Traffic Management Plan

for the

Washington Boulevard Diversion Project

Submitted to

December 2018

Submitted by

ALBERT GROVER & ASSOCIATES

TRANSPORTATION CONSULTING ENGINEERS

ALBERT GROVER & ASSOCIATES

December 7, 2018

Mr. Charles Herbertson, PE, LS
Public Works Director / City Engineer
City of Culver City
9770 Culver Boulevard
Culver City, California 90232

RE: Traffic Management Plan for the stormwater diversion project on Washington Boulevard

Dear Mr. Herbertson:

Albert Grover & Associates (AGA) is pleased to present to the CWE and the City of Culver City this Traffic Management Plan (TMP) for the stormwater diversion project along Washington Boulevard in the City of Culver City. The project purposes to install a new rainwater subsurface storage system and associated sewer tie-ins, construction of which is planned to close several lanes and prohibit select left-turn movements along Washington Boulevard between Lincoln Boulevard and Redwood Avenue.

This TMP has been prepared in accordance with industry-standard traffic engineering practices, including ongoing collaboration with City staff and our professional evaluations of traffic factors pertinent to the project area. The following report provides our assessment of expected traffic conditions during the project construction and recommended mitigation and improvement strategies for the project team to consider and implement to manage expected congestion during project construction.

We trust that these findings will be of assistance to you, the City, and others. Should you have any questions regarding this report or its recommendations, please do not hesitate to contact me or Ms. Kawai Mang at our office.

Respectfully submitted,

ALBERT GROVER & ASSOCIATES

David A. Roseman, TE
Principal Transportation Engineer

CWE\846-001\Report\Cover Letter.docx

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I. INTRODUCTION

Project Description

In 2012, the California Regional Water Quality Control Board issued an order requiring the Los Angeles region to reduce and restrict municipal storm sewer system discharges within coastal watersheds. One such coastal watershed is the Marina del Rey watershed, comprised of parts of the City of Los Angeles, City of Culver City, and unincorporated area of Los Angeles County (**Figure 1**). The Marina del Rey watershed is so named because its runoffs and discharges largely flow into the Marina del Rey Harbor, with some portion also draining toward the Santa Monica Bay.

Figure 1: Marina del Rey Watershed

To satisfy the maximum discharge requirements set forth by the Water Quality Board, the Washington Boulevard storm sewer diversion project is designed to provide a water storage system for large runoff flows within the Marina del Rey watershed in the event of a significant rainstorm so that the runoff can be treated at a later time when capacity is available at the Hyperion Water Reclamation Plant. The project entails installing a pretreatment system, several pumps, a large underground storage tank, and all necessary piping (**Figure 2**).

Figure 2: Washington Boulevard Sewer Diversion Project

Finally, this stormwater diversion project is to be followed up by a median restoration and beautification project to install raised, landscaped medians along Washington Boulevard within the project area, a continuation of the Washington Boulevard median improvement project previously completed to the east of the project location. Advantageously, the diverted and reclaimed stormwater is also to be used for maintenance of the new Washington Boulevard medians.

Project Stakeholders

The project is the result of a public-private partnership between the City of Culver City and Costco Wholesale, which is the owner of the shopping center located at 13411-13463 Washington Boulevard immediately adjacent to the project site. The Costco Wholesale site includes not only the warehouse but

also a Costco gasoline service station, as well as several other busy establishments including Starbucks, Verizon Mobile, and In-N-Out Burger.

Once completed, the project is designed to improve water quality in the marina and the bay for not only residents and boat owners but also waterfront visitors and the general public. During construction, however, these same residents, businesses, and visitors would be affected by the construction impacts, including lane closures and turn restrictions. Within the surrounding vicinity of the project, students traveling to and from several schools in the area may also be affected, including those attending Venice High School, Mark Twain Middle School, Beethoven Elementary School, and Coeur d'Alene Elementary School.

Anticipated Project Schedule

As of the date of this report, the design of the project is well underway and it is anticipated that a contractor could be awarded a construction contract as early as the Spring of 2019. Once the contractor begins construction, the project is expected to take approximately one year to complete. Phasing of the construction activities is anticipated to also take into account the City of Culver City's moratorium on construction during the winter holiday season from Thanksgiving through New Years.

Table 1: Project Schedule

Milestone	Anticipated Completion Date
Complete Design	January 2019
Advertise for Construction Bids	February 2019
Award Construction Contract	April 2019
Community Meeting	May 2019
Construction Start	June/July 2019
Construction Completed	June/July 2020

II. WORK ZONE TRAFFIC IMPACT ANALYSIS

Existing Conditions

The proposed project site is located along Washington Boulevard, a major regional arterial roadway, just east of its intersection with Lincoln Boulevard (CA-1). In the vicinity of the proposed project, Washington Boulevard is a four-lane, east-west roadway designated by the City of Culver City's General Plan as a major arterial. It provides access to California Route 1 to the west of the project location and the Interstate 10 freeway to the east.

To establish a baseline analysis for existing conditions (year 2018), 24-hour roadway traffic counts and intersection turning movement counts—including pedestrian and bicyclist counts—were conducted within the project vicinity. 24-hour roadway traffic volumes were collected on Thursday, June 7, 2018, on Washington Boulevard between Glencoe Avenue and Walgrove Avenue. The data shows that, in the vicinity of the proposed project, Washington Boulevard currently carries approximately 35,000 vehicles daily in both directions as a major regional arterial.

Turning movement data was also collected during weekday peak commute periods in June 2018 at signalized intersections along Washington Boulevard from Lincoln Boulevard to Redwood Avenue. Due to activity patterns at the Costco Wholesale and its adjacent businesses, Saturday traffic data was also collected at the two signalized shopping center driveways. Currently, the easterly shopping center driveway, which is directly opposed to South Glencoe Avenue, is the busier of the two, with about 1,000 vehicles in the weekday evening peak hour and over 1,100 vehicles during the Saturday peak hour.

An engineering field review was also conducted along Washington Boulevard and in the commercial and residential neighborhoods in the vicinity of the project site. The field review noted heavy commuter traffic along not only Washington Boulevard and Lincoln Boulevard but also key neighborhood streets such as Walgrove Avenue, Zanja Street, Glencoe Avenue, and Redwood Avenue. There are also several vehicular turn prohibitions and other traffic calming measures implemented within the neighborhoods in an effort to encourage commuters to remain on arterial streets. It was also observed that the Costco Wholesale, the Costco gas station, and businesses within the shopping center are busy not only during the afternoon and evening peak period but throughout the day when most project construction activities will be taking place.

Active transportation is a popular travel mode near the marina; however, the field review noted that the overwhelming majority of roadway commuter traffic through the project area was comprised of automobiles rather than bicycles, motorcycles, or motorized scooters. The field review also found moderate pedestrian activity along the sidewalks on either side of Washington Boulevard, mostly related to activity at several bus stops noted within the project area.

Project Construction Activity

During the project construction, the work zone traffic control plan outlines the closure of one lane of through westbound traffic and most of the center median lane, as well as temporary removal of on-street parking along Washington Boulevard between the western Costco Wholesale driveway and Redwood Avenue. This work zone traffic control and project staging plan would result in a one-lane roadway reduction for vehicles traveling westbound, while retaining two traffic lanes for vehicles traveling eastbound through the construction zone (**Figure 3**). In addition, the plan calls for the temporary prohibition of the westbound left turn from Washington Boulevard onto South Glencoe Avenue as well as the eastbound left turn from Washington Boulevard onto northbound Redwood Avenue. These lane closures are necessary to accommodate the construction of the pumping station and the underground storage tank. Furthermore, several pedestrian crosswalks will be closed during the project construction, but only across Washington Boulevard. Sidewalks along Washington Boulevard are to remain open and untouched by the project construction.

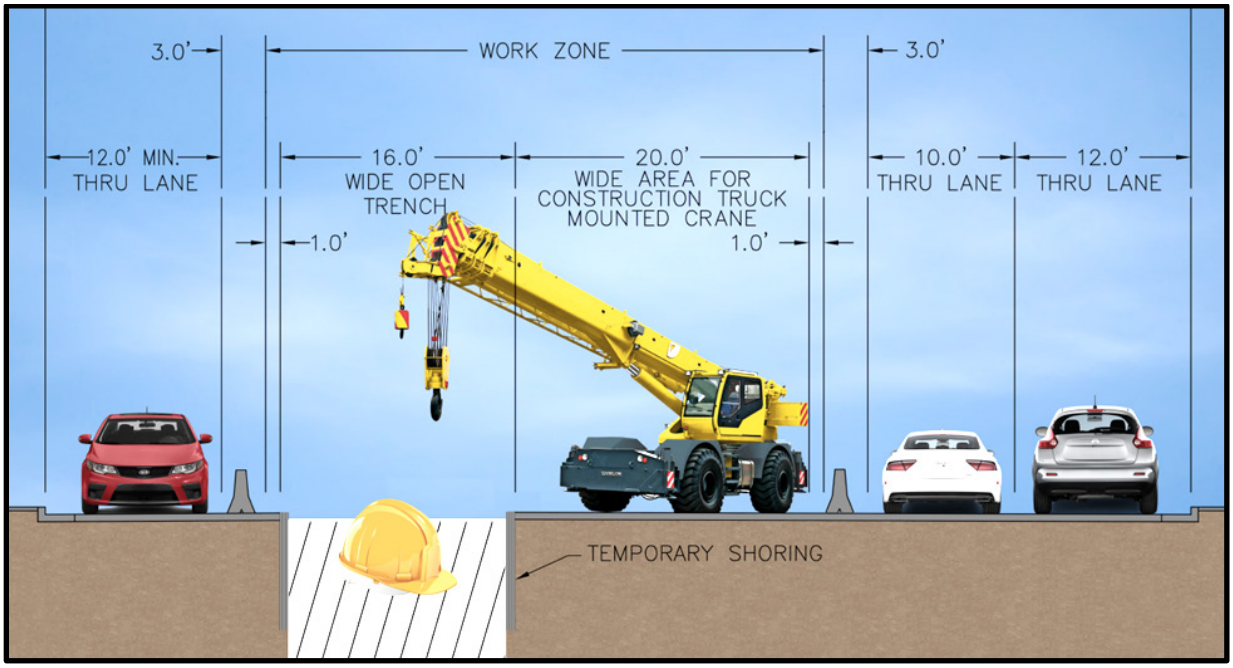


Figure 3: Project Work Zone

There will also be other construction work occurring in and around the project site to relocate and amend underground utilities and install new piping in order to connect the new underground storage facility to the storm sewer system. Fortunately, the design of the project and its location east of Lincoln Boulevard will allow all the approach lanes at the intersection of Washington Boulevard and Lincoln Boulevard to remain open throughout the construction. For detailed project traffic control plans, see **Appendix B**.

Expected Impacts

As a major regional arterial, Washington Boulevard carries heavy traffic during both the morning and evening peak commute periods. The project work zone was developed and oriented in an attempt to minimize traffic impacts on Washington Boulevard and maintain commercial and residential access wherever physically possible. The project team also considered alternative construction layouts that would close an eastbound traffic lane in order to keep the two westbound lanes open. That alternative was discarded since it would most certainly back up traffic queues into the Lincoln Boulevard intersection, significantly impacting traffic flow at one of the busiest intersections in the region. Furthermore, that alternative would also significantly impact access into and out of the Costco Wholesale shopping center creating long queues of vehicles both on the street and within the parking lot. Ultimately, it was determined that that closing one westbound lane rather than one eastbound lane on Washington Boulevard was the far superior alternative.

Despite the alternative analysis efforts to find the best possible construction layout, the remaining traffic handling capacity of the one westbound Washington Boulevard lane is still expected to be insufficient to accommodate peak demands. The westbound Washington Boulevard lane reduction will create a traffic bottleneck within the project work zone, restricting traffic flows and creating significant motorist delay.

Traffic operations at the following signalized intersections are expected to be significantly impacted by the project construction:

- Washington Boulevard at Lincoln Boulevard
- Washington Boulevard at West Costco Driveway
- Washington Boulevard at East Costco Driveway / South Glencoe Avenue
- Washington Boulevard at Redwood Avenue

Using Trafficware's Synchro traffic analysis software, traffic engineers conducted an intersection operational analysis for each of the study intersections within the project work zone. Synchro is a sophisticated traffic signal modeling software which allows traffic engineers to test and adjust traffic signal phasing and timing parameters to optimize traffic throughput. The results of this iterative traffic modeling effort are intersection efficiency rankings, or level-of-service (LOS), based on the Transportation Research Board's 2016 *Highway Capacity Manual* (HCM) criteria for signalized intersections. The HCM methodology assigns intersection LOS rankings from A to F based on calculations for average control delay per vehicle (**Table 2**).

Table 2: Level of Service

Highway Capacity Manual (HCM) Method

Signalized Intersections

Average Delay per Vehicle (s)	LOS	Description
0 - 10	**A**	Free flow
10 - 20	**B**	Stable flow (slight delay)
20 - 35	**C**	Stable flow (acceptable delay)
35 - 55	**D**	Approaching unstable flow (tolerable delay)
55 - 80	**E**	Unstable flow
80 +	**F**	Forced flow

The intersection analysis conducted for the project determined that significant traffic impacts are expected during the construction of the storage tank, the project element requiring the most extensive roadway closures. The bulk of the delays are expected to occur for westbound motorists traveling on Washington Boulevard, where the existing two travel lanes are to be temporarily reduced to one travel lane. Compared to the existing condition, minimal delays are expected for eastbound motorists, as two eastbound travel lanes are to remain open. Expected project-related delays for eastbound motorists are largely due to the planned closure of the eastbound left turn into the westerly Costco driveway as well as onto Redwood Avenue.

It should be noted that the anticipated congestion on Washington Boulevard during the project construction, especially for westbound traffic, is also expected to cause delays on side streets such as North Glencoe Avenue and Walgrove Avenue. With heavy volumes of slow-moving traffic in congested conditions, fewer gaps in traffic are expected, resulting in longer wait times for vehicles on these side streets wishing to enter westbound traffic. These anticipated delays are likely to influence motorists to choose alternate routes that provide a time advantage over waiting in congestion along Washington Boulevard. It is anticipated that some motorists will divert to Venice Boulevard and Maxella Avenue depending on their ultimate destination.

III. RECOMMENDED TRAFFIC MANAGEMENT STRATEGIES

Overview

Due to the dense urban landscape, constrained right-of-way, and discontinuous roadway network in the project area, there are no feasible opportunities to add travel lanes to compensate for the loss of roadway capacity on Washington Boulevard, either on a temporary or long-term basis. Furthermore, there are no natural or reasonable arterial detour routes that would create travel time savings for commuters over just "waiting it out" on westbound Washington Boulevard. On the other hand, it is likely that some motorists will decide to forgo or delay their travel thus leading to a lengthening of the peak-periods. Others may choose to use active transportation (e.g., walking, bicycling, or scootering) rather than travel by car for short trips to schools, restaurants, or shopping. These actions will help but are not expected to significantly reduce anticipated motorist delay for the average motorist. Therefore, in the absence of a reasonably efficient detour route or a feasible way to increase capacity, this traffic management plan is structured around operational strategies designed to make the most of the available roadway by intelligently managing the implementation of the project. Those key operational strategies are outlined below.

Inter-agency Coordination

Since the project vicinity includes roadways and traffic signals within multiple jurisdictions, it is highly recommended that a key strategy of the traffic management plan include inter-agency cooperation between the cities of Culver City and Los Angeles. Therefore, it is recommended that the cities develop and enter into a Memorandum of Understanding (MOU) whereby the City of Los Angeles Department of Transportation would participate in traffic management by monitoring traffic operations and implementing traffic control changes within the City of Los Angeles on behalf of the project. The MOU would permit LADOT to react directly and quickly to residents' and businesses' complaints and/or changing project traffic conditions, while having a mechanism by which to recover its costs for such activities. Such activities could include, but would not be limited to, traffic signal monitoring and timing adjustments, traffic safety measures, and neighborhood traffic calming measures within the City of Los Angeles. It is suggested that the MOU be initially set up with a value of $25,000 with a provision to extend the total value should it be mutually agreed by both cities.

It is also suggested that the City's project manager work closely with the school district and individual schools in the area to provide project construction information so that that information can be distributed to faculty, staff, students, and parents on a timely and relevant basis. It is also important that the City's project manager stay apprised of special bell schedules, holidays, minimum days, and other special events at schools in the area that could impact traffic demands within the work zone. As is practicable, the City project manager and the construction contractor should regularly discuss key school events and be aware of the arrival and dismissal times for Venice High School such that they can plan their work accordingly.

Work Zone Traffic Control

As a part of the project design and construction plans, a work zone traffic control plan detailing lane closures for the work zones has been completed (Appendix B). Generally, the traffic control plan is designed to maintain work zone safety by separating vehicles from workers and elevating motorist awareness of ongoing work. Additionally, the plan also sets forth the following stipulations:

- Work along the Costco Wholesale shopping plaza frontage is to be minimized during business hours.
- Employee and patron access to Costco Wholesale and its tenants is to be maintained during driveway work.
- At least three travel lanes, including one travel lane in each direction, must remain open on Washington Boulevard at all times during the day.

In addition to the signage included in the work zone traffic control plan, it is further recommended that the City consider utilizing changeable message signs (CMS) along Washington Boulevard to alert motorists of the planned and ongoing closures well ahead of the work zone. Changeable message sign messages should be updated regularly to provide real-time updates on construction activities and traffic conditions as much as practicable. For westbound traffic it is suggested, at a minimum, that full-time changeable message signs be deployed west of Zanja Street and east of Centinela Avenue on both Washington Boulevard and Washington Place. These three signs would serve to alert approaching traffic to road conditions so that motorists have sufficient time to choose an alternate route if they so choose. Since peak-period lane closures are not planned for the eastbound direction of Washington Boulevard, changeable message signs would be of less value west of the construction zone. It may be desirable to deploy part-time changeable message signs for utility work or other time-limited lane closures especially during school arrival and/or dismissal times or days when shopping activity is expected to be brisk at the Costco Wholesale shopping center.

Intelligent Project Staging

In addition to the work zone access requirements stated above, it is recommended that the project construction be streamlined so as to minimize overall duration and severity of traffic impacts along Washington Boulevard and within the surrounding area. This may involve the inclusion of contract incentives for expedited and/or early completion of project phases involving lane closures as well as an emphasis on off-peak work possibility at night and/or weekend work.

The construction for the sewer diversion and storage project is planned to be performed in several stages; namely, pump installation, pipe installation, and tank installation. The pump installation and tie-ins to existing sewer lines are planned to largely take place at night, with work areas to be plated or otherwise covered during the day. The pipe installation is to be performed using trenchless technology, minimizing disruption to the roadway and pavement by requiring staging area for boring and extrusion only. Of the three major sewer project elements, the most intensive (and therefore most disruptive) is the storage tank

installation, which would require a large work zone and staging area, closing traffic lanes for approximately eight to ten months. It is recommended that the City and project team work together to minimize closure of traffic lanes and open up impacted roadways as soon as possible.

Although several crosswalks across Washington Boulevard are planned to be closed throughout the project construction, sidewalk access, including ADA-compliant access is to remain open on either side of the roadway. Pedestrian crossing will still be provided at select locations across Washington Boulevard, while all crosswalks parallel to Washington Boulevard are to remain open.

Alternative Routing and Transit Solutions

Motorists diverted from Washington Boulevard during congested conditions while the project is being constructed have few alternative east-west roadways within the vicinity of the project area. To the north, Venice Boulevard parallels Washington Boulevard, offering an alternative connection between the I-405 freeway and Lincoln Boulevard. To the south, Maxella Avenue and Mindanao Way connect Lincoln Boulevard with local and collector cross streets such as Redwood Avenue and Alla Road. It is expected that motorists familiar with the project area such as residents and commuters would soon divert to an alternate route for their commutes, routines, and errands. The cities of Culver City and Los Angeles should make use of the recommended MOU to coordinate traffic flow monitoring and responsive measures to the expected diverted traffic flows.

Currently, curbside transit stops are provided on Washington Boulevard within the curb lane. Per the project work zone traffic control plan, the curb lanes will be used to accommodate through traffic; therefore, bus stops impeding through traffic will have to be closed and passengers directed to other bus stops outside the project construction zone. Temporary bus stops may be able to be established to the west of the construction zone in the vicinity of Walnut Avenue.

The project area is served by several transit agencies, including the Santa Monica Big Blue Bus and the Culver City Bus. It is suggested that the City project manager reach out to the applicable bus agencies to coordinate construction scheduling, the closure of conflicting bus stops, and the potential establishment of temporary bus stops during the construction work. In addition, to bus stop changes, the transit agencies may need to adjust their timetables and scheduling for routes on Washington Boulevard since travel in the westbound direction is likely to take longer than it does today. The City may also be able to assist in the notification of bus patrons, businesses, and the community of transit modifications due to construction.

Innovative Traffic Signal Solutions

As the region surrounding the project area (which includes west Los Angeles, Culver City, Santa Monica, and Marina del Rey) currently experiences heavy traffic volumes, the diversion of traffic from Washington Boulevard during the project construction could also affect travel along other routes and could increase delay at signalized intersections. It is therefore recommended that the cities of Culver City and Los Angeles

collaborate to consider implementing innovative and efficient traffic signal timing strategies to facilitate peak-period arterial traffic flows. Several potential solutions include:

- **Installation of northbound left-turn arrows at the intersection of Venice Boulevard and Centinela Avenue:** As Venice Boulevard is a potential alternative route to Washington Boulevard, it may be anticipated that vehicles diverting from Washington Boulevard may use Centinela Avenue to access Venice Boulevard. Currently, this intersection has left-turn arrows for all approaches except the northbound left-turn from Centinela Avenue to Venice Boulevard. The installation of northbound left-turn arrows here would provide a method for clearing any mounting backup in the left-turn queues. This improvement has been previously identified as a part of LADOT's Vision Zero program and design is complete, pending construction. It is suggested that LADOT expedite the completion of the project so that it can be in place prior to construction.

- **Installation of westbound left-turn arrows at the intersection of Washington Boulevard and Redwood Avenue:** During the construction of the underground storage tank, westbound left-turns from Washington Boulevard onto South Glencoe Avenue will be prohibited for more than six months. During this time, it is expected that a significant amount of traffic will take the westbound left-turn at Redwood Avenue to access locations south of Washington Boulevard. The installation of westbound left-turn arrows at this intersection would provide an opportunity to both facilitate traffic flows for a potential increase in westbound left-turn traffic as well as encourage motorists to divert from Washington Boulevard prior to entering the restricted travel lane section of the roadway through the project area.

- **Modification of traffic signal timing at the intersection of Washington Boulevard and East Costco Driveway / South Glencoe Avenue.** During project construction, eastbound left-turns from Washington Boulevard into the westerly Costco driveway will be prohibited for more than six months. During this time, it is expected that those vehicles wishing to access the Costco Wholesale parking lots and other adjacent businesses from the west would instead use the eastbound left-turn pocket at the easterly driveway. Therefore, it is recommended that the City of Culver City monitor and adjust the traffic signal timing at this intersection to ensure that increased eastbound left-turn traffic queues do not overflow to obstruct the eastbound through traffic lanes.

Business Coordination

In addition to Costco Wholesale, several other businesses are located along Washington Boulevard within the project work zone. Although the project construction is to maintain driveway and parking lot access for employees and patrons of these businesses at all times, traffic delays are still expected to affect motorists headed to and from businesses along Washington Boulevard. To minimize traffic impacts, especially during peak commute periods and business operating hours, it is recommended that the City and project team reach out to businesses to consider temporarily modifying their operations during the project construction.

Some potential business operational strategies may include:

- **Extending business hours.** Extending business hours later into the evening is expected to spread out traffic and encourage business patrons to avoid the peak traffic hours when commuter-related congestion is expected to be at its worst.

- **Conducting after-hours and/or off-peak deliveries.** Rescheduling inventory, supplies, and food deliveries to occur outside of business hours would reduce the truck traffic traveling on Washington Boulevard during the peak commute periods.

- **Flexible employee scheduling and carpooling.** There isn't a sufficient employee base or location to provide a reasonable off-site employee parking and shuttle operation for the Costco Wholesale shopping center, the largest commercial property within the project area. However, flexible scheduling could facilitate employee carpooling among the shopping center businesses. It is suggested that employers be requested to encourage their employees to carpool to the site and facilitate that activity by offering flexible scheduling options for those employees that live in close proximity to each other. Additionally, altering work schedules slightly in order to schedule shift changes outside of peak commute periods may also be an effective way of reducing traffic demands at the driveways and on Washington Boulevard.

- **Encouraging online orders.** Online orders would be shipped out and delivered by centralized delivery vehicles, discouraging patrons from individually visiting businesses and reducing traffic on Washington Boulevard through the work zone. Restaurants may also look into partnering with mobile services such as DoorDash, Postmates, and UberEats to consolidate food deliveries and reduce on-site visits without incurring additional hiring and staffing costs.

Public Outreach

Due to the duration and size of the project's construction impact on roadway operations on a major regional route, an intentional and coordinated public outreach campaign should be conducted to keep members of the residential and commercial communities apprised of up-to-date information regarding the project status, roadway closures, and modified transit routes and/or stops. The project outreach should be extensive and include methods of communication such as:

- Press and media alerts;
- Public town hall meetings;
- City and business website updates;
- Direct emails to project stakeholders and the public;
- Social media pages and announcements (eg., Facebook, Twitter, Nextdoor);
- Project updates to politicians from Culver City, Los Angeles, and Los Angeles County; and
- Periodic written notices and flyers updating project progress to residents, businesses, and schools.

Additionally, the City of Culver City and project team should keep the messages that are displayed on the changeable message signs current and relevant during the project to apprise motorists of traffic delays and

upcoming construction activities. Consideration should also be given to providing construction and traffic information to mobile navigation applications such as Google Maps, Apple Maps, and Waze.

