Appendix B

Transportation Impact Assessment

KITTELSON & ASSOCIATES

MONTEBELLO GENERAL PLAN TRANSPORTATION ANALYSIS

MONTEBELLO, CA

September 22, 2023

Inside front cover

Page Intentionally blank

Montebello General Plan Transportation Analysis

Montebello, CA

Prepared for:
City of Montebello
14717 Burin Avenue
Montebello, CA 90260

Prepared by:
Kittelson & Associates, Inc.
750 The City Drive, Suite 410
Orange, CA 92868
714.468.1997

Project Principal:
Tim Erney, AICP, PTP
Senior Principal Planner

Project Manager:
Fernando Sotelo, TE
Principal Engineer

Project Number 24761

September 22, 2023

Page Intentionally blank

CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

Appendix A: Detailed VMT Impact Summary

Appendix B: Intersection Turning Movement Count Worksheets

Appendix C: Roadway ADT Worksheets

Appendix D: Signal Timing Worksheets

Appendix E: Existing Conditions LOS Worksheets

Appendix F: 2045 General Plan Update Conditions LOS Worksheets

Page intentionally blank.

EXECUTIVE SUMMARY

The City of Montebello is updating its General Plan, which will guide the City's development, growth, and conservation through land use objectives and policy guidance. The General Plan Update will accommodate future growth in Montebello, including new businesses, expansion of existing businesses, and new residential uses. New growth is anticipated to occur primarily within the Downtown Specific Plan area. The buildout analysis assumes a 20-year planning horizon, with 2045 being the full buildout year of the General Plan Update. The study area is comprised of city boundaries and the city's sphere of influence. The Montebello Downtown Specific Plan is also being updated and incorporated in this analysis. The proposed general plan and downtown specific plan is referred to in this study as "General Plan Update" or "proposed Project", and the project area is referenced as "Plan Area". The current General Plan, which was adopted in 1973 is referred in this study as "Existing General Plan".

This transportation analysis was prepared to provide an evaluation of the potential transportation impacts from the proposed Project, consistent with the California Environmental Quality Act (CEQA) guidelines. For this analysis, the following assessments were conducted:

- Vehicle-Miles Traveled (VMT)
- Potential conflict with a program, plan, ordinance, or policy addressing the circulation system
- Potential increase in hazards

VMT IMPACT ASSESSMENT

Per current CEQA requirements, Vehicle-Miles Traveled (VMT) is the most appropriate metric to evaluate a project's transportation impact. The City is in the process of adopting updated Transportation Study Guidelines, which are expected to be considered for adoption by City Council in the fall of 2023. The most recent draft City of Montebello Transportation Study Guidelines prepared in May of 2022 are used for the purpose of this analysis. To evaluate the proposed Project as a land plan which includes a variety of land uses that would generate several trip purpose types, VMT per service population is used as it aggregates residents and worker trips in one metric. Based on this approach, if the VMT per service population is lower in the horizon year with the Plan compared to existing conditions, the Plan would be considered have a less than significant impact on VMT. Overall, a significant impact would occur if any of the following conditions take place:

- If the plan generates VMT per service population in the horizon year plus project scenario greater than total VMT per service population under existing conditions.
- If the plan generates VMT per service population in the horizon year plus project scenario greater than total VMT per service population under the no project/current plan scenario.

The following scenarios were reviewed and/or developed to analyze potential VMT impacts with the proposed Project:

- 2023 Existing Conditions: Corresponds to the existing circulation network and 2023 land use profile.
- 2045 No Project: Corresponds to the future year 2045 conditions with implementation of the Existing General Plan. It consists of the Existing General Plan transportation network and land uses adopted in 1973.
- 2045 With Project: Corresponds to the future year 2045 conditions with maximum development potential with the proposed Project (General Plan Update and Downtown Specific Plan).

The projected VMT impacts due to the Project were calculated using the Southern California Association of Governments (SCAG) regional travel model, the results of which are shown in Table 1.

Table 1: Summary of VMT Impacts

Units	2023 Existing Conditions	2045 No Project	2045 With Project
VMT Per Service Population	27.20	26.13	22.07
Total VMT	2,971,433	2,997,608	3,697,131

Source: Kittelson and Associates, 2023.
Notes:
Refer to Appendix A for detailed VMT summary showing results for the SCAG region, Los Angeles County and Montebello.
N/A = not applicable.

The proposed Project results in the highest total VMT compared to existing and future scenarios. However, since the number of residents and employees within the City would also increase with the proposed Project, it provides the lowest VMT per service population. In particular, future conditions with the Project would result in decreased VMT per service population in comparison to 2023 existing conditions and to 2045 No Project conditions. The reductions from the base year to the future year indicate that future development, in particular planned mixed-use development, will provide more opportunities for Montebello residents and employees to access jobs and services within shorter distances. The shorter trip distances reduce VMT by vehicles, and also increase the likelihood that trips will be made by non-auto modes such as bicycling and walking. Improved transit service and accessibility to transit also help to reduce VMT even as travel activity increases.

Overall, the VMT impact threshold would not be exceeded. Therefore, with respect to consistency with CEQA Guidelines Section 15064.3, subdivision (b), the impact of the Project would be less than significant.

POTENTIAL CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM

Relevant City circulation system policies, programs, and plans were reviewed to confirm consistency and that the Project would not preclude implementation of existing plans. Overall, it was determined the proposed Project would not conflict with any approved transportation plans and programs. Moreover, it was determined that there would be a less than significant impact to emergency vehicle access.

POTENTIAL INCREASE IN HAZARDS

The Project will accommodate future growth in the City, including new businesses, expansion of existing businesses, and new residential uses. New growth is anticipated to occur primarily within the Downtown Specific Plan area.

Prior to implementation, any improvements would be subject to a detailed review and future consideration by the City's Public Works engineering staff and other relevant City agencies. An evaluation of the roadway alignments, intersection geometrics, and traffic control features would be needed at the project design level. Roadway improvements would have to be made in accordance with the City's circulation plan and roadway design guidelines and meet design guidelines in the California Manual of Uniform Traffic Control Devices and the Caltrans Roadway Design Manual.

Overall, implementation of the Proposed General Plan would not result in hazardous conditions. As individual projects and circulation improvements would undergo review by Public Works and Planning departments for approval and construction and would have to meet design guidelines, no significant impacts would occur.

NON-CEQA OPERATIONAL ANALYSIS

A review of traffic operations in terms of levels of service (LOS) at key intersections and roadways under existing and future conditions. This analysis is included for non-CEQA purposes to determine if local intersections operate acceptably and if the project would cause any negative effects on local roadway operations. For this analysis 5 intersections and 14 roadways were selected to be evaluated based on anticipated traffic associated with intensification of land uses and discussions with City Engineering staff.

The City of Montebello strives to maintain vehicular LOS "D" whenever possible, but allow LOS E or F operations at specific locations to encourage mixed-use, infill development that is supportive of transit and active transportation. All study intersections currently operate at LOS D or better. Under future conditions with the proposed Project, most intersections would experience an increase in delay but will remain at LOS D or better.

Overall, five of the study roadway segments do not meet the target LOS D:

- R-1. Garfield Avenue between Via Campo and Via Paseo: Future (LOS F)
- R-2. Beverly Boulevard between Vail Avenue and Greenwood Avenue: Future (LOS F)
- R-3. Whittier Boulevard between Vail Avenue and Greenwood Avenue: Future (LOS F)
- R-6. Washington Boulevard between Vail Avenue and Greenwood Avenue: Future (LOS F)
- R-12. Whittier Boulevard between Montebello Boulevard and Poplar Avenue: Future (LOS F)

As previously discussed, the City may allow LOS E or F operations at specific locations to encourage mixed-use, infill development that is supportive of transit and active transportation. Three of these locations (R-2, R-3, R-12) are located in downtown Montebello, where the Montebello General Plan identified these locations with modified cross-sections in order to promote multimodal boulevards. These locations may be considered to operate at LOS compatible with downtown environment to encourage mixed-use, infill development supportive of transit and active transportation. Location R-1 is not within the downtown area and are antecipated to operate at LOS F. Location R-6 is a segment along the proposed Metro Gold Line extension.

PURPOSE OF TRANSPORTATION ANALYSIS

The purpose of this transportation analysis is to assess potentially significant impacts resulting from the with a proposed update to the City's General Plan and adoption of the Downtown Montebello Specific Plan on the transportation system, and to identify measures to mitigate those impacts. These two related actions are described below and are referred to as the proposed Project. The analysis also serves as the basis for the transportation component of the Environmental Impact Report (EIR) for the proposed Project. This analysis includes a review of the following:

- Assessment of the existing circulation conditions, including roadways, pedestrian, bicycle, and transit facilities.
- Review of consistency with existing City programs, plans, ordinances, and policies related to pedestrian and bicyclists, and transit facilities.
- Assessment of the Project's Vehicle Miles Traveled (VMT) impact compared to the City's adopted thresholds.
- Assessment of impacts and mitigations related to geometric design and emergency access.

PROJECT CHARACTERISTICS

The City of Montebello is preparing a comprehensive update to its current General Plan adopted in 1973, which will guide the City's development, growth, and conservation through land use objectives and policy guidance. The proposed Project also includes adoption of the Downtown Montebello Specific Plan.

Under the proposed Project, the City's General Plan will be reorganized and reformatted, with updated goals and policies that reflect the community's vision of Montebello that the General Plan seeks to achieve. The General Plan Land Use Map will also be updated. The General Plan Update includes an update of the City's 6th Cycle Housing Element (2021-2029), in compliance with the requirements of State Housing Element law. The City will implement the project by requiring development, infrastructure improvements, and other projects to be consistent with its policies, and by implementing the actions included in the General Plan Update. The General Plan includes 8 chapters that cover different focus areas such as land use, circulation, etc. The chapter that covers circulation is called "Our Accessible Community", which covers topics such as street networks, street types, transit services, bicycle and pedestrian systems, parking, transportation demand management (TDM), and performance metrics. Figure 1 presents the Plan Area for the City of Montebello General Plan Update and Downtown Specific Plan (Plan Area). The boundaries of the Downtown Montebello Specific Plan area are shown with the red line on the map attached as Figure 1, and in a more detailed view is provided in Figure 2.

The Downtown Montebello Specific Plan is a component of the General Plan and focuses on downtown Montebello, which is roughly bounded by Greenwood Avenue on the west, Los Angeles Avenue on the south, the Rio Hondo Channel on the east, and Cleveland Avenue on the north. The Specific Plan area includes a walkable core area around the Montebello Boulevard/Whittier Boulevard intersection. The Downtown Montebello Specific Plan is an integrated plan that implements the community driven vision, direction, and policy guidance set in the Montebello General Plan. The Downtown Montebello Specific Plan would establish a vision that is intended to restore and leverage downtown Montebello's natural, built, and social assets to build resilient prosperity with a focus on quality of place as a key competitive advantage. The Specific Plan includes a focus on walkable and mixed-use development in the downtown area; preserving and adding to the supply of affordable and supportive housing; providing proximity to daily necessities within a reasonable pedestrian journey; introducing more organic and less ordered spaces along the Rio Hondo Channel; creating a distinct and equitable downtown within a landscape that takes advantage of Montebello's mild climate with parklets, bicycle lanes, and passive and active outdoor recreation; and creating strategic mobility hubs throughout downtown to offer more mobility options and help reduce automobile dependence.

The goals of the General Plan Update and Downtown Montebello Specific Plan are, among other things, listed as follows:

- Thrive in balance with the natural ecosystems.
- Attract and retain high-wage and high value enterprises and diversify and increase the local tax base.
- Reinvest in key opportunity areas like the Downtown, Corridors, and large parcels along the highway, while protecting natural resources, respecting stable residential neighborhoods and making great places by insisting on the highest standard in architecture, landscaping, and urban design.
- Strengthen and balance pedestrian, bike, and transit connections in the City and surrounding region.
- Build effective partnerships that improve physical and mental health and social well being.
- Increase awareness for emergency, minimize threat to life and damage to structures from hazards.
- Provide enriching recreational options for the entire community.
- Weave arts, cultural events, and community programs into everyday life.

DEVELOPMENT POTENTIAL

Table 3 provides a summary of the buildout potential associated with the General Plan Update Land Use Map compared to existing on-the-ground conditions. As shown in Table 2, buildout of the General Plan could yield a total of up to 37,600 housing units, a population of 122,100 people, and 31,800 jobs within the Planning Area. Figure 3 shows the land use change map. This represents increases over existing conditions of up to approximately 17,200 new housing units, 60,500 people, and 2,200 jobs. The citywide buildout growth forecasts include a small amount of additional growth in portions of the City outside of the focused growth areas.

Table 2: Montebello General Plan Update Transportation Analysis Land Use Inputs

Description	Housing Units	Population	Jobs
Existing Conditions	20,400	61,600	29,600
Proposed General Plan	37,600	122,100	31,800
Net Change	+17,200	+60,500	+2,200

Sources: Montebello General Plan, Figure C3.7 updated as of July, 2023; Southern California Association of Governments travel model data files, 2016; Kittelson & Associates, 2023.

CIRCULATION NETWORK

The General Plan identifies the general locations and extent of existing and proposed major thoroughfares, transportation routes, and alternative transportation facilities necessary to support a multi-modal transportation system. The "Our Accessible Community" section includes guiding principles and identifies facilities to facilitate the movement of people and goods throughout Montebello by a variety of transportation modes, including vehicles, bicycles, pedestrians, and transit.

Roadways

The proposed General Plan includes a roadway classification map that defines roadways in the city in terms of how they accommodate vehicular traffic, as shown in Figure 4.

The Project is not proposing roadway expansions such as adding through lanes to existing roads or constructing new roadway facilities. The updated classification map maintains the functional classifications in the current General Plan, but the following roadways have been reclassified to better complement their surrounding land use context and provide the street space to better serve future bicyclists, pedestrians, and transit users.

- Washington Boulevard: Along the anticipated Los Angeles Metropolitan Transportation Authority (Metro) Gold Line extension alignment, reclassify from Major Roadway to Secondary Roadway.

- Mines Avenue: Reclassify from Major Roadway to Collector.
- Olympic Boulevard (west of Montebello Boulevard): Reclassify from Major Roadway and Collector to Secondary Roadway.
- Whittier Boulevard (Montebello Boulevard to 1st Street): Within downtown Montebello, reclassify from Major Roadway to Secondary Roadway.
- Beverly Boulevard (east of Hay Street): Reclassify from Major Roadway to Secondary Roadway.

