Element Policy 2.C – "Preserve the character, scale, and quality of established residential neighborhoods."

2. **The proposed Zoning Code Amendment will not be detrimental to the public interest, health, safety, convenience and welfare of the City.**

ZCA P-2015-0103-ZCA is not detrimental to the public interest, health, safety, convenience and welfare of the City. The amendments to Zoning Code Section 17.210.020 TABLE 2-3 regarding R1 development standards will reduce the overall size of single family homes, addressing areas of concern included privacy, building massing, building height, and building size. The Planning Commission recommended Zoning Code text amendments are intended to balance the right of property owners to improve and develop their properties to meet family needs and personal preferences while protecting the character of established neighborhoods and limiting the impacts of new development on adjacent properties.

3. **The proposed amendment is in compliance with the provisions of the California Environmental Quality Act (CEQA).**

Pursuant to Sections 15162 and 15168 of the California Environmental Quality Act (CEQA), the Zoning Code Amendment (ZCA P2015-0103-ZCA) is within the scope of the Culver City General Plan Update Program EIR approved on September 24, 1996 (PEIR), the circumstances under which the PEIR was prepared have not significantly changed, and no new significant information has been found that would impact the PEIR. Therefore no new environmental analysis is required.

SECTION 2. Pursuant to the foregoing recitations and findings, the Planning Commission of the City of Culver City, California, hereby recommends to the City Council approval of Zoning Code Amendment (ZCA P-2015-0103-ZCA), as set forth in Exhibit A attached hereto and incorporated herein by this reference.

APPROVED and ADOPTED this 21st day of October, 2015.

KEVIN LACHOFF, CHAIRPERSON
PLANNING COMMISSION
CITY OF CULVER CITY, CALIFORNIA

Attested by:

Yvonne Hunt
Administrative Secretary

EXHIBIT A
Resolution No. 2015-P005
Table 2-3
Residential Districts Development Standards (R1, R2, R3)

Development Feature	Requirement by Zoning District		
	R1	**R2**	**R3**
Minimum lot area (1)	5,000 sf or the average area of residential lots within a 500 ft radius of proposed subdivision, whichever is greater.		
Lot width (2)	50 ft		
Lot depth	100 ft		
Maximum number of dwelling units allowed per parcel (3)	1 unit	2 units	3 units
Dwelling size	***Maximum and minimum allowed floor area~~, not including any garage or other non-habitable space.~~***		
~~**Maximum area**~~	~~1,500 sf plus 40% of net lot area for parcels less than 8,000 sf;~~ ~~60% of net lot area for parcels 8,000 sf or more.~~		
Maximum area	.60 Floor Area Ratio (FAR) **(6)(7)**	1,500 sf plus 40% of net lot area for parcels less than 8,000 sf; **(8)** 60% of net lot area for parcels 8,000 sf or more. **(8)**	1,500 sf plus 40% of net lot area for parcels less than 8,000 sf; **(8)** 60% of net lot area for parcels 8,000 sf or more. **(8)**
Minimum area	1,000 sf on the ground floor.	1,000 sf for a single family unit; 750 sf / unit in a duplex.	1,000 sf for a single family unit; 750 sf for a duplex or triplex.
Setbacks (4)	***Minimum setbacks required. See Section 17.300.020 (Setback Regulations and Exceptions).***		
Front	20 ft - Single story structures; 20 ft - Two story structures; plus minimum 5 ft stepback for second floor; 25 ft -Two story structures without minimum 5 ft second floor stepback	15 ft	10 ft, or ½ the building height, whichever is greater.
Sides (each)	Interior Side: ~~4~~ 5 ft; Corner Side: 5 ft - Single story structures; 5 ft - Two story structures; plus minimum 5 ft stepback for second floor; 10 ft -Two story structures without minimum 5 ft second floor stepback	4 ft	5 ft
Rear	~~10~~ 15 ft		
Minimum distance between structures	5 ft between accessory residential structures; 8 ft between detached dwelling units.		
Open space	***Minimum area of a site to remain uncovered by structures, in compliance with Section 17.400.100 (Residential Uses - Accessory Residential Structures).***		

Private	None required other than setbacks.
Common	None required.
Height limit (4) (5) (9)	Flat Roofs - 2 stories and ~~30~~ 26 ft Sloped Roof - 2 stories and 30 ft
Landscaping	As required by Chapter 17.310 (Landscaping).
Parking	As required by Chapter 17.320 (Off-street Parking and Loading).
Signs	As required by Chapter 17.330 (Signs).