APPENDIX A

Existing Traffic Volume Data (2018)

24-Hour Roadway Volumes

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

W Washington Blvd Bet. Glencoe Ave & Walnut Ave (Client #19)

Day: Thursday
Date: 6/7/2018

City: Los Angeles
Project #: CA18_5412_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,854	18,619	34,473

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
0:00	0	0	43		53		96		12:00	0	0	285		229		514	
0:15	0	0	26		22		48		12:15	0	0	271		331		602	
0:30	0	0	43		39		82		12:30	0	0	235		323		558	
0:45	0	0	23	135	26	140	49	275	12:45	0	0	257	1048	267	1150	524	2198
1:00	0	0	27		12		39		13:00	0	0	277		296		573	
1:15	0	0	29		16		45		13:15	0	0	231		290		521	
1:30	0	0	20		13		33		13:30	0	0	228		302		530	
1:45	0	0	16	92	8	49	24	141	13:45	0	0	256	992	297	1185	553	2177
2:00	0	0	20		5		25		14:00	0	0	281		306		587	
2:15	0	0	5		12		17		14:15	0	0	248		305		553	
2:30	0	0	6		14		20		14:30	0	0	266		288		554	
2:45	0	0	10	41	9	40	19	81	14:45	0	0	215	1010	287	1186	502	2196
3:00	0	0	3		15		18		15:00	0	0	240		271		511	
3:15	0	0	4		6		10		15:15	0	0	281		300		581	
3:30	0	0	8		7		15		15:30	0	0	272		302		574	
3:45	0	0	7	22	7	35	14	57	15:45	0	0	287	1080	323	1196	610	2276
4:00	0	0	7		10		17		16:00	0	0	273		306		579	
4:15	0	0	9		4		13		16:15	0	0	271		271		542	
4:30	0	0	14		22		36		16:30	0	0	292		332		624	
4:45	0	0	15	45	25	61	40	106	16:45	0	0	244	1080	345	1254	589	2334
5:00	0	0	12		17		29		17:00	0	0	257		312		569	
5:15	0	0	17		25		42		17:15	0	0	271		288		559	
5:30	0	0	32		61		93		17:30	0	0	244		303		547	
5:45	0	0	48	109	77	180	125	289	17:45	0	0	245	1017	327	1230	572	2247
6:00	0	0	56		95		151		18:00	0	0	295		365		660	
6:15	0	0	53		120		173		18:15	0	0	277		270		547	
6:30	0	0	92		126		218		18:30	0	0	266		291		557	
6:45	0	0	125	326	165	506	290	832	18:45	0	0	211	1049	332	1258	543	2307
7:00	0	0	145		200		345		19:00	0	0	235		291		526	
7:15	0	0	149		226		375		19:15	0	0	239		252		491	
7:30	0	0	236		235		471		19:30	0	0	240		256		496	
7:45	0	0	240	770	290	951	530	1721	19:45	0	0	208	922	289	1088	497	2010
8:00	0	0	259		278		537		20:00	0	0	201		261		462	
8:15	0	0	253		279		532		20:15	0	0	236		252		488	
8:30	0	0	226		255		481		20:30	0	0	221		245		466	
8:45	0	0	241	979	278	1090	519	2069	20:45	0	0	189	847	260	1018	449	1865
9:00	0	0	254		279		533		21:00	0	0	170		244		414	
9:15	0	0	267		260		527		21:15	0	0	185		199		384	
9:30	0	0	274		274		548		21:30	0	0	159		212		371	
9:45	0	0	266	1061	275	1088	541	2149	21:45	0	0	137	651	182	837	319	1488
10:00	0	0	204		284		488		22:00	0	0	138		149		287	
10:15	0	0	220		251		471		22:15	0	0	121		139		260	
10:30	0	0	202		308		510		22:30	0	0	104		111		215	
10:45	0	0	259	885	272	1115	531	2000	22:45	0	0	100	463	116	515	216	978
11:00	0	0	219		278		497		23:00	0	0	109		88		197	
11:15	0	0	224		310		534		23:15	0	0	85		62		147	
11:30	0	0	260		286		546		23:30	0	0	58		64		122	
11:45	0	0	224	927	301	1175	525	2102	23:45	0	0	51	303	58	272	109	575
TOTALS				5392		6430		**11822**	**TOTALS**				10462		12189		**22651**
SPLIT %				45.6%		54.4%		**34.3%**	**SPLIT %**				46.2%		53.8%		**65.7%**

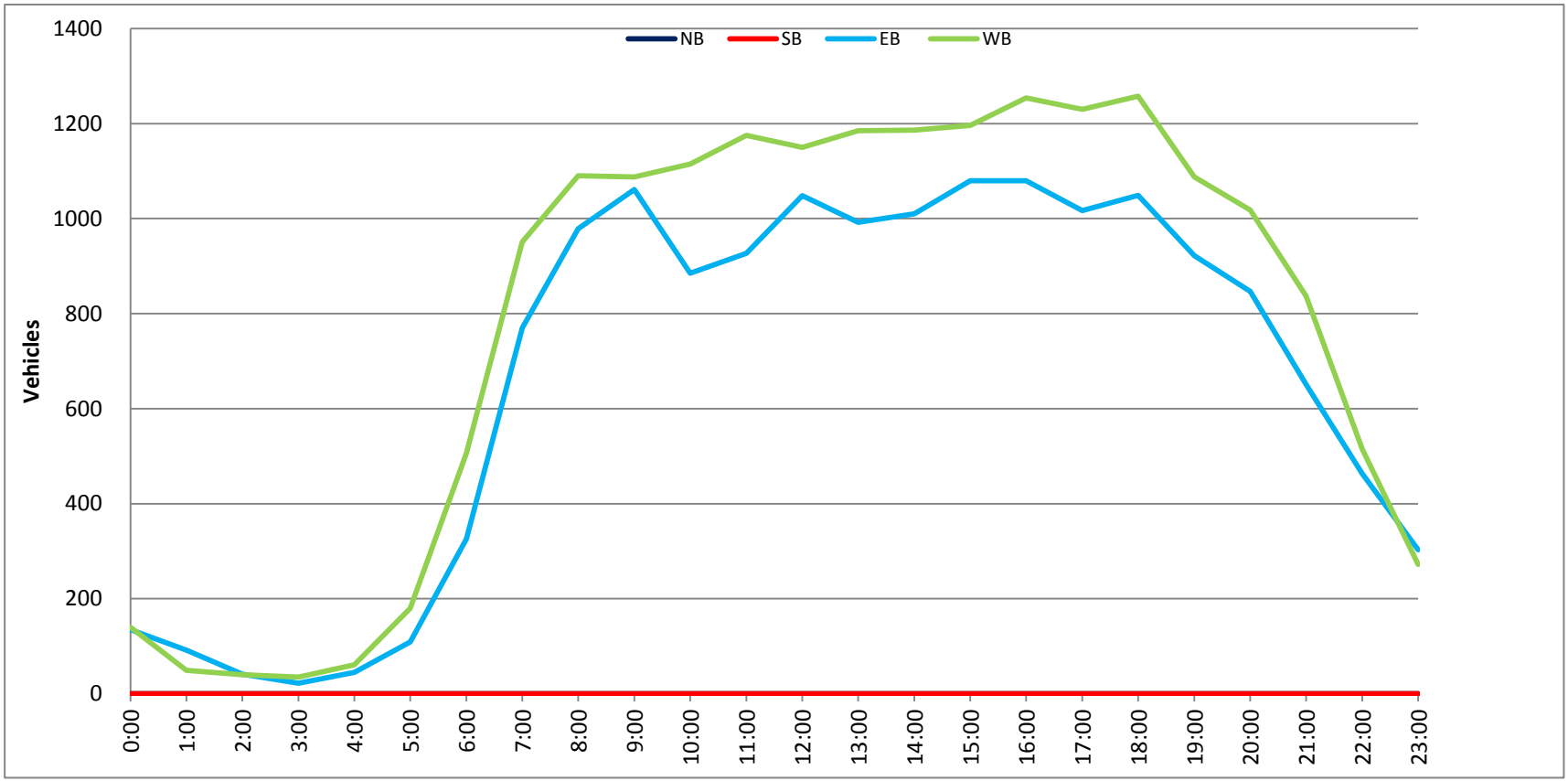
DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,854	18,619	34,473

AM Peak Hour			9:00		11:45		**11:45**		**PM Peak Hour**			15:45		17:15		**15:45**	
AM Pk Volume			1061		1184		**2199**		**PM Pk Volume**			1123		1283		**2355**	
Pk Hr Factor			0.968		0.894		**0.913**		**Pk Hr Factor**			0.961		0.879		**0.944**	
7 - 9 Volume	0	0	1749		2041		**3790**		**4 - 6 Volume**	0	0	2097		2484		**4581**	
7 - 9 Peak Hour			7:30		7:45		**7:45**		**4 - 6 Peak Hour**			16:00		16:30		**16:30**	
7 - 9 Pk Volume	0	0	988		1102		**2080**		**4 - 6 Pk Volume**	0	0	1080		1277		**2341**	
Pk Hr Factor	0.000	0.000	0.954		0.950		**0.968**		**Pk Hr Factor**	0.000	0.000	0.925		0.925		**0.938**	

Prepared by NDS/ATD

Project #: CA18_5412_001 **City:** Los Angeles

Location: W Washington Blvd Bet. Glencoe Ave & **Date:** 6/7/2018



Prepared by National Data & Surveying Services

CLASSIFICATION

W Washington Blvd Bet. Glencoe Ave & Walnut Ave (Client #19)

Day: Thursday
Date: 6/7/2018

City: Los Angeles
Project #: CA18_5412_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	256	13	0	6	0	0	0	0	0	0	0	0	275
01:00	0	130	9	0	2	0	0	0	0	0	0	0	0	141
02:00	0	73	6	0	2	0	0	0	0	0	0	0	0	81
03:00	0	56	1	0	0	0	0	0	0	0	0	0	0	57
04:00	0	100	5	0	1	0	0	0	0	0	0	0	0	106
05:00	0	273	9	0	7	0	0	0	0	0	0	0	0	289
06:00	1	746	63	4	18	0	0	0	0	0	0	0	0	832
07:00	0	1570	103	10	36	1	0	0	1	0	0	0	0	1721
08:00	6	1888	107	8	58	0	0	2	0	0	0	0	0	2069
09:00	6	1944	126	7	62	2	0	2	0	0	0	0	0	2149
10:00	3	1799	120	5	66	2	1	1	3	0	0	0	0	2000
11:00	9	1892	125	10	63	1	0	1	1	0	0	0	0	2102
12:00 PM	7	1985	120	7	71	2	0	4	2	0	0	0	0	2198
13:00	4	1960	130	7	73	0	0	3	0	0	0	0	0	2177
14:00	5	1977	149	10	54	1	0	0	0	0	0	0	0	2196
15:00	9	2060	139	12	55	0	0	1	0	0	0	0	0	2276
16:00	7	2114	136	9	67	0	0	1	0	0	0	0	0	2334
17:00	3	2030	128	11	72	0	0	2	1	0	0	0	0	2247
18:00	6	2115	110	8	67	0	0	1	0	0	0	0	0	2307
19:00	3	1855	100	6	45	0	0	1	0	0	0	0	0	2010
20:00	4	1720	89	9	41	1	0	1	0	0	0	0	0	1865
21:00	1	1371	69	1	46	0	0	0	0	0	0	0	0	1488
22:00	0	897	59	4	18	0	0	0	0	0	0	0	0	978
23:00	0	525	33	1	16	0	0	0	0	0	0	0	0	575
Totals	74	31336	1949	129	946	10	1	20	8					34473
% of Totals	0%	91%	6%	0%	3%	0%	0%	0%	0%					100%

AM Volumes	25	10727	687	44	321	6	1	6	5	0	0	0	0	11822
% AM	0%	31%	2%	0%	1%	0%	0%	0%	0%					34%
AM Peak Hour	11:00	09:00	09:00	07:00	10:00	09:00	10:00	08:00	10:00					09:00
Volume	9	1944	126	10	66	2	1	2	3					2149
PM Volumes	49	20609	1262	85	625	4	0	14	3	0	0	0	0	22651
% PM	0%	60%	4%	0%	2%	0%		0%	0%					66%
PM Peak Hour	15:00	18:00	14:00	15:00	13:00	12:00		12:00	12:00					16:00
Volume	9	2115	149	12	73	2		4	2					2334

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	3790		11%	4375		13%	4581		13%	21727		63%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Turning Movement Counts

Prepared by National Data & Surveying Services

Lincoln Blvd & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-015
City: Venice

Day: Tuesday
Date: 06/05/2018

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	01:00 PM - 02:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

Lincoln Blvd — SOUTHBOUND

AM	78	1240	217	0	1554	AM
NOON	115	1102	270	0	1535	NOON
PM	70	1542	163	0	1563	PM

Washington Blvd — EASTBOUND

AM	NOON	PM		
1471	1314	1301		
0	0	0	0	
42	127	96	2	
735	602	652	3	
513	485	417	0	
AM	NOON	PM		

Washington Blvd — WESTBOUND

PM	NOON	AM		
230	320	156	0	
765	649	684	3	
284	234	129	2	
0	0	0	0	
1018	1119	1074		
PM	NOON	AM		

Lincoln Blvd — NORTHBOUND

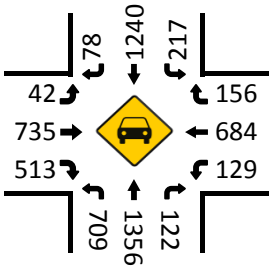
PM	2243	0	466	1237	203	PM
NOON	1821	0	550	1088	247	NOON
AM	1882	0	709	1356	122	AM

0	3	2	0	
0	2	3	0	

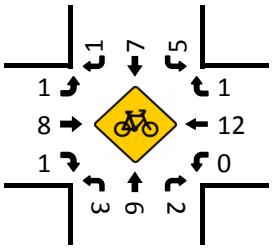
CONTROL: Signalized

	AM	NOON	PM
TEV	5981	5789	6125
PHF	0.99	0.99	0.99

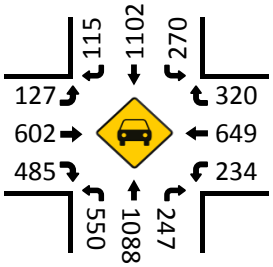
Total Vehicles (AM)



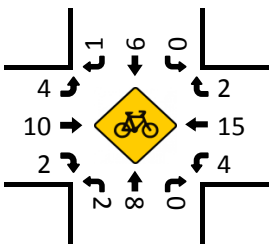
Bikes (AM)



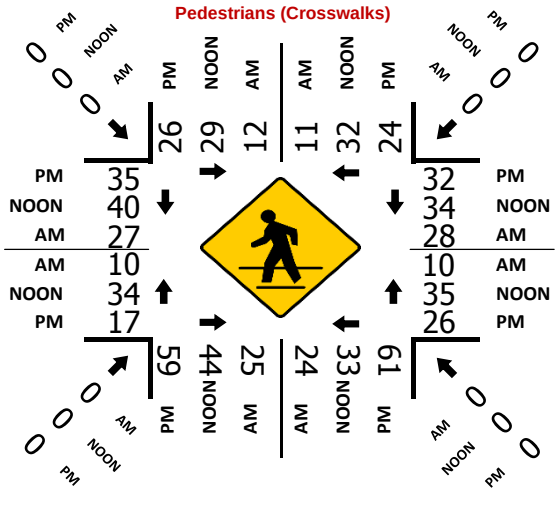
Total Vehicles (Noon)



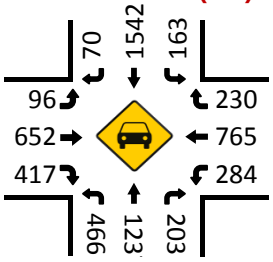
Bikes (NOON)



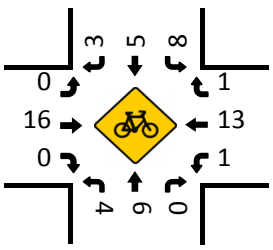
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Lincoln Blvd & Washington Blvd
City: Venice
Control: Signalized

Project ID: 18-05413-015
Date: 6/5/2018

Total

NS/EW Streets:	Lincoln Blvd				Lincoln Blvd				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	171	350	34	0	25	168	19	0	15	127	67	0	16	92	37	0	1121
7:15 AM	155	384	28	0	27	181	15	0	13	139	73	0	20	100	36	0	1171
7:30 AM	145	324	34	0	50	245	24	0	10	175	100	0	35	169	45	0	1356
7:45 AM	171	364	32	0	59	297	21	0	10	173	124	0	29	190	33	0	1503
8:00 AM	180	320	25	0	54	304	22	0	9	192	128	0	34	173	51	0	1492
8:15 AM	160	340	26	0	61	339	22	0	7	187	126	0	29	174	34	0	1505
8:30 AM	198	332	39	0	43	300	13	0	16	183	135	0	37	147	38	0	1481
8:45 AM	191	289	32	0	59	308	14	0	16	185	113	0	24	153	35	0	1419
9:00 AM	177	339	40	0	61	281	23	0	17	201	146	0	32	156	38	0	1511
9:15 AM	192	317	41	0	46	224	40	0	30	179	111	0	42	152	50	0	1424
9:30 AM	215	291	25	0	54	306	22	0	10	154	119	0	39	148	57	0	1440
9:45 AM	188	308	48	0	55	284	34	0	19	157	105	0	31	166	47	0	1442
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2143	3958	404	0	594	3237	269	0	172	2052	1347	0	368	1820	501	0	16865
APPROACH %'s :	32.94%	60.85%	6.21%	0.00%	14.49%	78.95%	6.56%	0.00%	4.82%	57.46%	37.72%	0.00%	13.69%	67.68%	18.63%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	709	1356	122	0	217	1240	78	0	42	735	513	0	129	684	156	0	5981
PEAK HR FACTOR :	0.895	0.931	0.782	0.000	0.889	0.914	0.886	0.000	0.656	0.957	0.950	0.000	0.872	0.900	0.765	0.000	0.994
	0.961				0.909				0.966				0.939				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	152	297	67	0	65	266	36	0	19	139	93	0	52	127	75	0	1388
12:15 PM	131	279	85	0	82	265	42	0	22	144	104	0	56	126	82	0	1418
12:30 PM	188	298	79	0	62	224	36	0	41	148	115	0	66	147	70	0	1474
12:45 PM	127	275	61	0	70	246	41	0	39	134	103	0	68	158	69	0	1391
1:00 PM	153	262	55	0	67	257	27	0	38	159	132	0	63	174	79	0	1466
1:15 PM	128	273	81	0	84	300	29	0	28	128	113	0	54	150	84	0	1452
1:30 PM	153	259	57	0	59	236	26	0	41	158	126	0	67	168	74	0	1424
1:45 PM	116	294	54	0	60	309	33	0	20	157	114	0	50	157	83	0	1447
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1148	2237	539	0	549	2103	270	0	248	1167	900	0	476	1207	616	0	11460
APPROACH %'s :	29.26%	57.01%	13.74%	0.00%	18.79%	71.97%	9.24%	0.00%	10.71%	50.41%	38.88%	0.00%	20.70%	52.50%	26.79%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	550	1088	247	0	270	1102	115	0	127	602	485	0	234	649	320	0	5789
PEAK HR FACTOR :	0.899	0.925	0.762	0.000	0.804	0.892	0.871	0.000	0.774	0.947	0.919	0.000	0.873	0.932	0.952	0.000	0.987
	0.978				0.900				0.922				0.952				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	112	257	45	0	51	303	22	0	23	152	121	0	67	157	70	0	1380
3:15 PM	107	303	40	0	60	310	24	0	34	172	101	0	90	178	58	0	1477
3:30 PM	119	300	58	0	39	325	33	0	19	153	97	0	78	166	54	0	1441
3:45 PM	106	258	49	0	42	281	19	0	29	173	108	0	70	162	69	0	1366
4:00 PM	110	284	46	0	31	268	9	0	20	161	113	0	83	184	81	0	1390
4:15 PM	115	306	47	0	35	347	15	0	25	154	119	0	90	167	59	0	1479
4:30 PM	109	302	49	0	56	346	16	0	19	158	92	0	69	191	46	0	1453
4:45 PM	116	311	44	0	38	412	16	0	16	169	101	0	61	193	66	0	1543
5:00 PM	118	286	66	0	34	386	18	0	35	156	111	0	77	166	55	0	1508
5:15 PM	115	310	53	0	33	391	19	0	21	165	117	0	79	188	58	0	1549
5:30 PM	117	330	40	0	58	353	17	0	24	162	88	0	67	218	51	0	1525
5:45 PM	112	334	61	0	66	322	20	0	14	162	108	0	65	190	52	0	1506
6:00 PM	96	329	43	0	65	364	16	0	18	167	88	0	62	195	52	0	1495
6:15 PM	97	341	62	0	58	333	26	0	19	170	99	0	60	183	54	0	1502
6:30 PM	102	309	37	0	52	326	26	0	15	172	103	0	71	184	44	0	1441
6:45 PM	95	314	55	0	53	307	12	0	26	172	113	0	78	185	56	0	1466
7:00 PM	92	287	49	0	54	357	28	0	15	132	89	0	76	195	55	0	1429
7:15 PM	113	243	43	0	50	350	26	0	9	133	117	0	68	183	54	0	1389
7:30 PM	108	219	60	0	37	327	18	0	28	146	100	0	43	139	51	0	1276
7:45 PM	112	185	33	0	53	327	18	0	29	136	83	0	64	152	48	0	1240
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2171	5808	980	0	965	6735	398	0	438	3165	2068	0	1418	3576	1133	0	28855
APPROACH %'s :	24.23%	64.83%	10.94%	0.00%	11.92%	83.17%	4.91%	0.00%	7.72%	55.81%	36.47%	0.00%	23.14%	58.36%	18.49%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	466	1237	203	0	163	1542	70	0	96	652	417	0	284	765	230	0	6125
PEAK HR FACTOR :	0.987	0.937	0.769	0.000	0.703	0.936	0.921	0.000	0.686	0.964	0.891	0.000	0.899	0.877	0.871	0.000	0.989
	0.978				0.952				0.961				0.952				

Prepared by National Data & Surveying Services

Costco Dwy & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-016
City: Marina Del Rey

Day: Tuesday
Date: 06/05/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	12:30 PM - 01:30 PM
PM	05:15 PM - 06:15 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

Costco Dwy — SOUTHBOUND

AM	64	0	38	0	165 AM
NOON	282	0	191	0	436 NOON
PM	161	0	94	0	300 PM

Washington Blvd — EASTBOUND

AM	NOON	PM		
1213	1251	1282	⇦	
10	2	4	↶	0
126	305	214	↰	1
989	847	915	→	2
0	4	4	↱	0
AM	NOON	PM		

Washington Blvd — WESTBOUND

PM	NOON	AM		
86	131	39	↷	0
1116	966	1139	←	3
2	3	0	↶	0
6	2	1	↶	0
1023	1046	1028	⇨	
PM	NOON	AM		

Costco Dwy — NORTHBOUND

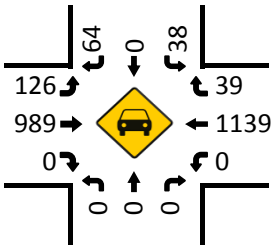
PM	6	0	1	0	8 PM
NOON	7	0	1	0	6 NOON
AM	0	0	0	0	0 AM

	1	0	1	0
	0	0	1	0

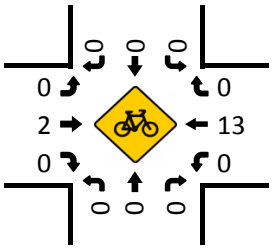
CONTROL: Signalized

	AM	NOON	PM
TEV	2406	2740	2611
PHF	0.96	0.97	0.96

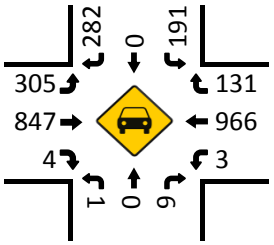
Total Vehicles (AM)



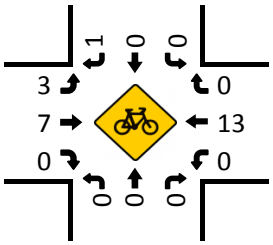
Bikes (AM)



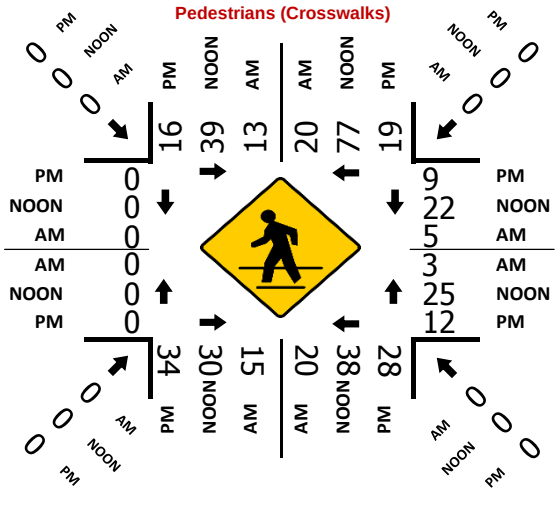
Total Vehicles (Noon)



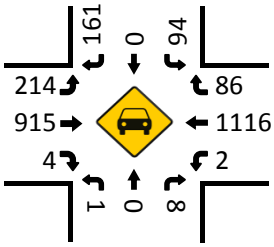
Bikes (NOON)



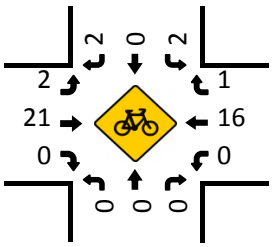
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Costco Dwy & Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05413-016
Date: 6/5/2018

Total

NS/EW Streets:	Costco Dwy				Costco Dwy				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	2	0	13	0	14	158	0	1	0	152	3	0	343
7:15 AM	0	0	0	0	3	0	11	0	31	185	0	0	0	166	10	0	406
7:30 AM	0	0	0	0	4	0	21	0	27	242	0	3	0	276	6	0	579
7:45 AM	0	0	0	0	8	0	13	0	27	255	0	4	0	312	10	0	629
8:00 AM	0	0	0	0	10	0	17	0	28	253	0	3	0	291	11	0	613
8:15 AM	0	0	0	0	16	0	13	0	44	239	0	0	0	260	12	1	585
8:30 AM	0	0	1	0	8	0	22	0	35	239	0	1	1	228	18	1	554
8:45 AM	1	0	0	0	12	0	12	0	27	250	1	0	0	228	10	0	541
9:00 AM	0	0	1	0	11	0	12	0	46	252	0	0	0	239	18	2	581
9:15 AM	0	0	0	0	21	0	28	0	40	223	1	0	0	242	17	0	572
9:30 AM	0	0	1	0	11	0	26	0	55	211	1	1	1	244	20	0	571
9:45 AM	0	0	0	0	17	0	36	0	69	189	1	2	1	227	19	0	561
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	3	0	123	0	224	0	443	2696	4	15	3	2865	154	4	6535
APPROACH %'s :	25.00%	0.00%	75.00%	0.00%	35.45%	0.00%	64.55%	0.00%	14.03%	85.37%	0.13%	0.47%	0.10%	94.68%	5.09%	0.13%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	38	0	64	0	126	989	0	10	0	1139	39	1	2406
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.594	0.000	0.762	0.000	0.716	0.970	0.000	0.625	0.000	0.913	0.813	0.250	0.956
							0.879				0.983				0.915		

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	1	0	32	0	53	0	84	226	2	0	0	243	28	0	669
12:15 PM	0	0	0	0	41	0	63	0	79	227	1	0	0	210	34	0	655
12:30 PM	0	0	1	0	44	0	65	0	89	247	0	0	0	227	33	0	706
12:45 PM	0	0	1	0	50	0	70	0	71	174	2	1	0	237	25	2	633
1:00 PM	0	0	2	0	47	0	85	0	75	202	1	1	2	244	42	0	701
1:15 PM	1	0	2	0	50	0	62	0	70	224	1	0	1	258	31	0	700
1:30 PM	0	0	0	0	38	0	62	0	62	220	1	0	1	265	30	0	679
1:45 PM	0	0	2	0	47	0	65	0	73	217	1	0	0	230	24	1	660
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	9	0	349	0	525	0	603	1737	9	2	4	1914	247	3	5403
APPROACH %'s :	10.00%	0.00%	90.00%	0.00%	39.93%	0.00%	60.07%	0.00%	25.65%	73.88%	0.38%	0.09%	0.18%	88.28%	11.39%	0.14%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	1	0	6	0	191	0	282	0	305	847	4	2	3	966	131	2	2740
PEAK HR FACTOR :	0.250	0.000	0.750	0.000	0.955	0.000	0.829	0.000	0.857	0.857	0.500	0.500	0.375	0.936	0.780	0.250	0.970
			0.583				0.896				0.862				0.950		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	1	0	38	0	63	0	60	201	2	0	0	266	35	0	666
3:15 PM	0	0	0	0	39	0	47	0	65	232	0	1	0	256	25	1	666
3:30 PM	0	0	0	0	38	0	40	0	43	185	3	0	0	270	25	2	606
3:45 PM	1	0	0	0	24	0	55	0	72	225	5	0	0	247	23	0	652
4:00 PM	1	0	2	0	43	0	67	0	44	196	4	0	0	279	9	0	645
4:15 PM	0	0	2	0	26	0	54	0	45	217	2	1	1	279	26	1	654
4:30 PM	0	0	2	0	38	0	48	0	54	215	0	0	0	249	16	0	622
4:45 PM	0	0	0	0	22	0	51	0	47	228	0	0	2	266	14	1	631
5:00 PM	0	0	6	0	22	0	35	0	39	221	5	1	0	268	18	1	616
5:15 PM	1	0	3	0	20	0	37	0	47	237	2	1	0	284	18	0	650
5:30 PM	0	0	1	0	28	0	39	0	54	209	1	0	0	278	26	3	639
5:45 PM	0	0	2	0	23	0	47	0	57	246	1	1	1	282	19	3	682
6:00 PM	0	0	2	0	23	0	38	0	56	223	0	2	1	272	23	0	640
6:15 PM	0	0	3	0	26	0	26	0	50	243	1	0	0	270	12	3	634
6:30 PM	0	0	1	0	16	0	42	0	43	209	2	0	0	255	15	2	585
6:45 PM	0	0	3	0	17	0	34	0	52	240	1	0	1	294	18	3	663
7:00 PM	0	0	3	0	27	0	40	0	54	183	3	0	1	251	22	0	584
7:15 PM	0	0	0	0	20	0	40	0	50	176	0	1	0	259	26	0	572
7:30 PM	0	0	1	0	20	0	39	0	58	185	1	1	0	226	17	0	548
7:45 PM	0	0	3	0	25	0	45	0	55	192	0	0	0	235	22	0	577
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	35	0	535	0	887	0	1045	4263	33	9	7	5286	409	20	12532
APPROACH %'s :	7.89%	0.00%	92.11%	0.00%	37.62%	0.00%	62.38%	0.00%	19.53%	79.68%	0.62%	0.17%	0.12%	92.38%	7.15%	0.35%	
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	1	0	8	0	94	0	161	0	214	915	4	4	2	1116	86	6	2611
PEAK HR FACTOR :	0.250	0.000	0.667	0.000	0.839	0.000	0.856	0.000	0.939	0.930	0.500	0.500	0.500	0.982	0.827	0.500	0.957
			0.563				0.911				0.932				0.985		

Prepared by National Data & Surveying Services

Dwy/Glencoe Ave S & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-017
City: Marina Del Rey

Day: Tuesday
Date: 06/05/2018

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	12:15 PM - 01:15 PM
PM	05:15 PM - 06:15 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

Dwy/Glencoe Ave S — SOUTHBOUND

AM	8	44	103	0	236	AM
NOON	93	111	324	0	644	NOON
PM	57	155	256	0	520	PM

Washington Blvd — EASTBOUND

AM	NOON	PM		
1073	1002	1136		
0	0	0	0	
8	51	20	1	
917	784	718	2	
119	217	322	1	
AM	NOON	PM		

CONTROL

Signalized

	AM	NOON	PM
TEV	3218	3579	3788
PHF	0.94	0.97	0.99

Washington Blvd — WESTBOUND

1	387	445	156
2	860	711	715
1	386	243	279
0	0	0	0
	1268	1362	1467

PM	NOON	AM

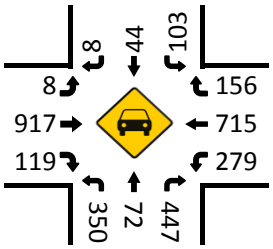
Dwy/Glencoe Ave S — NORTHBOUND

PM	864	1	219	113	294	PM
NOON	571	0	198	148	254	NOON
AM	442	0	350	72	447	AM

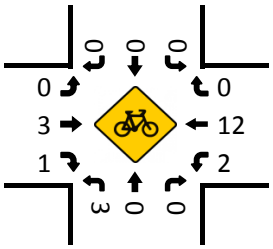
0 1.5 0.5 1

1 0.5 1.5 0

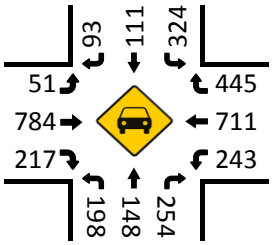
Total Vehicles (AM)