Bicycle, Pedestrian and Transit

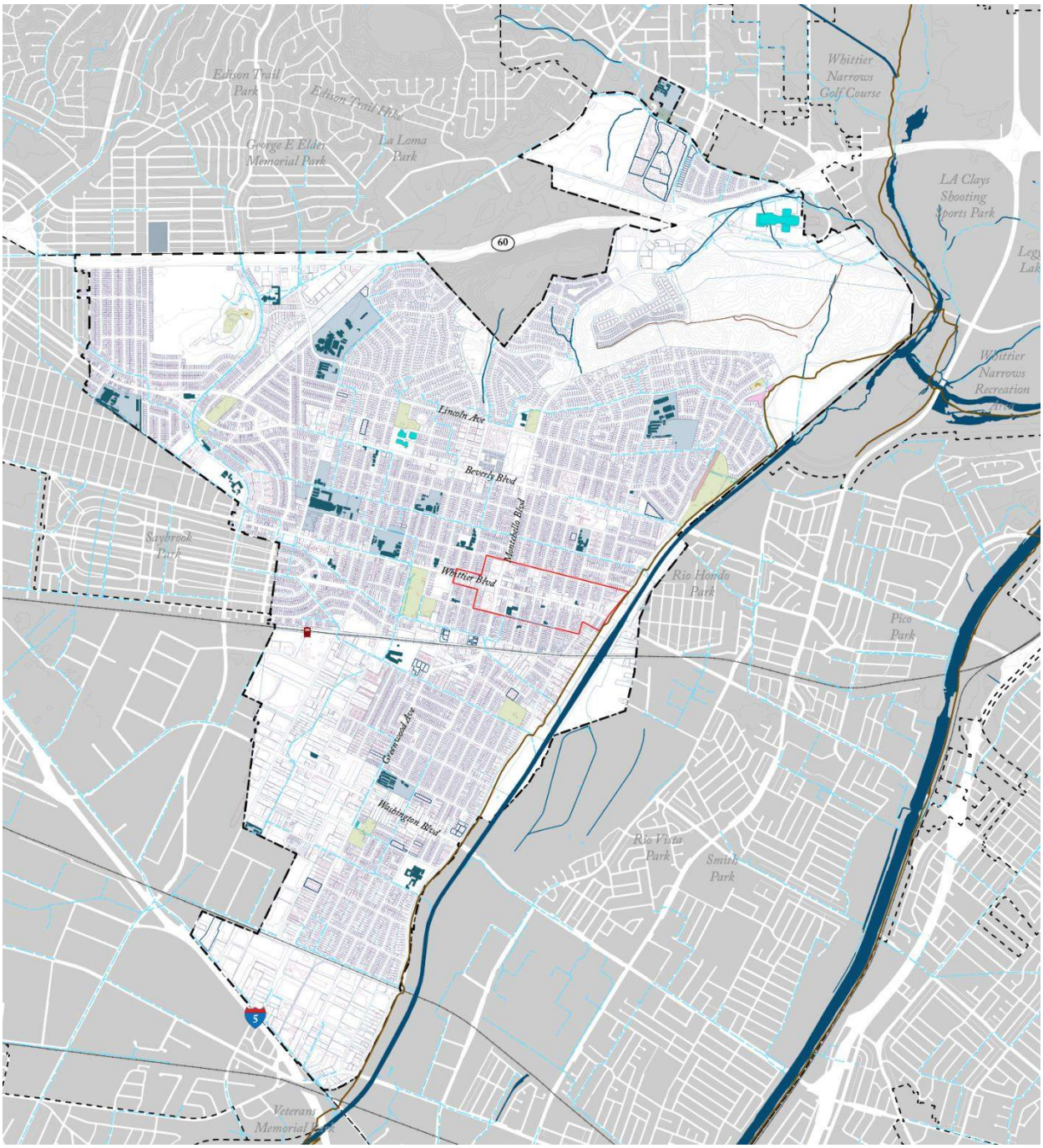
The proposed General Plan also includes a complete streets network with proposed bicycle, pedestrian and transit facilities, as shown in Figure 5. Bike facilities are proposed on several key roads in the City such as Lincoln Avenue, Beverly Boulevard, Whittier Boulevard, Greenwood Avenue, Montebello Boulevard, and Washington Boulevard. Metro has plans to extend Metro L Line (Gold) further east from its current terminus at Pomona Boulevard and Atlantic Boulevard in East Los Angeles potentially through the cities of Commerce, Montebello, Pico Rivera, Santa Fe Springs, Whittier, and the unincorporated communities of East Los Angeles and West Whittier-Los Nietos. Metro prepared a Draft Environmental Impact Report (DEIR) for public review from January 26 to March 27, 2023.[1] Within Montebello, the locally-preferred alternative calls for an at-grade alignment of the L Line along Washington Boulevard, with a station near Greenwood Avenue.

Truck Routes/Goods Movement

The City currently has a designated network of local truck routes to accommodate goods movement between local industrial uses, freeways, and other freight facilities; this local truck route network is regularly be reviewed and updated to accommodate existing and future multimodal transportation needs and complement the local built environment. The proposed updated local truck route network is shown in Figure 6. With the proposed General Plan, Whittier Boulevard east of Montebello Boulevard is proposed to be removed from the local truck route network to reflect area's vision as a place to walk and bike to retail and dining destinations.

[1] ***EASTSIDE PHASE 2, LA METRO, 2023.*** https://www.metro.net/projects/eastside_phase2/

Figure 1: Proposed General Plan Map

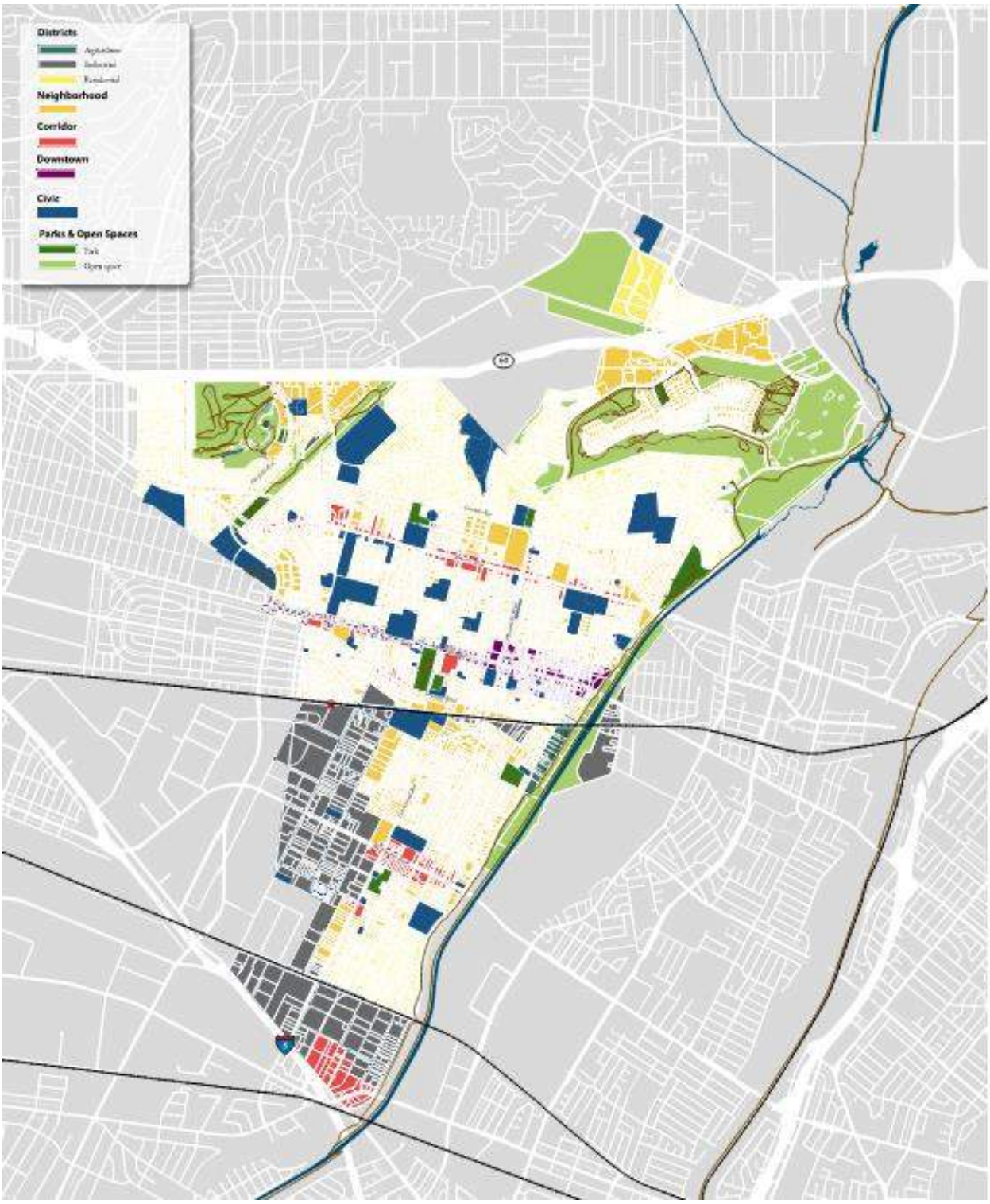


Source: City of Montebello General Plan Update and Downtown Montebello Specific Plan, Notice of Preparation 2023

Figure 2: Plan Area for City of Montebello Downtown Specific Plan

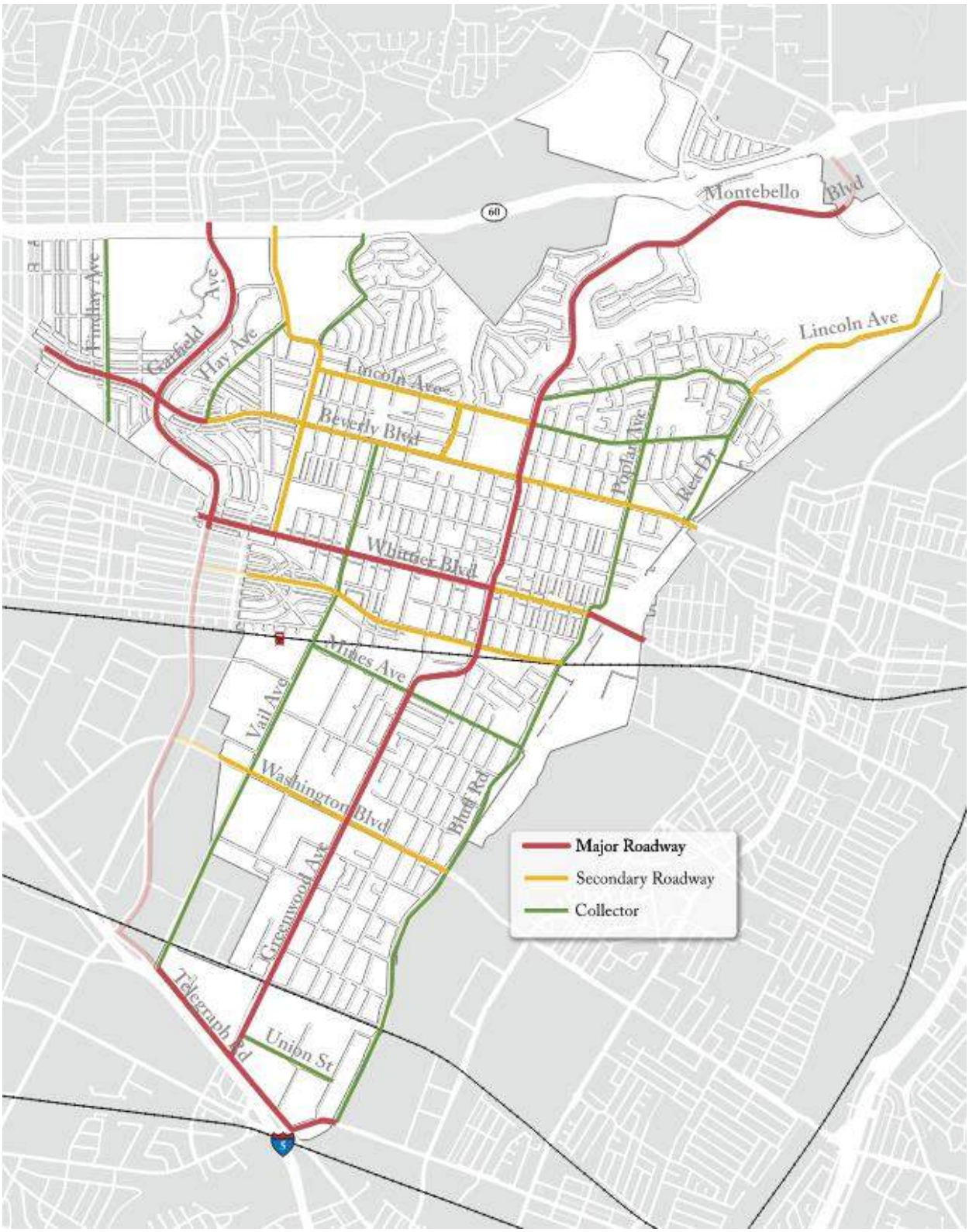
Source: City of Montebello General Plan Update and Downtown Montebello Specific Plan, Notice of Preparation 2023

Figure 3: Proposed Land Use Map



Source: City of Montebello, General Plan, 2023

Figure 4: Proposed Roadway Functional Classifications Map

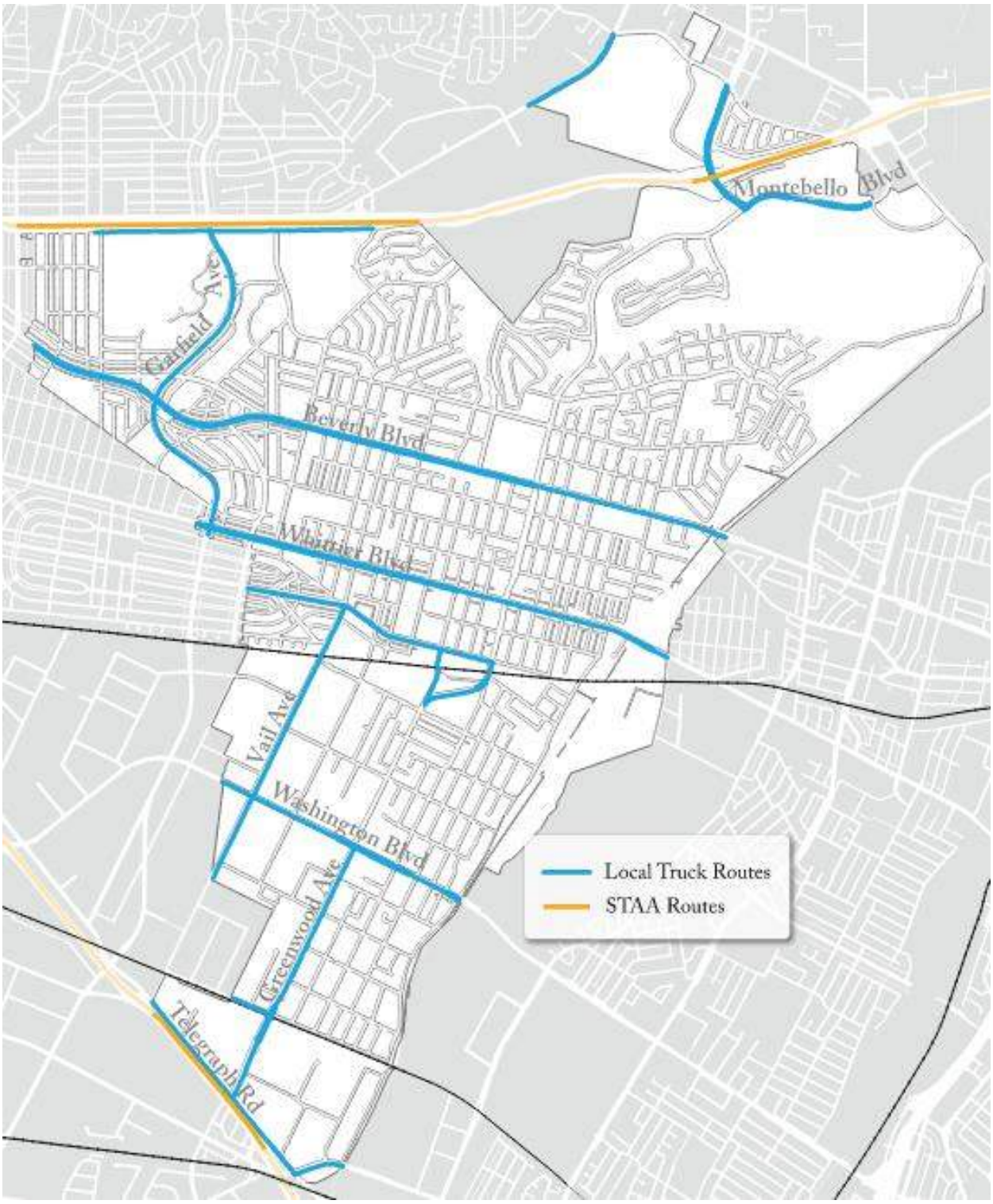


Source: City of Montebello, General Plan, 2023

Figure 5: Proposed Active Mobility Plan Map

Source: City of Montebello, General Plan, 2023

Figure 6: Proposed Local Truck Route Network Map



Source: City of Montebello, General Plan, 2023

REGULATORY FRAMEWORK

The regulatory framework applicable to the Project includes state, regional and local plans pertinent to the City of Montebello and the California Environmental Quality Act (CEQA) review process for transportation and circulation.