Notes:

(1) Minimum lot area for parcels proposed in new subdivisions and lot line adjustments. Condominium, townhome, or planned development projects may be subdivided with smaller parcel sizes for ownership purposes, with the minimum lot area determined through the subdivision review process, provided that the overall development site complies with the minimum lot size requirements of this Chapter.
(2) Minimum required width measured at the street property line, except as otherwise provided by Section 15.10.700. (Subdivision Design Standards) for curved lot frontages and flag lots.
(3) For standards for Accessory Dwelling Unit, see Section 17.400.095.
(4) For standards for Accessory Residential Structures, see Section 17.400.100.
(5) For standards for Height Measurement and Height Limit Exceptions, see Section 17.300.025.
(6) Garages attached to the primary structure shall be included in the FAR. Detached garages shall not be included in the FAR.
(7) The floor area of basements shall not be included in the FAR.
(8) Maximum Floor Area does not include garages or other non-habitable space.
(9) Sloped Roofs equal to or greater than a 3:12 slope; Flat Roofs less than 3:12 slope.

17.700.010- Definitions of Specialized Terms and Phrases

B. Definitions, “B”,

Basement. That portion of a building or an area enclosed by walls located below finished grade and beneath and not exceeding the first floor footprint above, where the vertical distance from finished grade to the bottom of the finished floor above is no more than three vertical feet at all points around the perimeter of all exterior walls. A basement does not constitute a story. All basements shall be limited to one floor level and not to exceed twelve (12) feet in height.

F. Definitions, “F”,

Floor Area Ratio (FAR). The floor area ratio (FAR) is the ratio of floor area to total lot area. The maximum floor area permitted on a site shall be determined by multiplying the floor area ratio (FAR) by the total area of the site (FAR x Site Area = Maximum Allowable Floor Area). Basement area shall not be included in calculation of FAR.

ATTACHMENT NO. 2

BUILDING SIZE COMPARISON CURRENT STANDARDS VS. PROPOSED STANDARDS

Lot Size	40% plus 1,500 s.f. Existing	.60 FAR Recommended	.50 FAR Comparison
5000 s.f.	3,500 s.f	3,000 s.f.	2,500 s.f.
5500 s.f.	3,700 s.f.	3,300 s.f.	2,750 s.f.
6000 s.f.	3,900 s.f.	3,600 s.f.	3,000 s.f.
6500 s.f.	4,100 s.f.	3,900 s.f.	3,250 s.f.
7,000 s.f.	4,300 s.f.	4,200 s.f.	3,500 s.f.
7500 s.f.	4,500 s.f.	4,500 s.f	3,750 s.f.
8000 s.f.	60% of lot area 4,800 s.f.	4,800 s.f.	4,000 s.f.

ATTACHMENT NO. 3

PUBLIC COMMENTS

Gorham, Thomas

From: Patricia Edlefsen <pmccoyedlefsen@gmail.com>
Sent: October 12, 2015 5:05 PM
To: Gorham, Thomas
Subject: Zoning Code Ammendment.

Hello, Mr. Gorham. Regarding the meeting for Wednesday, October 21st at City Hall. I'm among those opposed to the "mansionization" of homes being built in Culver City. We have three going in where the old fire station was and the homes take up almost the whole lot! Not much neighborhood feel to that!

Gorham, Thomas

From: george seeman <georgeseeman@hotmail.com>
Sent: October 09, 2015 1:26 PM
To: Gorham, Thomas
Subject: Zoning Code Text Amendment P2015-0103-ZCA

Dear Mr. Gorham:

I am a lifelong resident of Culver City and I will be out of town on Wednesday, October 21, 2015. I would like to convey my opinion of the current trend of oversized construction projects of single family homes in Culver City. I think that new homes being built should fit in with the surrounding neighborhood. These mini-mansions just don't look fit in most Culver City neighborhoods.

Thank you,

George R. Seeman
11282 Grayridge Drive
Culver City, CA 90230

At the June 8, 2015 City of Culver City City Council Meeting, there was public discussion about changing the zoning code regarding upper limits of size for single family dwellings. The City Council has charged the Planning Commission with studying the issue and making proposals for change to the zoning code.