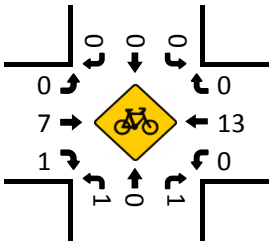
Bikes (AM)



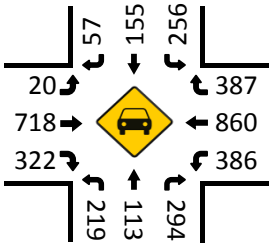
Total Vehicles (Noon)



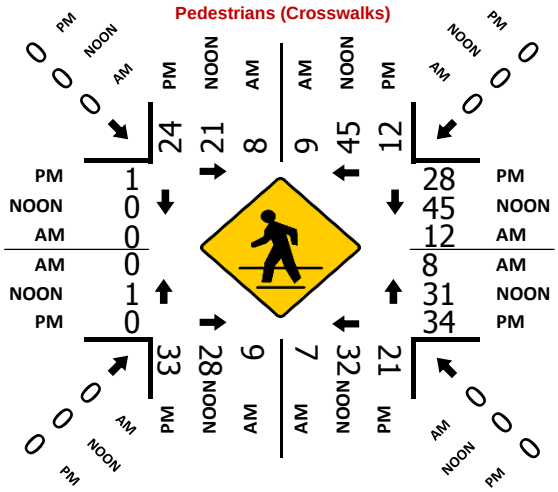
Bikes (NOON)



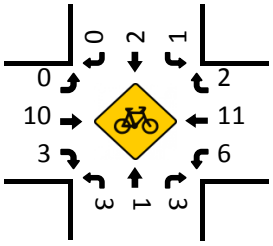
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Dwy/Glencoe Ave S & Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05413-017
Date: 6/5/2018

Total

NS/EW Streets:	Dwy/Glencoe Ave S				Dwy/Glencoe Ave S				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	44	18	77	0	17	8	2	0	2	158	9	0	37	93	23	0	488
7:15 AM	49	18	118	0	22	7	2	0	3	170	16	0	36	110	23	0	574
7:30 AM	104	18	107	0	21	12	3	0	2	211	18	0	41	163	37	0	737
7:45 AM	103	18	130	0	28	9	1	0	2	226	25	0	69	216	31	0	858
8:00 AM	101	14	108	0	25	8	4	0	4	245	33	0	66	163	40	0	811
8:15 AM	75	17	106	0	29	18	2	0	1	212	36	0	78	183	42	0	799
8:30 AM	71	23	103	0	21	9	1	0	1	234	25	0	66	153	43	0	750
8:45 AM	57	26	74	0	17	12	1	0	5	223	40	0	75	174	57	0	761
9:00 AM	58	30	76	0	18	9	2	0	9	196	45	0	95	182	83	0	803
9:15 AM	59	29	74	0	41	13	7	0	3	188	35	0	90	186	76	0	801
9:30 AM	57	31	83	0	37	21	7	0	7	194	34	0	60	162	73	0	766
9:45 AM	44	41	54	0	47	22	9	0	12	154	32	0	60	180	108	0	763
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	822	283	1110	0	323	148	41	0	51	2411	348	0	773	1965	636	0	8911
APPROACH %'s :	37.11%	12.78%	50.11%	0.00%	63.09%	28.91%	8.01%	0.00%	1.81%	85.80%	12.38%	0.00%	22.91%	58.24%	18.85%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	350	72	447	0	103	44	8	0	8	917	119	0	279	715	156	0	3218
PEAK HR FACTOR :	0.850	0.783	0.860	0.000	0.888	0.611	0.500	0.000	0.500	0.936	0.826	0.000	0.894	0.828	0.907	0.000	0.938
	0.866				0.791				0.926				0.910				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	50	31	61	0	56	25	22	0	12	212	57	0	59	184	112	0	881
12:15 PM	43	30	64	0	88	28	19	0	12	206	54	0	60	168	122	0	894
12:30 PM	57	39	69	0	64	22	22	0	13	216	66	0	53	158	124	0	903
12:45 PM	43	44	57	0	101	34	27	0	15	142	48	0	67	192	86	0	856
1:00 PM	55	35	64	0	71	27	25	0	11	220	49	0	63	193	113	0	926
1:15 PM	39	29	67	0	73	35	27	0	19	189	53	0	73	186	102	0	892
1:30 PM	44	33	73	0	79	16	22	0	10	195	50	0	61	186	100	0	869
1:45 PM	49	31	70	0	81	29	19	0	8	181	58	0	75	183	107	0	891
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	380	272	525	0	613	216	183	0	100	1561	435	0	511	1450	866	0	7112
APPROACH %'s :	32.29%	23.11%	44.60%	0.00%	60.57%	21.34%	18.08%	0.00%	4.77%	74.48%	20.75%	0.00%	18.08%	51.29%	30.63%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	198	148	254	0	324	111	93	0	51	784	217	0	243	711	445	0	3579
PEAK HR FACTOR :	0.868	0.841	0.920	0.000	0.802	0.816	0.861	0.000	0.850	0.891	0.822	0.000	0.907	0.921	0.897	0.000	0.966
	0.909				0.815				0.892				0.948				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	61	39	67	0	68	23	19	0	9	188	56	0	87	188	92	0	897
3:15 PM	45	24	80	0	80	23	17	0	10	209	62	0	85	200	110	0	945
3:30 PM	48	35	69	0	72	38	30	0	5	159	61	0	78	209	89	0	893
3:45 PM	36	23	59	0	65	29	17	0	8	185	64	0	97	217	96	0	896
4:00 PM	42	31	58	0	74	36	18	0	7	153	74	0	97	207	94	0	891
4:15 PM	34	29	47	0	65	22	20	0	9	184	69	0	106	229	107	0	921
4:30 PM	44	27	47	0	75	40	22	0	5	168	63	0	82	185	83	0	841
4:45 PM	28	28	71	0	61	34	16	0	6	187	68	0	95	218	99	0	911
5:00 PM	55	23	72	0	79	38	18	0	7	180	53	0	82	205	94	0	906
5:15 PM	38	23	52	0	70	33	18	0	4	202	73	0	90	228	111	0	942
5:30 PM	68	40	85	0	62	45	15	0	5	150	83	0	102	212	83	0	950
5:45 PM	52	25	58	0	57	47	16	0	5	187	89	0	106	221	90	0	953
6:00 PM	61	25	99	1	67	30	8	0	6	179	77	0	88	199	103	0	943
6:15 PM	43	16	61	0	69	31	10	0	7	205	66	0	87	216	79	0	890
6:30 PM	49	29	72	0	84	36	12	0	3	160	71	0	93	213	66	0	888
6:45 PM	43	23	67	0	69	30	14	0	6	197	69	0	82	253	87	0	940
7:00 PM	52	25	68	0	79	25	8	0	8	153	58	0	89	194	114	0	873
7:15 PM	37	15	47	0	78	34	14	0	3	146	55	0	103	215	87	0	834
7:30 PM	46	39	47	0	79	36	4	0	5	148	45	0	98	172	113	0	832
7:45 PM	42	20	48	0	68	24	16	0	11	157	59	0	97	200	96	0	838
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	924	539	1274	1	1421	654	312	0	129	3497	1315	0	1844	4181	1893	0	17984
APPROACH %'s :	33.75%	19.69%	46.53%	0.04%	59.53%	27.40%	13.07%	0.00%	2.61%	70.78%	26.61%	0.00%	23.29%	52.80%	23.91%	0.00%	
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	219	113	294	1	256	155	57	0	20	718	322	0	386	860	387	0	3788
PEAK HR FACTOR :	0.805	0.706	0.742	0.250	0.914	0.824	0.792	0.000	0.833	0.889	0.904	0.000	0.910	0.943	0.872	0.000	0.994
	0.812				0.959				0.943				0.952				

Prepared by National Data & Surveying Services

Redwood Ave & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-116
City: Los Angeles

Day: Tuesday
Date: 06/05/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	12:15 PM - 01:15 PM
PM	05:30 PM - 06:30 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

Redwood Ave — SOUTHBOUND

AM	15	62	58	0	208	AM
NOON	20	102	58	1	167	NOON
PM	23	250	38	0	124	PM

Washington Blvd — EASTBOUND

AM	NOON	PM		
1198	1227	1239	⇦	
1	1	1	↶	0
36	41	20	↱	1
1018	1042	1038	→	3
29	56	67	↷	0
AM	NOON	PM		

CONTROL

1-Way Stop(SB)

TEV	2673	2775	2957
	AM	NOON	PM
PHF	0.88	0.98	0.98

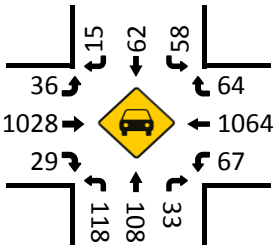
Washington Blvd — WESTBOUND

PM	NOON	AM		
39	28	64	↶	0
1157	1133	1064	←	3
130	60	67	↰	1
1	2	0	↶	0
1147	1163	1109	⇨	
PM	NOON	AM		

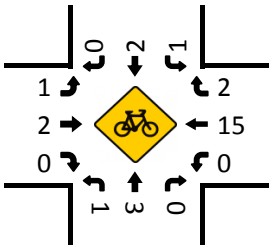
Redwood Ave — NORTHBOUND

PM	447	0	58	65	70	PM
NOON	218	0	73	97	61	NOON
AM	158	0	118	108	33	AM

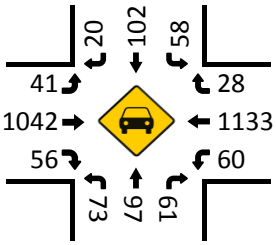
Total Vehicles (AM)



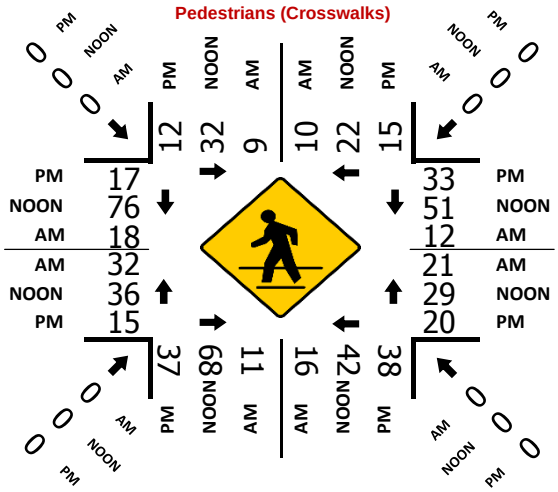
Bikes (AM)



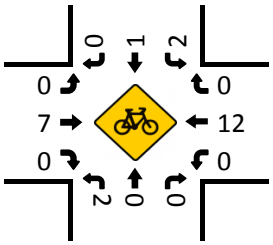
Total Vehicles (Noon)



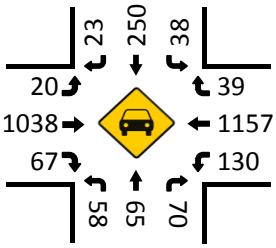
Pedestrians (Crosswalks)



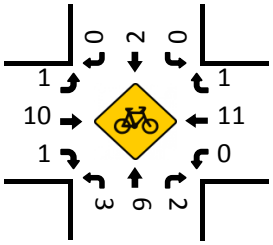
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Redwood Ave & Washington Blvd
City: Los Angeles
Control: 1-Way Stop(SB)

Project ID: 18-05413-116
Date: 6/5/2018

Total

NS/EW Streets:	Redwood Ave				Redwood Ave				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	18	25	12	0	1	10	1	0	2	161	6	0	5	133	3	0	377
7:15 AM	24	31	10	0	6	16	1	0	10	195	4	0	11	175	13	0	496
7:30 AM	30	21	8	0	15	15	2	0	7	225	6	1	12	276	19	0	637
7:45 AM	33	30	3	0	21	20	5	0	20	257	7	0	17	318	28	0	759
8:00 AM	27	23	10	0	9	15	5	0	4	276	10	0	14	233	10	0	636
8:15 AM	28	34	12	0	13	12	3	0	5	260	6	0	24	237	7	0	641
8:30 AM	31	22	10	0	10	21	5	0	6	268	10	0	21	230	3	0	637
8:45 AM	29	29	20	0	11	27	3	0	2	221	12	0	22	249	7	0	632
9:00 AM	25	22	12	0	11	11	3	0	2	244	6	0	21	285	3	0	645
9:15 AM	27	23	20	0	6	10	7	0	2	241	9	0	22	304	4	0	675
9:30 AM	34	14	12	0	7	19	4	0	5	218	6	1	28	250	2	0	600
9:45 AM	24	17	13	0	3	10	9	0	5	207	17	2	32	284	1	0	624
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	330	291	142	0	113	186	48	0	70	2773	99	4	229	2974	100	0	7359
APPROACH %'s :	43.25%	38.14%	18.61%	0.00%	32.56%	53.60%	13.83%	0.00%	2.38%	94.13%	3.36%	0.14%	6.93%	90.04%	3.03%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	118	108	33	0	58	62	15	0	36	1018	29	1	67	1064	64	0	2673
PEAK HR FACTOR :	0.894	0.794	0.688	0.000	0.690	0.775	0.750	0.000	0.450	0.922	0.725	0.250	0.698	0.836	0.571	0.000	0.880
	0.875				0.734				0.934				0.823				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	13	30	17	0	5	20	5	0	8	259	12	1	18	288	4	0	680
12:15 PM	20	24	19	0	14	30	3	0	11	273	9	0	12	288	4	0	707
12:30 PM	16	32	15	0	11	17	3	1	9	254	16	0	11	277	10	0	672
12:45 PM	18	20	11	0	14	39	8	0	13	249	14	1	20	278	6	2	693
1:00 PM	19	21	16	0	19	16	6	0	8	266	17	0	17	290	8	0	703
1:15 PM	11	18	18	0	15	22	3	1	7	253	14	0	10	281	7	1	661
1:30 PM	15	13	23	0	6	25	8	0	9	262	9	0	15	259	6	0	650
1:45 PM	20	18	15	0	10	40	1	0	4	267	15	0	11	266	6	0	673
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	132	176	134	0	94	209	37	2	69	2083	106	2	114	2227	51	3	5439
APPROACH %'s :	29.86%	39.82%	30.32%	0.00%	27.49%	61.11%	10.82%	0.58%	3.05%	92.17%	4.69%	0.09%	4.76%	92.99%	2.13%	0.13%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	73	97	61	0	58	102	20	1	41	1042	56	1	60	1133	28	2	2775
PEAK HR FACTOR :	0.913	0.758	0.803	0.000	0.763	0.654	0.625	0.250	0.788	0.954	0.824	0.250	0.750	0.977	0.700	0.250	0.981
	0.917				0.742				0.973				0.971				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	18	8	14	0	4	43	7	0	6	258	12	1	12	255	1	0	639
3:15 PM	16	20	16	0	9	33	3	0	2	304	13	1	16	260	2	2	697
3:30 PM	19	13	18	0	16	40	7	0	4	278	9	0	22	291	2	2	721
3:45 PM	15	10	15	0	11	51	3	0	8	239	16	0	44	300	6	0	718
4:00 PM	19	17	11	0	16	48	10	0	4	246	14	1	21	276	1	0	684
4:15 PM	17	15	8	0	7	54	5	0	2	232	18	0	29	276	3	2	668
4:30 PM	18	20	15	0	10	56	1	0	5	241	15	0	30	272	3	0	686
4:45 PM	11	15	10	0	9	55	3	0	8	246	18	0	28	300	6	2	711
5:00 PM	17	12	15	0	6	66	9	0	6	266	13	2	33	302	11	0	758
5:15 PM	19	20	10	0	6	56	3	0	2	269	13	1	36	288	4	0	727
5:30 PM	11	23	24	0	6	74	3	0	6	248	20	0	31	295	8	1	750
5:45 PM	17	10	12	0	9	58	7	0	5	238	15	1	42	288	14	0	716
6:00 PM	18	20	18	0	14	53	6	0	6	274	18	0	20	292	13	0	752
6:15 PM	12	12	16	0	9	65	7	0	3	278	14	0	37	282	4	0	739
6:30 PM	18	19	10	0	7	61	5	0	8	257	15	0	37	277	5	0	719
6:45 PM	20	15	12	0	9	46	2	0	12	254	18	1	26	309	6	0	730
7:00 PM	20	18	9	0	11	41	6	0	6	234	17	0	33	270	6	0	671
7:15 PM	17	5	8	0	3	35	6	0	5	227	11	0	19	293	8	1	638
7:30 PM	11	20	7	0	8	51	8	0	4	239	18	0	22	259	5	0	652
7:45 PM	15	11	12	0	13	37	5	0	5	229	10	0	22	253	8	0	620
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	328	303	260	0	183	1023	106	0	107	5057	297	8	560	5638	116	10	13996
APPROACH %'s :	36.81%	34.01%	29.18%	0.00%	13.95%	77.97%	8.08%	0.00%	1.96%	92.47%	5.43%	0.15%	8.86%	89.15%	1.83%	0.16%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	58	65	70	0	38	250	23	0	20	1038	67	1	130	1157	39	1	2957
PEAK HR FACTOR :	0.806	0.707	0.729	0.000	0.679	0.845	0.821	0.000	0.833	0.933	0.838	0.250	0.774	0.981	0.696	0.250	0.983
	0.832				0.937				0.945				0.964				

Prepared by National Data & Surveying Services

Lincoln Blvd & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-015
City: Venice

Day: Wednesday
Date: 06/06/2018

PEAK HOURS

AM	08:30 AM - 09:30 AM
NOON	12:00 PM - 01:00 PM
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

Lincoln Blvd — SOUTHBOUND

AM	90	1255	238	0	1531	AM
NOON	184	1017	317	0	1543	NOON
PM	102	1400	150	0	1618	PM

Washington Blvd — EASTBOUND

AM	NOON	PM		
1527	1393	1295		
0	0	0	0	
69	119	69	2	
730	579	599	3	
544	441	465	0	
AM	NOON	PM		

CONTROL

Signalized

	AM	NOON	PM
TEV	6124	5789	6054
PHF	0.98	0.98	0.97

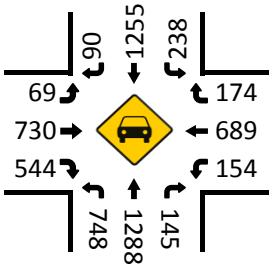
Washington Blvd — WESTBOUND

0	238	284	174
3	723	549	689
2	328	247	154
0	0	0	0
	948	1148	1113
	PM	NOON	AM

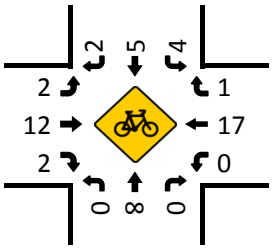
Lincoln Blvd — NORTHBOUND

PM	2193	0	470	1311	199	PM
NOON	1705	0	660	1140	252	NOON
AM	1953	0	748	1288	145	AM

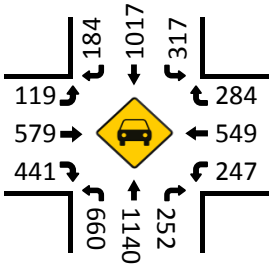
Total Vehicles (AM)



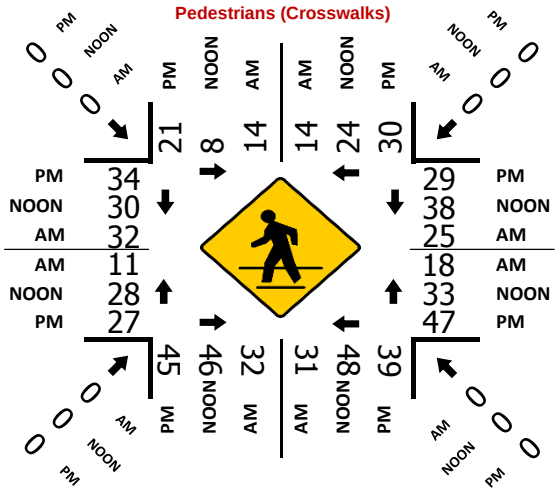
Bikes (AM)



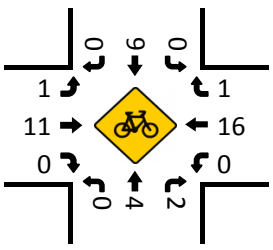
Total Vehicles (Noon)



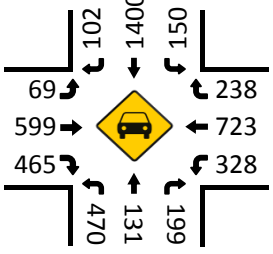
Pedestrians (Crosswalks)



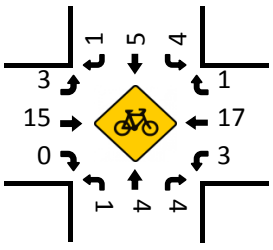
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Lincoln Blvd & Washington Blvd
City: Venice
Control: Signalized

Project ID: 18-05413-015
Date: 6/6/2018

Total

NS/EW Streets:	Lincoln Blvd				Lincoln Blvd				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	171	379	34	0	27	171	21	0	18	117	91	0	11	96	39	0	1175
7:15 AM	149	386	26	0	27	203	18	0	15	137	77	0	22	120	36	0	1216
7:30 AM	171	334	22	0	46	256	17	0	19	164	90	0	28	163	41	0	1351
7:45 AM	155	282	19	0	45	272	22	0	17	173	133	0	25	158	38	0	1339
8:00 AM	150	286	26	0	56	298	31	0	17	165	108	0	42	163	35	0	1377
8:15 AM	196	304	30	0	52	299	23	0	14	190	143	0	40	183	41	0	1515
8:30 AM	158	298	30	0	52	332	21	0	16	189	145	0	42	183	40	0	1506
8:45 AM	218	317	39	0	43	293	16	0	22	205	131	0	40	162	37	0	1523
9:00 AM	178	341	38	0	67	314	26	0	14	167	134	0	37	170	45	0	1531
9:15 AM	194	332	38	0	76	316	27	0	17	169	134	0	35	174	52	0	1564
9:30 AM	171	338	33	0	57	224	28	0	25	171	124	0	44	138	53	0	1406
9:45 AM	171	338	49	0	79	244	21	0	29	155	110	0	36	131	45	0	1408
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2082	3935	384	0	627	3222	271	0	223	2002	1420	0	402	1841	502	0	16911
APPROACH %'s :	32.53%	61.47%	6.00%	0.00%	15.22%	78.20%	6.58%	0.00%	6.12%	54.92%	38.96%	0.00%	14.64%	67.07%	18.29%	0.00%	
PEAK HR :	08:30 AM - 09:30 AM																TOTAL
PEAK HR VOL :	748	1288	145	0	238	1255	90	0	69	730	544	0	154	689	174	0	6124
PEAK HR FACTOR :	0.858	0.944	0.929	0.000	0.783	0.945	0.833	0.000	0.784	0.890	0.938	0.000	0.917	0.941	0.837	0.000	0.979
	0.950				0.945				0.938				0.959				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	170	278	67	0	93	277	55	0	27	145	103	0	53	134	54	0	1456
12:15 PM	181	294	57	0	73	249	63	0	26	139	114	0	51	138	91	0	1476
12:30 PM	150	279	68	0	75	227	36	0	31	147	111	0	80	153	72	0	1429
12:45 PM	159	289	60	0	76	264	30	0	35	148	113	0	63	124	67	0	1428
1:00 PM	181	272	63	0	70	252	29	0	33	148	126	0	56	135	48	0	1413
1:15 PM	153	281	57	0	71	280	32	0	32	154	118	0	66	134	68	0	1446
1:30 PM	126	266	75	0	83	272	22	0	23	154	116	0	61	146	67	0	1411
1:45 PM	175	278	52	0	50	267	25	0	23	147	126	0	61	124	57	0	1385
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1295	2237	499	0	591	2088	292	0	230	1182	927	0	491	1088	524	0	11444
APPROACH %'s :	32.13%	55.49%	12.38%	0.00%	19.89%	70.28%	9.83%	0.00%	9.83%	50.53%	39.63%	0.00%	23.35%	51.74%	24.92%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	660	1140	252	0	317	1017	184	0	119	579	441	0	247	549	284	0	5789
PEAK HR FACTOR :	0.912	0.969	0.926	0.000	0.852	0.918	0.730	0.000	0.850	0.978	0.967	0.000	0.772	0.897	0.780	0.000	0.981
	0.964				0.893				0.962				0.885				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	129	304	50	0	52	261	25	0	13	177	158	0	74	170	46	0	1459
3:15 PM	121	301	48	0	52	310	25	0	21	141	132	0	79	139	74	0	1443
3:30 PM	120	338	56	0	46	316	33	0	16	150	119	0	80	199	70	0	1543
3:45 PM	106	320	58	0	53	324	22	0	18	158	127	0	74	165	70	0	1495
4:00 PM	117	315	57	0	38	314	25	0	25	160	132	0	65	154	63	0	1465
4:15 PM	112	315	47	0	54	328	21	0	19	170	113	0	74	173	66	0	1492
4:30 PM	108	290	58	0	47	342	25	0	19	155	128	0	78	189	52	0	1491
4:45 PM	116	320	50	0	33	336	33	0	21	151	107	0	87	171	61	0	1486
5:00 PM	121	324	45	0	45	344	23	0	18	153	140	0	84	199	58	0	1554
5:15 PM	115	325	56	0	37	342	21	0	18	139	106	0	84	158	55	0	1456
5:30 PM	118	342	48	0	35	378	25	0	12	156	112	0	73	195	64	0	1558
5:45 PM	121	324	45	0	52	341	16	0	13	163	94	0	86	177	54	0	1486
6:00 PM	109	306	57	0	53	338	19	0	16	143	100	0	62	206	61	0	1470
6:15 PM	114	330	56	0	53	342	22	0	18	147	84	0	63	215	61	0	1505
6:30 PM	109	328	59	0	51	330	22	0	24	162	123	0	59	219	69	0	1555
6:45 PM	120	294	57	0	49	307	28	0	25	169	123	0	67	236	46	0	1521
7:00 PM	111	255	49	0	35	309	21	0	25	149	111	0	73	187	48	0	1373
7:15 PM	118	259	51	0	33	348	17	0	16	142	111	0	63	174	61	0	1393
7:30 PM	91	216	43	0	47	364	35	0	20	120	106	0	70	148	53	0	1313
7:45 PM	98	194	42	0	41	307	26	0	26	157	103	0	55	142	49	0	1240
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2274	6000	1032	0	906	6581	484	0	383	3062	2329	0	1450	3616	1181	0	29298
APPROACH %'s :	24.44%	64.47%	11.09%	0.00%	11.37%	82.56%	6.07%	0.00%	6.63%	53.03%	40.34%	0.00%	23.21%	57.88%	18.91%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	470	1311	199	0	150	1400	102	0	69	599	465	0	328	723	238	0	6054
PEAK HR FACTOR :	0.971	0.958	0.888	0.000	0.833	0.926	0.773	0.000	0.821	0.960	0.830	0.000	0.943	0.908	0.930	0.000	0.971
	0.974				0.943				0.911				0.945				

Prepared by National Data & Surveying Services

Costco Dwy & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-016
City: Marina Del Rey

Day: Wednesday
Date: 06/06/2018

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	12:00 PM - 01:00 PM
PM	03:00 PM - 04:00 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

SOUTHBOUND — Costco Dwy

AM	101	0	69	0	203
NOON	247	0	167	0	437
PM	247	1	168	0	394

EASTBOUND — Washington Blvd

AM	NOON	PM	
1197	1149	1254	
4	1	2	0
153	311	266	1
988	825	864	2
1	6	6	0

WESTBOUND — Washington Blvd

PM	NOON	AM	
128	126	50	0
1004	901	1091	3
0	1	2	0
0	0	0	0
1037	997	1058	

NORTHBOUND — Costco Dwy

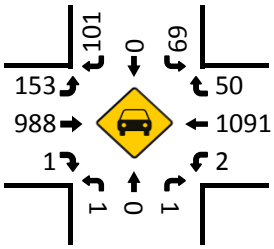
PM	7	0	1	0	5
NOON	7	0	0	0	5
AM	3	0	1	0	1

	1	0	1	0
	0	0	1	0

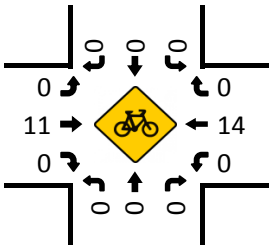
CONTROL: Signalized

TEV	2461	2590	2692
	AM	NOON	PM
PHF	0.97	0.94	0.98

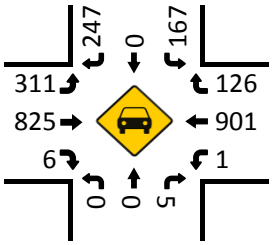
Total Vehicles (AM)



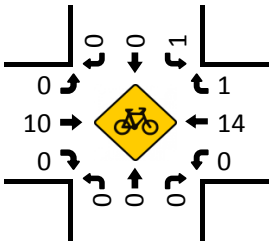
Bikes (AM)