FEDERAL REGULATIONS

The Federal Highway Administration (FHWA) is a federal agency that focuses on national highway programs. FHWA administers and manages federal highway programs and establishes national standards. The FHWA publishes the Manual on Uniform Traffic Control Devices (MUTCD) which specifies the standards for street markings, traffic signals, and street signs in the United States. The California Department of Transportation (Caltrans) developed the California MUTCD based on the FHWA MUTCD. Caltrans published the 2014 edition, Revision 7 on March 10, 2023.

STATE REGULATIONS

California Department of Transportation

The California Department of Transportation (Caltrans) manages the operation of state highways and is the primary state agency responsible for transportation issues. One of its duties is the construction and maintenance of the state highway system.

Caltrans has developed procedures to determine if state-controlled facilities require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that would not physically affect facilities but may influence traffic flow and operational deficiencies at such facilities, Caltrans may recommend measures to address adverse effects from traffic caused by such projects. Caltrans also prepares comprehensive planning documents, including Corridor System Management Plans and Transportation Concept Reports, which are long-range planning documents that establish a planning concept for state facilities.

Caltrans updated its guidance in 2020 to include metrics to evaluate transportation impacts based on vehicle miles traveled (VMT) and no longer sets a minimum acceptable level of service (LOS) for its facilities. Vehicle Miles Traveled (VMT) is a common metric used to understand and quantify the amount of travel for all vehicles within a specified area and timeframe. Based on the Caltrans *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*, Caltrans has transitioned from LOS performance standards to VMT to identify significant impacts.

> "For land use projects and plans, automobile delay is no longer considered a significant impact on the environment under CEQA (SB 743, 2013). Caltrans review of land use projects and plans is focused on a VMT metric, consistent with changes to the CEQA Guidelines (California Code of Regulations Section 15064.3(b)(1)). This VMT-focused TISG provides a foundation for review of how lead agencies apply the VMT metric to CEQA project analysis.
>
> Beyond or in addition to the use of the VMT metric, determining how the State Highway System may otherwise be affected by a land use project may still be necessary at times, particularly as it relates to the safety of the traveling public. Additional future guidance will include the basis for requesting transportation impact analysis that is not based on VMT. This guidance will include a simplified safety analysis approach that reduces risks to all road users and focuses on multi-modal conflict analysis as

well as access management issues. With this guidance the Department will transition away from requesting LOS or other vehicle operations analyses of land use projects."[2]

Assembly Bill 32, Senate Bill 32, and Senate Bill 375

Assembly Bill (AB) 32, also known as the Global Warming Solutions Act of 2006, committed California to reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. In 2016, SB 32 added a new target: reducing statewide emissions to 40 percent below 1990 levels by 2030.

SB 375 provides guidance for curbing emissions from cars and light trucks to help California comply with AB 32. There are five major components to SB 375:

- Air Resources Board (ARB) will guide the adoption of GHG emission targets to be met by each Metropolitan Planning Organization (MPO) in the state.
- MPOs are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting these regional targets. The SCS must be consistent with the Regional Transportation Plan (RTP).
- Regional housing elements and transportation plans must be synchronized on eight-year schedules. Also, the SCS and Regional Housing Needs Assessment (RHNA) must be consistent with each other.
- CEQA is streamlined for preferred development types such as mixed-use projects and transit-oriented developments (TODs) if they meet specific requirements.
- MPOs must use transportation and air emission modeling methodologies consistent with California Transportation Commission (CTC) guidelines.

California Complete Streets Act of 2008 (AB 1358)

Originally passed in 2008, California's Complete Streets Act took effect in 2011 and requires local jurisdictions to plan for land use transportation policies that reflect a "complete streets" approach to mobility. "Complete streets" comprises a suite of policies and street design guidelines which provide for the needs of all road users, including pedestrians, bicyclists, transit operators and riders, children, the elderly, and the disabled. From 2011 onward, any local jurisdiction—county or city—that undertakes a substantive update of the circulation element of its general plan must consider "complete streets" and incorporate corresponding policies and programs. In 2010, OPR released guidelines for compliance with this legislation which provide direction on how circulation elements can best plan for a variety of travel modes such as transit, walking, bicycling, and freight.

Senate Bill 743

Senate Bill (SB) 743 fundamentally changed transportation impact analysis as part of CEQA compliance. With the passage of SB 743, which promotes the reduction of greenhouse gas emission and developing multimodal transportation networks, VMT is now used by agencies to understand transportation impacts under CEQA. Since VMT measures the total number of miles traveled by all vehicles, distances traveled and the proportion of trips made by non-vehicles are key factors that affect an area's VMT. Areas that have a diverse land use density, are walkable, and provide connectivity to quality transit and non-motorized facilities typically have lower VMT than suburban areas where residents must travel longer distances for work, shopping, and school.

In its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, the California Governor's Office of Planning and Research (OPR) provides recommendations for jurisdictions to implement SB 743-compliant transportation analyses. OPR's recommendations are not binding and lead agencies ultimately have the discretion to set or apply their own significance thresholds, provided they are based on significant evidence.

[2] *Vehicle Miles Travelled- Focused Transportation Impact Study Guide, CalTrans, 2020.* https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf

CEQA Guidelines Section 15064.3 describes how transportation impacts are to be analyzed under SB 743. It states that in general transportation impacts are best measured by evaluating the project's vehicle miles traveled. For land use projects, vehicle miles travelled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. The City of Montebello is in the process of adopting VMT criteria and thresholds to evaluate impacts of projects, which is discussed in the CEQA Significant Thresholds section of this report.

REGIONAL REGULATIONS

Southern California Association of Governments (SCAG)

SCAG is a federally designated Metropolitan Planning Organization (MPO) and is made up of six counties and 191 cities. SCAG develops long-range regional transportation plans including sustainable communities' strategies and growth forecast components, regional transportation improvement programs, regional housing needs allocations, and a portion of the South Coast Air Quality Management Plans.

On May 7, 2020, SCAG's Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy) for federal transportation conformity purposes only. Connect SoCal outlines more than $638 billion in transportation system investments through 2045.

Los Angeles County Metropolitan Transportation Authority

The Los Angeles County Metropolitan Transportation Agency (Metro) coordinates transportation planning efforts throughout Los Angeles County and programs local, regional, state and federal funding for project implementation. Additionally, it prepares the Congestion Management Program (CMP), a plan mandated by California law to describe the strategies to address congestion problems on the CMP network, which includes State highways and principal arterials. The CMP Guidelines require analysis of the Metropolitan Transportation System (MTS) roadway and transit system and uses level of service standards to measure congestion and to determine how local governments meet CMP standards.

The 2020 Long Range Transportation Plan (LRTP) provides a detailed roadmap for how Metro will plan, build, operate, maintain, and partner for improved mobility in the next 30 years. The LRTP guides future funding plans and policies needed to move LA County forward for a more mobile, resilient, accessible and sustainable future. The adopted 2020 plan lays out a strategy for meeting transportation needs for all users in LA County and includes projects and other improvements for new and existing freeways, local streets, and public transit (paratransit, buses, rails, ferries), as well as facilities and programs to support bicycling and walking.

Metro has several countywide planning efforts that outline regional networks and provide guidance on best practices. These plans include the Countywide Multimodal Arterial Plan, the Countywide Goods Movement Plan, the Countywide Transit Plan, the Active Transportation Strategic Plan, and the First Last Mile Strategic Plan.

As previously discussed, Metro has plans to extend the Metro L Line (Gold) further east from its current terminus at Pomona Boulevard and Atlantic Boulevard in East Los Angeles through the cities of Commerce, Montebello, Pico Rivera, Santa Fe Springs, Whittier, and the unincorporated communities of East Los Angeles and West Whittier-Los Nietos. Metro prepared a Draft Environmental Impact Report (DEIR) for public review from January 26 to March 27, 2023.[3]

[3] *Eastside Transit Corridor Phase 2, LA Metro, 2023.* https://www.metro.net/projects/eastside_phase2/

San Gabriel Valley Council of Governments (SGVCOG)

The City of Montebello is a member of the San Gabriel Valley Council of Governments (SGVCOG). SGVCOG is a regional government planning agency and joint powers authority that includes 31 incorporated cities, unincorporated communities in Los Angeles County Supervisorial Districts 1, 4, and 5, and three San Gabriel Valley Municipal Water Districts (San Gabriel Valley Municipal Water District, Three Valleys Municipal Water District, and Upper San Gabriel Valley Municipal Water District). SGVCOG collaborates with member agencies on several mobility-related efforts:

- In June 2019, SGVCOG prepared the San Gabriel Valley Regional Active Transportation Plan and Greenway Network Study. The plan was intended to guide the development and maintenance of a comprehensive active transportation network and supportive non-infrastructure programs within the cities of Glendora, Irwindale, La Puente, Monrovia, and Montebello and identify the 50 most feasible miles of potential 'greenways'- off-street walking and biking paths along waterways in the region.
- SGVCOG formed a bikeshare program in the San Gabriel Valley called GoSGV.
- Measure M (a ½ cent sales tax measure to provide funding for transportation improvements in Los Angeles County) was approved by voters in November 2016. SGVCOG is tasked with programming and administering the Measure M Subregional Program (MSP) funds in the San Gabriel Valley. The funds generated from Measure M are expected to fund $3.3 billion in transportation improvements in the San Gabriel Valley over the course of 40 years.
- SGVCOG worked with member agencies to develop a framework to assist local agencies in developing transportation impact analysis guidelines consistent with SB 743 using VMT metrics. SGVCOG also implemented a web-based VMT analysis tool to provide VMT metrics and reductions from mitigation measures.

LOCAL REGULATIONS

San Gabriel Valley Greenway Network Strategic Implementation Plan

The San Gabriel Valley (SGV) Greenway Network Strategic Implementation Plan builds upon the SGVCOG's Active Transportation Planning Initiative's Greenway Network Feasibility Study and will transform the storm channels, washes, and creeks that feed into the San Gabriel and Rio Hondo Rivers into a modernized network of bicycle and pedestrian pathways in the San Gabriel Valley. The goals of the plan include:

- Improve mobility and recreational opportunities for people with disabilities, youth and the aging population, bicyclists, pedestrians, and equestrians;
- Reduce vehicle miles traveled and associated greenhouse gas emissions;
- Integrate stormwater capture and water management opportunities;
- Enhance natural habitats and enrich community well-being.

General Plan Circulation Element

The current Montebello General Plan, adopted in 1973, includes a circulation element that identifies existing and proposed major thoroughfares in the City, describes the overall circulation in the City, and develops goals and objectives to improve the transportation network. Key goals in the plan include facilitating traffic movement and alleviating congestion in and around the City, protecting residential areas from through traffic movement, and developing a circulation system which provides for continuous movement to and from adjacent communities. As previously discussed, the proposed Project is updating the City's General Plan.

The Downtown Montebello Specific Plan is a component of the General Plan and focuses on downtown Montebello, which is roughly bounded by Greenwood Avenue on the west, Los Angeles Avenue on the south, the Rio Hondo Channel on the east, and Cleveland Avenue on the north. The Downtown Montebello Specific Plan is being updated in conjunction with the General Plan update and is part of the proposed Project.

Montebello Hill Specific Plan

Montebello Hills Specific Plan was adopted in 2015 to plan for an infill residential development in northern Montebello, south of Montebello Boulevard and southwest of San Gabriel Boulevard, south of State Route 60. The plan ensures that infrastructure and public facilities appropriately serve the community by preserving open space, creating a range of housing options, creating walkable neighborhoods, and providing a variety of transportation options. A master circulation plan is included that outlines existing and proposed roads and improvements, as well as conceptual designs for street cross sections and roundabouts. The Specific Plan does not anticipate changes to the City's circulation network and is not inconsistent with the adopted and proposed Citywide circulation maps.

Montebello Capital Improvements Program

The Public Works Department maintains and improves the City's infrastructure through the Capital Improvements Program (CIP). According to the FY 2018-2019 CIP budget, projects include intersection safety improvements at intersections such as traffic signal and improvements along Beverly Boulevard and Montebello Boulevard such as ADA access ramp improvements.

EXISTING CIRCULATION SYSTEM

VEHICULAR FACILITIES

The roadway system in Montebello consists of arterial roadways as well as regional freeways and highways that serve local and regional traffic demand. The major vehicular facilities in Montebello are discussed below.

Freeways

The following are key freeways that provide direct access to and from Montebello via freeway interchanges located within City limits, as described below.

State Route 60 (SR-60) is an east-west freeway extending from Downtown Los Angeles/Boyle Heights to the City of Beaumont. SR-60 runs along Montebello's northern City limit and provides connections to I-5, I-10, US 101, I-710, I-605, SR-57, and other regional freeways. Direct access to and from SR-60 within the city is provided via ramps at Pomona Boulevard, Via Campo, and Potrero Grande Drive. Adjacent to Montebello, the freeway has four general purpose lanes in each direction. The posted speed limit is 65 mph.

Interstate 5 (I-5) is a north-south freeway connecting the Mexican border to the Canadian border, running through California, Oregon, and Washington. I-5 runs along Montebello's southern City limit and provides connections to Downtown Los Angeles, southeastern Los Angeles County, and Orange County, as well as connections to I-10, US 101, I-710, I-605, and several other regional freeways. Access to and from I-5 is provided within the city via ramps at Washington Boulevard, Telegraph Road, Slauson Avenue, and Paramount Boulevard. Adjacent to Montebello, the freeway has four general purpose lanes in each direction. The posted speed limit is 65 mph.

Key Roadways

Key roadways within the city are described below.

Greenwood Avenue is a north-south roadway that runs from Gage Avenue south of I-5 north to the railroad tracks south of Olympic Boulevard, where it becomes Montebello Boulevard. Greenwood Avenue generally has two travel lanes in each direction with a posted speed limit of 40 mph. Free two-hour on-street parking is available on both sides of the road for the majority of the corridor. No bicycle facilities are provided.

Montebello Boulevard is a north-south roadway that runs from Greenwood Avenue north to Montebello Town Center near SR-60. Montebello Boulevard generally has two travel lanes in each direction with a posted speed limit of 40 mph. A two-way center left-turn lane is present for much of the corridor, with raised medians present at several intersections. Free two-hour on-street parking is available on both sides of the street south of Avenida De Le Merced. Class II bicycle lanes are provided between Lincoln Avenue and Montebello Town Center on the northern edge of the city.

Garfield Avenue is a north-south roadway that runs through the western part of the city. Garfield Avenue has two travel lanes in each direction with a posted speed limit of 40 mph. Left-turn lanes are provided at all signalized and unsignalized intersections. On-street parking is generally provided on both sides of the street. No bicycle facilities are provided on Garfield Avenue.