What is **proposed**:

- **New limitations on maximum areas** using a metric called the Floor Area Ratio (FAR). Floor area ratio is the ratio of the floor area of a building to the area of the lot on which the building is located. Culver City currently does not use FAR calculations for zoning, but instead a maximum area of 1500 sf + 40% of net lot area (for parcels less than 8000 sq ft)
    - Proposed FAR for R1 units is 0.60. Neighboring cities have a wide range of practices, from no FAR in Santa Monica, to 0.50 FAR in West Hollywood and parts of Los Angeles, to 0.75 FAR in Beverly Hills and Manhattan Beach.
    - Proposed FAR for R2 and R3 units is 0.70.
    - Initial proposal from city Planning staff was for FAR of 0.50
    - Garages attached the primary structure, but not basements, would now be included in the FAR.
- Increased side lot setbacks from 4 to 5 feet
- Increased rear lot set backs from 10 to 15 feet
- Decreased height limits depending on flat vs sloped roofs

Why **R2 and R3 lots should be excluded**:

- We **did not get due process**. R1 homeowners received mailings notifying them of this public discussion and their right to comment, but not R2 and R3 homeowners, because of an oversight where this proposal was conceived of as being for "single family dwellings."
    - This process is being driven primarily by residents in the Carlson Park neighborhood, which isn't even zoned for R2 and R3 lots in the General Plan. R1 owners in a single neighborhood are trying to speak for R2 and R3 homeowners in other neighborhoods.
- Some **neighborhoods were designated for R2 and R3 lots in the Culver City General Plan to offer maximum flexibility and variety of residential options.** (See https://www.culvercity.org/~/media/Maps/Map15_Zoning%20pdf.ashx)
    - These low-density multi-family residential lots can accommodate multigenerational family living, owner/renter pairs, and other scenarios.
    - Multigenerational family living is on the rise, with now 20% of the country living in multigenerational family settings (Pew trends). Multigenerational living allows economic flexibility for young adults, promotes safe environments for seniors and persons with disabilities, and is often preferred by some ethnic groups.

- R2 and R3 lots represent only 12% of the city's residential stock (2014 Culver City Housing Needs Assessment). Most of these lots are near the downtown area or near light-rail, where there is already increased density from other developments. Excluding them from the proposed changes to single family homes will still allow the city to preserve the visual character and community feel of Culver City.

- **The majority of R2 and R3 homeowners live on their property, and are Culver City community members, NOT developers.** They want maximum flexibility within their own property rights. They want to avoid limits that may force a second unit to be too small to be practical.
  - For example, given a 5000 sq ft lot:
    - Current code: could build 3500 sq ft living space, excluding garage
    - FAR of 0.5: could build 2500 sq ft living space, including garage
    - FAR of 0.6: could build 3000 sq ft living space, including garage
    - FAR of 0.7: could build 3500 sq ft living space, including garage
  - The 2014 Culver City Housing Needs Assessment found that 92% of housing stock in Culver City was built before 1980. Homeowners need flexibility to update and maintain the quality and safety of their housing stock.
- **This proposal is nothing less than "downzoning",** which may significantly limit growth in property values, and growth in tax revenue for Culver City.
- The City Council/Planning Commission originally stated they desired to study the problem, hold public discussion, and draft new zoning language within a 4 month period, ending November 2015. A rushed City Council/Planning Commission process will not lead to the desired outcome of preserving the community feel of Culver City, but rather lead to a rush to get permits pulled before the zoning changes take effect, and will push people to build quickly without giving them the time to do it right.

Dear Members of the Culver City City Council and Planning Commission,

I support:

- Exclusion of R2 and R3 lots in Culver City from "downzoning"
- NO moratorium on renovations/constructions during discussion of city planning
- Exploration of other ways to preserve the visual character and community feel of Culver City without downzoning, such as stepback facades

Please sign online as well at Change.org! http://tinyurl.com/nbhsp9o

I support:

- Exclusion of R2 and R3 lots in Culver City from "downzoning"
- NO moratorium on renovations/constructions during discussion of city planning
- Exploration of other ways to preserve the visual character and community feel of Culver City without downzoning, such as stepback facades

Name	Email	Address
DEBORAH FRYMAN	DEBORAH DFRYMAN@GMAIL.COM	8922 KRUEGER ST, CULVER CITY 90232
LINDA MILLAN	lamiln@yahoo.com	8916 KRUEGER ST. Culver city 90232
Nenita J. Gumban		8925 Krueger St. Culver City 90232
ERIC SPIES	eric.spies@tuxable.com	8931 KRUEGER ST. 90232
STEVE THOMSON	SJTHOMSON23@GMAIL.COM	8948 KRUEGER ST 90232
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Jaime GARCIA	Jaime Garcia	9059 Krueger St.
Nidia Cividanes		8951 Krueger St.
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