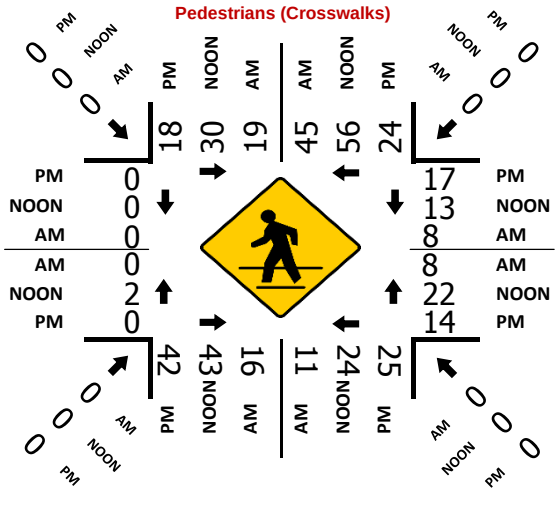
Total Vehicles (Noon)



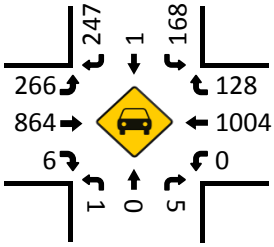
Bikes (NOON)



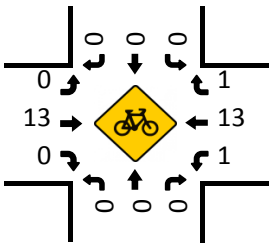
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Costco Dwy & Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05413-016
Date: 6/6/2018

Total

NS/EW Streets:	Costco Dwy				Costco Dwy				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	5	0	17	0	35	136	0	0	0	143	8	0	344
7:15 AM	0	0	0	0	8	0	16	0	20	183	0	1	0	175	10	0	413
7:30 AM	0	0	0	0	12	0	23	0	26	214	0	2	0	259	7	0	543
7:45 AM	0	0	0	0	17	0	25	0	26	237	0	1	0	250	6	0	562
8:00 AM	0	0	0	0	16	0	20	0	32	234	0	0	0	303	13	0	618
8:15 AM	1	0	1	0	27	0	25	0	29	264	1	2	1	275	10	0	636
8:30 AM	0	0	0	0	14	0	23	0	37	248	0	2	1	267	15	0	607
8:45 AM	0	0	0	0	12	0	33	0	55	242	0	0	0	246	12	0	600
9:00 AM	0	0	0	0	11	0	22	0	41	231	0	1	0	260	13	0	579
9:15 AM	0	0	1	0	23	0	37	0	50	232	1	0	0	236	14	0	594
9:30 AM	0	0	2	0	16	0	28	0	45	216	0	1	0	223	18	0	549
9:45 AM	0	0	0	0	20	0	38	0	70	241	1	2	0	193	20	0	585
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	4	0	181	0	307	0	466	2678	3	12	2	2830	146	0	6630
APPROACH %'s :	20.00%	0.00%	80.00%	0.00%	37.09%	0.00%	62.91%	0.00%	14.75%	84.77%	0.09%	0.38%	0.07%	95.03%	4.90%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	1	0	1	0	69	0	101	0	153	988	1	4	2	1091	50	0	2461
PEAK HR FACTOR :	0.250	0.000	0.250	0.000	0.639	0.000	0.765	0.000	0.695	0.936	0.250	0.500	0.500	0.900	0.833	0.000	0.967
	0.250				0.817				0.965				0.904				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	3	0	26	0	50	0	86	233	3	0	0	248	40	0	689
12:15 PM	0	0	1	0	48	0	66	0	75	206	1	0	0	231	39	0	667
12:30 PM	0	0	1	0	41	0	72	0	78	204	1	1	1	237	27	0	663
12:45 PM	0	0	0	0	52	0	59	0	72	182	1	0	0	185	20	0	571
1:00 PM	0	0	3	0	37	0	52	0	83	216	1	1	0	215	29	0	637
1:15 PM	0	0	1	0	53	0	63	0	78	205	1	0	0	206	35	2	644
1:30 PM	0	0	1	0	55	0	63	0	75	228	1	1	0	236	20	1	681
1:45 PM	0	0	4	0	40	0	67	1	75	187	1	0	0	200	27	0	602
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	14	0	352	0	492	1	622	1661	10	3	1	1758	237	3	5154
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	41.66%	0.00%	58.22%	0.12%	27.09%	72.34%	0.44%	0.13%	0.05%	87.94%	11.86%	0.15%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	5	0	167	0	247	0	311	825	6	1	1	901	126	0	2590
PEAK HR FACTOR :	0.000	0.000	0.417	0.000	0.803	0.000	0.858	0.000	0.904	0.885	0.500	0.250	0.250	0.908	0.788	0.000	0.940
	0.417				0.908				0.887				0.892				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	1	0	2	0	41	0	57	0	84	215	2	0	0	237	44	0	683
3:15 PM	0	0	3	0	41	0	63	0	64	216	3	0	0	249	34	0	673
3:30 PM	0	0	0	0	46	0	76	0	61	187	1	1	0	252	25	0	649
3:45 PM	0	0	0	0	40	1	51	0	57	246	0	1	0	266	25	0	687
4:00 PM	0	0	0	0	32	0	45	0	47	211	1	2	0	231	20	1	590
4:15 PM	0	0	1	0	28	0	63	0	53	237	1	3	0	254	22	1	663
4:30 PM	0	0	1	0	27	0	59	0	45	216	2	1	0	255	22	2	630
4:45 PM	0	0	3	0	26	0	33	0	48	227	2	0	0	290	16	2	647
5:00 PM	0	0	1	0	48	0	43	0	48	208	0	0	0	294	21	0	663
5:15 PM	0	0	4	0	43	0	54	0	47	206	2	1	0	247	32	3	639
5:30 PM	0	0	2	0	34	0	39	0	40	209	4	0	0	296	27	1	652
5:45 PM	0	0	3	0	18	0	29	0	44	229	0	1	1	292	27	1	645
6:00 PM	0	0	3	0	22	0	40	1	53	199	2	0	0	279	27	2	628
6:15 PM	0	0	0	0	18	0	33	0	51	248	1	0	1	322	21	1	696
6:30 PM	0	0	2	0	29	0	45	0	46	211	2	1	1	283	24	2	646
6:45 PM	0	0	0	0	31	0	40	0	55	248	1	0	0	314	30	1	720
7:00 PM	0	0	7	0	27	0	43	0	47	185	4	0	0	248	26	0	587
7:15 PM	0	0	2	0	30	0	46	0	59	182	4	0	0	251	30	0	604
7:30 PM	0	0	1	0	29	0	45	0	43	168	1	1	1	229	18	1	537
7:45 PM	0	0	1	0	20	0	48	0	53	201	1	0	0	211	18	0	553
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	36	0	630	1	952	1	1045	4249	34	12	4	5300	509	18	12792
APPROACH %'s :	2.70%	0.00%	97.30%	0.00%	39.77%	0.06%	60.10%	0.06%	19.57%	79.57%	0.64%	0.22%	0.07%	90.89%	8.73%	0.31%	
PEAK HR :	03:00 PM - 04:00 PM																TOTAL
PEAK HR VOL :	1	0	5	0	168	1	247	0	266	864	6	2	0	1004	128	0	2692
PEAK HR FACTOR :	0.250	0.000	0.417	0.000	0.913	0.250	0.813	0.000	0.792	0.878	0.500	0.500	0.000	0.944	0.727	0.000	0.980
	0.500				0.852				0.936				0.973				

Prepared by National Data & Surveying Services

Dwy/Glencoe Ave S & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-017
City: Marina Del Rey

Day: Wednesday
Date: 06/06/2018

PEAK HOURS

AM	08:15 AM - 09:15 AM
NOON	01:00 PM - 02:00 PM
PM	06:00 PM - 07:00 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

SOUTHBOUND — Dwy/Glencoe Ave S

AM	47	38	70	0	324	AM
NOON	78	102	351	0	661	NOON
PM	64	170	278	0	507	PM
	1	0.5	1.5	0		

EASTBOUND — Washington Blvd

AM	NOON	PM		
1103	882	1258		
0	2	1	0	
11	53	25	1	
875	784	693	2	
162	216	303	1	
AM	NOON	PM		

CONTROL

Signalized

	AM	NOON	PM
TEV	3262	3524	3864
PHF	0.95	0.98	0.96

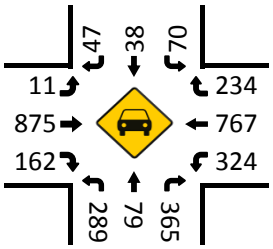
WESTBOUND — Washington Blvd

PM	NOON	AM		
383	467	234	1	
945	633	767	2	
364	287	324	1	
0	0	1	0	
1261	1376	1311		
PM	NOON	AM		

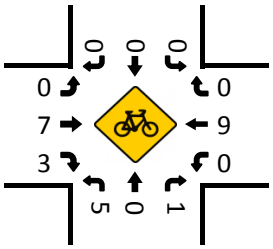
NORTHBOUND — Dwy/Glencoe Ave S

PM	838	1	248	99	290	PM
NOON	605	0	169	141	241	NOON
AM	524	0	289	79	365	AM
		0	1.5	0.5	1	

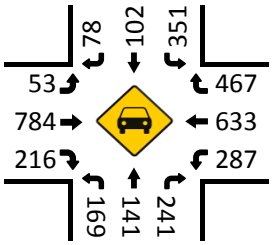
Total Vehicles (AM)



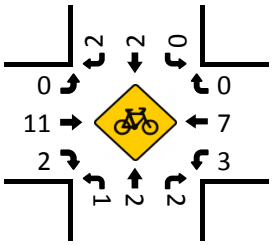
Bikes (AM)



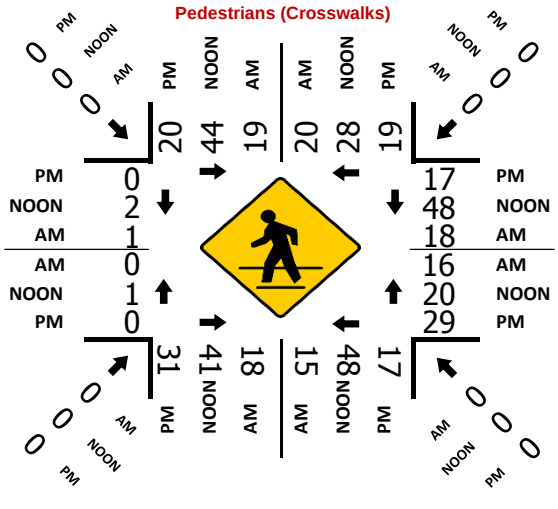
Total Vehicles (Noon)



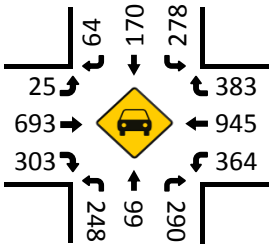
Bikes (NOON)



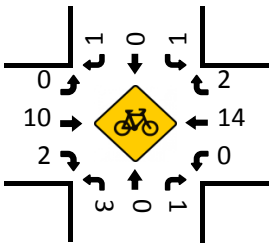
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Dwy/Glencoe Ave S & Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05413-017
Date: 6/6/2018

Total

NS/EW Streets:	Dwy/Glencoe Ave S				Dwy/Glencoe Ave S				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	50	13	92	0	15	7	16	0	1	129	14	0	38	84	18	0	477
7:15 AM	53	13	104	0	15	6	9	0	1	187	9	0	43	131	17	0	588
7:30 AM	95	19	101	0	23	7	9	0	1	192	23	0	55	155	34	0	714
7:45 AM	101	13	113	0	16	11	4	0	5	229	21	0	67	167	28	0	775
8:00 AM	117	16	98	0	14	11	21	0	2	220	25	0	58	169	39	0	790
8:15 AM	80	25	109	0	19	11	9	0	3	257	36	0	66	195	44	0	854
8:30 AM	77	16	103	0	15	11	14	0	0	223	39	0	89	199	47	1	834
8:45 AM	68	16	77	0	20	7	13	0	3	208	40	0	91	172	67	0	782
9:00 AM	64	22	76	0	16	9	11	0	5	187	47	0	78	201	76	0	792
9:15 AM	60	30	61	0	31	15	19	0	13	195	36	1	64	184	68	0	777
9:30 AM	56	29	78	0	33	18	13	0	8	200	37	0	61	155	89	0	777
9:45 AM	48	29	65	0	51	19	17	0	15	187	40	0	63	150	86	0	770
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	869	241	1077	0	268	132	155	0	57	2414	367	1	773	1962	613	1	8930
APPROACH %'s :	39.73%	11.02%	49.25%	0.00%	48.29%	23.78%	27.93%	0.00%	2.01%	85.03%	12.93%	0.04%	23.08%	58.58%	18.30%	0.03%	
PEAK HR :	08:15 AM - 09:15 AM																TOTAL
PEAK HR VOL :	289	79	365	0	70	38	47	0	11	875	162	0	324	767	234	1	3262
PEAK HR FACTOR :	0.903	0.790	0.837	0.000	0.875	0.864	0.839	0.000	0.550	0.851	0.862	0.000	0.890	0.954	0.770	0.250	0.955
			0.856				0.969				0.885				0.934		

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	55	42	62	0	74	22	13	0	12	193	59	0	73	197	113	0	915
12:15 PM	68	36	61	0	93	26	19	0	7	197	52	0	49	169	115	0	892
12:30 PM	54	35	61	0	78	23	24	0	9	198	42	1	65	164	103	0	857
12:45 PM	34	39	71	0	89	29	28	0	10	186	53	0	61	138	85	0	823
1:00 PM	44	40	65	0	77	21	18	0	20	198	56	1	69	153	136	0	898
1:15 PM	45	35	60	0	104	28	25	0	14	183	52	0	75	165	110	0	896
1:30 PM	40	36	62	0	83	28	20	0	9	222	54	1	70	159	118	0	902
1:45 PM	40	30	54	0	87	25	15	0	10	181	54	0	73	156	103	0	828
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	380	293	496	0	685	202	162	0	91	1558	422	3	535	1301	883	0	7011
APPROACH %'s :	32.51%	25.06%	42.43%	0.00%	65.30%	19.26%	15.44%	0.00%	4.39%	75.12%	20.35%	0.14%	19.68%	47.85%	32.48%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	169	141	241	0	351	102	78	0	53	784	216	2	287	633	467	0	3524
PEAK HR FACTOR :	0.939	0.881	0.927	0.000	0.844	0.911	0.780	0.000	0.663	0.883	0.964	0.500	0.957	0.959	0.858	0.000	0.977
			0.924				0.846				0.922				0.969		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	56	36	69	0	79	24	24	0	8	201	58	1	75	199	96	0	926
3:15 PM	54	26	85	0	72	26	21	0	6	209	61	0	99	184	98	0	941
3:30 PM	48	27	74	0	78	37	20	0	10	165	59	0	90	194	96	0	898
3:45 PM	36	26	68	0	60	25	13	0	13	207	68	0	84	211	95	0	906
4:00 PM	53	27	64	0	80	29	19	0	5	162	65	0	95	170	97	0	866
4:15 PM	33	30	67	0	69	28	17	0	7	195	73	0	101	211	95	0	926
4:30 PM	43	18	71	0	97	31	14	0	10	170	62	0	84	210	99	0	909
4:45 PM	43	26	70	0	69	29	12	1	5	181	77	0	112	220	107	0	952
5:00 PM	61	27	77	0	59	32	20	0	6	172	65	0	98	213	91	0	921
5:15 PM	47	30	68	0	68	27	14	0	4	207	59	0	95	213	110	0	942
5:30 PM	68	28	80	0	66	38	24	0	8	157	79	0	86	220	81	0	935
5:45 PM	55	30	85	0	70	35	15	0	7	189	71	0	98	229	98	0	982
6:00 PM	73	26	78	0	87	42	22	0	7	146	72	0	88	212	76	0	929
6:15 PM	57	24	71	1	69	40	15	0	3	196	71	0	91	257	106	0	1001
6:30 PM	73	21	76	0	63	52	18	0	5	164	64	0	84	212	97	0	929
6:45 PM	45	28	65	0	59	36	9	0	10	187	96	1	101	264	104	0	1005
7:00 PM	45	32	60	0	87	44	12	0	6	133	69	0	80	183	120	0	871
7:15 PM	32	24	62	0	69	26	12	0	5	166	59	0	108	212	115	0	890
7:30 PM	37	22	54	0	80	44	14	0	5	141	47	0	86	171	107	0	808
7:45 PM	22	16	43	0	70	28	16	0	8	171	60	0	91	165	94	0	784
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	981	524	1387	1	1451	673	331	1	138	3519	1335	2	1846	4150	1982	0	18321
APPROACH %'s :	33.91%	18.11%	47.94%	0.03%	59.08%	27.40%	13.48%	0.04%	2.76%	70.46%	26.73%	0.04%	23.14%	52.02%	24.84%	0.00%	
PEAK HR :	06:00 PM - 07:00 PM																TOTAL
PEAK HR VOL :	248	99	290	1	278	170	64	0	25	693	303	1	364	945	383	0	3864
PEAK HR FACTOR :	0.849	0.884	0.929	0.250	0.799	0.817	0.727	0.000	0.625	0.884	0.789	0.250	0.901	0.895	0.903	0.000	0.961
			0.901				0.848				0.869				0.902		

Prepared by National Data & Surveying Services

Redwood Ave & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-116
City: Los Angeles

Day: Wednesday
Date: 06/06/2018

PEAK HOURS	COUNT PERIODS
08:15 AM - 09:15 AM	07:00 AM - 10:00 AM
01:00 PM - 02:00 PM	12:00 PM - 02:00 PM
06:00 PM - 07:00 PM	03:00 PM - 08:00 PM

Redwood Ave — SOUTHBOUND

AM	11	68	34	0	118	AM
NOON	20	100	36	0	95	NOON
PM	24	242	31	1	153	PM

EASTBOUND (Washington Blvd)

AM	NOON	PM		
1220	1140	1314		
0	1	1	0	
13	19	23	1	
1009	1131	1023	3	
36	54	56	0	
AM	NOON	PM		

WESTBOUND (Washington Blvd)

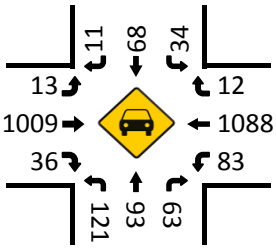
	PM	NOON	AM
0	39	18	12
3	1227	1055	1088
1	147	58	83
0	0	1	0
	1113	1249	1106
	PM	NOON	AM

NORTHBOUND — Redwood Ave

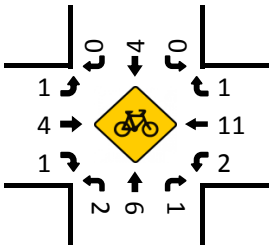
PM	445	0	62	90	59	PM
NOON	212	0	64	58	81	NOON
AM	187	0	121	93	63	AM

CONTROL			
1-Way Stop(SB)			
TEV	2631	2696	3025
	AM	NOON	PM
PHF	0.95	0.98	0.96

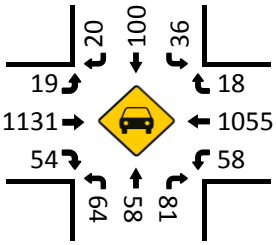
Total Vehicles (AM)



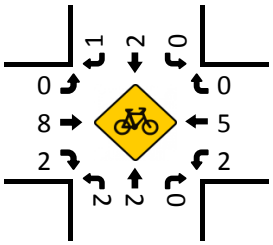
Bikes (AM)



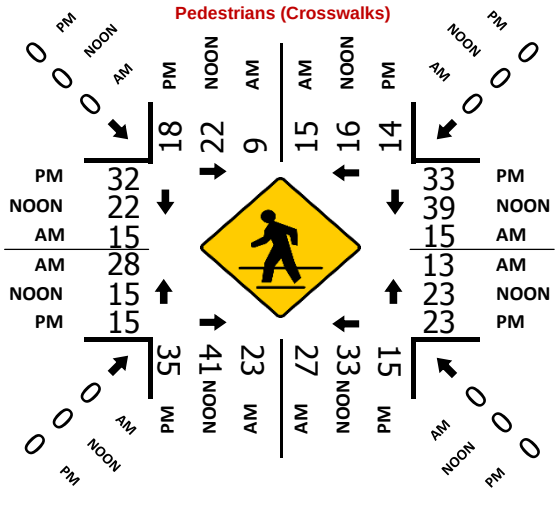
Total Vehicles (Noon)



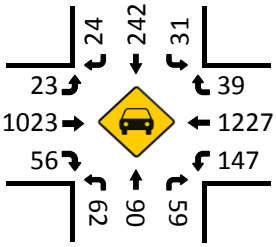
Bikes (NOON)



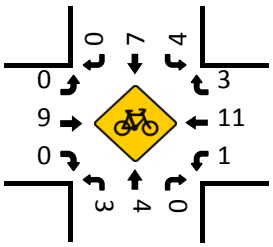
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Redwood Ave & Washington Blvd
City: Los Angeles
Control: 1-Way Stop(SB)

Project ID: 18-05413-116
Date: 6/6/2018

Total

NS/EW Streets:	Redwood Ave				Redwood Ave				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	15	22	10	0	5	10	1	0	3	147	10	0	9	137	4	0	373
7:15 AM	25	25	13	0	2	7	1	0	8	194	3	0	9	188	9	0	484
7:30 AM	34	28	8	0	13	14	4	0	5	228	9	0	18	227	18	0	606
7:45 AM	33	31	4	0	14	24	3	0	10	220	4	0	13	252	33	0	641
8:00 AM	29	24	8	0	10	15	4	0	2	252	11	1	17	233	10	0	616
8:15 AM	31	23	17	0	11	21	3	0	5	277	6	0	21	273	2	0	690
8:30 AM	28	29	19	0	4	20	5	0	5	261	9	0	18	274	4	0	676
8:45 AM	39	19	13	0	11	13	0	0	3	241	11	0	21	273	2	0	646
9:00 AM	23	22	14	0	8	14	3	0	0	230	10	0	23	268	4	0	619
9:15 AM	31	26	13	0	5	16	2	0	5	222	12	0	20	280	5	0	637
9:30 AM	34	21	13	0	7	17	4	0	7	217	12	1	20	266	5	0	624
9:45 AM	37	18	13	0	9	16	5	0	4	237	13	1	28	272	2	0	655
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	359	288	145	0	99	187	35	0	57	2726	110	3	217	2943	98	0	7267
APPROACH %'s :	45.33%	36.36%	18.31%	0.00%	30.84%	58.26%	10.90%	0.00%	1.97%	94.13%	3.80%	0.10%	6.66%	90.33%	3.01%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM																TOTAL
PEAK HR VOL :	121	93	63	0	34	68	11	0	13	1009	36	0	83	1088	12	0	2631
PEAK HR FACTOR :	0.776	0.802	0.829	0.000	0.773	0.810	0.550	0.000	0.650	0.911	0.818	0.000	0.902	0.993	0.750	0.000	0.953
	0.911				0.807				0.918				0.999				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	17	12	26	0	8	18	2	0	5	246	12	0	19	294	9	0	668
12:15 PM	22	23	18	0	10	21	6	0	7	276	16	0	17	276	9	0	701
12:30 PM	24	30	13	0	13	24	6	0	15	257	15	1	16	249	7	1	671
12:45 PM	21	18	13	0	10	21	11	0	6	266	13	0	13	186	3	1	582
1:00 PM	10	17	15	0	9	28	4	0	5	277	11	0	13	252	4	0	645
1:15 PM	22	14	20	0	11	16	7	0	6	289	12	0	15	270	3	1	686
1:30 PM	22	13	22	0	8	25	4	0	3	297	18	0	13	244	8	0	677
1:45 PM	10	14	24	0	8	31	5	0	5	268	13	1	17	289	3	0	688
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	148	141	151	0	77	184	45	0	52	2176	110	2	123	2060	46	3	5318
APPROACH %'s :	33.64%	32.05%	34.32%	0.00%	25.16%	60.13%	14.71%	0.00%	2.22%	92.99%	4.70%	0.09%	5.51%	92.29%	2.06%	0.13%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	64	58	81	0	36	100	20	0	19	1131	54	1	58	1055	18	1	2696
PEAK HR FACTOR :	0.727	0.853	0.844	0.000	0.818	0.806	0.714	0.000	0.792	0.952	0.750	0.250	0.853	0.913	0.563	0.250	0.980
	0.890				0.886				0.947				0.916				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	13	36	12	0	14	43	6	0	8	268	8	1	24	255	10	0	698
3:15 PM	15	34	13	0	6	30	5	0	8	277	17	0	17	246	11	0	679
3:30 PM	21	23	13	0	15	37	6	0	5	263	10	0	19	298	11	0	721
3:45 PM	13	26	11	0	19	28	4	0	6	252	13	0	26	296	12	0	706
4:00 PM	20	20	13	0	13	51	5	0	9	253	9	0	20	276	7	0	696
4:15 PM	13	19	13	0	9	55	4	0	6	253	10	0	19	287	9	0	697
4:30 PM	11	18	15	0	12	59	6	0	6	291	16	0	35	298	7	1	775
4:45 PM	17	20	10	0	9	56	5	0	1	235	22	0	37	307	6	0	725
5:00 PM	21	25	8	0	13	54	6	0	6	256	17	2	28	290	11	1	738
5:15 PM	16	25	19	0	17	47	5	0	4	245	23	0	32	278	7	0	718
5:30 PM	23	23	15	0	11	53	4	0	4	262	7	0	26	320	4	0	752
5:45 PM	15	17	12	0	7	60	5	0	8	235	21	1	37	282	7	0	707
6:00 PM	17	28	16	0	7	58	8	1	7	265	13	0	48	307	12	0	787
6:15 PM	12	25	16	0	11	54	6	0	3	274	16	0	38	311	7	0	773
6:30 PM	19	21	12	0	7	66	5	0	3	260	10	1	23	284	11	0	722
6:45 PM	14	16	15	0	6	64	5	0	10	224	17	0	38	325	9	0	743
7:00 PM	20	11	13	0	9	65	12	0	7	236	17	0	37	286	9	0	722
7:15 PM	12	13	22	0	7	42	0	0	2	241	11	0	35	280	5	0	670
7:30 PM	15	9	14	0	7	39	8	0	8	234	18	0	17	257	8	0	634
7:45 PM	8	15	11	0	11	20	6	0	5	226	16	0	21	235	2	0	576
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	315	424	273	0	210	981	111	1	116	5050	291	5	577	5718	165	2	14239
APPROACH %'s :	31.13%	41.90%	26.98%	0.00%	16.12%	75.29%	8.52%	0.08%	2.12%	92.46%	5.33%	0.09%	8.93%	88.49%	2.55%	0.03%	
PEAK HR :	06:00 PM - 07:00 PM																TOTAL
PEAK HR VOL :	62	90	59	0	31	242	24	1	23	1023	56	1	147	1227	39	0	3025
PEAK HR FACTOR :	0.816	0.804	0.922	0.000	0.705	0.917	0.750	0.250	0.575	0.933	0.824	0.250	0.766	0.944	0.813	0.000	0.961
	0.865				0.955				0.941				0.950				

Prepared by National Data & Surveying Services

Lincoln Blvd & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-015
City: Los Angeles

Day: Thursday
Date: 06/07/2018

PEAK HOURS	COUNT PERIODS
08:30 AM - 09:30 AM	07:00 AM - 10:00 AM
12:00 PM - 01:00 PM	12:00 PM - 02:00 PM
05:15 PM - 06:15 PM	03:00 PM - 08:00 PM

SOUTHBOUND (Lincoln Blvd)

AM	94	1176	248	0	1591	AM
NOON	108	1085	262	0	1560	NOON
PM	77	1387	203	0	1686	PM

EASTBOUND (Washington Blvd)

AM	NOON	PM		
1466	1422	1355		
0	0	0	0	
76	118	77	2	
735	600	671	3	
480	445	462	0	
AM	NOON	PM		

WESTBOUND (Washington Blvd)

PM	NOON	AM		
229	282	180	0	
803	663	635	3	
236	231	169	2	
0	0	0	0	
1082	1152	1130		
PM	NOON	AM		

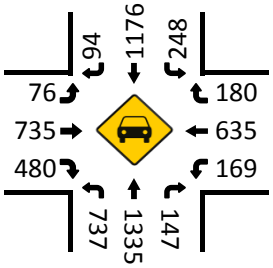
CONTROL: Signalized

TEV	6012	5895	6208
	AM	NOON	PM
PHF	0.98	0.96	0.98

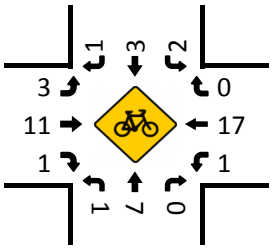
NORTHBOUND (Lincoln Blvd)

PM	2085	0	475	1380	208	PM
NOON	1761	0	651	1160	290	NOON
AM	1825	0	737	1335	147	AM
		0	2	3	0	

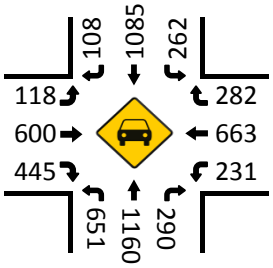
Total Vehicles (AM)



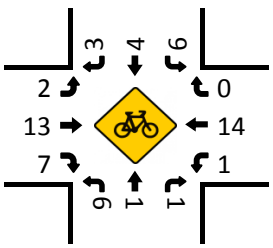
Bikes (AM)