Beverly Boulevard is an east-west roadway that runs the entire length of the city limits, connecting to Pomona Boulevard in East Los Angeles and running east to Turnbull Canyon in Whittier. Beverly Boulevard has two travel lanes in each direction, except between Via Val Verde and Montebello Boulevard, where three travel lanes in each direction are present. The posted speed limit is 35 mph. A two-way center left-turn lane is provided for much of the corridor, with raised medians present at intersections between Gerhart Avenue and Montebello Boulevard. Free two-hour on-street parking is generally provided on both sides of the street

between 9:00 a.m. and 6:00 p.m. on the north side and between 7:00 a.m. and 3:00 p.m. on the south side. No bicycle facilities are provided.

Whittier Boulevard is an east-west roadway that runs through the center of the city, stretching from the Los Angeles River in the west to Whittier and La Habra in the east. Within Montebello, Whittier Boulevard has two travel lanes in each direction with a posted speed limit of 30 mph. An intermittent raised median is present along much of the corridor within the city, from the western City limits at Garfield Avenue to Greenwood Avenue. East of Greenwood Avenue, the road narrows as it enters downtown Montebello. Free two-hour parking is generally provided between 7:00 a.m. and 6:00 p.m. No bicycle facilities are provided.

Washington Boulevard is an east-west roadway that runs through the southern portion of the City. The roadway stretches from Venice Beach to Santa Fe Springs Road in Whittier where it becomes Whittier Boulevard. Within Montebello, Washington Boulevard has three travel lanes in each direction with a posted speed limit of 40 mph. A two-way center left-turn lane is provided for much of the corridor. On-street parking is generally prohibited along the corridor west of Greenwood Avenue; east of Greenwood Avenue, on-street parking is allowed except between 4:00 p.m. and 6:00 p.m. Bicycle facilities are not present.

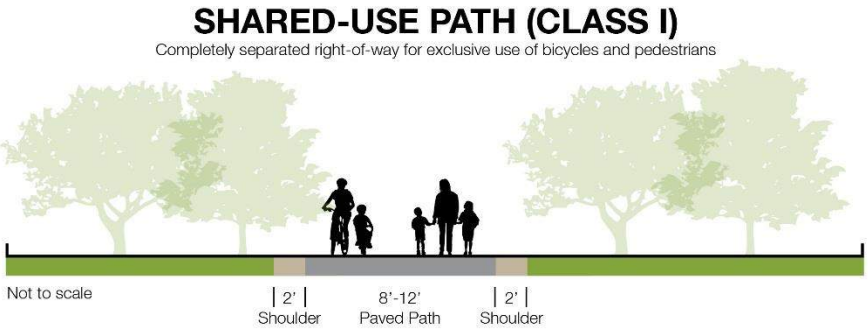
Telegraph Road is an east-west roadway that runs along the southern City limits, parallel to I-5. An off-ramp for northbound I-5 vehicles is present northwest of Gage Road; immediately west of the City limits, Telegraph Road provides an on-/off-ramp for northbound I-5. Telegraph Road has two travel lanes in each direction with a posted speed limit of 45 mph. A two-way center left-turn lane is provided along the roadway's length within the city. On-street parking is prohibited, and no bicycle facilities are present. A pedestrian bridge over I-5 connects to Telegraph Road at Greenwood Avenue.

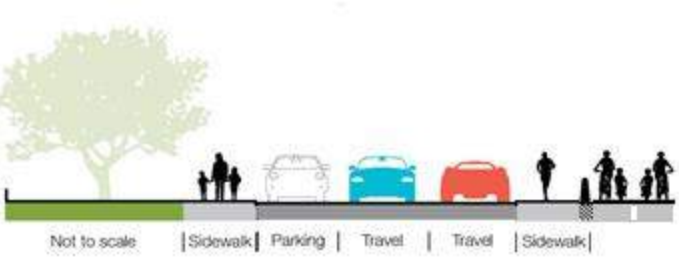
Operating conditions, in terms of Level of Service (LOS), at key intersections and roadways are analyzed below under the Non-CEQA analyses in this report.

BICYCLE AND PEDESTRIAN FACILITIES

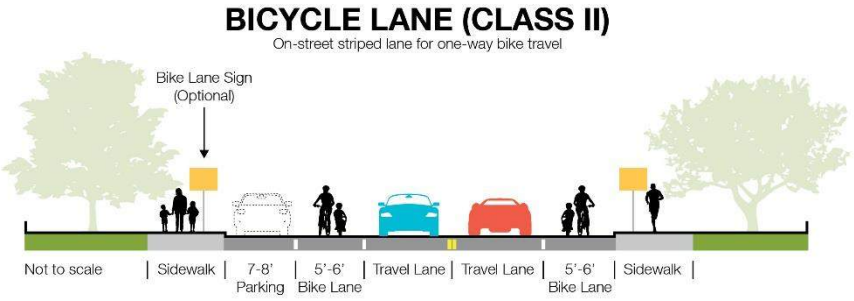
Bicycle facilities are categorized into four types, as described and depicted in illustrations below. Note that while the graphics include typical widths for each facility type, the exact configuration can vary depending on location and the jurisdiction's preference.

- **Class I Bikeway (Bike Path).** Also known as a shared path or multi-use path, a bike path is a paved right-of-way for bicycle travel that is completely separate from any street or highway.

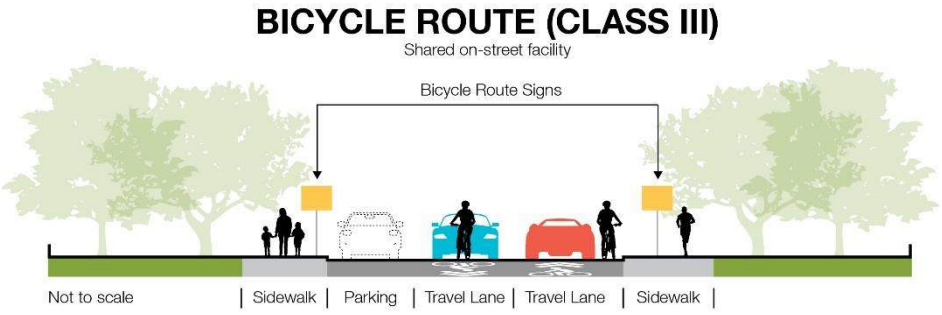




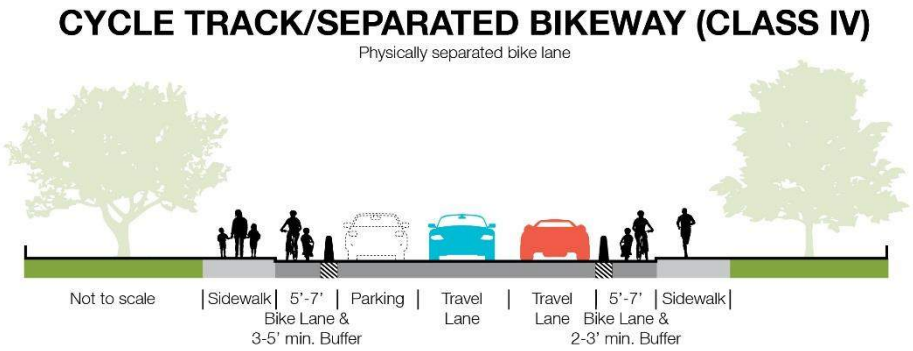
- **Class II Bikeway (Bike Lane).** A striped and stenciled lane for one-way bicycle travel on a street or highway. This facility could include a buffered (typically painted) space between the bike lane and vehicle lane and the bike lane could be adjacent to on-street parking.



- **Class III Bikeway (Bike Route).** A signed route along a street where the bicyclist shares the right-of-way with motor vehicles. This facility can also be designated using a shared-lane marking (sharrow).



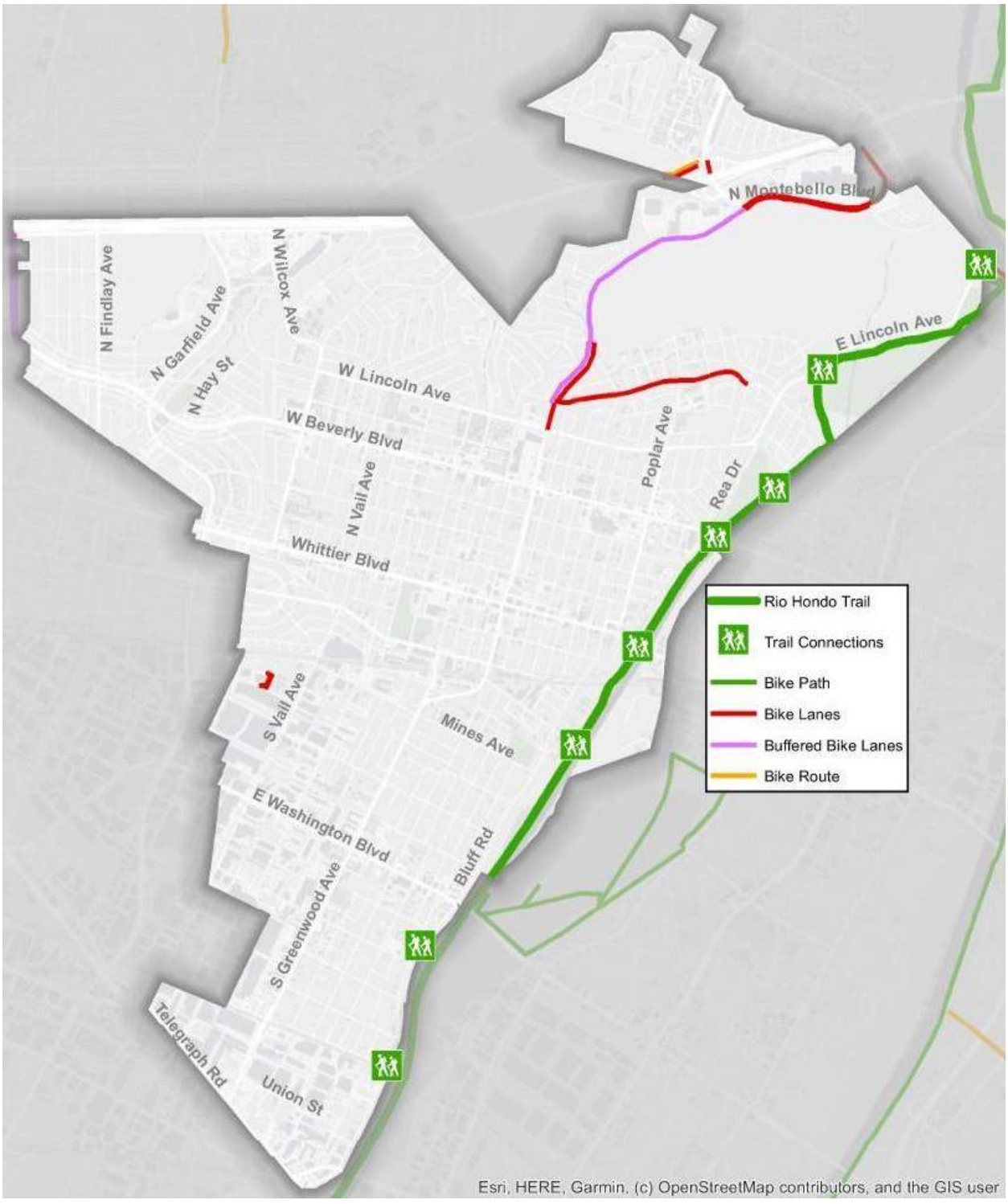
- **Class IV Bikeway (Separated Bike Lane).** A bikeway for the exclusive use of bicycles including a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.



At this time, there are limited bicycle facilities in Montebello. The City of Montebello currently has approximately five miles of existing bikeways, including one 3.5-mile Class I shared-use path and 1.5 miles of Class II bicycle lanes. The existing bikeways are described in more detail below and shown in Figure 7.

- The Rio Hondo Bike Path, a Class I bike path that runs adjacent to the Rio Hondo Channel from Imperial Highway (in the City of South Gate) to Santa Anita Avenue (in the City of El Monte).
- Class II bike lanes along Montebello Boulevard from Lincoln Avenue to Montebello Town Center.
- Parking-adjacent Class II bike lanes along Avenida de la Merced from Montebello Boulevard to Sanchez Street.
- Class II bike lanes along the Montebello/Commerce Metrolink Station access road north of Flotilla Street.

Figure 7: Existing Bikeways Map



Source: City of Montebello General Plan, 2023

TRANSIT SERVICES

Montebello Bus Lines provides local bus service within the City of Montebello and neighboring cities. In addition, transit riders also have access to Metro bus service in the city as well as Metrolink rail service at the Montebello/Commerce Station. Transit riders can also access Metro L Line (formerly Gold Line) commuter rail through the Atlantic Station, which is located west of the Montebello city limits.

Transit Lines and Routes

Montebello Bus Lines

Montebello Bus Lines (MBL) provides transportation services to residents of Montebello and neighboring cities. MBL is the third largest municipal bus system in Los Angeles County with a fleet of 66 buses that provide fixed route services along major corridors in Montebello such as Washington Boulevard, Montebello Boulevard, and Beverly Boulevard.

MBL also provides a Dial-A-Taxi (DAT) service. Residents may ride DAT if they are a resident of Montebello, a senior citizen age 62 and over and/or disabled of any age and their attendants. The service utilizes vehicles equipped with wheelchair lifts upon request at the time of scheduling. DAT provides transportation service within the City of Montebello and medical trips within the designated DAT boundary service area. Users must register to use DAT by completing an eligibility form. When their eligibility has been certified, they will receive a free ID-CARD. Riders must make a reservation ahead of time. The DAT service is available 24 hours a day, seven days a week, including holidays.

MBL is also responsible for the operation of "Montebello LINK," which offers curb-to-curb shuttle service to and from the Montebello Metrolink Station and employment centers in Bell, Commerce, Montebello, Monterey Park, Pico Rivera, and Rosemead. The service is scheduled to meet each arriving and departing Metrolink train. In addition to providing transportation services, the department also maintains the Montebello Metrolink Station and over 800 bus stops. MBL secures dedicated transportation funding from federal, state, and local agencies to provide public transit services.

Metro

Metro provides bus, light rail, and heavy rail service throughout Los Angeles County. As part of this service, Metro operates several bus routes that have within Montebello (routes 18, 62, 66, 68, 108 and 176). However, Metro currently does not provide rail service through Montebello. The closest LA Metro rail station is the Atlantic Station, which serves as the terminus of the L Line and is located in East Los Angeles, approximately 0.6 miles west of Montebello's city limits.

Metrolink

Metrolink provides commuter regional rail transit service to the counties of Los Angeles, San Bernardino, Orange, Ventura, Riverside, and San Diego. The Montebello/Commerce Station, which is on the Riverside Line, is located in the west part of the city, south of Olympic Boulevard and in close proximity to the boundary with the City of Commerce. Metrolink operates service on the Riverside Line Monday through Friday. from 4:35 AM to 4:30 PM, five inbound (Riverside to Los Angeles) trains; from 1:20 PM to 7:28 PM, five outbound (Los Angeles to Riverside)[4].

Metrolink users can utilize several amenities at the Montebello/Commerce Station. There are 267 parking spaces, parking is free with a 72-hour time limit. There is also a drop-off area and 15-minute short-term parking spots. Bike racks are available for bicyclists (secure-long-term bike lockers are not provided). In the eastern

[4] *Regional Rail System, MetroLink, 2023. https://metrolinktrains.com/globalassets/schedules/web_noads_mlk_lft_alllines_23_07_01_232206.pdf*

portion of the station are several bus bays with shaded shelters and benches serving three bus routes (Metro 18, Metro 66, and MBL 70) and the Montebello Link service.

In addition to Riverside Line service at the Montebello/Commerce Station, the Metrolink Commerce Station is located approximately one mile southwest of Montebello and provides service along the Orange County Line.

Amtrak

Amtrak operates intercity and interstate rail service nationwide. Currently, there are no Amtrak stations located within the City of Montebello, but residents can access Amtrak Coast Starlight, Southwest Chief, Sunset Limited, Texas Eagle, and Pacific Surfliner at the Los Angeles Union Station, located 10 miles west of Montebello.

Local Bus Stops

LA Metro and MBL bus stops in Montebello generally include some amenities, which may include a shelter, bench, signage, and a garbage can. The majority of stops on Whittier Boulevard include shelters, but shelters are only present intermittently along other corridors. In addition, some stops lack other amenities. Bus stops along Montebello Avenue north of Lincoln Avenue generally only include a signpost with no bench or shelter.

Park and Ride

The Taylor Ranch Park & Ride parking lot is located at the northwest corner of the Montebello Boulevard and Lincoln Avenue intersection and includes a stop for MBL Route 90. Parking at the lot is reserved for transit and rideshare users between 5:00 AM and 9:00 AM Monday through Friday. There are approximately 80 parking spaces, including six handicapped spaces.

Rail Station Access

Pedestrian and bicyclist accessibility to the Montebello/Commerce Metrolink Station is generally limited. While sidewalks are provided from Flotilla Street into the station, the crosswalk at the station access driveway is a standard crosswalk rather than a high-visibility crosswalk (such as those within the station). In addition, pedestrians do not have a marked crosswalk to cross Flotilla Street at that location. Pedestrians walking to the station along roads such as Flotilla Street and Vail Avenue face several barriers such as rail crossings and a lack of marked crosswalks. Bicyclists accessing the station can utilize dedicated bicycle lanes along the station access road. However, these lanes are narrow in some locations (3.5 feet wide including the gutter). In addition, the inbound bike lane does not start at the Flotilla Street driveway but rather starts 300 feet within the station area. These conditions both present barriers for bicyclists which must share the access road with cars accessing the parking lot or drop-off area and buses accessing the bus bays. Outside of the station area, there is a lack of dedicated bike lanes along roads to and from the station.

The LA Metro L Line Atlantic Station is located on Pomona Boulevard in East Los Angeles, approximately 0.6 miles west of Montebello's city limits. Pedestrians and bicyclists accessing the station from Montebello can use either Beverly Boulevard or Via Campo Street. While both roads consistently provide pedestrian amenities such as sidewalks and marked crosswalks, they lack dedicated bikeways.

CEQA SIGNIFICANCE THRESHOLDS

TRANSPORTATION SIGNIFICANCE CRITERIA

In accordance with Appendix G of the CEQA Guidelines, the Project would be considered to have a significant transportation impact if it would:

a) conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
b) conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
c) substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
d) result in inadequate emergency access.

Significance criteria "b" is related to the implementation of VMT as the primary performance metric consistent with SB 743 as described above.

SPECIFIC TRANSPORTATION THRESHOLDS

The thresholds used for the CEQA categories are summarized below.

Conflict with Program/Plan/Ordinance/Policy

The following thresholds are used to evaluate impacts for CEQA Appendix G Item (a).

The Project will be qualitatively evaluated to determine if it is expected to conflict with relevant programs, plans, ordinances, and policies related to the circulation system. A conflict could occur if the proposed Project would preclude the ability of Montebello to implement its goals or policies. For the purpose of this analysis, the Project could result in a significant impact if it results in a conflict with any adopted City of Montebello programs, plans, ordinances, and policies.

Generally, a plan/project causes a significant impact to transit facilities and services if an element of it conflicts with existing or planned transit services. The evaluation of transit facilities shall consider if:

- a plan or project creates demand for public transit services above the capacity that is provided or planned;
- a plan or project or related mitigation disrupts existing transit services or facilities;
- a plan or project or related mitigation conflicts with an existing or planned transit facility; or
- a plan or project or related mitigation conflicts with transit policies adopted by the City of Montebello for its respective facilities.

The City's "Our Accessible Community" section within the General Plan describes the related policies necessary to ensure that pedestrian and bicycle facilities are safe and effective for Montebello residents, employees and visitors. Using the "Our Accessible Community" section as a guide, significant impacts to these facilities would occur when a plan or project:

- creates a hazardous condition that currently does not exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility; or
- conflicts with an existing or planned pedestrian or bicycle facility; or
- conflicts with policies related to bicycle and pedestrian facilities as adopted by the City of Montebello for its respective facilities.

Conflict with CEQA Guidelines for VMT

The following thresholds are used to evaluate impacts for CEQA Appendix G Item (b).

The City is in the process of adopting updated Transportation Study Guidelines, which are expected to be considered for adoption by City Council in the fall of 2023. The most recent draft City of Montebello Transportation Study Guidelines prepared in May of 2022 are used for the purpose of this analysis.

To evaluate the proposed Project as a land plan which includes a variety of land uses that would generate several trip purpose types, VMT per service population is used as it aggregates residents and worker trips in one metric. Based on this approach, if the VMT per service population is lower in the horizon year with the Plan compared to existing conditions, the Plan would have a less than significant impact on VMT. In summary, a significant impact would occur if any of the following conditions take place:

- If the plan generates VMT per service population in the horizon year plus project scenario greater than total VMT per service population under existing conditions.
- If the plan generates VMT per service population in the horizon year plus project scenario greater than total VMT per service population under the no project/current plan scenario.

Increase Hazards Because of a Geometric Design Feature

The following threshold is used to evaluate impacts for CEQA Appendix G item (c).

Any project that causes a substantial increase in on-street hazards due to geometric design will potentially result in a significant impact. Generally, a plan/project causes a significant impact related to hazards if the area plan creates an unsafe geometric design feature in the transportation system. The evaluation of hazards shall consider if:

- The Project creates a change in the transportation system which introduces an unsafe design feature.

Inadequate Emergency Access

The following threshold is used to evaluate impacts for CEQA Appendix G item (d).

Generally, a project causes a significant impact to emergency access if it creates an area with inadequate emergency access. The evaluation of emergency access shall consider if:

- The Project creates a change in land uses or the transportation system which results in inadequate emergency access to one or more areas.

CEQA ANALYSIS METHODOLOGY

Because SB 743 eliminated the use of LOS for CEQA impact analysis purposes, road capacity analysis is not included in this study. Under CEQA, the primary quantitative measure to evaluate transportation impacts is VMT. This transportation analysis provides an analysis of potential transportation impacts under current CEQA criteria. A local transportation analysis is being prepared separately to evaluate effects associated with implementation of the Project in terms of roadway capacity and LOS.

VEHICLE MILES TRAVELED

The SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) travel demand model was used to estimate VMT metrics. This version of the SCAG model has been used for VMT analysis in most communities in the SCAG region. The model has a base year of 2012 and a forecast year of 2040. Use of the 2016 RTP/SCS model is consistent with the requirements from nearby local and regional agencies such as the SGGVOG, which relies on this model to establish thresholds and findings of significance. The SCAG model's "base conditions" scenario relies on year 2023 travel characteristics and the built environment (such as land use quantities and patterns). The model estimates that approximately 2,971,433 vehicle miles of travel are generated daily within the City of Montebello. This estimate reflects trips beginning or ending within the City of Montebello and does not include regional traffic passing through the area. The citywide home-based VMT per service population is 27.20. In comparison, at the county level, average VMT is 22.96 per service population.

TRAVEL DEMAND MODEL

This study assesses the VMT characteristics of the adopted General Plan and the proposed General Plan (Project) conditions in the 2045 planning horizon year to identify if the Project would result in VMT impacts. The applicable VMT significant impact thresholds are described above. Existing (2023) VMT and future VMT were estimated using SCAG's travel demand model. The VMT for the Project was determined for the transportation analysis zones (TAZs) that most closely represent the study area including the City limits and sphere of influence.

The SCAG regional travel model evaluates travel throughout the six-county SCAG region. The model groups land uses in the region into TAZs, and then uses a series of calculation steps to estimate travel associated with the land uses and transportation network.

- **Trip Generation:** How many daily trips by trip purpose are generated by each land use in each TAZ.
- **Trip Distribution:** How many trips of each type travel to each other TAZ.
- **Mode Choice:** Which travel modes are used by people of different demographic categories for trips of different purposes between each origin and destination, including auto, transit, bicycle and walk modes.
- **Time of Day:** Which trips are made during peak hours versus off-peak hours.
- **Trip Assignment:** Which routes are used by each vehicle trip or transit trip.

The daily activity patterns in the travel model are based on a statistical analysis of a household travel survey, where a representative sample of households were asked to track all daily activities and trips by all members of their household. The travel model was calibrated to these surveyed travel patterns, and also validated by its ability to replicate counted traffic volumes, transit ridership, and total VMT from traffic count sources.

Modelled Scenarios

The following scenarios were reviewed and developed to provide VMT and roadway segment forecasts:

- **2023 Existing Conditions:** corresponds to an interpolation between the SCAG model 2012 base year and the 2045 forecast conditions.
- **2045 No Project:** corresponds to 2045 horizon year conditions under the current General Plan. It consists of the adopted general plan network and land uses and assumes allowable land use buildout with current zoning. Outside of the Montebello planning area, the forecasts use the 2040 SCAG RTP land use forecast.
- **2045 With Project:** corresponds to 2045 conditions with maximum development potential with the proposed Project (General Plan Update and Downtown Specific Plan). Outside of the Montebello planning area, the forecasts use the 2040 SCAG RTP land use forecast.

Land Use

The SCAG travel model requires land uses to be defined for each geographic area in the county. The model defines land uses in transportation analysis zones (TAZs) which are typically bounded by major arterial or collector streets and are generally subdivisions of Census tracts. The model land use inputs include numbers of households and employees by employment category, as well as enrollment at schools.

The SCAG model had defined a 2040 land use forecast based on the SCAG Regional Transportation Plan. This forecast was generally consistent with the allowable land uses currently in the City and sphere of influence, but did not fully account for the proposed land uses in the planning area. To assess the transportation impacts of the Project more completely, a revised future 2045 land use forecast was prepared for this TIA.

A detailed mapping of parcels and allowable development was compiled to determine the maximum buildout potential of each parcel with the City's proposed General Plan land use map. The proposed square footage of non-residential uses was converted to employment assuming an average of 500 square feet per employee. Table 3 summarizes the housing and employment totals in the SCAG model for 2023 and 2045.

Table 3: SCAG Model Land Use Inputs for Montebello Planning Area TAZs[1]

Description	Housing Units	Population	Jobs
Existing Conditions	20,400	61,600	29,600
Proposed Project	37,600	122,100	31,800
Net Change	+17,200	+60,500	+2,200

Sources: Montebello General Plan, Figure C3.7 updated as of July, 2023; Southern California Association of Governments travel model data files, 2016; Kittelson & Associates, 2023.

The Project was represented in existing SCAG model TAZs, The SCAG model TAZ boundaries in the Project Area include some area and land uses outside the Project Area boundary, so totals may not be identical to the Project Description.

Compared to 2023 existing conditions, the proposed General Plan would allow for an 84 percent increase in housing and a 7 percent increase in employment.

Transportation Networks

The travel model contains representations of transportation networks for all travel modes, as described below.

- The model road network includes all freeways, highways, arterial streets, most collector streets which provide connectivity between neighborhoods, and selected local streets. The roads are coded with information on functional classification, number of through lanes, speed limit, and capacity.
- All regular weekday transit routes are coded in the model. Bus routes are assumed to run on the streets and be subject to varying congested conditions on those streets. Rail transit operates on separate facilities and is not affected by road congestion. The model also has a general representation of transit

stop locations and park-and-ride access. The model includes the LA Metro Eastside Transit Corridor project along Washington Boulevard.
- Bicycles and pedestrians are assumed to have access to all streets except freeways.

The following transportation network changes are included for the 2045 travel forecasts consistent with the proposed General Plan circulation system:

- Metro L Line (Gold Line extension) rail service along Washington Boulevard with station at Greenwood Avenue
- Washington Boulevard: Between Garfield Avenue and Rosemead Boulevard, reduce from 3 through lanes each direction to 2 through lanes each direction consistent with Eastside Transit project
- Beverly Boulevard: Between Via Val Verde and Montebello Boulevard, provide left-turn lanes at intersections only with no continuous median left-turn lane
- Whittier Boulevard: Between Garfield Avenue and Bluff Road, reduce from 2 through lanes each direction to 1 through lane each direction
- Lincoln Avenue: Between Maple Avenue and Montebello Boulevard, reduce from 2 eastbound through lanes to 1 eastbound through lane, remove continuous median left-turn lane

Future Travel Trends

The model presumes that future background travel options and behaviors remain similar to current conditions and does not explicitly account for potential changes associated with disruptive trends, emerging technologies, and changes in travel preferences. As a result, the travel model is likely to represent a conservative estimate of future amounts of commuting, vehicle use and VMT.

CEQA IMPACT ANALYSIS

The following provides an evaluation of the Project's:

1) potential conflicts with City's programs, plans, ordinances, and policies;
2) impacts in terms of VMT;
3) potential geometric design hazards; and
4) impacts to emergency vehicle access.

Impact 1: Consistency with Circulation System Programs

SIGNIFICANCE CRITERION A: *Would the proposed plans conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

The following reviews consistency with policies and programs related to transit, pedestrian, vehicular, and bicycle travel.

Pedestrian and Bicycle Travel

The Proposed project includes Policy P4.5 to promote a network of complete streets that are safe and accessible for all transportation modes and users. The proposed Project references and incorporates the San Gabriel Valley Regional Active Transportation Plan and Greenway Network Study (ATP study), which includes recommendations for the City. The ATP study identifies that the city generally lacks bikeways and that there are opportunities to improve access to the Rio Hondo Path. The General Plan includes new planned bike facilities on several key roadways including but not limited to Washington Boulevard, Mines Avenue, Whittier Boulevard, Beverly Boulevard, Lincoln Avenue, and Wilcox Avenue.

The proposed Project would also implement a network of complete streets to enhance the pedestrian experience by providing a more walkable and denser environment, especially in the downtown Montebello area. Specifically, as discussed previously, the proposed Project proposes modifications to sections of Washington Boulevard, Beverly Boulevard, Whittier Boulevard, and Lincoln Avenue that reduces the number of vehicular travel lanes while adding amenities for pedestrian and cyclists such as landscaping, parking, and bike lanes. The proposed Project also includes policies that would promote safety such as working with LA Metro and Caltrans to improve pedestrian crossings. By enhancing the experience for pedestrians and cyclists and promoting the implementation of multi-modal facilities, the proposed Plan would not conflict with roadway policies adopted by the City of Montebello.

Conclusion

In summary, the proposed Project includes policies that support public transit, bicycle improvements, and improvements to the pedestrian facilities by expanding the network and coordinating with regional agencies. A review of the Project's land use and circulation characteristics revealed no potential policy inconsistencies or conflicts with policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or the performance or safety of those facilities. Additionally, the City has numerous policies supporting complete streets and to promote use of transit and active transportation. Therefore, with respect to conflicts with circulation system policies, the impact of the proposed Project would be less than significant.

Impact 2: Vehicle Miles of Travel

SIGNIFICANCE CRITERION B: *Would the proposed plans conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

The proposed plans were assessed for VMT to comply with SB 743 requirements and CEQA Guideline section 15064.3, subdivision (b).

VMT Project Impact Assessment

The VMT statistics were calculated for existing and future scenarios, encompassing the City of Montebello. Table 4 summarizes the VMT results for existing and future conditions without and with the proposed Project.