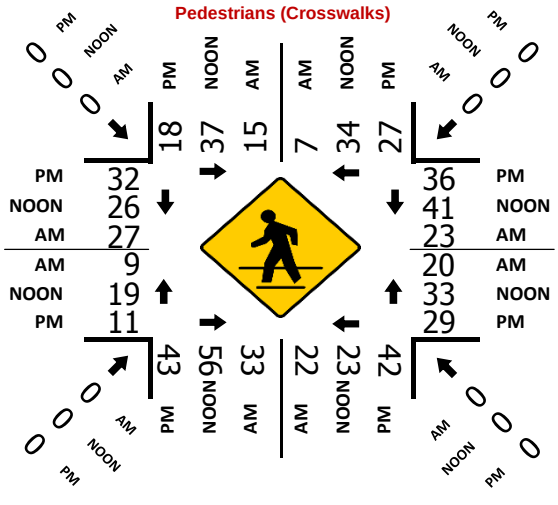
Total Vehicles (Noon)



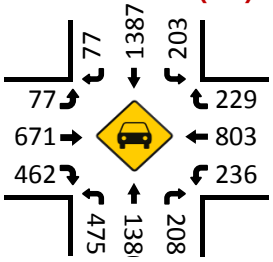
Bikes (NOON)



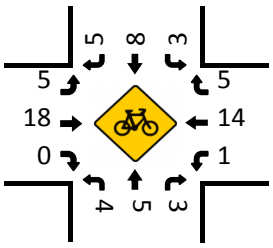
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Lincoln Blvd & Washington Blvd
City: Los Angeles
Control: Signalized

Project ID: 18-05413-015
Date: 6/7/2018

Total

NS/EW Streets:	Lincoln Blvd				Lincoln Blvd				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	151	379	27	0	42	158	19	0	24	118	69	0	16	103	37	0	1143
7:15 AM	152	411	30	0	35	215	19	0	14	120	88	0	19	130	49	0	1282
7:30 AM	172	357	18	0	37	258	23	0	13	163	101	0	21	129	32	0	1324
7:45 AM	162	343	27	0	44	260	21	0	18	191	123	0	31	155	41	0	1416
8:00 AM	186	347	37	0	66	313	21	0	10	174	118	0	36	151	47	0	1506
8:15 AM	164	306	28	0	60	332	21	0	14	194	124	0	29	160	43	0	1475
8:30 AM	204	326	30	0	51	300	20	0	13	180	134	0	42	149	38	0	1487
8:45 AM	179	325	29	0	67	322	13	0	9	183	114	0	35	170	56	0	1502
9:00 AM	177	341	40	0	72	267	29	0	28	198	135	0	47	167	40	0	1541
9:15 AM	177	343	48	0	58	287	32	0	26	174	97	0	45	149	46	0	1482
9:30 AM	194	342	44	0	59	291	33	0	30	155	107	0	38	140	46	0	1479
9:45 AM	170	304	56	0	75	258	22	0	24	164	104	0	33	175	49	0	1434
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2088	4124	414	0	666	3261	273	0	223	2014	1314	0	392	1778	524	0	17071
APPROACH %'s :	31.51%	62.24%	6.25%	0.00%	15.86%	77.64%	6.50%	0.00%	6.28%	56.72%	37.00%	0.00%	14.55%	66.00%	19.45%	0.00%	
PEAK HR :	08:30 AM - 09:30 AM																TOTAL
PEAK HR VOL :	737	1335	147	0	248	1176	94	0	76	735	480	0	169	635	180	0	6012
PEAK HR FACTOR :	0.903	0.973	0.766	0.000	0.861	0.913	0.734	0.000	0.679	0.928	0.889	0.000	0.899	0.934	0.804	0.000	0.975
	0.977				0.944				0.894				0.943				

NS/EW Streets:	Lincoln Blvd				Lincoln Blvd				Washington Blvd				Washington Blvd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	164	294	76	0	89	294	23	0	33	136	93	0	39	140	56	0	1437
12:15 PM	156	302	64	0	75	232	24	0	25	163	119	0	72	211	86	0	1529
12:30 PM	174	271	79	0	40	263	34	0	18	142	120	0	58	158	65	0	1422
12:45 PM	157	293	71	0	58	296	27	0	42	159	113	0	62	154	75	0	1507
1:00 PM	155	261	64	0	66	266	14	0	20	149	113	0	61	126	76	0	1371
1:15 PM	154	261	60	0	47	258	16	0	25	152	117	0	57	150	74	0	1371
1:30 PM	128	262	59	0	56	278	21	0	22	147	123	0	82	146	70	0	1394
1:45 PM	159	305	77	0	36	275	12	0	24	150	127	0	67	157	76	0	1465
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1247	2249	550	0	467	2162	171	0	209	1198	925	0	498	1242	578	0	11496
APPROACH %'s :	30.82%	55.59%	13.59%	0.00%	16.68%	77.21%	6.11%	0.00%	8.96%	51.37%	39.67%	0.00%	21.48%	53.58%	24.94%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	651	1160	290	0	262	1085	108	0	118	600	445	0	231	663	282	0	5895
PEAK HR FACTOR :	0.935	0.960	0.918	0.000	0.736	0.916	0.794	0.000	0.702	0.920	0.927	0.000	0.802	0.786	0.820	0.000	0.964
	0.984				0.896				0.926				0.797				

NS/EW Streets:	Lincoln Blvd				Lincoln Blvd				Washington Blvd				Washington Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	2	3	0	0	2	3	0	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	113	263	44	0	40	318	20	0	20	153	114	0	77	153	58	0	1373
3:15 PM	120	318	60	0	59	305	18	0	23	151	106	0	87	150	51	0	1448
3:30 PM	114	296	58	0	49	320	15	0	21	158	102	0	70	185	53	0	1441
3:45 PM	120	302	57	0	36	361	15	0	21	163	109	0	67	207	62	0	1520
4:00 PM	113	300	47	0	41	331	12	0	16	165	119	0	83	135	62	0	1424
4:15 PM	120	299	55	0	46	375	12	0	20	160	135	0	83	169	57	0	1531
4:30 PM	121	314	59	0	40	366	15	0	21	149	98	0	85	152	52	0	1472
4:45 PM	116	337	43	0	41	337	13	0	16	164	119	0	88	224	62	0	1560
5:00 PM	120	305	46	0	44	347	15	0	15	156	103	0	82	177	41	0	1451
5:15 PM	115	335	49	0	48	362	23	0	29	162	114	0	58	196	69	0	1560
5:30 PM	113	367	47	0	39	354	13	0	14	171	125	0	65	177	60	0	1545
5:45 PM	126	329	46	0	43	348	21	0	15	160	116	0	54	202	56	0	1516
6:00 PM	121	349	66	0	73	323	20	0	19	178	107	0	59	228	44	0	1587
6:15 PM	107	330	60	0	44	338	8	0	19	159	114	0	73	214	45	0	1511
6:30 PM	118	295	43	0	33	350	20	0	21	161	141	0	68	180	50	0	1480
6:45 PM	113	318	49	0	29	311	19	0	33	134	111	0	59	203	50	0	1429
7:00 PM	111	277	53	0	52	312	23	0	20	142	93	0	59	195	46	0	1383
7:15 PM	118	263	41	0	52	316	31	0	21	165	102	0	54	195	60	0	1418
7:30 PM	98	244	48	0	71	333	32	0	10	153	115	0	61	152	42	0	1359
7:45 PM	109	236	53	0	44	281	45	0	18	152	136	0	53	183	47	0	1357
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2306	6077	1024	0	924	6688	390	0	392	3156	2279	0	1385	3677	1067	0	29365
APPROACH %'s :	24.51%	64.60%	10.89%	0.00%	11.55%	83.58%	4.87%	0.00%	6.73%	54.16%	39.11%	0.00%	22.60%	59.99%	17.41%	0.00%	
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	475	1380	208	0	203	1387	77	0	77	671	462	0	236	803	229	0	6208
PEAK HR FACTOR :	0.942	0.940	0.788	0.000	0.695	0.958	0.837	0.000	0.664	0.942	0.924	0.000	0.908	0.880	0.830	0.000	0.978
	0.962				0.962				0.976				0.958				

Prepared by National Data & Surveying Services

Costco Dwy & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-016
City: Marina Del Rey

Day: Thursday
Date: 06/07/2018

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	12:00 PM - 01:00 PM
PM	05:45 PM - 06:45 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

Costco Dwy — SOUTHBOUND

AM	122	0	77	0	285
NOON	268	0	148	0	456
PM	167	0	119	0	297

Washington Blvd — EASTBOUND

	AM	NOON	PM	
	1103	1266	1322	
	2	4	4	0
	211	319	211	1
	979	880	914	2
	3	11	6	0

WESTBOUND — Washington Blvd

	PM	NOON	AM	
	86	137	74	0
	1149	994	979	3
	0	2	1	0
	3	1	0	0
	1044	1040	1060	

NORTHBOUND — Costco Dwy

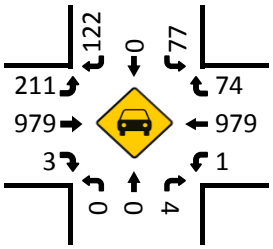
PM	6	0	2	0	8
NOON	13	0	0	0	11
AM	4	0	0	0	4

	1	0	1	0
	0	0	1	0

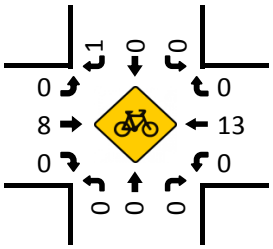
CONTROL: Signalized

		AM	NOON	PM
TEV	2452	2775	2669	
PHF	0.98	0.93	0.91	

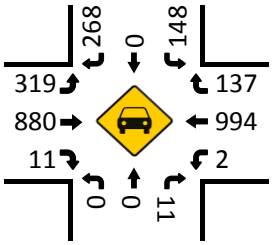
Total Vehicles (AM)



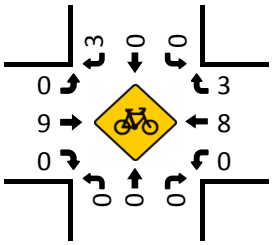
Bikes (AM)



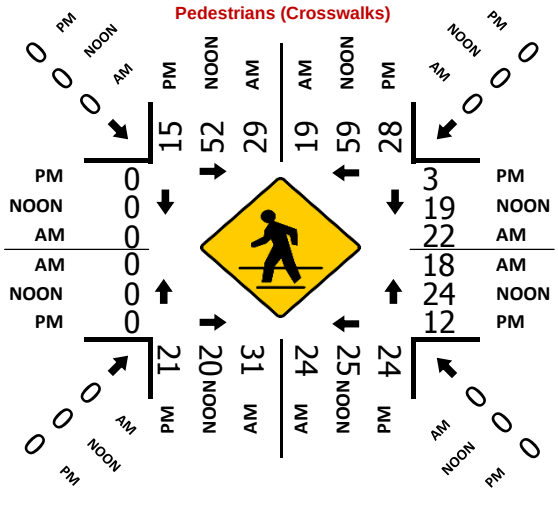
Total Vehicles (Noon)



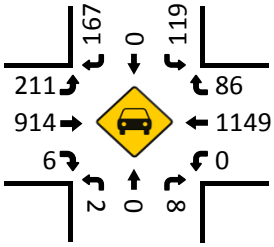
Bikes (NOON)



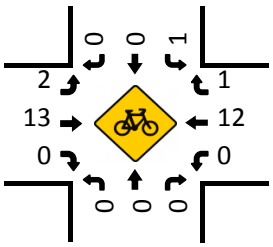
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Costco Dwy & Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05413-016
Date: 6/7/2018

Total

NS/EW Streets:	Costco Dwy				Costco Dwy				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	9	0	13	0	47	143	0	0	0	155	13	0	380
7:15 AM	0	0	0	0	5	0	18	0	26	154	0	0	0	200	11	0	414
7:30 AM	0	0	0	0	7	0	10	0	18	215	0	0	0	221	7	1	479
7:45 AM	0	0	0	0	13	0	14	0	40	238	0	2	0	265	9	0	581
8:00 AM	0	0	0	0	6	0	15	0	40	270	0	2	0	277	7	0	617
8:15 AM	0	0	0	0	18	0	14	0	40	242	0	2	0	252	11	0	579
8:30 AM	0	0	0	0	8	0	22	0	47	225	0	0	0	239	14	0	555
8:45 AM	0	0	1	0	19	0	21	0	48	240	0	0	0	250	16	0	595
9:00 AM	0	0	0	0	11	0	22	0	56	255	0	0	0	265	18	0	627
9:15 AM	0	0	0	0	22	0	34	0	46	247	1	1	0	231	12	0	594
9:30 AM	0	0	2	0	23	0	37	0	49	246	0	0	1	242	25	0	625
9:45 AM	0	0	2	0	21	0	29	0	60	231	2	1	0	241	19	0	606
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	5	0	162	0	249	0	517	2706	3	8	1	2838	162	1	6652
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	39.42%	0.00%	60.58%	0.00%	15.99%	83.67%	0.09%	0.25%	0.03%	94.54%	5.40%	0.03%	
PEAK HR :	09:00 AM - 10:00 AM																TOTAL
PEAK HR VOL :	0	0	4	0	77	0	122	0	211	979	3	2	1	979	74	0	2452
PEAK HR FACTOR :	0.000	0.000	0.500	0.000	0.837	0.000	0.824	0.000	0.879	0.960	0.375	0.500	0.250	0.924	0.740	0.000	0.978
			0.500				0.829				0.961				0.931		

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	3	0	42	0	60	0	80	235	2	0	1	213	26	0	662
12:15 PM	0	0	0	0	40	0	67	0	87	220	4	2	0	298	27	1	746
12:30 PM	0	0	6	0	35	0	62	0	69	211	2	1	0	265	51	0	702
12:45 PM	0	0	2	0	31	0	79	0	83	214	3	1	1	218	33	0	665
1:00 PM	0	0	4	0	32	0	60	0	74	220	1	0	1	217	53	0	662
1:15 PM	0	0	2	0	30	0	66	0	76	195	3	1	0	231	43	1	648
1:30 PM	0	0	3	0	45	1	65	0	80	182	0	0	0	245	43	0	664
1:45 PM	0	0	2	0	44	0	63	0	62	216	1	0	1	227	35	2	653
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	22	0	299	1	522	0	611	1693	16	5	4	1914	311	4	5402
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	36.37%	0.12%	63.50%	0.00%	26.28%	72.82%	0.69%	0.22%	0.18%	85.71%	13.93%	0.18%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	11	0	148	0	268	0	319	880	11	4	2	994	137	1	2775
PEAK HR FACTOR :	0.000	0.000	0.458	0.000	0.881	0.000	0.848	0.000	0.917	0.936	0.688	0.500	0.500	0.834	0.672	0.250	0.930
			0.458				0.945				0.957				0.870		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	0	0	2	0	47	0	62	0	66	181	1	0	2	216	23	0	600
3:15 PM	0	0	3	0	44	0	45	0	55	222	2	1	0	260	26	1	659
3:30 PM	1	0	1	0	57	0	58	0	74	202	3	1	0	231	29	0	657
3:45 PM	0	0	3	0	42	0	59	0	56	219	2	0	1	278	27	1	688
4:00 PM	0	0	3	0	37	0	50	0	51	212	1	0	0	247	25	2	628
4:15 PM	0	0	4	0	40	0	45	0	56	216	1	0	1	234	23	0	620
4:30 PM	0	0	2	0	36	0	39	0	54	217	4	0	1	267	23	1	644
4:45 PM	0	0	4	0	28	0	38	0	48	214	1	0	1	309	19	0	662
5:00 PM	0	0	1	0	38	0	43	0	47	212	1	0	0	271	19	0	632
5:15 PM	0	0	0	0	31	0	42	0	52	240	0	0	0	271	18	0	654
5:30 PM	0	0	1	0	27	0	37	0	51	218	3	0	0	260	18	1	616
5:45 PM	0	0	2	0	22	0	39	0	43	211	0	1	0	311	14	2	645
6:00 PM	0	0	5	0	32	0	30	0	66	248	4	1	0	320	30	0	736
6:15 PM	0	0	1	0	30	0	44	0	58	242	0	2	0	266	26	0	669
6:30 PM	2	0	0	0	35	0	54	0	44	213	2	0	0	252	16	1	619
6:45 PM	1	0	0	0	15	0	35	0	36	179	1	0	1	299	19	1	587
7:00 PM	0	0	5	0	33	0	48	0	68	193	2	0	0	265	27	1	642
7:15 PM	0	0	0	0	21	0	45	0	52	217	1	1	0	240	23	2	602
7:30 PM	1	0	1	0	37	0	47	0	66	207	1	1	0	220	21	0	602
7:45 PM	0	0	1	0	36	0	43	0	64	192	2	0	0	245	19	0	602
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	39	0	688	0	903	0	1107	4255	32	8	7	5262	445	13	12764
APPROACH %'s :	11.36%	0.00%	88.64%	0.00%	43.24%	0.00%	56.76%	0.00%	20.49%	78.77%	0.59%	0.15%	0.12%	91.88%	7.77%	0.23%	
PEAK HR :	05:45 PM - 06:45 PM																TOTAL
PEAK HR VOL :	2	0	8	0	119	0	167	0	211	914	6	4	0	1149	86	3	2669
PEAK HR FACTOR :	0.250	0.000	0.400	0.000	0.850	0.000	0.773	0.000	0.799	0.921	0.375	0.500	0.000	0.898	0.717	0.375	0.907
			0.500				0.803				0.889				0.884		

Prepared by National Data & Surveying Services

Dwy/Glencoe Ave S & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-017
City: Marina Del Rey

Day: Thursday
Date: 06/07/2018

PEAK HOURS

AM	09:00 AM - 10:00 AM
NOON	12:15 PM - 01:15 PM
PM	05:30 PM - 06:30 PM

COUNT PERIODS

AM	07:00 AM - 10:00 AM
NOON	12:00 PM - 02:00 PM
PM	03:00 PM - 08:00 PM

Dwy/Glencoe Ave S — SOUTHBOUND

AM	43	60	148	0	525	AM
NOON	86	132	334	0	580	NOON
PM	54	132	289	0	509	PM

Washington Blvd — EASTBOUND

AM	NOON	PM		
986	1054	1181	⇦	
0	0	0	↶	0
36	63	29	↱	1
827	783	780	→	2
176	187	240	↴	1
AM	NOON	PM		

Washington Blvd — WESTBOUND

PM	NOON	AM		
369	375	348	↰	1
866	782	717	←	2
371	282	265	↰	1
0	0	0	↶	0
1410	1372	1267	⇨	
PM	NOON	AM		

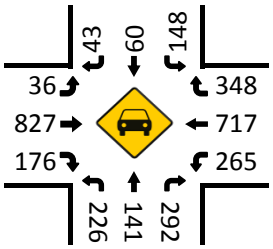
Dwy/Glencoe Ave S — NORTHBOUND

PM	743	0	261	111	341	PM
NOON	601	0	186	142	255	NOON
AM	501	0	226	141	292	AM

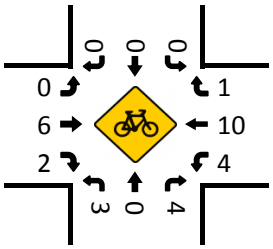
	1	0.5	1.5	0
	0	1.5	0.5	1

CONTROL			
Signalized			
TEV	3279 AM	3607 NOON	3843 PM
PHF	0.98	0.95	0.96

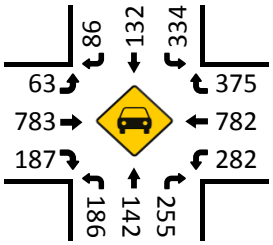
Total Vehicles (AM)



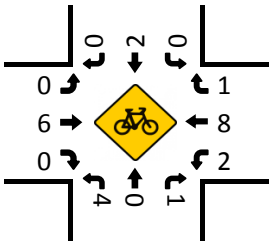
Bikes (AM)



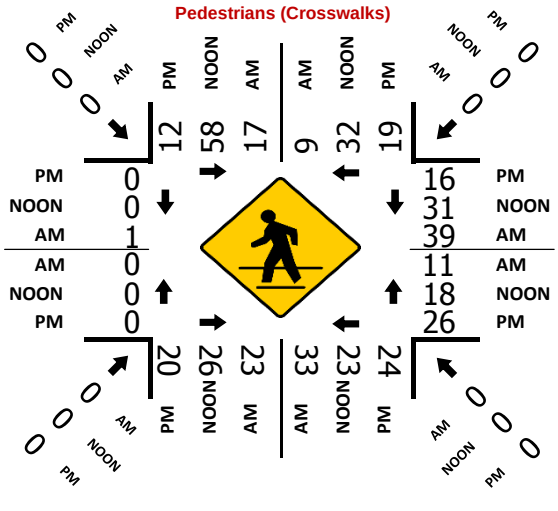
Total Vehicles (Noon)



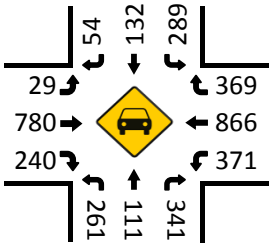
Bikes (NOON)



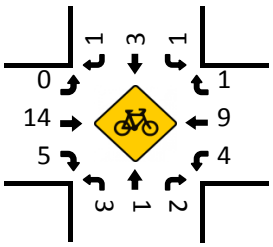
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Dwy/Glencoe Ave S & Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05413-017
Date: 6/7/2018

Total

NS/EW Streets:	Dwy/Glencoe Ave S				Dwy/Glencoe Ave S				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	44	13	76	0	19	0	0	0	1	139	13	0	24	94	29	0	452
7:15 AM	67	20	79	0	28	6	2	0	0	153	13	0	44	121	28	0	561
7:30 AM	78	14	105	0	31	8	0	0	1	200	14	0	44	149	24	0	668
7:45 AM	89	16	99	0	20	11	1	0	1	221	33	0	59	184	45	0	779
8:00 AM	92	26	85	0	25	10	1	0	2	239	30	0	52	154	54	0	770
8:15 AM	71	31	117	0	25	11	3	0	6	224	25	0	74	156	35	0	778
8:30 AM	59	22	99	0	26	14	6	0	2	207	35	0	81	170	62	0	783
8:45 AM	52	21	87	0	26	6	3	0	5	210	43	0	77	215	54	0	799
9:00 AM	58	31	71	0	24	7	8	0	15	193	45	0	69	182	87	0	790
9:15 AM	47	31	68	0	38	19	5	0	5	213	42	0	80	184	88	0	820
9:30 AM	57	40	87	0	34	15	15	0	11	214	44	0	62	169	81	0	829
9:45 AM	64	39	66	0	52	19	15	0	5	207	45	0	54	182	92	0	840
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	778	304	1039	0	348	126	59	0	54	2420	382	0	720	1960	679	0	8869
APPROACH %'s :	36.68%	14.33%	48.99%	0.00%	65.29%	23.64%	11.07%	0.00%	1.89%	84.73%	13.38%	0.00%	21.43%	58.35%	20.21%	0.00%	
PEAK HR :	09:00 AM - 10:00 AM																TOTAL
PEAK HR VOL :	226	141	292	0	148	60	43	0	36	827	176	0	265	717	348	0	3279
PEAK HR FACTOR :	0.883	0.881	0.839	0.000	0.712	0.789	0.717	0.000	0.600	0.966	0.978	0.000	0.828	0.974	0.946	0.000	0.976
	0.895				0.730				0.966				0.945				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	56	45	58	0	72	27	21	0	14	203	56	0	53	160	100	0	865
12:15 PM	54	43	71	0	85	35	30	0	15	195	37	0	64	207	104	0	940
12:30 PM	49	32	58	0	88	31	23	0	23	202	47	0	70	202	121	0	946
12:45 PM	48	21	66	0	91	34	24	0	9	194	35	0	77	176	80	0	855
1:00 PM	35	46	60	0	70	32	9	0	16	192	68	0	71	197	70	0	866
1:15 PM	50	27	70	0	98	26	20	0	6	159	43	0	72	191	119	0	881
1:30 PM	47	32	63	0	64	20	36	0	20	183	45	0	60	195	98	0	863
1:45 PM	38	28	58	0	82	31	22	0	12	184	47	0	91	170	108	0	871
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	377	274	504	0	650	236	185	0	115	1512	378	0	558	1498	800	0	7087
APPROACH %'s :	32.64%	23.72%	43.64%	0.00%	60.69%	22.04%	17.27%	0.00%	5.74%	75.41%	18.85%	0.00%	19.54%	52.45%	28.01%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	186	142	255	0	334	132	86	0	63	783	187	0	282	782	375	0	3607
PEAK HR FACTOR :	0.861	0.772	0.898	0.000	0.918	0.943	0.717	0.000	0.685	0.969	0.688	0.000	0.916	0.944	0.775	0.000	0.953
	0.868				0.920				0.936				0.915				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	38	33	92	0	73	25	12	0	6	176	57	0	86	180	105	0	883
3:15 PM	45	40	79	0	81	31	19	0	5	203	67	0	99	216	121	0	1006
3:30 PM	48	29	78	0	83	32	25	0	4	187	57	0	84	176	113	0	916
3:45 PM	48	29	69	0	65	43	23	0	5	214	65	0	85	223	87	0	956
4:00 PM	38	28	64	0	71	33	17	0	6	176	56	0	85	181	104	0	859
4:15 PM	41	26	58	0	82	22	17	0	7	216	43	0	93	187	95	0	887
4:30 PM	48	33	61	0	75	26	14	0	5	191	51	0	91	211	85	0	891
4:45 PM	44	22	55	0	59	38	16	0	5	193	70	0	112	253	85	0	952
5:00 PM	61	25	64	0	70	36	13	0	8	167	61	0	95	197	88	0	885
5:15 PM	46	25	88	0	58	29	12	0	5	214	56	0	100	229	77	0	939
5:30 PM	60	32	84	0	79	45	16	0	6	178	58	0	85	180	79	0	902
5:45 PM	72	19	88	0	80	24	15	0	11	196	52	0	95	231	96	0	979
6:00 PM	82	27	90	0	67	32	9	0	8	198	65	0	90	236	100	0	1004
6:15 PM	47	33	79	0	63	31	14	0	4	208	65	0	101	219	94	0	958
6:30 PM	49	28	72	0	56	31	7	0	6	192	57	0	98	179	78	0	853
6:45 PM	50	21	75	0	64	34	17	0	7	156	46	0	109	257	105	0	941
7:00 PM	45	31	59	0	68	36	15	0	6	157	76	0	90	210	93	0	886
7:15 PM	36	21	51	0	57	38	20	0	5	177	71	0	111	186	90	0	863
7:30 PM	40	28	49	0	86	29	12	0	10	169	63	0	95	172	97	0	850
7:45 PM	36	29	51	0	76	30	14	0	10	180	48	0	86	215	96	0	871
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	974	559	1406	0	1413	645	307	0	129	3748	1184	0	1890	4138	1888	0	18281
APPROACH %'s :	33.14%	19.02%	47.84%	0.00%	59.75%	27.27%	12.98%	0.00%	2.55%	74.06%	23.39%	0.00%	23.88%	52.27%	23.85%	0.00%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	261	111	341	0	289	132	54	0	29	780	240	0	371	866	369	0	3843
PEAK HR FACTOR :	0.796	0.841	0.947	0.000	0.903	0.733	0.844	0.000	0.659	0.938	0.923	0.000	0.918	0.917	0.923	0.000	0.957
	0.896				0.848				0.947				0.942				

Prepared by National Data & Surveying Services

Redwood Ave & Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05413-116
City: Los Angeles

Day: Thursday
Date: 06/07/2018

PEAK HOURS	COUNT PERIODS
09:00 AM - 10:00 AM	07:00 AM - 10:00 AM
12:15 PM - 01:15 PM	12:00 PM - 02:00 PM
05:30 PM - 06:30 PM	03:00 PM - 08:00 PM

Redwood Ave — SOUTHBOUND

AM	11	84	23	0	144	AM
NOON	26	103	42	0	151	NOON
PM	27	259	39	1	134	PM

Washington Blvd — EASTBOUND

AM	NOON	PM		
1271	1218	1268		
3	0	2	0	
22	33	30	1	
947	1079	1103	3	
47	63	63	0	
AM	NOON	PM		

Washington Blvd — WESTBOUND

PM	NOON	AM	
23	33	18	0
1174	1114	1144	3
139	70	97	1
1	0	1	0
1204	1180	1029	
PM	NOON	AM	

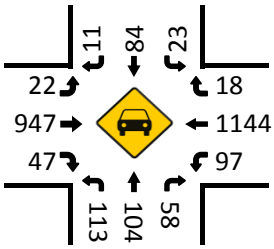
Redwood Ave — NORTHBOUND

PM	461	0	65	80	61	PM
NOON	236	0	78	85	59	NOON
AM	228	0	113	104	58	AM

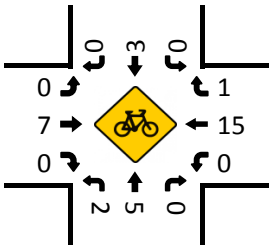
	0	1	0	0
	0	0	1	0

CONTROL			
1-Way Stop(SB)			
TEV	2672	2785	3067
	AM	NOON	PM
PHF	0.98	0.94	0.95

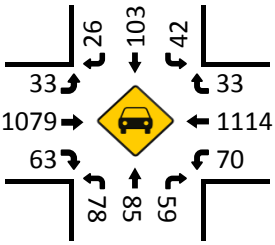
Total Vehicles (AM)