As shown in Table 4, the proposed Project results in the highest total VMT compared to existing and future scenarios. While it results in the highest VMT, it provides the lowest VMT per service population. In other words, future conditions with the proposed Project would result in decreased VMT per service population in comparison to 2023 existing conditions and in comparison to future No Project conditions. The reductions from the base year to the future year indicate that future development, in particular planned mixed-use development, will provide more opportunities for Montebello residents and employees to access jobs and services within shorter distances. The shorter trip distances reduce VMT by vehicles and also increase the likelihood that trips will be made by non-auto modes such as bicycling and walking. Improved transit service and accessibility to transit also help to reduce VMT even as travel activity increases.

As previously discussed, a significant impact would occur if any of the following conditions take place:

- If the plan generates VMT per service population in the horizon year plus project scenario greater than total VMT per service population under existing conditions.
- If the plan generates VMT per service population in the horizon year plus project scenario greater than total VMT per service population under the no project/current plan scenario.

The VMT per service population for 2045 proposed Project (22.07) would not be greater than the existing conditions (27.20), or greater than 2045 No Project (26.13). Therefore, with respect to consistency with CEQA Guidelines Section 15064.3, subdivision (b), the impact of the Project would be less than significant.

Table 4: City of Montebello VMT Summary

Units	2023 Existing Conditions	2045 No Project	2045 With Project
VMT Per Service Population	27.20	26.13	22.07
Total VMT	2,971,433	2,997,608	3,697,131

Source: Kittelson and Associates, 2023.
Notes:
Refer to Appendix A for detailed VMT summary showing results for the SCAG region, Los Angeles County and Montebello.
N/A = not applicable.

VMT Cumulative Impact Assessment

A significant transportation cumulative impact would occur if the Project threshold is exceeded, or if the Project is determined to be inconsistent with the RTP/SCS . As noted above, the project impacts in VMT would be less than significant, as the Project's VMT per service population would not exceed applicable thresholds. In addition, the Project is consistent with the SCAG RTP/SCS. Besides helping increase the local and regional housing supply to meet regional housing needs and locating housing in a transit-rich area, the Project helps further the following RTP/SCS goals:

- Encourage regional economic prosperity and global competitiveness.
- Improve mobility, accessibility, reliability, and travel safety for people and goods.
- Enhance the preservation, security, and resilience of the regional transportation system.
- Reduce greenhouse gas emissions and improve air quality.
- Support healthy and equitable communities.
- Adapt to a changing climate and support an integrated regional development pattern and transportation network.
- Encourage development of diverse housing types in areas that are supported by multiple transportation options.

The Project does not exceed the Project VMT threshold and is not inconsistent with the RTP/SCS. Therefore, cumulative impacts would be less than significant and no mitigation would be required.

Impact 3: Roadway Safety Design Hazards

SIGNIFICANCE CRITERION C: *Would the proposed plans substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*

The proposed Project would primarily involve the long-term vision for the City to guide and promote alteration, intensification, and redistribution of land uses. The proposed Project also provides examples of cross-sections to illustrate concepts of multimodal boulevards that would enhance pedestrian and cyclist travel. The General Plan document notes that additional studies and design would be necessary to implement modifications along corridors. Hazards are typically assessed at the individual project level when an actual design and construction of a circulation facility is proposed. Potential impacts associated with future land use development projects would be analyzed and evaluated in detail through the city review process for those individual projects. The city's design and construction standards and specifications provide for coordinated and standardized development of city facilities, including roadways. The standards apply to, regulate, and guide the design and preparation of plans, and the construction of streets, highways, alleys, drainage, traffic signals, site access, and related public improvements. As individual projects would undergo review by Public Works and Planning departments for approval and construction and would have to meet design guidelines, potential safety design hazards associated with land development projects would be addressed.

Prior to implementation, any improvements would be subject to a detailed review and future consideration by the City's Public Works engineering staff and other relevant City agencies. An evaluation of the roadway alignments, intersection geometrics, and traffic control features would be needed at the project design level. Roadway improvements would have to be made in accordance with the City's circulation plan and roadway design guidelines and meet design guidelines in the California Manual of Uniform Traffic Control Devices and the Caltrans Roadway Design Manual. In addition, the City of Montebello Mobility Element includes goals, policies, and actions to improve the safety of all users of the transportation system in the City such as Goal 1 (Local Circulation System), "Development-Related Traffic Impacts" policy, which requires new development to provide appropriate and feasible improvements as condition of approval so they do not adversely affect traffic flow and roadway operations.

Overall, implementation of the updated General Plan would not result in hazardous conditions. As individual projects and circulation improvements would undergo review by Public Works and Planning departments for approval and construction and would have to meet design guidelines, impacts would be less than significant.

Impact 4: Emergency Vehicle Access

SIGNIFICANCE CRITERION D: *Would the proposed plans result in inadequate emergency access?*

Emergency access associated with future land use development projects would be analyzed and evaluated in detail through the city review process for those individual projects. The City's emergency access standards would apply to all developments proposed under the proposed Project. Therefore, with respect to inadequate emergency access, the impact of the proposed plans would be less than significant.

INTERSECTION AND ROADWAY OPERATIONS ANALYSES

This section provides a review of traffic operations in terms of levels of service (LOS) at key intersections and roadways under existing and future conditions. This analysis is included for non-CEQA purposes to determine if local intersections operate acceptably and if the project would cause any negative effects on local roadway operations.

This section provides an overview of the methodology for the operational analyses for intersections and roadways, presents existing and future volumes and a LOS summary under existing and future conditions at study locations. Figure 8 shows the study intersections and roadways, which were selected based on anticipated traffic associated with intensification of land uses and discussions with City Engineering staff.

The approach to review traffic operations is consistent with City's Transportation Study Guidelines, published in May 2022. While the proposed General Plan does not set LOS standards for roadways and intersections, the City's Transportation Study Guidelines requires that traffic analyses for land development projects would be required to provide improvements if they degrade intersection and roadway segments operations beyond LOS "D". The Transportation Study Guidelines also states that "While the minimum acceptable LOS for City facilities is LOS D, at its discretion the City may allow LOS E or F operations at specific locations to encourage mixed-use, infill development that is supportive of transit and active transportation."

INTERSECTION LEVELS OF SERVICE

The evaluation of intersections incorporates the intersection level of service (LOS) methodologies as recommended in the most recent edition of the Transportation Research Board Highway Capacity Manual (HCM), and for individual intersection, utilizing the Vistro software package, which implements the methodologies outlined in the HCM, and is considered appropriate.

In this report, LOS is based on the Highway Capacity Manual (HCM) 6th edition definitions, included as Table 5 for ease of reference. The HCM methodology assigns an LOS grade to an intersection based on the delay for vehicles at the intersection, ranging from LOS A to LOS F; LOS A signifies very slight delay with no approach phase fully utilized, while LOS F signifies very high delays and congestion, frequent cycle failures, and long queues. For signalized and all-way stop-controlled intersections, the average control delay for all vehicles is assessed; for two-way stop-controlled intersections, the intersection approach with the highest delay is utilized. All study intersections are signalized. Figure 9 shows the existing lane configurations and traffic control devices for the study intersections.

The existing intersection and roadway segment analyses are based on traffic counts collected on June 7, 2023. Appendix B contains the Intersection Turning Movement Counts Worksheets and Appendix C contains the Roadway Count Worksheets. Traffic volumes for the year 2045 conditions analysis were developed using the SCAG model, as previously discussed. Link volumes from the model were used alongside existing intersection counts to develop 2045 intersection counts, using the post-processing approach from NCHRP 255[5]. The intersection volumes were reviewed and adjusted considering corridor balancing and the growth rate reflected in the model volumes. Figure 10 shows the existing weekday AM and PM volumes at the study intersections. Figure 11 shows the Year 2045 General Plan Update weekday AM and PM volumes at the study intersections.

[5] National Cooperative Highway Research Program (NCHRP). Report 255: Highway Traffic Data for Urbanized Area Project Planning and Design. 1982.

Table 5: Intersection Delays and Corresponding Level of Service

Level of Service	Delay Per Vehicle (Seconds)	
	Signalized Intersection	Unsignalized Intersection
A	< 10.0	< 10.0
B	> 10.0 to 20.0	> 10.0 to 15.0
C	> 20.0 to 35.0	> 15.0 to 25.0
D	> 35.0 to 55.0	> 25.0 to 35.0
E	> 55.0 to 80.0	> 35.0 to 50.0
F	> 80.0	> 50.0

Source: Highway Capacity Manual, 6th Edition

The intersection operations analyses were also based on signal timing provided by the City, which are included in *Appendix C*. For future conditions, the intersection lane configurations along Montebello Boulevard and Greenwood Avenue were adjusted according to the street cross-sections that show examples of the envisioned network of complete streets.

Table 6 summarizes the operations for the study intersections in both the Existing and the Year 2045 General Plan Update scenarios. As shown in Table 6, all study intersections currently operate at LOS D or better. Under future conditions with the proposed Project, most intersections would experience an increase in delay but will remain at LOS D or better. The intersection LOS worksheets for Existing Conditions, and for 2045 General Plan Update Conditions are included in Appendix E and Appendix F, respectively.

Table 6: Intersection Operating Conditions Analysis – Existing and Year 2045 General Plan Update

ID	Study Intersection	Existing				Year 2045 General Plan Update				Change in Delay (sec)	
		Weekday AM		Weekday PM		Weekday AM		Weekday PM			
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	AM	PM
I-1	Montebello Blvd & Paramount Blvd	11.2	B	20.4	C	12.1	B	36.3	D	0.9	15.9
I-2	Montebello Blvd & W Beverly Blvd	35.1	D	44.0	D	36.1	D	55.0	D	1.0	11.0
I-3	Montebello Blvd & Whittier Blvd	33.4	C	43.2	D	33.7	C	43.0	D	0.3	-0.2
I-4	Greenwood Ave & E Washington Blvd	25.7	C	34.1	C	28.0	C	42.2	D	2.3	8.1
I-5	Garfield Ave & Via Campo	34.2	C	46.4	D	34.2	C	53.0	D	0.0	6.6

Source: Kittelson & Associates, Inc. 2023
Bold signifies operations below LOS ("D").
"Change in Delay" notes the difference between the "Year 2045 General Plan Updates" and "Existing" conditions.

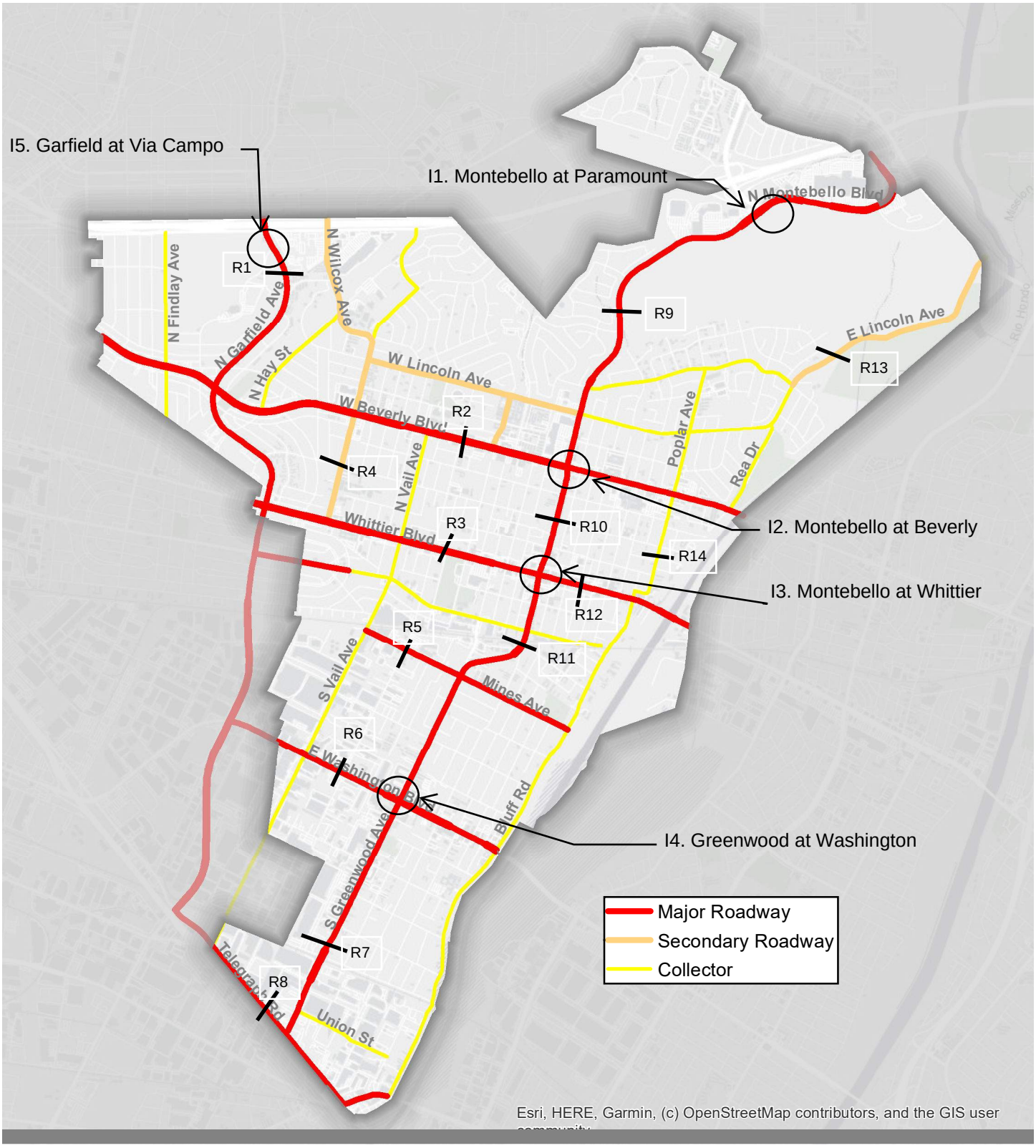
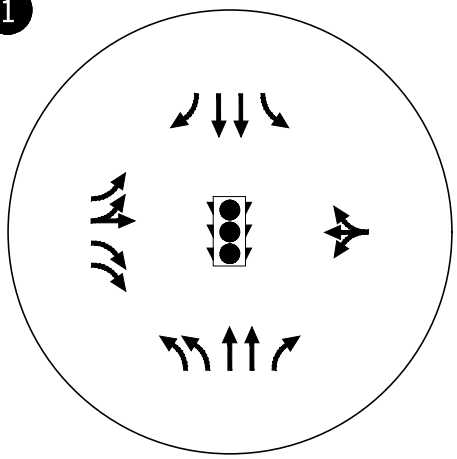


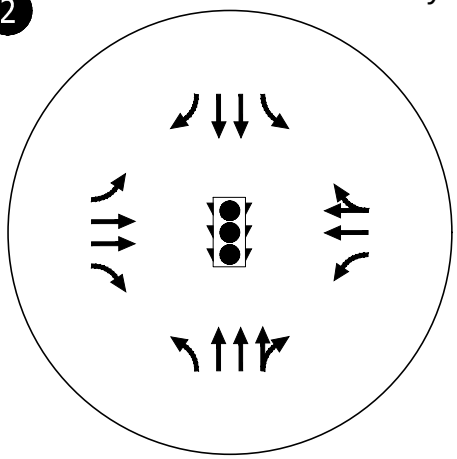
Figure 8
Study Intersections and Roadways
Montebello, CA

KITTELSON & ASSOCIATES

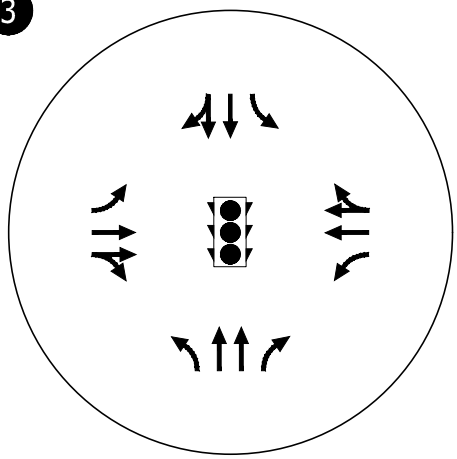
1 Montebello Blvd/ Paramount Blvd



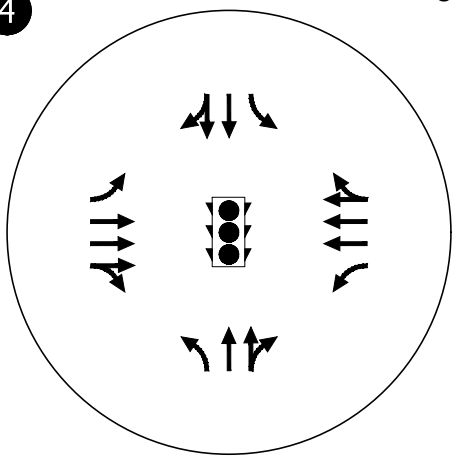
2 Montebello Blvd/ W Beverly Blvd



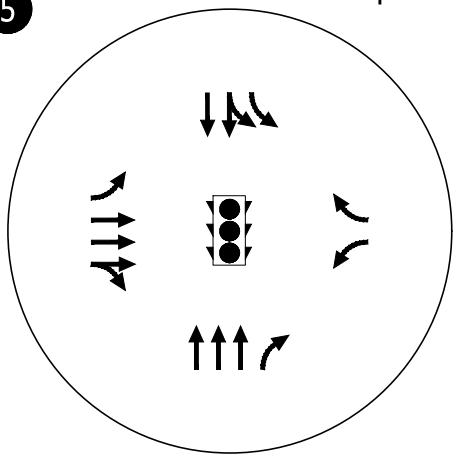
3 Montebello Blvd/ Whittier Blvd



4 Greenwood Ave/ E Washington Blvd



5 Garfield Ave/ Via Campo

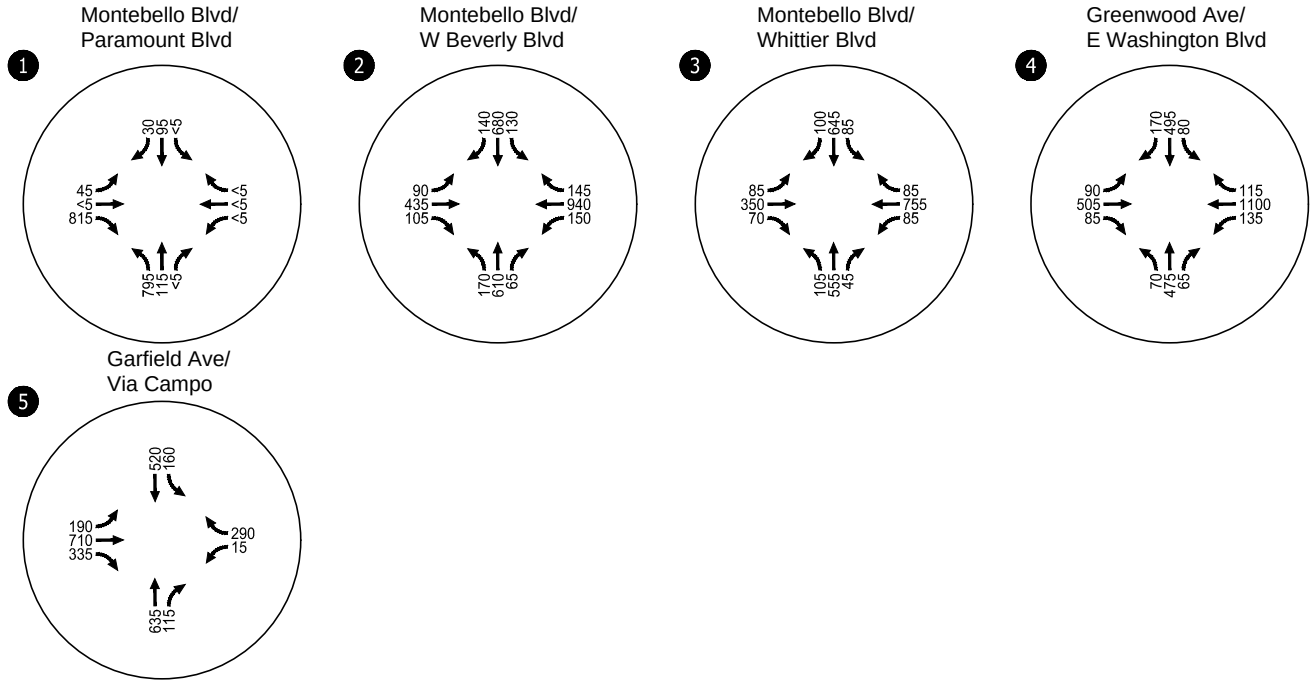


N

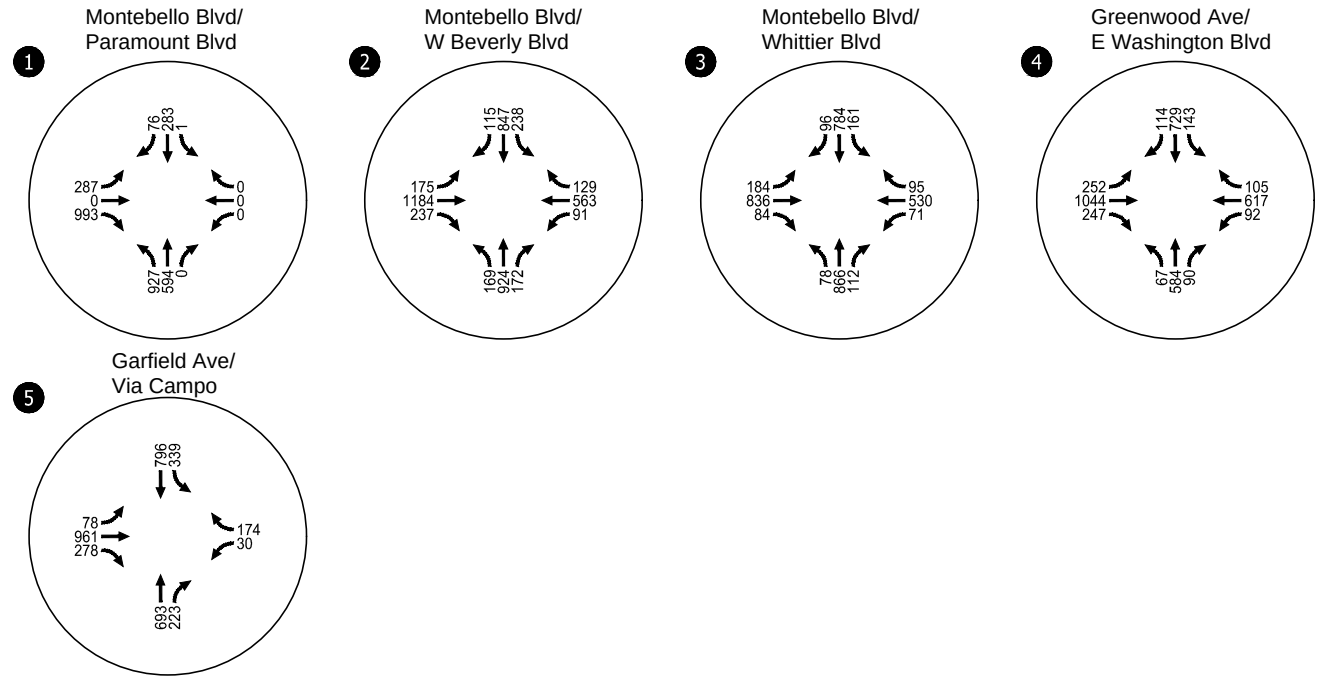
Existing Lane Configurations
& Traffic Control Devices
Montebello, CA

Figure
9

EXISTING AM



EXISTING PM



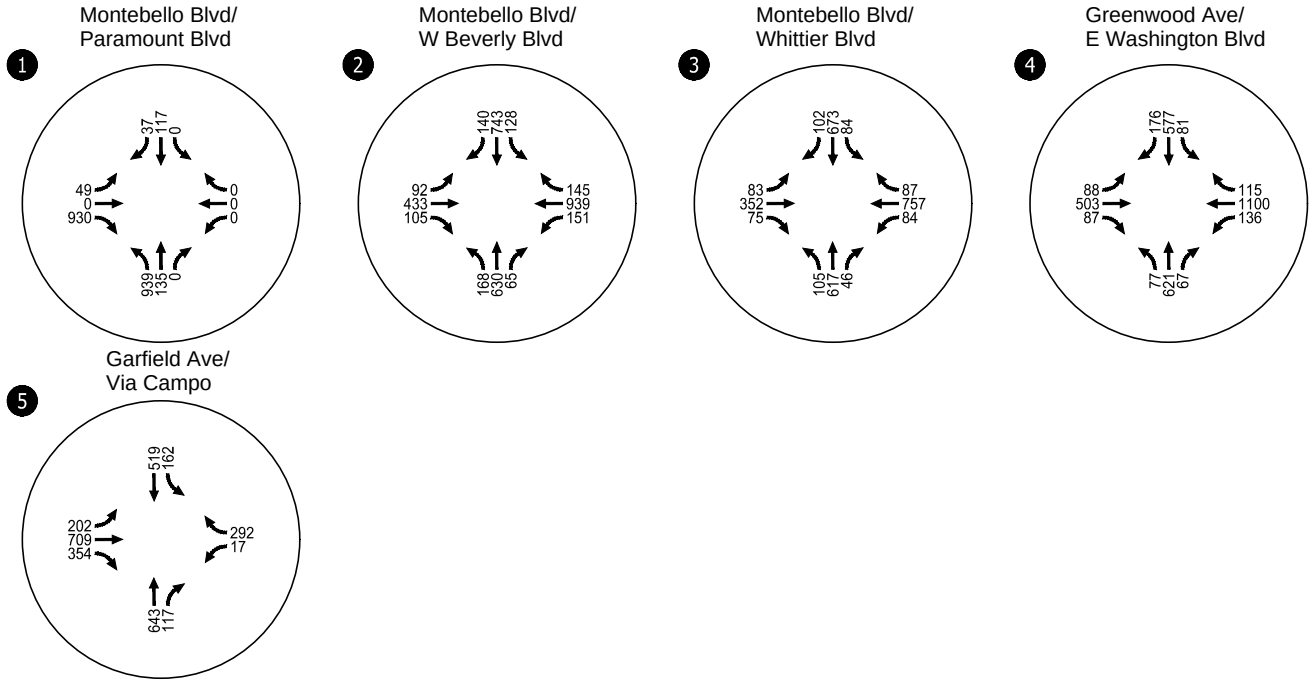
N

Existing AM and PM Volumes

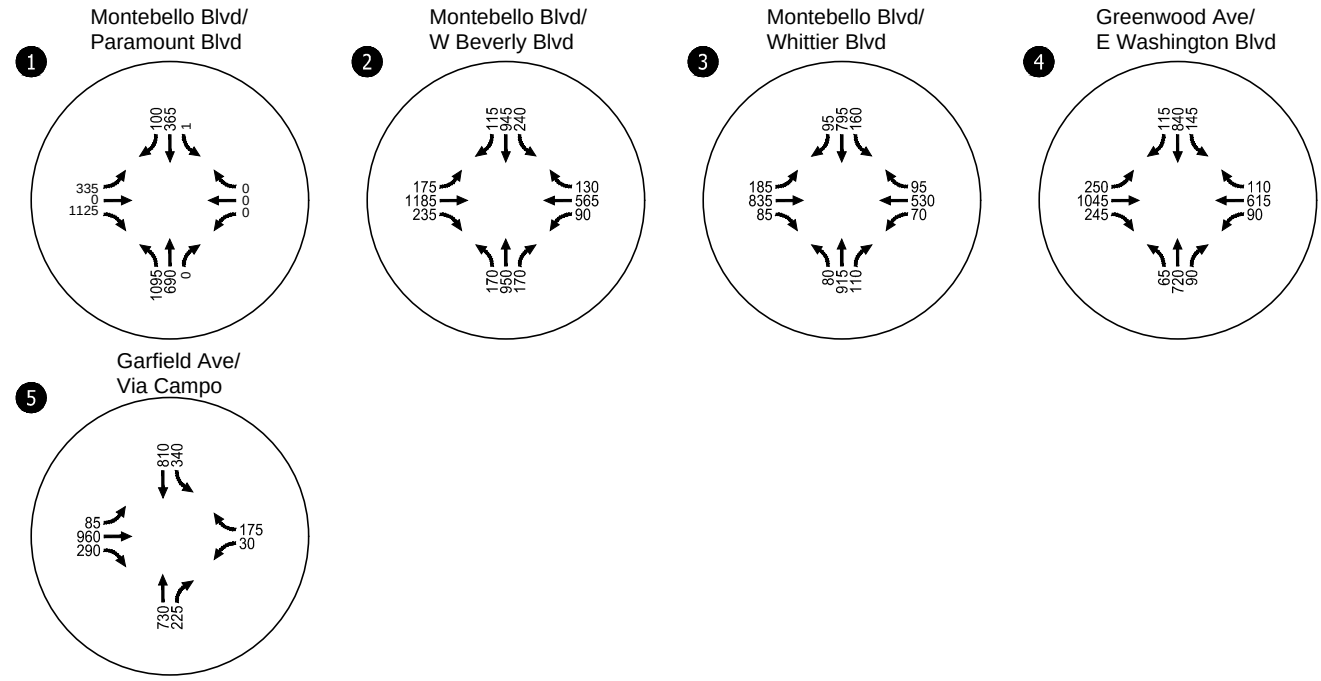
Montebello, CA

Figure 10

FUTURE AM



FUTURE PM



Future AM and PM Volumes

Montebello, CA

Figure 11

ROADWAY SEGMENTS

A level of service (LOS) analysis is included for non-CEQA purposes to determine if local roadway segments operate acceptably and if the project would cause any negative effects on local roadway operations. The evaluation of roadway segments incorporates the level of service (LOS) methodologies as recommended in the City of Montebello Transportation Study Guidelines.

The roadway segment analysis compares the daily traffic experienced by the roadway segment to the roadway classification and associated design capacity. The results are reflected in a volume to capacity (V/C) ratio.

Table 7 summarizes the roadway segment vehicle capacity thresholds as defined by the Transportation Study Guidelines , and Table 8 summarizes the range of V/C ratios and resulting LOS values.

Table 7: Roadway Segment Vehicle Capacity Thresholds

Roadway Classification	Roadway Capacity (Average Daily Traffic)
6 Lane Major Arterial	60,000
4 Lane Major Arterial	40,000
4 Lane Secondary Arterial	30,000
2 Lane Collector	15,000

Source: City of Montebello Transportation Study Guidelines, May 2022

Table 8: Roadway Segment Level of Service Criteria

V/C Ratio	LOS
≤0.60	A
>0.60 and ≤0.70	B
>0.70 and ≤0.80	C
>0.80 and ≤0.90	D
>0.90 and ≤1.00	E
>1.00	F

Source: City of Montebello Transportation Study Guidelines, May 2022

Table 9 summarizes the operations for the roadway segments in the Existing scenario, and Table 10 summarizes the operations for the roadway segments in the Year 2045 General Plan Update scenario. As previously discussed, the City of Montebello strives to maintain vehicular LOS "D" whenever possible, but allow LOS E or F operations at specific locations to encourage mixed-use, infill development that is supportive of transit and active transportation.