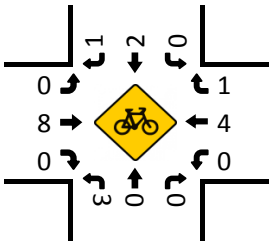
Bikes (AM)



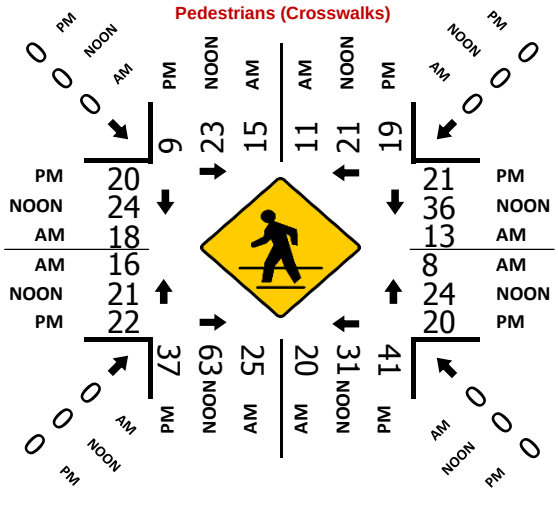
Total Vehicles (Noon)



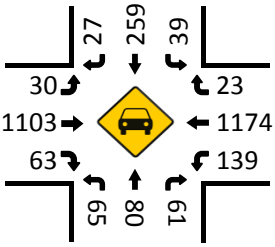
Bikes (NOON)



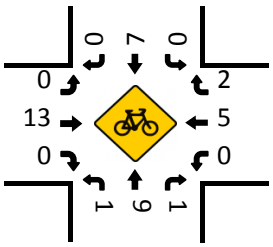
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Redwood Ave & Washington Blvd
City: Los Angeles
Control: 1-Way Stop(SB)

Project ID: 18-05413-116
Date: 6/7/2018

Total

NS/EW Streets:	Redwood Ave				Redwood Ave				Washington Blvd				Washington Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	23	23	8	0	3	11	1	0	3	163	7	0	7	146	2	0	397
7:15 AM	30	27	12	0	6	14	3	0	2	172	3	0	13	176	4	0	462
7:30 AM	28	29	12	0	9	14	1	0	2	246	4	0	12	194	9	0	560
7:45 AM	28	27	8	0	11	17	6	0	5	255	5	0	18	285	18	0	683
8:00 AM	32	22	15	0	11	15	2	0	4	257	17	0	15	241	7	1	639
8:15 AM	35	28	16	0	9	13	2	0	5	291	6	0	22	224	3	0	654
8:30 AM	34	15	14	0	7	22	3	0	3	248	10	0	23	256	1	0	636
8:45 AM	27	20	14	0	6	16	3	0	3	240	9	1	20	296	5	2	662
9:00 AM	38	26	10	0	8	20	0	0	6	236	13	1	22	262	6	0	648
9:15 AM	29	30	12	0	3	24	4	0	4	236	8	2	24	306	3	0	685
9:30 AM	25	21	18	0	9	24	2	0	5	246	15	0	29	269	3	0	666
9:45 AM	21	27	18	0	3	16	5	0	7	229	11	0	22	307	6	1	673
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	350	295	157	0	85	206	32	0	49	2819	108	4	227	2962	67	4	7365
APPROACH %'s :	43.64%	36.78%	19.58%	0.00%	26.32%	63.78%	9.91%	0.00%	1.64%	94.60%	3.62%	0.13%	6.96%	90.86%	2.06%	0.12%	
PEAK HR :	09:00 AM - 10:00 AM																TOTAL
PEAK HR VOL :	113	104	58	0	23	84	11	0	22	947	47	3	97	1144	18	1	2672
PEAK HR FACTOR :	0.743	0.867	0.806	0.000	0.639	0.875	0.550	0.000	0.786	0.962	0.783	0.375	0.836	0.932	0.750	0.250	0.975
			0.929				0.843				0.958				0.938		

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	15	17	16	0	9	23	8	0	11	241	11	1	21	231	13	0	617
12:15 PM	23	24	9	0	7	31	2	0	8	276	10	0	15	306	12	0	723
12:30 PM	18	19	17	0	12	15	9	0	10	264	16	0	17	266	7	0	670
12:45 PM	20	22	16	0	14	27	9	0	6	299	25	0	16	283	5	0	742
1:00 PM	17	20	17	0	9	30	6	0	9	240	12	0	22	259	9	0	650
1:15 PM	21	18	23	0	9	27	6	0	16	273	19	0	15	274	4	0	705
1:30 PM	18	20	15	0	11	35	10	0	3	246	9	0	20	267	4	0	658
1:45 PM	15	14	13	0	10	50	7	0	6	254	19	0	17	248	6	0	659
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	147	154	126	0	81	238	57	0	69	2093	121	1	143	2134	60	0	5424
APPROACH %'s :	34.43%	36.07%	29.51%	0.00%	21.54%	63.30%	15.16%	0.00%	3.02%	91.64%	5.30%	0.04%	6.12%	91.31%	2.57%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	78	85	59	0	42	103	26	0	33	1079	63	0	70	1114	33	0	2785
PEAK HR FACTOR :	0.848	0.885	0.868	0.000	0.750	0.831	0.722	0.000	0.825	0.902	0.630	0.000	0.795	0.910	0.688	0.000	0.938
			0.957				0.855				0.890				0.914		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:00 PM	21	31	16	0	12	54	2	0	5	275	14	0	21	243	5	0	699
3:15 PM	16	15	16	0	8	37	7	0	4	287	14	0	29	295	3	1	732
3:30 PM	18	17	13	0	14	55	7	0	6	299	11	0	19	283	3	0	745
3:45 PM	17	18	16	0	9	46	8	0	5	264	10	0	25	265	7	0	690
4:00 PM	20	21	14	0	10	47	3	0	5	274	10	0	23	273	11	0	711
4:15 PM	13	19	11	0	9	66	5	0	6	273	19	0	26	251	4	0	702
4:30 PM	9	23	13	0	11	46	4	0	4	282	10	0	30	300	4	0	736
4:45 PM	13	15	12	0	7	63	5	0	4	240	26	0	37	295	2	0	719
5:00 PM	17	25	15	0	10	59	6	0	6	253	11	1	33	290	5	1	732
5:15 PM	20	20	13	0	9	57	3	0	3	266	18	0	29	271	5	0	714
5:30 PM	14	28	9	0	6	78	9	0	5	283	13	0	32	275	6	0	758
5:45 PM	17	24	18	0	10	47	7	0	12	267	11	0	45	301	7	0	766
6:00 PM	19	10	17	0	13	67	6	0	7	286	23	1	33	320	5	1	808
6:15 PM	15	18	17	0	10	67	5	1	6	267	16	1	29	278	5	0	735
6:30 PM	16	14	12	0	8	55	3	0	4	269	17	0	25	308	2	1	734
6:45 PM	17	18	13	0	6	58	9	0	9	231	9	0	29	345	4	2	750
7:00 PM	17	19	13	0	10	52	10	0	4	255	9	0	26	287	1	0	703
7:15 PM	12	13	13	0	12	40	11	0	4	225	8	0	29	253	7	0	627
7:30 PM	16	10	13	0	6	28	4	0	3	271	12	3	20	263	2	1	652
7:45 PM	10	15	10	0	5	35	1	0	11	256	12	0	13	296	3	0	667
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	317	373	274	0	185	1057	115	1	113	5323	273	6	553	5692	91	7	14380
APPROACH %'s :	32.88%	38.69%	28.42%	0.00%	13.62%	77.84%	8.47%	0.07%	1.98%	93.14%	4.78%	0.10%	8.72%	89.74%	1.43%	0.11%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	65	80	61	0	39	259	27	1	30	1103	63	2	139	1174	23	1	3067
PEAK HR FACTOR :	0.855	0.714	0.847	0.000	0.750	0.830	0.750	0.250	0.625	0.964	0.685	0.500	0.772	0.917	0.821	0.250	0.949
			0.873				0.876				0.945				0.931		

Prepared by National Data & Surveying Services

Bet. Walnut Ave & Glencoe Ave & West Costco dwy on Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05468-001
City: Marina Del Rey

Day: Friday
Date: 06/29/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

Bet. Walnut Ave & Glencoe Ave — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	197	0	116	0	311	PM

EASTBOUND — West Costco dwy on Washington

AM	NOON	PM		
0	0	1308	⇦	
0	0	4	↰	0
0	0	224	↑	1
0	0	877	→	2
0	0	11	↱	0
AM	NOON	PM		

WESTBOUND — West Costco dwy on Washington

PM	NOON	AM		
86	0	0	↰	0
1104	0	0	←	3
4	0	0	↰	0
1	0	0	↰	0
1011	0	0	⇨	
PM	NOON	AM		

CONTROL

Signalized

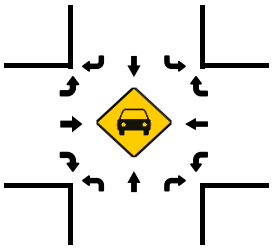
	AM	NOON	PM
TEV	0	0	2645
PHF			0.95

	1	0	1	0	
	0	0	0	0	

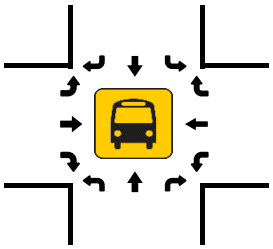
Bet. Walnut Ave & Glencoe Ave — NORTHBOUND

PM	15	0	3	1	17	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

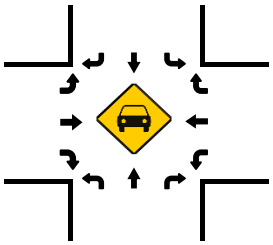
Total Vehicles (AM)



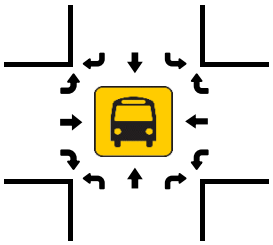
Total Vehicles (AM)



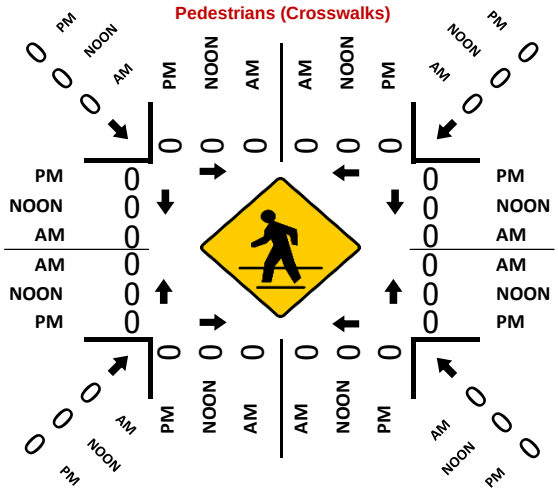
Total Vehicles (NOON)



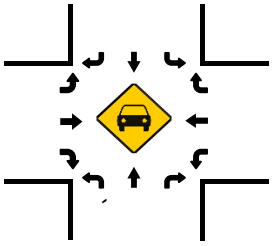
Total Vehicles (NOON)



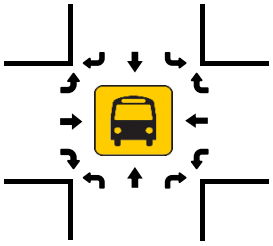
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Bet. Walnut Ave & Glencoe Ave & West Costco dwy on Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05468-001
Date: 2018-06-29

Total

NS/EW Streets:	Bet. Walnut Ave & Glencoe Ave				Bet. Walnut Ave & Glencoe Ave				West Costco dwy on Washington Blvd				West Costco dwy on Washington Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	3	0	36	2	79	0	50	213	0	0	2	259	24	0	668
4:15 PM	1	1	3	0	40	0	53	0	49	209	1	0	0	256	20	0	633
4:30 PM	0	0	3	0	27	0	42	0	56	206	4	2	0	269	20	0	629
4:45 PM	0	0	2	0	30	0	43	0	43	221	1	1	1	271	26	0	639
5:00 PM	1	0	10	0	28	0	54	0	48	215	5	0	0	271	23	0	655
5:15 PM	1	1	6	0	27	0	53	0	68	235	5	2	2	270	23	0	693
5:30 PM	0	0	1	0	24	0	43	0	43	213	1	1	0	281	20	1	628
5:45 PM	1	0	0	0	37	0	47	0	65	214	0	1	2	282	20	0	669
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	2	28	0	249	2	414	0	422	1726	17	7	7	2159	176	1	5214
APPROACH %'s :	11.76%	5.88%	82.35%	0.00%	37.44%	0.30%	62.26%	0.00%	19.43%	79.47%	0.78%	0.32%	0.30%	92.15%	7.51%	0.04%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	3	1	17	0	116	0	197	0	224	877	11	4	4	1104	86	1	2645
PEAK HR FACTOR :	0.750	0.250	0.425	0.000	0.784	0.000	0.912	0.000	0.824	0.933	0.550	0.500	0.500	0.979	0.935	0.250	0.954
	0.477				0.932				0.900				0.983				

Prepared by National Data & Surveying Services

Bet. Walnut Ave & Glencoe Ave & East Costco dwy on Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05468-002
City: Marina Del Rey

Day: Friday
Date: 06/29/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Bet. Walnut Ave & Glencoe Ave — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	64	163	318	0	565	PM

1 | 0.5 | 1.5 | 0

EASTBOUND — East Costco dwy on Washington

AM	NOON	PM	
0	0	1133	
0	0	0	0
0	0	33	1
0	0	743	2
0	0	241	1
AM	NOON	PM	

WESTBOUND — East Costco dwy on Washington

	PM	NOON	AM
1	402	0	0
2	850	0	0
1	364	0	0
0	0	0	0
	1359	0	0
	PM	NOON	AM

CONTROL

Signalized

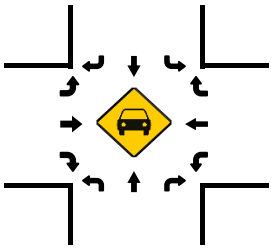
TEV	0 AM	0 NOON	3825 PM
PHF			0.97

0 | 1.5 | 0.5 | 1

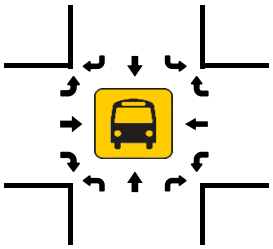
PM	768	0	219	130	298	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

NORTHBOUND — Bet. Walnut Ave & Glencoe Ave

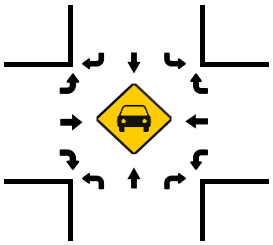
Total Vehicles (AM)



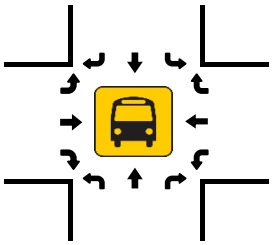
Total Vehicles (AM)



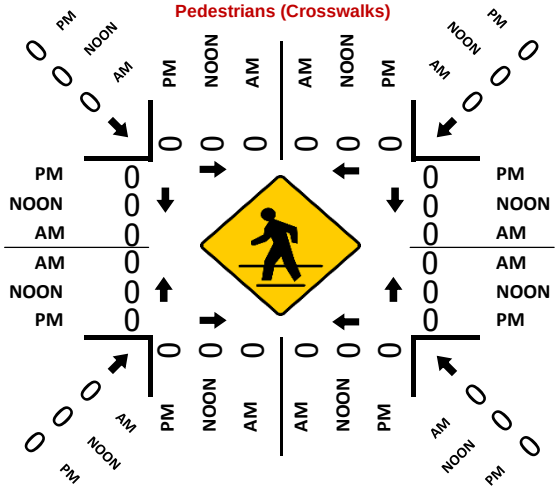
Total Vehicles (NOON)



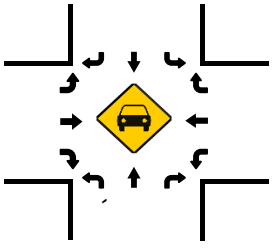
Total Vehicles (NOON)



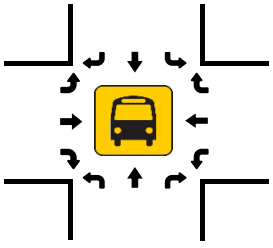
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Bet. Walnut Ave & Glencoe Ave & East Costco dwy on Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05468-002
Date: 2018-06-29

Total

NS/EW Streets:	Bet. Walnut Ave & Glencoe Ave				Bet. Walnut Ave & Glencoe Ave				East Costco dwy on Washington Blvd				East Costco dwy on Washington Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	64	35	76	0	90	36	23	0	8	172	64	0	86	171	117	0	942
4:15 PM	50	33	88	0	87	41	14	0	6	196	59	0	87	189	90	0	940
4:30 PM	53	25	77	0	75	37	14	0	6	177	56	0	87	187	107	0	901
4:45 PM	58	33	71	0	80	41	20	0	10	186	57	0	93	224	111	0	984
5:00 PM	56	40	91	0	97	39	14	0	7	189	45	0	83	192	99	0	952
5:15 PM	49	27	71	0	67	47	14	0	7	189	78	0	95	234	99	0	977
5:30 PM	56	30	65	0	74	36	16	0	9	179	61	0	93	200	93	0	912
5:45 PM	50	28	58	0	79	38	16	0	14	188	52	0	90	245	92	0	950
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	436	251	597	0	649	315	131	0	67	1476	472	0	714	1642	808	0	7558
APPROACH %'s :	33.96%	19.55%	46.50%	0.00%	59.27%	28.77%	11.96%	0.00%	3.33%	73.25%	23.42%	0.00%	22.57%	51.90%	25.54%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	219	130	298	0	318	163	64	0	33	743	241	0	364	850	402	0	3825
PEAK HR FACTOR :	0.944	0.813	0.819	0.000	0.820	0.867	0.800	0.000	0.825	0.983	0.772	0.000	0.958	0.908	0.905	0.000	0.972
	0.865				0.908				0.928				0.944				

Prepared by National Data & Surveying Services

Bet. Walnut Ave & Glencoe Ave & West Costco dwy on Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05468-001
City: Marina Del Rey

Day: Saturday
Date: 06/30/2018

Bet. Walnut Ave & Glencoe Ave

SOUTHBOUND

PEAK HOURS	AM	NONE				
	NOON	NONE				
	PM	02:30 PM - 03:30 PM				

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	239	2	175	0	428

AM	NOON	PM	
0	0	1228	⇦
0	0	2	0
0	0	289	1
0	0	830	2
0	0	15	0
AM	NOON	PM	

EASTBOUND

West Costco dwy on Washington

1	0	1	0

CONTROL

Signalized

TEV	0 AM	0 NOON	2705 PM
PHF			0.93

PM	NOON	AM	
139	0	0	0
986	0	0	3
2	0	0	0
8	0	0	0
1029	0	0	⇨
PM	NOON	AM	

WESTBOUND

West Costco dwy on Washington

0	0	0	0	

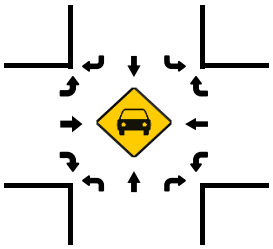
PM	20	1	1	0	16	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

NORTHBOUND

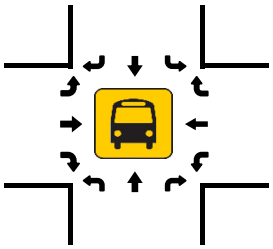
Bet. Walnut Ave & Glencoe Ave

COUNT PERIODS	AM	NONE	
	NOON	NONE	
	PM	02:00 PM - 04:00 PM	

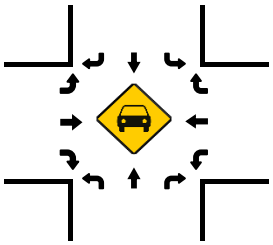
Total Vehicles (AM)



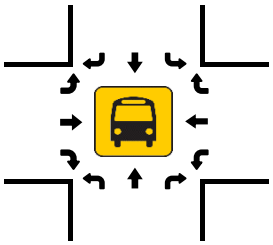
Total Vehicles (AM)



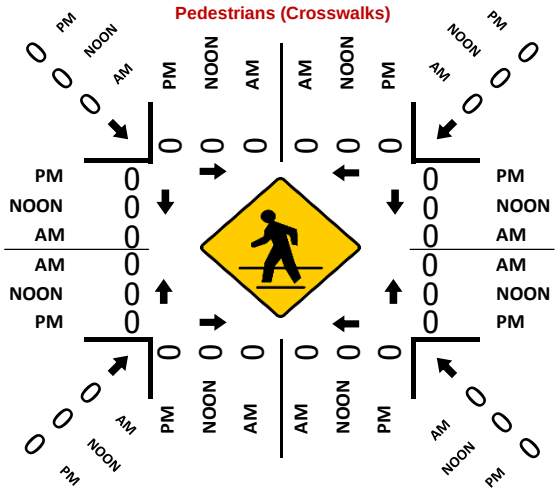
Total Vehicles (NOON)



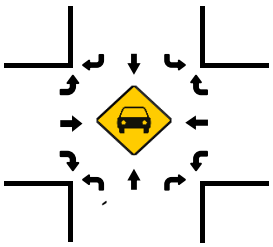
Total Vehicles (NOON)



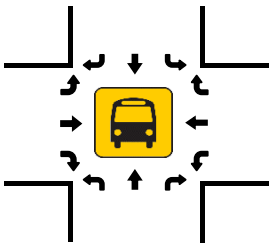
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Bet. Walnut Ave & Glencoe Ave & West Costco dwy on Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05468-001
Date: 2018-06-30

Total

NS/EW Streets:	Bet. Walnut Ave & Glencoe Ave				Bet. Walnut Ave & Glencoe Ave				West Costco dwy on Washington Blvd				West Costco dwy on Washington Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	1	0	5	1	36	0	66	0	65	190	5	0	0	248	35	4	656
2:15 PM	0	0	6	0	27	0	65	0	71	171	2	0	0	261	43	0	646
2:30 PM	0	0	4	0	38	0	54	0	73	199	1	0	0	254	38	1	662
2:45 PM	0	0	1	0	39	1	58	0	74	192	7	0	0	232	35	2	641
3:00 PM	0	0	7	1	56	1	56	0	68	226	4	2	0	271	33	3	728
3:15 PM	1	0	4	0	42	0	71	0	74	213	3	0	2	229	33	2	674
3:30 PM	0	0	1	0	36	0	43	0	66	196	3	0	0	259	24	1	629
3:45 PM	0	0	5	0	45	0	55	0	54	187	2	1	2	263	19	0	633
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	0	33	2	319	2	468	0	545	1574	27	3	4	2017	260	13	5269
APPROACH %'s :	5.41%	0.00%	89.19%	5.41%	40.43%	0.25%	59.32%	0.00%	25.36%	73.24%	1.26%	0.14%	0.17%	87.93%	11.33%	0.57%	
PEAK HR :	02:30 PM - 03:30 PM																TOTAL
PEAK HR VOL :	1	0	16	1	175	2	239	0	289	830	15	2	2	986	139	8	2705
PEAK HR FACTOR :	0.250	0.000	0.571	0.250	0.781	0.500	0.842	0.000	0.976	0.918	0.536	0.250	0.250	0.910	0.914	0.667	0.929
	0.563				0.920				0.947				0.924				

Prepared by National Data & Surveying Services

Bet. Walnut Ave & Glencoe Ave & East Costco dwy on Washington Blvd

Peak Hour Turning Movement Count

ID: 18-05468-002
City: Marina Del Rey

Day: Saturday
Date: 06/30/2018

Bet. Walnut Ave & Glencoe Ave

SOUTHBOUND

PEAK HOURS	AM	NONE				COUNT PERIODS
	NOON	NONE				
	PM	03:00 PM - 04:00 PM				

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	80	107	389	0	670
	1	0.5	1.5	0	

EASTBOUND (East Costco dwy on Washington)

AM	NOON	PM	
0	0	1065	
0	0	0	0
0	0	43	1
0	0	769	2
0	0	204	1
AM	NOON	PM	

WESTBOUND (East Costco dwy on Washington)

	PM	NOON	AM
1	507	0	0
2	825	0	0
1	284	0	0
0	0	0	0
	1394	0	0
	PM	NOON	AM

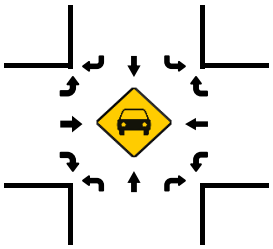
CONTROL			
Signalized			
TEV	0 AM	0 NOON	3724 PM
PHF			0.98

PM	595	0	160	120	236
NOON	0	0	0	0	0
AM	0	0	0	0	0
		0	1.5	0.5	1

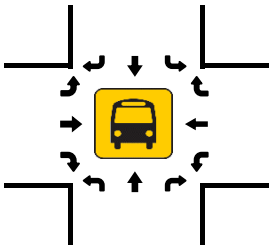
NORTHBOUND

Bet. Walnut Ave & Glencoe Ave

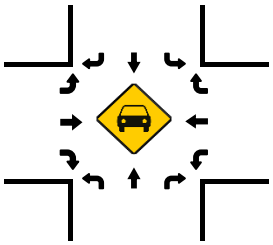
Total Vehicles (AM)



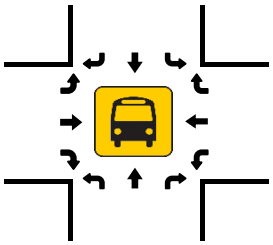
Total Vehicles (AM)



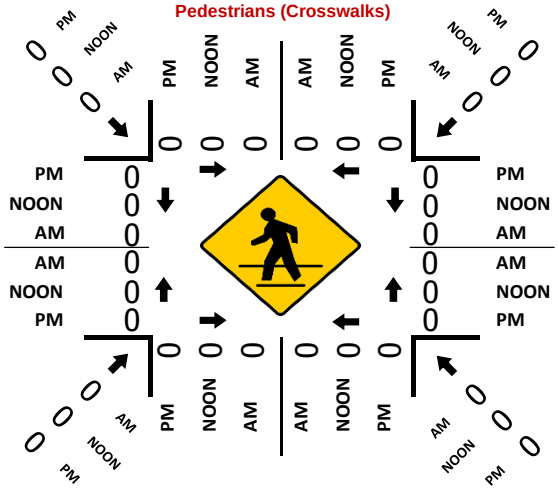
Total Vehicles (NOON)



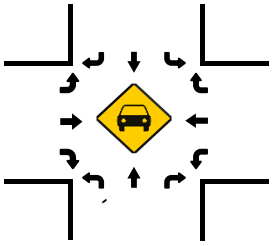
Total Vehicles (NOON)



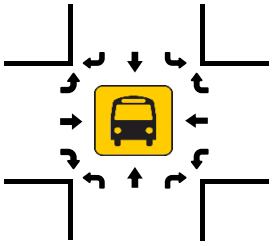
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Bet. Walnut Ave & Glencoe Ave & East Costco dwy on Washington Blvd
City: Marina Del Rey
Control: Signalized

Project ID: 18-05468-002
Date: 2018-06-30

Total

NS/EW Streets:	Bet. Walnut Ave & Glencoe Ave				Bet. Walnut Ave & Glencoe Ave				East Costco dwy on Washington Blvd				East Costco dwy on Washington Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	1.5	0.5	1	0	1	2	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	50	44	56	0	102	39	20	0	11	172	48	0	67	191	119	0	919
2:15 PM	46	36	58	0	78	31	21	0	7	164	42	1	75	218	140	0	917
2:30 PM	55	28	63	0	95	28	27	0	11	194	46	0	70	180	110	0	907
2:45 PM	45	45	49	0	90	25	30	0	11	167	56	0	81	204	103	0	906
3:00 PM	35	30	61	0	87	27	25	0	9	198	54	0	68	205	142	0	941
3:15 PM	38	32	53	0	103	30	22	0	16	204	53	0	65	205	112	0	933
3:30 PM	47	33	59	0	102	21	14	0	12	192	37	0	71	194	118	0	900
3:45 PM	40	25	63	0	97	29	19	0	6	175	60	0	80	221	135	0	950
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	356	273	462	0	754	230	178	0	83	1466	396	1	577	1618	979	0	7373
APPROACH %'s :	32.63%	25.02%	42.35%	0.00%	64.89%	19.79%	15.32%	0.00%	4.27%	75.33%	20.35%	0.05%	18.18%	50.98%	30.84%	0.00%	
PEAK HR :	03:00 PM - 04:00 PM																TOTAL
PEAK HR VOL :	160	120	236	0	389	107	80	0	43	769	204	0	284	825	507	0	3724
PEAK HR FACTOR :	0.851	0.909	0.937	0.000	0.944	0.892	0.800	0.000	0.672	0.942	0.850	0.000	0.888	0.933	0.893	0.000	0.980
	0.928				0.929				0.930				0.927				

APPENDIX B

Proposed Project Traffic Control Plan

WORKSITE TRAFFIC CONTROL PLAN GENERAL NOTES

1. THIS STAGE OF WORK IS FOR PHASE 1A AND 1B (UNDERGROUND STORMWATER STORAGE CHAMBERS, TRENCHLESS PIPE INSTALLATION, PUMP WELLS)
2. THE PROPOSED START DATE FOR THIS WTCP IS XXXXX XX ,20XX, WITH AN ESTIMATED CONSTRUCTION DURATION OF 24 WEEKS.
3. ALL SIGNS SHALL BE RETLECTORIZED AND STANDARD SIZE. WORK AREA WARNING SIGNS SHALL BE ORANGE SIGN FACE.
4. THE CONTRACTOR SHALL HAVE SIGNS, DELINEATORS, BARRICADES, ETC., PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION.
5. THESE PLANS INDICATE VEHICULAR TRAFFIC CONTROL IN THE WORK AREA DURING CONSTRUCTION ACTIVITY. ADDITIONAL TRAFFIC CONTROLS, SIGNS, DELINEATORS OR BARRICADES MAY BE REQUIRED IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ANY ADDITIONAL DEVICES NECESSARY TO ASSURE SAFETY TO THE PUBLIC AT ALL TIMES DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL PROVIDE SAFE PEDESTRIAN ACCESS AT ALL TIMES.
7. ALL EXISTING STRIPING WITHIN THE WORK AREA MUST BE SAND BLASTED (PAINT) OR GRINDING (THERMOPLASTIC) PRIOR TO BEING REAPPLIED WITHIN THE CITY RIGHT OF WAY. THIS DOES NOT APPLY TO THE AREA PROTECTED BY THE K-RAIL.
8. CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH THE CONSTRUCTION SIGNS. CONTRACTOR SHALL UNCOVER EXISTING SIGNS AS SOON AS THE CONSTRUCTION SIGNS ARE REMOVED.
9. ALL DELINEATORS SHALL BE EQUIPPED WITH REFLECTIVE BAND AT NIGHT TIME.
10. OPEN TRENCH WITH LESS THAN FIVE FEET OF CLEARANCE SHALL BE PROTECTED BY K-RAIL BARRIERS AND TEMPORARY CRASH CUSHIONS INSTALLED PER CALTRANS STANDARDS. AT LOCATIONS SHOWN ON THESE PLANS, UNLESS OTHERWISE DIRECTED BY ENGINEER.
11. TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AT ALL TIMES. CONFLICTING TRAFFIC SIGNAL INDICATIONS SHALL BE COVERED AND SIGNAL OPERATION DURING EACH CONSTRUCTION PHASE SHALL BE COORDINATED WITH AND APPROVED BY THE CITY ENGINEER.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREON, AS WELL AS ANY SUCH ADDITIONAL TRAFFIC CONTROL DEVICE AS MAY BE REQUIRED TO ENSURE THE SAFE MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
13. THE CITY RESERVES THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN USE AND TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL SUPERSEDE THESE PLANS AND BE DONE PER CALIFORNIA MUTCD WITH THE APPROVAL OF THE ENGINEER. EXACT LOCATION OF ALL EQUIPMENT AND TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE ENGINEER.
14. ALL PRIVATE DRIVEWAYS AND SIDE STREETS SHALL BE KEPT OPEN AT ALL TIMES EXCEPT WHEN CONSTRUCTION TAKES PLACE DIRECTLY IN FRONT OF OR WITHIN THE DRIVEWAY/SIDE STREET. ALL OPEN EXCAVATIONS ON PUBLIC STREETS SHALL BE BACK-FILLED OR STEEL-PLATED (ANTI-SKID PLATES) FOR TRAFFIC TO THE SATISFACTION OF CITY ENGINEER OUTSIDE THE WORKING HOURS. TRAFFIC SHALL BE RESTORED TO NORMAL CONDITIONS DURING NON-WORKING HOURS.
15. THE CONTRACTOR SHALL MAINTAIN INGRESS TO AND EGRESS FROM ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS THROUGHOUT THE PROJECT LIMITS. THE CONTRACTOR WILL BE ALLOWED TO CLOSE SAID DRIVEWAYS TO PERFORM THE REQUIRED WORK DURING THOSE PERIODS WHEN THE BUSINESSES ARE CLOSED UNLESS PERMISSION IS GRANTED FROM THE BUSINESS OWNER TO CLOSE THE DRIVEWAY DURING BUSINESS HOURS. THE CONTRACTOR SHALL NOTIFY AFFECTED RESIDENTS THAT RESIDENTIAL DRIVEWAY ACCESS WILL BE RESTRICTED. IF A TEMPORARY CLOSURE OF A RESIDENTIAL DRIVEWAY IS NECESSARY, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE THE TIME PERIOD OF THE CLOSURE.
16. PLACE CHANGEABLE MESSAGE SIGNS AT THE PROJECT APPROACHES OR LOCATIONS DESIGNATED BY THE ENGINEER, 14 DAYS PRIOR TO START OF WORK TO WARN MOTORISTS TO USE ALTERNATIVE ROUTES.
17. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES AND WITH THE CALIFORNIA ACCESSIBILITY GUIDELINES AS RELATED TO PEDESTRIAN ACCESS AND SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES PER ADA REQUIREMENTS. SIDEWALK AND BIKE LANE CLOSURE/DETOUR SHALL COMPLY WITH THE CALIFORNIA MUTCD STANDARDS.

TYPICAL CONTRACTOR RESPONSIBILITIES

1. THE STRIPING AND SIGNAGE SHOWN FOR REMOVAL ON THESE PLANS MAY BE DIFFERENT THAN WHAT EXISTS AT TIME OF IMPLEMENTATION OF A CONSTRUCTION STAGE. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGNAGE AND STRIPING, WHETHER OR NOT IT IS DEPICTED ACCURATELY ON THESE PLANS.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES, AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
3. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FUNCTIONAL DRIVEWAYS AT ALL TIMES AND SHALL COORDINATE WITH ALL AFFECTED RESIDENTS AND BUSINESSES.
4. CONTRACTOR SHALL PERFORM WORK IN ONLY ONE STAGE AT A TIME. THE CONTRACTOR SHALL ONLY UTILIZE THAT PORTION OF THE DESIGNATED "WORK AREA" WHICH IS NEEDED FOR CONSTRUCTION AT ANY GIVEN TIME.
5. THE IMPLEMENTATION OF WORKSITE TRAFFIC CONTROL PLANS, INCLUDING PAINT REMOVAL/GRINDING, MARK-OUT, LAYOUT AND INSTALLATION OF ALL TRAFFIC CONTROLS, INCLUDING SIGNAL WORK AND STRIPING SHALL ONLY TAKE PLACE DURING OFF-PEAK HOURS; 9AM-3PM. CONTRACTOR SHALL REQUEST APPROVAL FROM ENGINEER FOR ANY ADDITIONAL TEMPORARY LANE CLOSURES NOT SHOWN ON THESE PLANS, REGARDLESS OF DURATION OR TIME PERIOD.
6. ANY CHANGES TO WORK AREAS, WORK HOURS, AND/OR APPROVED PLANS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STRIPING (PROPOSED AND EXISTING) SHOWN ON THIS WTCP TO BE IN GOOD CONDITION AND VISIBLE. THE CONTRACTOR SHALL REPLACE ANY FADED EXISTING STRIPING AS DIRECTED BY THE ENGINEER.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY MISSING OR DAMAGED SIGNS (DUE TO CONSTRUCTION).
9. FIELD CONDITIONS MAY VARY FROM THOSE SHOWN ON THE WTCP. IN THE EVENT FIELD CONDITIONS ARE DIFFERENT, THE CONTRACTOR SHALL COORDINATE WITH ENGINEER BEFORE IMPLEMENTING THE WTCP. THE CONTRACTOR MAY BE REQUIRED TO SUBMIT A REVISED WTCP FOR APPROVAL PRIOR TO WTCP IMPLEMENTATION.

TEMPORARY CRASH CUSHION INSTALLATION NOTES

1. ⓧ INDICATES SAND FILLED MODULE LOCATION AND WEIGHT OF SAND IN POUNDS FOR EACH MODULE. MODULE SPACING IS BASED ON THE GREATER DIAMETER OF THE MODULE.
2. ALL SAND WEIGHTS ARE NOMINAL.
3. THE TEMPORARY CRASH CUSHION ARRAYS SHOWN ON THE PLANS SHALL BE USED ONLY IN LOCATIONS WHERE THERE WILL BE TRAFFIC ON ONE SIDE OF THE TEMPORARY CRASH CUSHION ARRAY.
4. IF THE FIXED OBJECT OR APPROACH END OF THE TEMPORARY RAILING IS LESS THAN 15'-0" FROM THE EDGE OF THE TRAVELED WAY, A TEMPORARY CRASH CUSHION ARRAY IS REQUIRED IN A CONSTRUCTION WORK ZONE.
5. TEMPORARY CRASH CUSHION ARRAYS SHALL NOT ENCROACH ON THE TRAVELED WAY.
6. PLACE THE TYPE P MARKER PANEL SO THAT THE BOTTOM OF THE PANEL RESTS UPON THE PALLET AND FACES TRAFFIC.

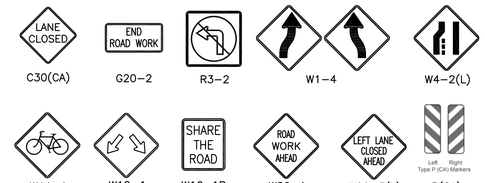
TYPICAL IMPLEMENTATION REQUIREMENTS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LABOR EQUIPMENT AND MATERIAL INVOLVED IN THE REMOVAL, INSTALLATION, AND MAINTENANCE OF ALL STRIPING, PAVEMENT MARKINGS, SIGNS, BARRICADES, DELINEATORS, ETC., SHOWN ON THESE WTC PLANS AND AS CONSTRUCTION STAGING NECESSITATES. STRIPING AND PAVEMENT MARKINGS SHALL BE REMOVED BY WET SANDBLASTING/GRINDING. PAINTING THE EXISTING STRIPING OVER WITH BLACK PAINT IS NOT PERMITTED. PAINT MAY BE USED ON SMOOTH SURFACES FOR INSTALLATION LESS THAN 6 MONTHS. DETOUR TAPE IS NOT PERMITTED.
2. ALL CONSTRUCTION RELATED WARNING SIGNS SHALL BE IN BLACK LEGEND WITH ORANGE BACKGROUND AND IN CONFORMANCE WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA M.U.T.C.D.) LATEST EDITION.
3. CONTRACTOR SHALL PROVIDE FLAGGERS AS DEEMED NECESSARY BY CITY. A FLAGGER SHALL USE ONLY THE APPROVED OCTAGONAL STOP/ SLOW PADDLE, SHALL WEAR AN ORANGE SAFETY VEST (PADDLE AND VEST MUST BE REFLECTORIZED FOR NIGHT WORK) AND HARD HAT, AS REQUIRED BY THE WATCH MANUAL, AND MUST BE PROPERLY TRAINED BY THE CONTRACTOR IN PERFORMING THE WORK SAFELY. APPROPRIATE ADVANCE SIGNS MUST ALSO BE INSTALLED, PER THE WATCH MANUAL.
4. ALL SIGNS, DELINEATORS, BARRICADES, ETC., SHALL CONFORM TO THE CALIFORNIA MUTCD (LATEST EDITION).
5. FOR OTHER REQUIREMENTS RELATED TO TRAFFIC CONTROL PLANS AND WORK AREA MAINTENANCE, THE CONTRACTOR SHALL FOLLOW THE CALIFORNIA MUTCD (LATEST EDITION) AND WATCH MANUAL (LATEST EDITION) ADOPTED BY THE CITY, AND ALL RELATED SECTIONS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, INCLUDING SECTION 7-10 "SAFETY," AND 302-4.5 "SCHEDULING, PUBLIC CONVENIENCE AND TRAFFIC CONTROL."
6. CONTRACTOR SHALL PROVIDE CHANGEABLE MESSAGE SIGNS/FLASHING ARROW BOARDS AND CONES/BARRICADES DELINEATORS AS FIELD CONDITIONS/DETOURS WARRANT AND AS DEEMED NECESSARY BY ENGINEER.
7. UNLESS K-RAILS AND CRASH CUSHIONS ARE INSTALLED, CONTRACTOR SHALL PROVIDE MIN. 5' SHOULDER FROM ANY OPEN EXCAVATION.
8. ALL K-RAIL ENDS, PLATFORMS AND FIXED OBJECTS SHALL BE PROTECTED BY CRASH CUSHIONS OR BY A QUADGUARD SYSTEM, UNLESS THEY ARE PLACED 15' AWAY FROM EDGE OF TRAVEL WAY. FOR A 20' K-RAIL MAX. VERTICAL DISTANCE DISPLACED CAN NOT EXCEED 5'/K-RAIL, OR A TAPER RATE SHALL NOT EXCEED 1/4.
9. ALL TEMPORARY SIGNAGE INSTALLED ADJACENT TO PEDESTRIAN TRAVEL WAY MUST ALLOW FOR ADA-COMPLIANT PASSAGEWAYS.
10. CONCRETE K-RAIL SECTIONS SHALL BE CONTINUOUSLY CONNECTED. IN AREAS WITH LESS THAN 3 CONCRETE K-RAILS, SECURE K-RAIL TO PAVEMENT PER CALTRANS SPECIFICATIONS T3B.
11. THE CONTRACTOR SHALL INSTALL SIDE REFLECTORS WITH CUBE-CORNER LENSES OR TOP MOUNTED REFLECTORS (FACING THE DRIVER) ON ALL K-RAIL BARRIERS.
12. WHEN REMOVAL IS REQUIRED BY CONSTRUCTION, CROSSWALK MARKINGS AND PEDESTRIAN SIGNAL HEADS SHALL BE COVERED SIMULTANEOUSLY.
13. CONTRACTOR SHALL PROVIDE RETLECTORIZED CONES AT TYPE III BARRICADE SUPPORTS TO ALERT PEDESTRIANS OF THE BARRICADE SUPPORT.
14. CONTRACTOR SHALL PROVIDE ACCESS TO ALL FIRE HYDRANTS WITHIN AND ADJACENT TO THE WORK AREA AT ALL TIMES.
15. CONTRACTOR SHALL PROVIDE ADA COMPLIANT AND MINIMUM 5FT WIDE CONTINUOUS ACCESS FOR PEDESTRIAN PASSAGEWAYS.

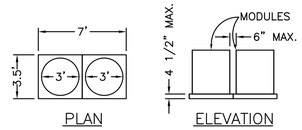
RESTORATION STRIPING NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LABOR AND MATERIAL INVOLVED IN THE MARKOUT, AND INSTALLATION OF ALL RESTORATION STRIPING/PAVEMENT MARKINGS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL OF ALL CONFLICTING WTCP STRIPING, SIGNING, AND OTHER WTCP-RELATED TRAFFIC CONTROL DEVICES PRIOR TO THE INSTALLATION OF THE FINAL STRIPING. IF THERE IS NO RESTORATION PLAN IN THIS PACKAGE, CONTRACTOR SHALL CONTACT TEMPORARY TRAFFIC MANAGEMENT SECTION FOR THE LATEST STRIPING PLANS SEVEN (7) DAYS PRIOR TO PROJECT COMPLETION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAINTING OF ALL EXISTING STRIPING THAT HAS BEEN DAMAGED DURING THE CONSTRUCTION PROCESS.
3. MARKOUT SHALL BE BY HEAVY PAINT BRUSH MARKINGS OVER A PULLED ROPE IN THE RESPECTIVE WHITE AND YELLOW COLORS OF THE PROPOSED STRIPING.
4. THE CONTRACTOR SHALL CONTACT ENGINEER AT LEAST TEN (10) WORKING DAYS BEFORE BEGINNING MARKOUT. THE CONTRACTOR SHALL CORRECT ALL ERRORS IN MARKOUT REQUESTED. THE INSTALLATION OF STRIPING MAY PROCEED ONLY AFTER APPROVAL OF MARKOUT.

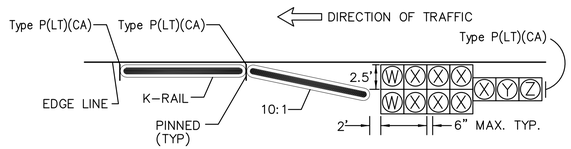
TRAFFIC SIGN LEGEND



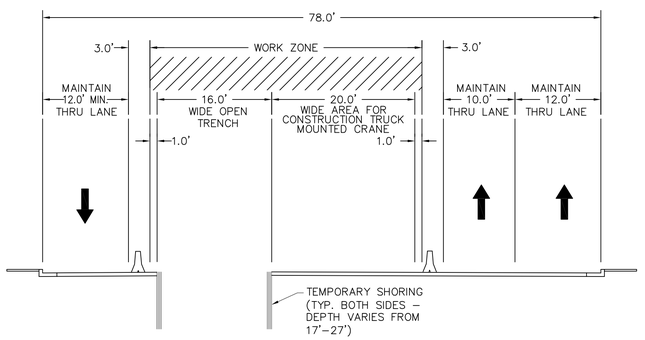
* 6" MIN HEIGHT LETTERING, BLACK LETTERS ON ORANGE BACKGROUND



CRASH CUSHION PALLET DETAIL
DETAIL A
(TO BE USED AT THE DISCRETION OF THE CONTRACTOR)



WEIGHT OF SAND
(W=2,112 LBS.),(X=1,408 LBS.),(Y=704 LBS.),(Z=396 LBS.)
TYPICAL INSTALLATION OF CRASH CUSHIONS
45 MPH MAXIMUM INTERSECTIONS
DETAIL B



WASHINGTON BLVD (EASTBOUND)
TRAFFIC CONTROL TYPICAL SECTION
NOT TO SCALE

CITY OF CULVER CITY
PUBLIC WORKS DEPARTMENT

WASHINGTON BLVD STORMWATER AND URBAN RUNOFF DIVERSION

TRAFFIC CONTROL GENERAL NOTES
PHASE 1

APPROVED BY: LEE TORRES, P.E.
SENIOR CIVIL ENGINEER — DATE

SHEET
Sheet 31 Of 33 Sheets

75% SUBMITTAL, NOT FOR CONSTRUCTION

DIGALERT — DIAL BEFORE YOU DIG — TOLL FREE 800-227-2600 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT — TWO WORKING DAYS BEFORE YOU DIG

PREPARED BY
Harris & Associates
22 Executive Park, Suite 200 - Irvine, CA 92614
PHONE: (949) 655-3900 • FAX: (949) 655-3995

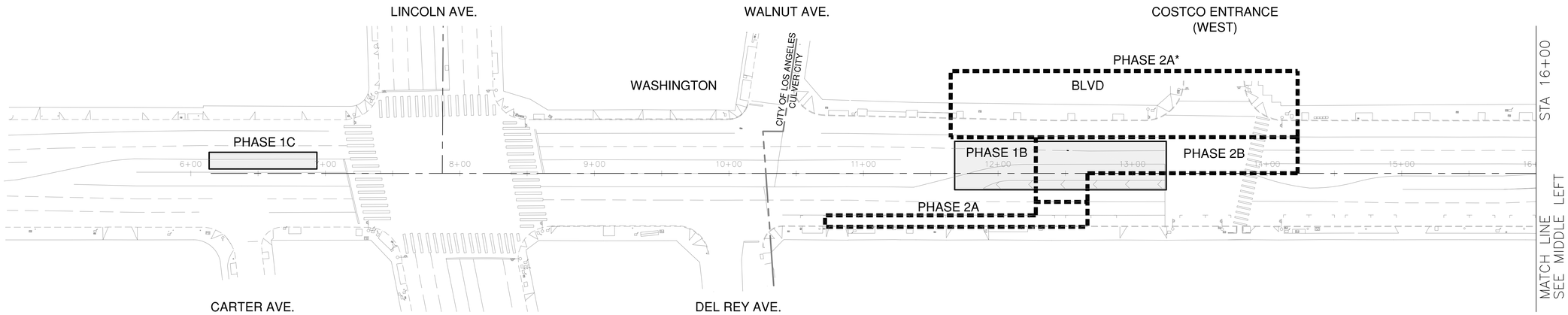
PLANS PREPARED UNDER THE SUPERVISION OF:

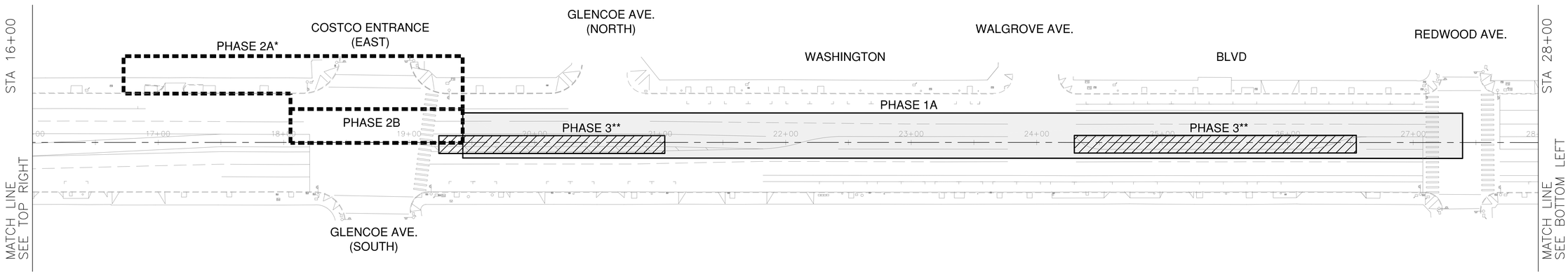
Project Number: PR- 001

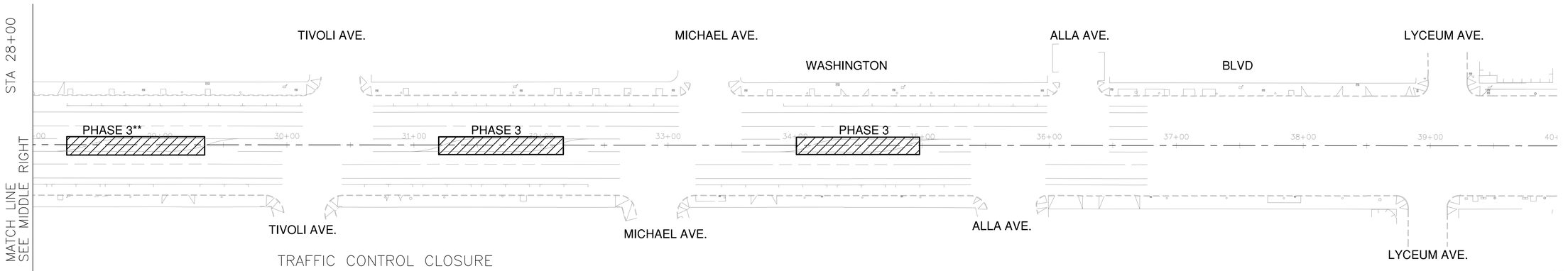
Drawing No.

NO.	REVISION	BY	APPR.	DATE
1				
2				
3				

Drawing Name: P:\projects\Culver City\160-0932 - Washington Boulevard Stormwater Diversion Traffic Control\00-CAD\Originals from CME\TC-PHASE 1 - 1TITLE.dwg
Last Opened: Apr 14, 2018 - 7:01am by cmieke







LEGEND:

TRAFFIC CONTROL CLOSURE TYPE (METHOD)

PHASE 1 – (UNDERGROUND STORAGE TANK, PUMP STATION AND PIPING CONSTRUCTION)	1A AND 1B – CONTINUOUS (SEE TRAFFIC CONTROL PLAN SHEET 33) 1C (NIGHT) – TEMPORARY (WATCH)
PHASE 2 – (DIVERSION PIPING AND COSTCO DRIVEWAY AND INTERSECTION CONSTRUCTION)	2A – TEMPORARY (WATCH) 2B – CONTINUOUS (WATCH)
PHASE 3 – (MEDIAN CONSTRUCTION)	3 – CONTINUOUS (WATCH)

* COSTCO DRIVEWAYS MAY NOT BE CONSTRUCTED CONCURRENTLY.

** CONTRACTOR MAY CONSTRUCT AS PART OF PHASE 1 – SEE SPECIFICATIONS.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

75% SUBMITTAL, NOT FOR CONSTRUCTION

DIG ALERT — DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG — TOLL FREE 800-227-2600 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

PREPARED BY
Harris & Associates
22 Executive Park, Suite 200 – Irvine, CA 92614
PHONE: (949) 655-3900 • FAX: (949) 655-3995

PLANS PREPARED UNDER THE SUPERVISION OF:

Project Number: PR- 001

Drawing No.

NO.	REVISION	BY	APPR.	DATE
1				
2				
3				

CITY OF CULVER CITY
PUBLIC WORKS DEPARTMENT

WASHINGTON BLVD STORMWATER AND URBAN RUNOFF DIVERSION

PHASING PLAN

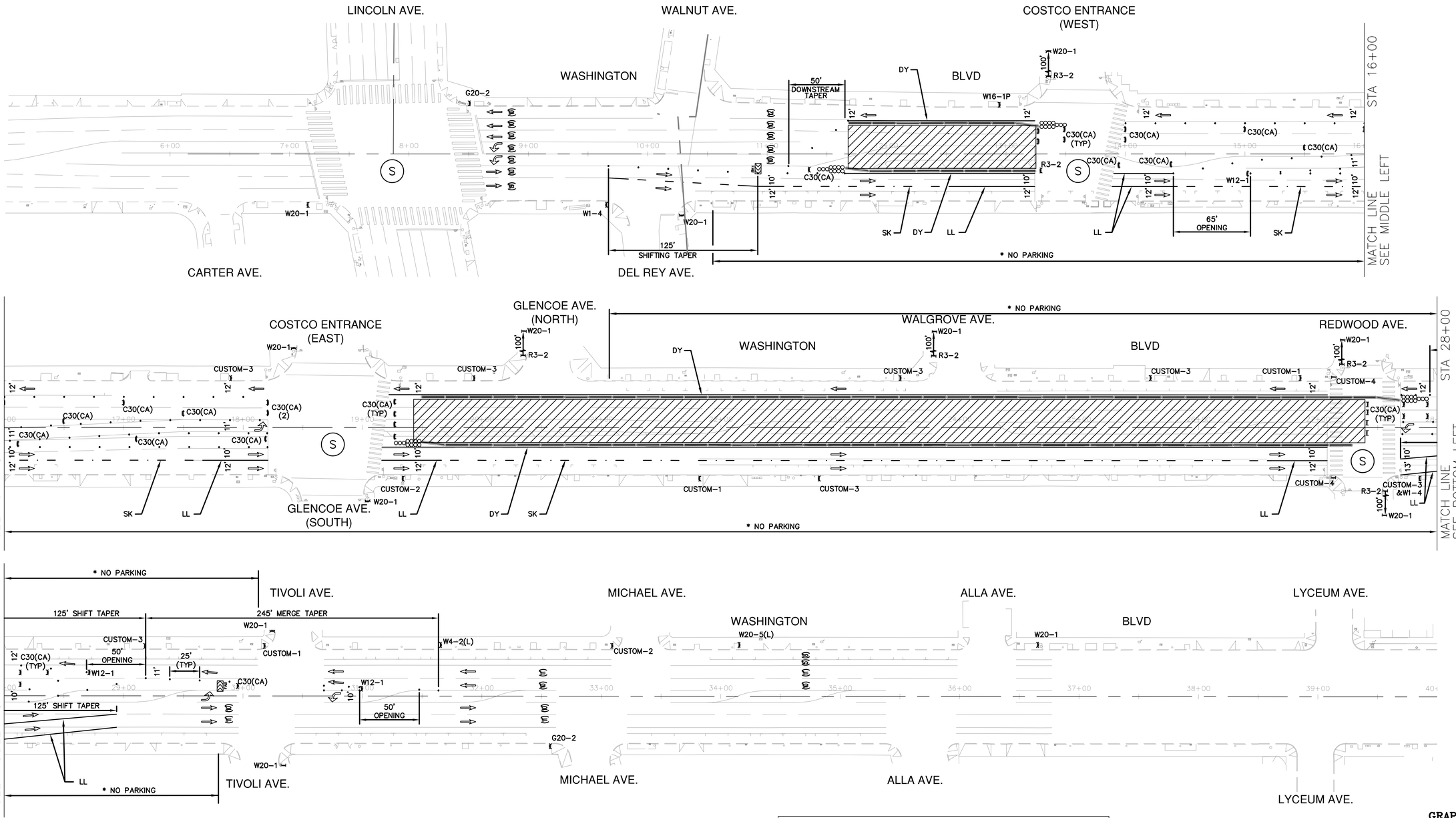
APPROVED BY: LEE TORRES, P.E.

SENIOR CIVIL ENGINEER DATE

SHEET

Sheet 32 of 33 Sheets

Drawing Name: P:\projects\Culver City\160-1932 - Washington Boulevard Stormwater Diversion Traffic Control\02- CAD\Graphics From CME\TC PHASE PLAN.dwg
Last Opened: Apr 14, 2018 - 6:11pm by cmeike



LEGEND:

- (S) – SIGNALIZED INTERSECTION
- – TYPE II BARRICADE / WITH SIGN(S)
- – TYPE III BARRICADE / WITH SIGN(S)
- – CRASH CUSHION ARRAY "TS11" (PER CALTRANS STD. PLAN T2 AND DETAIL ON SHEET X)
- – 20' K–RAIL (INTERCONNECTED)
- – WORK AREA
- FAB – FLASHING ARROW BOARD (FAB)
- – TRAFFIC DIRECTION

DY PAINT 12" DOUBLE YELLOW LINE PER CALTRANS STD PLAN A20B, DETAIL 27

LL PAINT 50' LONG PAINTED 4–INCH WIDE WHITE LEAD LINE WITH ONE TYPE G CLEAR RETROREFLECTIVE PAVEMENT MARKER AT EACH END.

SK PAINT 4" SKIP WHITE LINE PER CALTRANS STD PLAN A20A, DETAIL 9

75% SUBMITTAL, NOT FOR CONSTRUCTION

*NO PARKING:
COVER ALL EXISTING PARKING SIGNS AND PLACE TEMPORARY "NO PARKING" SIGN.

STREET	POSTED WORK ZONE SPEED LIMIT	MINIMUM TAPER LENGTH (L) BASED ON 12' LANE	SPACING OF DELINEATORS	SIGN SPACING
WASHINGTON BLVD.	35 MPH	L – 245' (MERGE) L/2 – 125' (SHIFT)	25' (TAPER) 25' (TANGENT) 12' (CONFLICT)	100'

CONTRACTOR SHALL REMOVE CONFLICTING STRIPING (INCLUDING RAISED PAVEMENT MARKERS) OR PAVEMENT MARKING BY WET SANDBLASTING (PAINT) OR GRINDING (THERMOPLASTIC) – SEE GENERAL NOTES

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

DIG ALERT – DIAL BEFORE YOU DIG – TOLL FREE 800-227-2600 – A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT – TWO WORKING DAYS BEFORE YOU DIG

PREPARED BY
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22 Executive Park, Suite 200 – Irvine, CA 92614
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PLANS PREPARED UNDER THE SUPERVISION OF:

Project Number: PR- 001

Drawing No.

NO.	REVISION	BY	APPR.	DATE
1				
2				
3				

CITY OF CULVER CITY
PUBLIC WORKS DEPARTMENT

WASHINGTON BLVD STORMWATER AND URBAN RUNOFF DIVERSION

TRAFFIC CONTROL PLANS
PHASE 1A AND 1B

APPROVED BY: LEE TORRES, P.E.

SENIOR CIVIL ENGINEER DATE

SHEET
Sheet 33 Of 33 Sheets

Drawing Name: P:\projects\Culver City\160-1932 - Washington Boulevard Stormwater Diversion Traffic Control\02-CAD\02plots From CME\TC-PHASE 1.dwg
Last Opened: Apr 14, 2018 - 6:54am by cmiske

APPENDIX C

Intersection Analysis Worksheets

Existing Conditions
2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	671	462	236	803	229	475	1380	208	203	1387	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	12	10	11	11	12	12	12
Storage Length (ft)	180		0	0		0	400		0	220		0
Storage Lanes	2		1	2		0	4		0	2		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61		77			39			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		574			215			600			311	
Travel Time (s)		13.0			4.9			13.6			7.1	
Lane Group Flow (vph)	84	729	502	257	1122	0	516	1726	0	221	1592	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Total Split (s)	8.0	24.0	19.0	11.0	27.0		19.0	43.0		12.0	36.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	4.0	20.0	39.0	7.0	24.6		15.0	39.0		8.0	32.0	
Actuated g/C Ratio	0.04	0.22	0.43	0.08	0.27		0.17	0.43		0.09	0.36	
v/c Ratio	0.59	0.96	0.72	0.96	0.80		0.97	0.82		0.72	0.88	
Control Delay	60.0	60.0	25.3	76.7	37.4		70.3	25.8		49.8	35.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.0	60.0	25.3	76.7	37.4		70.3	25.8		49.8	35.6	
LOS	E	E	C	E	D		E	C		D	D	
Approach Delay		46.8			44.7			36.1			37.3	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 40.2		Intersection LOS: D	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Lincoln Blvd & Washington Blvd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	671	462	236	803	229	475	1380	208	203	1387	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	12	10	11	11	12	12	12
Storage Length (ft)	180		0	0		0	400		0	220		0
Storage Lanes	2		1	2		0	4		0	2		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61		77			39			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		574			215			600			311	
Travel Time (s)		13.0			4.9			13.6			7.1	
Lane Group Flow (vph)	84	729	502	257	1122	0	516	1726	0	221	1592	0
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Total Split (s)	8.0	24.0	19.0	11.0	27.0		19.0	43.0		12.0	36.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	4.0	20.0	39.0	7.0	24.6		15.0	39.0		8.0	32.0	
Actuated g/C Ratio	0.04	0.22	0.43	0.08	0.27		0.17	0.43		0.09	0.36	
v/c Ratio	0.59	0.96	0.72	0.96	0.80		0.97	0.82		0.72	0.88	
Control Delay	60.0	60.0	25.3	76.8	35.4		70.3	25.8		49.8	35.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.0	60.0	25.3	76.8	35.4		70.3	25.8		49.8	35.6	
LOS	E	E	C	E	D		E	C		D	D	
Approach Delay		46.8			43.1			36.1			37.3	
Approach LOS		D			D			D			D	

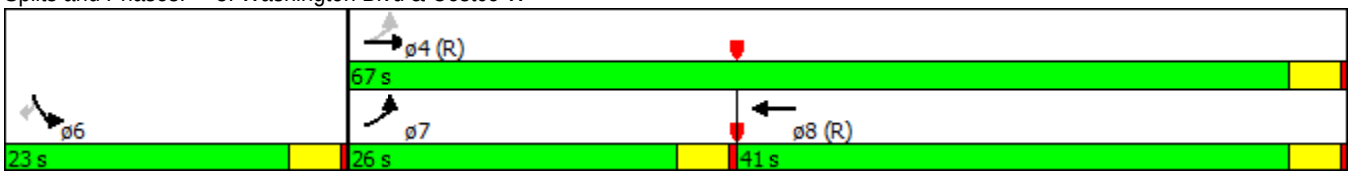
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 39.9		Intersection LOS: D	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Lincoln Blvd & Washington Blvd

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	228	877	1104	86	116	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	3539	5029	0	1770	1583
Flt Permitted	0.159				0.950	
Satd. Flow (perm)	296	3539	5029	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			17			214
Link Speed (mph)		30	30		30	
Link Distance (ft)		364	518		245	
Travel Time (s)		8.3	11.8		5.6	
Lane Group Flow (vph)	248	953	1293	0	126	214
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Total Split (s)	26.0	67.0	41.0		23.0	23.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	70.3	70.3	54.9		11.7	11.7
Actuated g/C Ratio	0.78	0.78	0.61		0.13	0.13
v/c Ratio	0.59	0.34	0.42		0.55	0.55
Control Delay	8.4	0.9	6.6		45.1	10.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	8.4	0.9	6.6		45.1	10.6
LOS	A	A	A		D	B
Approach Delay		2.4	6.6		23.4	
Approach LOS		A	A		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 6.9		Intersection LOS: A	
Intersection Capacity Utilization 52.3%		ICU Level of Service A	
Analysis Period (min) 15			

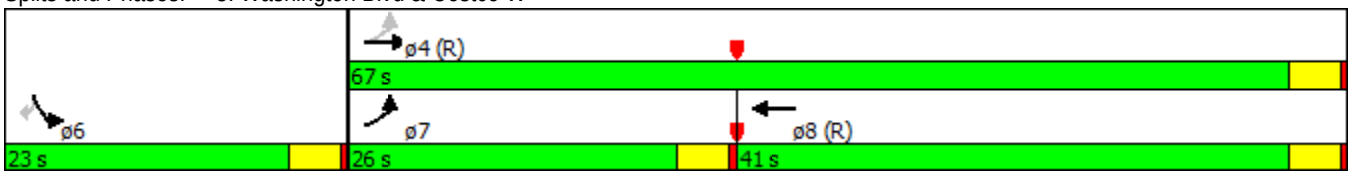
Splits and Phases: 3: Washington Blvd & Costco W



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	291	830	986	139	175	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	3539	4989	0	1770	1583
Flt Permitted	0.162				0.950	
Satd. Flow (perm)	302	3539	4989	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			35			260
Link Speed (mph)		30	30		30	
Link Distance (ft)		364	518		245	
Travel Time (s)		8.3	11.8		5.6	
Lane Group Flow (vph)	316	902	1223	0	190	260
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Total Split (s)	26.0	67.0	41.0		23.0	23.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	67.4	67.4	49.3		14.6	14.6
Actuated g/C Ratio	0.75	0.75	0.55		0.16	0.16
v/c Ratio	0.69	0.34	0.44		0.66	0.55
Control Delay	8.9	1.5	7.2		46.3	8.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	8.9	1.5	7.2		46.3	8.9
LOS	A	A	A		D	A
Approach Delay		3.4	7.2		24.7	
Approach LOS		A	A		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 8.3		Intersection LOS: A	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Washington Blvd & Costco W

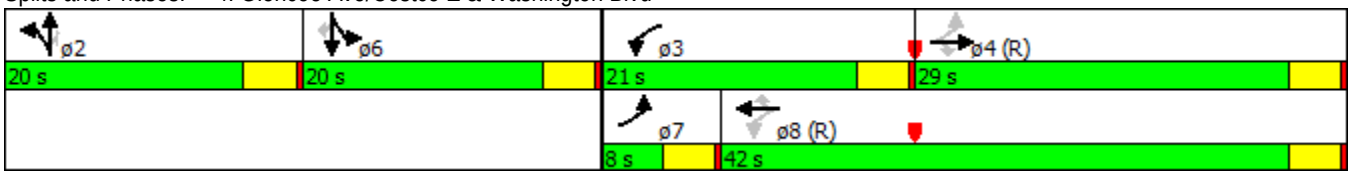


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	743	241	364	850	402	219	130	298	318	163	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		150	0		0	160		110	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1681	1747	1583	1681	1740	1583
Flt Permitted	0.309			0.129			0.950	0.987		0.950	0.983	
Satd. Flow (perm)	576	3539	1583	240	3539	1583	1681	1747	1583	1681	1740	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			262			437			296			158
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			187			701			254	
Travel Time (s)		11.8			4.3			15.9			5.8	
Lane Group Flow (vph)	36	808	262	396	924	437	186	193	324	256	267	70
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8		8			2			6
Total Split (s)	8.0	29.0	29.0	21.0	42.0	42.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	31.4	27.0	27.0	47.8	43.0	43.0	14.2	14.2	14.2	16.0	16.0	16.0
Actuated g/C Ratio	0.35	0.30	0.30	0.53	0.48	0.48	0.16	0.16	0.16	0.18	0.18	0.18
v/c Ratio	0.14	0.76	0.40	0.96	0.55	0.44	0.70	0.70	0.65	0.86	0.87	0.17
Control Delay	11.9	27.8	5.9	53.7	19.2	6.5	50.2	49.6	12.5	64.0	64.0	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	27.8	5.9	53.7	19.2	6.5	50.2	49.6	12.5	64.0	64.0	0.9
LOS	B	C	A	D	B	A	D	D	B	E	E	A
Approach Delay		22.1			23.8			32.6			56.5	
Approach LOS		C			C			C			E	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 29.5 Intersection LOS: C
Intersection Capacity Utilization 76.6% ICU Level of Service D
Analysis Period (min) 15

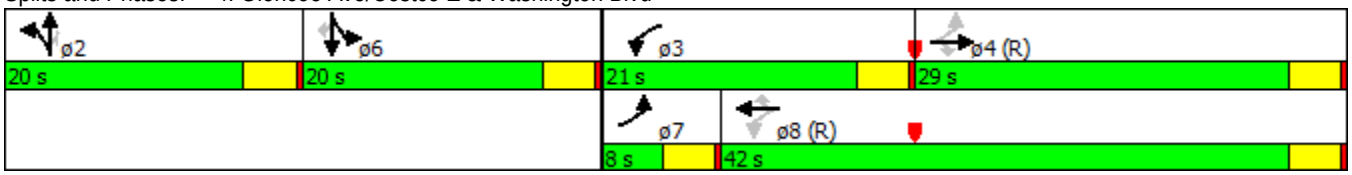
Splits and Phases: 4: Glencoe Ave/Costco E & Washington Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	769	204	284	825	507	160	120	236	389	107	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		150	0		0	160		110	0		0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1681	1755	1583	1681	1720	1583
Flt Permitted	0.307			0.139			0.950	0.992		0.950	0.972	
Satd. Flow (perm)	572	3539	1583	259	3539	1583	1681	1755	1583	1681	1720	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			222			551			257			158
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			187			701			254	
Travel Time (s)		11.8			4.3			15.9			5.8	
Lane Group Flow (vph)	47	836	222	309	897	551	150	154	257	266	273	87
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8		8			2			6
Total Split (s)	8.0	29.0	29.0	21.0	42.0	42.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	34.0	29.4	29.4	48.0	43.2	43.2	13.1	13.1	13.1	16.9	16.9	16.9
Actuated g/C Ratio	0.38	0.33	0.33	0.53	0.48	0.48	0.15	0.15	0.15	0.19	0.19	0.19
v/c Ratio	0.17	0.72	0.33	0.81	0.53	0.53	0.61	0.60	0.57	0.84	0.85	0.20
Control Delay	11.4	25.8	4.9	30.0	18.7	7.3	46.7	45.7	9.9	60.8	60.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.4	25.8	4.9	30.0	18.7	7.3	46.7	45.7	9.9	60.8	60.6	1.4
LOS	B	C	A	C	B	A	D	D	A	E	E	A
Approach Delay		21.0			17.1			29.6			52.5	
Approach LOS		C			B			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Glencoe Ave/Costco E & Washington Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1103	63	140	1174	23	65	80	61	40	259	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3511	0	1770	3529	0	0	1760	0	0	1831	0
Flt Permitted	0.137			0.145				0.736			0.942	
Satd. Flow (perm)	255	3511	0	270	3529	0	0	1316	0	0	1735	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4			22			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		339			2044			292			843	
Travel Time (s)		7.7			46.5			6.6			19.2	
Lane Group Flow (vph)	35	1267	0	152	1301	0	0	224	0	0	354	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	63.0	63.0		63.0	63.0		27.0	27.0		27.0	27.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Act Effct Green (s)	52.9	52.9		52.9	52.9			29.1			29.1	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.32			0.32	
v/c Ratio	0.23	0.61		0.96	0.63			0.51			0.63	
Control Delay	5.8	10.0		81.6	13.1			29.8			34.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.8	10.0		81.6	13.1			29.8			34.4	
LOS	A	A		F	B			C			C	
Approach Delay		9.8			20.3			29.8			34.4	
Approach LOS		A			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 18.4 Intersection LOS: B
Intersection Capacity Utilization 73.9% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 17: Redwood Ave & Washington Blvd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1103	63	140	1174	23	65	80	61	40	259	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3511	0	1770	3529	0	0	1760	0	0	1831	0
Flt Permitted	0.137			0.145				0.736			0.942	
Satd. Flow (perm)	255	3511	0	270	3529	0	0	1316	0	0	1735	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			4			22			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		339			2044			292			843	
Travel Time (s)		7.7			46.5			6.6			19.2	
Lane Group Flow (vph)	35	1267	0	152	1301	0	0	224	0	0	354	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	63.0	63.0		63.0	63.0		27.0	27.0		27.0	27.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Act Effct Green (s)	52.9	52.9		52.9	52.9			29.1			29.1	
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.32			0.32	
v/c Ratio	0.23	0.61		0.96	0.63			0.51			0.63	
Control Delay	5.6	10.0		81.6	13.1			29.8			34.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.6	10.0		81.6	13.1			29.8			34.4	
LOS	A	A		F	B			C			C	
Approach Delay		9.9			20.3			29.8			34.4	
Approach LOS		A			C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 18.4 Intersection LOS: B
Intersection Capacity Utilization 73.9% ICU Level of Service D
Analysis Period (min) 15

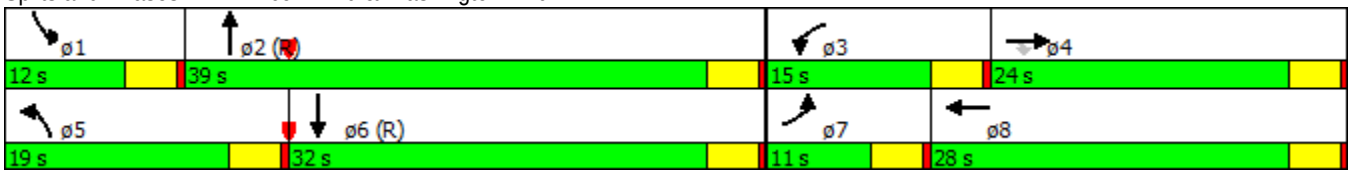
Splits and Phases: 17: Redwood Ave & Washington Blvd

Project Construction
2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	671	462	382	803	229	475	1380	208	203	1387	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	12	10	11	11	12	12	12
Storage Length (ft)	180		0	0		0	400		0	220		0
Storage Lanes	2		1	2		0	4		0	2		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			263		78			36			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		574			215			600			311	
Travel Time (s)		13.0			4.9			13.6			7.1	
Lane Group Flow (vph)	182	729	502	415	1122	0	516	1726	0	221	1592	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Total Split (s)	11.0	24.0	24.0	15.0	28.0		19.0	39.0		12.0	32.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	7.0	20.0	20.0	11.0	24.0		15.0	35.0		8.0	28.0	
Actuated g/C Ratio	0.08	0.22	0.22	0.12	0.27		0.17	0.39		0.09	0.31	
v/c Ratio	0.73	0.96	0.92	0.99	0.82		0.97	0.91		0.72	1.01	
Control Delay	58.8	60.0	41.4	64.4	27.3		70.3	34.2		49.8	55.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	58.8	60.0	41.4	64.4	27.3		70.3	34.2		49.8	55.6	
LOS	E	E	D	E	C		E	C		D	E	
Approach Delay		53.2			37.3			42.5			54.9	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 46.7		Intersection LOS: D	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			

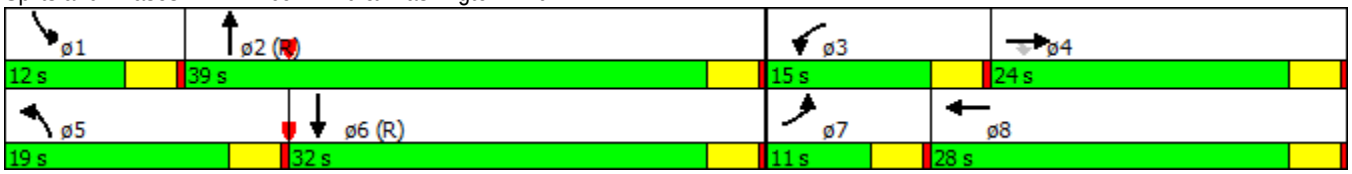
Splits and Phases: 1: Lincoln Blvd & Washington Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	671	462	355	803	229	475	1380	208	203	1387	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	12	12	12	10	11	11	12	12	12
Storage Length (ft)	180		0	0		0	400		0	220		0
Storage Lanes	2		1	2		0	4		0	2		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3204	3421	1531	3433	4917	0	3204	4817	0	3433	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			264		78			36			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		574			215			600			311	
Travel Time (s)		13.0			4.9			13.6			7.1	
Lane Group Flow (vph)	182	729	502	386	1122	0	516	1726	0	221	1592	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Total Split (s)	11.0	24.0	24.0	15.0	28.0		19.0	39.0		12.0	32.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	7.0	20.0	20.0	11.0	24.0		15.0	35.0		8.0	28.0	
Actuated g/C Ratio	0.08	0.22	0.22	0.12	0.27		0.17	0.39		0.09	0.31	
v/c Ratio	0.73	0.96	0.92	0.92	0.82		0.97	0.91		0.72	1.01	
Control Delay	58.8	60.0	41.0	57.0	28.5		70.3	34.2		49.8	55.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	58.8	60.0	41.0	57.0	28.5		70.3	34.2		49.8	55.6	
LOS	E	E	D	E	C		E	C		D	E	
Approach Delay		53.1			35.8			42.5			54.9	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 46.4		Intersection LOS: D	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Lincoln Blvd & Washington Blvd



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1105	1250	86	116	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	0	0
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3539	1846	0	1770	1583
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	1846	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			10			93
Link Speed (mph)		30	30		30	
Link Distance (ft)		144	530		245	
Travel Time (s)		3.3	12.0		5.6	
Lane Group Flow (vph)	0	1201	1452	0	126	214
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Total Split (s)		70.0	70.0		20.0	20.0
Total Lost Time (s)		4.0	4.0		4.0	4.0
Act Effct Green (s)		69.8	69.8		12.2	12.2
Actuated g/C Ratio		0.78	0.78		0.14	0.14
v/c Ratio		0.44	1.01		0.53	0.73
Control Delay		12.7	40.2		43.5	35.0
Queue Delay		0.4	31.2		0.0	0.0
Total Delay		13.1	71.3		43.5	35.0
LOS		B	E		D	D
Approach Delay		13.1	71.3		38.2	
Approach LOS		B	E		D	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 44.2 Intersection LOS: D
Intersection Capacity Utilization 89.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Washington Blvd & Costco W

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1121	1103	139	175	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130			0	0	0
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3539	1835	0	1770	1583
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	1835	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			19			126
Link Speed (mph)		30	30		30	
Link Distance (ft)		144	530		245	
Travel Time (s)		3.3	12.0		5.6	
Lane Group Flow (vph)	0	1218	1350	0	190	260
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Total Split (s)		70.0	70.0		20.0	20.0
Total Lost Time (s)		4.0	4.0		4.0	4.0
Act Effct Green (s)		68.3	68.3		13.7	13.7
Actuated g/C Ratio		0.76	0.76		0.15	0.15
v/c Ratio		0.45	0.97		0.70	0.75
Control Delay		13.7	29.9		50.4	32.1
Queue Delay		0.4	30.1		0.0	0.0
Total Delay		14.1	60.0		50.4	32.1
LOS		B	E		D	C
Approach Delay		14.1	60.0		39.8	
Approach LOS		B	E		D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 38.5		Intersection LOS: D	
Intersection Capacity Utilization 87.9%		ICU Level of Service E	
Analysis Period (min) 15			

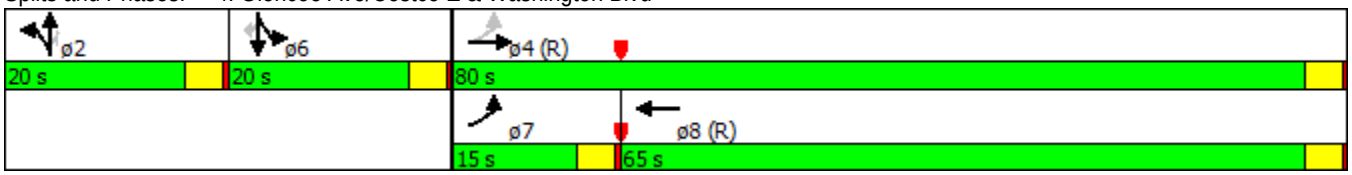
Splits and Phases: 3: Washington Blvd & Costco W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	743	241	0	996	402	219	130	298	318	163	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		150	0		0	160		110	0		0
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3408	0	0	1790	0	1770	1863	1583	1681	1740	1583
Flt Permitted	0.062						0.950			0.950	0.983	
Satd. Flow (perm)	115	3408	0	0	1790	0	1770	1863	1583	1681	1740	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			25				174			82
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		530			185			701			254	
Travel Time (s)		12.0			4.2			15.9			5.8	
Lane Group Flow (vph)	284	1070	0	0	1520	0	238	141	324	256	267	70
Turn Type	pm+pt	NA			NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4			8		2	2		6	6	
Permitted Phases	4								2			6
Total Split (s)	15.0	80.0			65.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	76.0	76.0			61.0		16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.63	0.63			0.51		0.13	0.13	0.13	0.13	0.13	0.13
v/c Ratio	1.27	0.49			1.65		1.01	0.57	0.90	1.14	1.15	0.25
Control Delay	180.7	11.7			321.7		112.8	58.6	51.5	150.5	152.1	9.9
Queue Delay	0.0	0.7			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	180.7	12.4			321.7		112.8	58.6	51.5	150.5	152.1	9.9
LOS	F	B			F		F	E	D	F	F	A
Approach Delay		47.7			321.7			73.7			134.6	
Approach LOS		D			F			E			F	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.65
Intersection Signal Delay: 164.3 Intersection LOS: F
Intersection Capacity Utilization 129.9% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 4: Glencoe Ave/Costco E & Washington Blvd

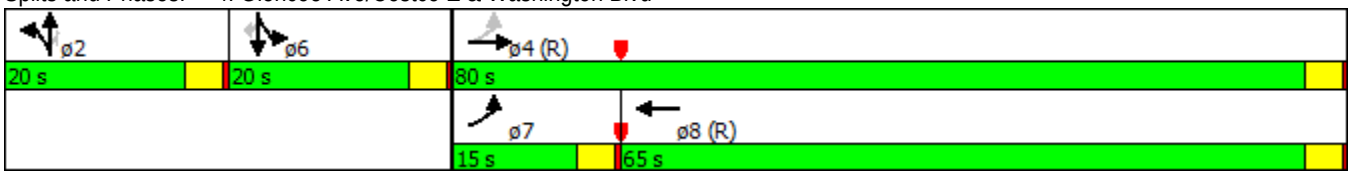


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	334	769	204	0	942	507	160	120	236	389	107	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		150	0		0	160		110	0		0
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	3429	0	0	1775	0	1770	1863	1583	1681	1720	1583
Flt Permitted	0.062						0.950			0.950	0.972	
Satd. Flow (perm)	115	3429	0	0	1775	0	1770	1863	1583	1681	1720	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			33				161			87
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		530			185			701			254	
Travel Time (s)		12.0			4.2			15.9			5.8	
Lane Group Flow (vph)	363	1058	0	0	1575	0	174	130	257	266	273	87
Turn Type	pm+pt	NA			NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4			8		2	2		6	6	
Permitted Phases	4								2			6
Total Split (s)	15.0	80.0			65.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	76.0	76.0			61.0		14.9	14.9	14.9	17.1	17.1	17.1
Actuated g/C Ratio	0.63	0.63			0.51		0.12	0.12	0.12	0.14	0.14	0.14
v/c Ratio	1.62	0.48			1.72		0.79	0.57	0.76	1.11	1.11	0.29
Control Delay	325.1	11.8			351.0		76.3	59.3	34.7	138.1	138.7	12.3
Queue Delay	0.0	0.7			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	325.1	12.5			351.0		76.3	59.3	34.7	138.1	138.7	12.3
LOS	F	B			F		E	E	C	F	F	B
Approach Delay		92.4			351.0			53.3			120.9	
Approach LOS		F			F			D			F	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.72
Intersection Signal Delay: 188.8 Intersection LOS: F
Intersection Capacity Utilization 129.2% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 4: Glencoe Ave/Costco E & Washington Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1407	63	261	1174	23	65	80	61	0	0	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3518	0	1770	1857	0	0	1760	0	0	0	1611
Flt Permitted				0.129				0.984				
Satd. Flow (perm)	0	3518	0	240	1857	0	0	1760	0	0	0	1611
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			3			14				133
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			2044			292			838	
Travel Time (s)		8.0			46.5			6.6			19.0	
Lane Group Flow (vph)	0	1597	0	284	1301	0	0	224	0	0	0	100
Turn Type		NA		Perm	NA		Perm	NA				Perm
Protected Phases		4			8			2				
Permitted Phases				8			2					6
Total Split (s)		100.0		100.0	100.0		20.0	20.0				20.0
Total Lost Time (s)		4.0		4.0	4.0			4.0				4.0
Act Effct Green (s)		96.0		96.0	96.0			16.0				16.0
Actuated g/C Ratio		0.80		0.80	0.80			0.13				0.13
v/c Ratio		0.57		1.48	0.88			0.91				0.30
Control Delay		8.3		260.4	16.7			86.8				5.8
Queue Delay		0.2		0.0	0.0			0.0				0.0
Total Delay		8.5		260.4	16.7			86.8				5.8
LOS		A		F	B			F				A
Approach Delay		8.5			60.4			86.8				
Approach LOS		A			E			F				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBR, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.48			
Intersection Signal Delay: 36.9		Intersection LOS: D	
Intersection Capacity Utilization 90.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 17: Redwood Ave & Washington Blvd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1317	63	234	1174	23	65	80	61	0	0	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3514	0	1770	1857	0	0	1760	0	0	0	1611
Flt Permitted				0.147				0.984				
Satd. Flow (perm)	0	3514	0	274	1857	0	0	1760	0	0	0	1611
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			3			14				133
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			2044			292			838	
Travel Time (s)		8.0			46.5			6.6			19.0	
Lane Group Flow (vph)	0	1500	0	254	1301	0	0	224	0	0	0	100
Turn Type		NA		Perm	NA		Perm	NA				Perm
Protected Phases		4			8			2				
Permitted Phases				8			2					6
Total Split (s)		100.0		100.0	100.0		20.0	20.0				20.0
Total Lost Time (s)		4.0		4.0	4.0			4.0				4.0
Act Effct Green (s)		96.0		96.0	96.0			16.0				16.0
Actuated g/C Ratio		0.80		0.80	0.80			0.13				0.13
v/c Ratio		0.53		1.16	0.88			0.91				0.30
Control Delay		8.0		128.6	16.7			86.8				5.8
Queue Delay		0.0		0.0	0.0			0.0				0.0
Total Delay		8.0		128.6	16.7			86.8				5.8
LOS		A		F	B			F				A
Approach Delay		8.0			35.0			86.8				
Approach LOS		A			C			F				

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBR, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.16			
Intersection Signal Delay: 25.6		Intersection LOS: C	
Intersection Capacity Utilization 90.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 17: Redwood Ave & Washington Blvd