Table 9: Roadway Segments Operating Conditions Analysis – Existing

ID	Roadway Segment	Classification	ADT	V/C Ratio	LOS
R-1	Garfield Avenue between Via Campo and Via Paseo	4 Lane Major Arterial	28,833	0.72	C
R-2	Beverly Boulevard between Vail Avenue and Greenwood Avenue	6 Lane Major Arterial	31,405	0.52	A
R-3	Whittier Boulevard between Vail Avenue and Greenwood Avenue	4 Lane Major Arterial	22,976	0.57	A
R-4	Wilcox Avenue between Beverly Boulevard and Whittier Boulevard	2 Lane Collector	11,635	0.78	C
R-5	Mines Avenue between Vail Avenue and Greenwood Avenue	2 Lane Collector	5,252	0.35	A
R-6	Washington Boulevard between Vail Avenue and Greenwood Avenue	6 Lane Major Arterial	33,116	0.55	A
R-7	Greenwood Avenue between Union Street and Oakwood Street	4 Lane Major Arterial	21,255	0.53	A
R-8	Telegraph Road west of Greenwood Avenue	4 Lane Major Arterial	24,388	0.61	B
R-9	Montebello Boulevard between Avenida De La Merced and Liberty Avenue	4 Lane Major Arterial	29,461	0.74	C
R-10	Montebello Boulevard between Beverly Boulevard and Whittier Boulevard	4 Lane Major Arterial	24,405	0.61	B
R-11	Montebello Boulevard south of Olympic Boulevard	4 Lane Major Arterial	19,018	0.48	A
R-12	Whittier Boulevard between Montebello Boulevard and Poplar Avenue	4 Lane Major Arterial	22,559	0.56	C
R-13	Lincoln Avenue north of Avenida De La Merced	2 Lane Collector	6,810	0.45	A
R-14	Poplar Avenue between Beverly Boulevard and Whittier Boulevard	2 Lane Collector	4,275	0.29	A

Source: Kittelson& Associates

Table 10: Roadway Segments Operating Conditions Analysis – Year 2045 General Plan Update

ID	Roadway Segment	Classification	ADT	V/C Ratio	LOS
R-1	Garfield Avenue between Via Campo and Via Paseo	4 Lane Major Arterial	40,600	1.02	F
R-2	Beverly Boulevard between Vail Avenue and Greenwood Avenue*	4 Lane Secondary Arterial	34,600	1.15	F
R-3	Whittier Boulevard between Vail Avenue and Greenwood Avenue*	2 Lane Collector	17,300	1.15	F
R-4	Wilcox Avenue between Beverly Boulevard and Whittier Boulevard	2 Lane Collector	9,200	0.61	B
R-5	Mines Avenue between Vail Avenue and Greenwood Avenue*	2 Lane Collector	7,500	0.50	A
R-6	Washington Boulevard between Vail Avenue and Greenwood Avenue*	4 Lane Secondary Arterial	45,600	1.52	F
R-7	Greenwood Avenue between Union Street and Oakwood Street	4 Lane Major Arterial	26,600	0.67	B
R-8	Telegraph Road west of Greenwood Avenue	4 Lane Major Arterial	25,800	0.65	B
R-9	Montebello Boulevard between Avenida De La Merced and Liberty Avenue	4 Lane Major Arterial	34,800	0.87	D
R-10	Montebello Boulevard between Beverly Boulevard and Whittier Boulevard	4 Lane Major Arterial	23,100	0.58	A
R-11	Montebello Boulevard south of Olympic Boulevard	4 Lane Major Arterial	24,800	0.62	B
R-12	Whittier Boulevard between Montebello Boulevard and Poplar Avenue*	2 Lane Collector	16,600	1.11	F
R-13	Lincoln Avenue north of Avenida De La Merced	2 Lane Collector	7,800	0.52	A
R-14	Poplar Avenue between Beverly Boulevard and Whittier Boulevard	2 Lane Collector	6,000	0.40	A

Source: Kittelson& Associates; Notes: * indicates a planned transportation network change for the 2045 scenario (roadway configuration change and/or roadway classification change).

Overall, five of the study roadway segments do not meet the target LOS D:

- R-1. Garfield Avenue between Via Campo and Via Paseo: Future (LOS F)
- R-2. Beverly Boulevard between Vail Avenue and Greenwood Avenue: Future (LOS F)
- R-3. Whittier Boulevard between Vail Avenue and Greenwood Avenue: Future (LOS F)
- R-6. Washington Boulevard between Vail Avenue and Greenwood Avenue: Future (LOS F)
- R-12. Whittier Boulevard between Montebello Boulevard and Poplar Avenue: Future (LOS F)

As previously discussed, the City may allow LOS E or F operations at specific locations to encourage mixed-use, infill development that is supportive of transit and active transportation. Three of these locations (R-2, R-3, R-12) are located in downtown Montebello, where the Montebello General Plan identified these locations with modified cross-sections in order to promote multimodal boulevards. These locations may be considered to operate at LOS compatible with downtown environment to encourage mixed-use, infill development supportive of transit and active transportation. Locations R-1 is not within the downtown area and are antecipated to operate at LOS F. Location R-6 is a segment along the proposed Metro Gold line extension.

Appendix A
Detailed VMT Impact Summary

MONTEBELLO GP VMT SUMMARY

August 21, 2023

	2012 Base Year	2023 Interpolated	2040 No Project	2040 With Project	2045 No Project	2045 With Project
SCAG Region						
Demographics						
Population	18,317,584	19,816,156	22,132,131	22,185,162		
Households	5,883,352	6,483,783	7,411,723	7,425,971		
Employment	7,425,052	8,375,476	9,844,314	9,844,305		
Daily Vehicle Trips						
Auto	76,744,282	81,541,637	88,955,730	89,446,579		
Truck	2,097,093	2,409,550	2,892,437	2,893,258		
Total	78,841,376	83,951,186	91,848,167	92,339,837		
Truck Percent	2.7%	2.9%	3.1%	3.1%		
Daily VMT by Purpose						
Home Based	267,793,262	281,203,213	301,927,682	303,369,827		
VMT/Capita	14.62	14.19	13.64	13.67		
Employee Based	149,652,640	157,046,768	168,474,056	169,367,542		
VMT/Employee	20.16	18.75	17.11	17.20		
Total Daily VMT						
Auto						
Truck						
Total	655,290,194	688,004,357	738,562,609	742,038,835		
Truck Percent						
VMT/Service Population	25.46	24.40	23.10	23.17		
Los Angeles County						
Demographics						
Population	9,918,214	10,542,993	11,508,560	11,561,591		
Households	3,255,425	3,526,628	3,945,761	3,960,009		
Employment	4,242,577	4,627,299	5,221,869	5,221,860		
Daily Vehicle Trips						
Auto	40,598,204	41,864,478	43,821,448	44,188,462		
Truck	1,192,970	1,333,870	1,551,626	1,552,359		
Total	41,791,173	43,198,349	45,373,074	45,740,820		
Truck Percent	2.9%	3.1%	3.4%	3.4%		
Daily VMT by Purpose						
Home Based	130,625,977	135,033,355	141,844,756	143,497,841		
VMT/Capita	13.17	12.81	12.33	12.41		
Employee Based	82,706,937	83,880,257	85,693,571	86,088,443		
VMT/Employee	19.49	18.13	16.41	16.49		
Total Daily VMT						
Auto						
Truck						
Total	339,797,977	**348,307,514**	**358,489,475**	**361,458,616**		
Truck Percent						
VMT/Service Population	24.00	22.96	21.43	21.54		
Montebello						
Demographics						
Population	74,172	76,200	79,333	132,028	79,333	132,028
Households	21,981	22,872	24,250	40,223	24,250	40,223
Employment	31,534	33,041	35,370	35,482	35,370	35,482
Daily Vehicle Trips						
Auto	350,917	349,333	346,884	430,137	346,884	430,137
Truck	12,098	13,061	14,549	15,424	14,549	15,424
Total	363,015	362,394	361,434	445,561	361,434	445,561
Truck Percent	3.3%	3.6%	4.0%	3.5%	4.0%	3.5%
Daily VMT by Purpose						
Home Based	914,351	942,951	987,150	1,674,135	987,150	1,674,135
VMT/Capita	12.33	**12.37**	12.44	12.68	**12.44**	**12.68**
Employee Based	654,370	660,203	669,219	641,806	669,219	641,806
VMT/Employee	20.75	**19.98**	18.92	18.09	**18.92**	**18.09**
Total Daily VMT						
Auto						
Truck						
Total	2,954,496	2,971,433	2,997,608	3,697,131	2,997,608	3,697,131
Truck Percent						
VMT/Service Population	27.95	27.20	26.13	22.07	26.13	22.07

Appendix B

Intersection Turning Movement Count Worksheets

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Paramount Boulevard
E/W: Montebello Boulevard
Weather: Clear

File Name : 01_MTB_Para_Monte AM
Site Code : 99923585
Start Date : 6/7/2023

Groups Printed- Total Volume

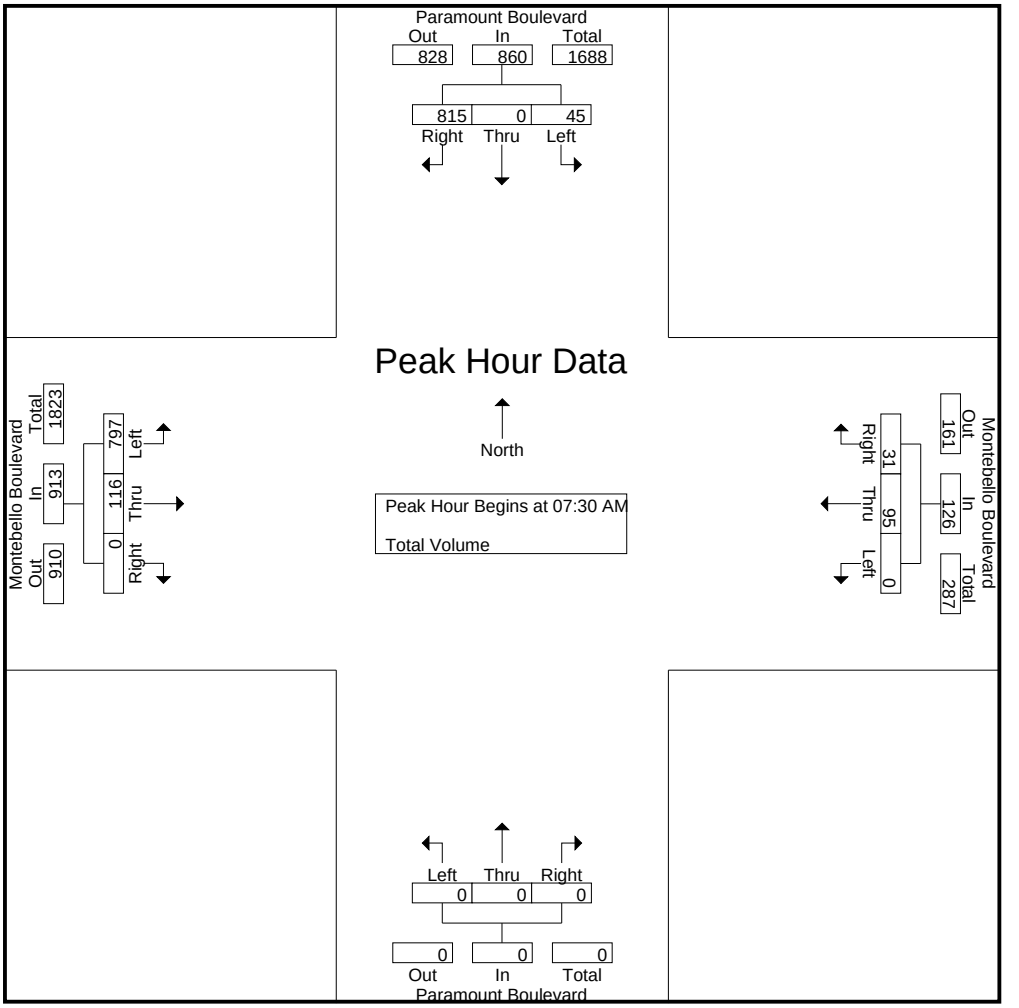
	Paramount Boulevard Southbound				Montebello Boulevard Westbound				Paramount Boulevard Northbound				Montebello Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	0	109	119	0	10	6	16	0	0	0	0	109	12	0	121	256
07:15 AM	7	0	133	140	1	16	6	23	0	0	0	0	190	26	0	216	379
07:30 AM	10	0	187	197	0	15	7	22	0	0	0	0	229	19	0	248	467
07:45 AM	12	0	249	261	0	24	6	30	0	0	0	0	213	27	0	240	531
Total	39	0	678	717	1	65	25	91	0	0	0	0	741	84	0	825	1633
08:00 AM	12	0	196	208	0	24	9	33	0	0	0	0	183	37	0	220	461
08:15 AM	11	0	183	194	0	32	9	41	0	0	0	0	172	33	0	205	440
08:30 AM	19	0	176	195	0	25	8	33	0	0	0	0	164	16	0	180	408
08:45 AM	13	0	171	184	0	34	9	43	0	0	0	0	125	22	0	147	374
Total	55	0	726	781	0	115	35	150	0	0	0	0	644	108	0	752	1683
Grand Total	94	0	1404	1498	1	180	60	241	0	0	0	0	1385	192	0	1577	3316
Apprch %	6.3	0	93.7		0.4	74.7	24.9		0	0	0		87.8	12.2	0		
Total %	2.8	0	42.3	45.2	0	5.4	1.8	7.3	0	0	0	0	41.8	5.8	0	47.6	

	Paramount Boulevard Southbound				Montebello Boulevard Westbound				Paramount Boulevard Northbound				Montebello Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	0	187	197	0	15	7	22	0	0	0	0	**229**	19	0	**248**	467
07:45 AM	**12**	0	**249**	**261**	0	24	6	30	0	0	0	0	213	27	0	240	**531**
08:00 AM	12	0	196	208	0	24	**9**	33	0	0	0	0	183	**37**	0	220	461
08:15 AM	11	0	183	194	0	**32**	9	**41**	0	0	0	0	172	33	0	205	440
Total Volume	45	0	815	860	0	95	31	126	0	0	0	0	797	116	0	913	1899
% App. Total	5.2	0	94.8		0	75.4	24.6		0	0	0		87.3	12.7	0		
PHF	.938	.000	.818	.824	.000	.742	.861	.768	.000	.000	.000	.000	.870	.784	.000	.920	.894

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Paramount Boulevard
E/W: Montebello Boulevard
Weather: Clear

File Name : 01_MTB_Para_Monte AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:00 AM				07:15 AM			
+0 mins.	10	0	187	197	0	24	**9**	33	0	0	0	0	190	26	0	216
+15 mins.	**12**	0	**249**	**261**	0	32	9	41	0	0	0	0	**229**	19	0	**248**
+30 mins.	12	0	196	208	0	25	8	33	0	0	0	0	213	27	0	240
+45 mins.	11	0	183	194	0	**34**	9	**43**	0	0	0	0	183	**37**	0	220
Total Volume	45	0	815	860	0	115	35	150	0	0	0	0	815	109	0	924
% App. Total	5.2	0	94.8		0	76.7	23.3		0	0	0		88.2	11.8	0	
PHF	.938	.000	.818	.824	.000	.846	.972	.872	.000	.000	.000	.000	.890	.736	.000	.931

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Paramount Boulevard
E/W: Montebello Boulevard
Weather: Clear

File Name : 01_MTB_Para_Monte PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

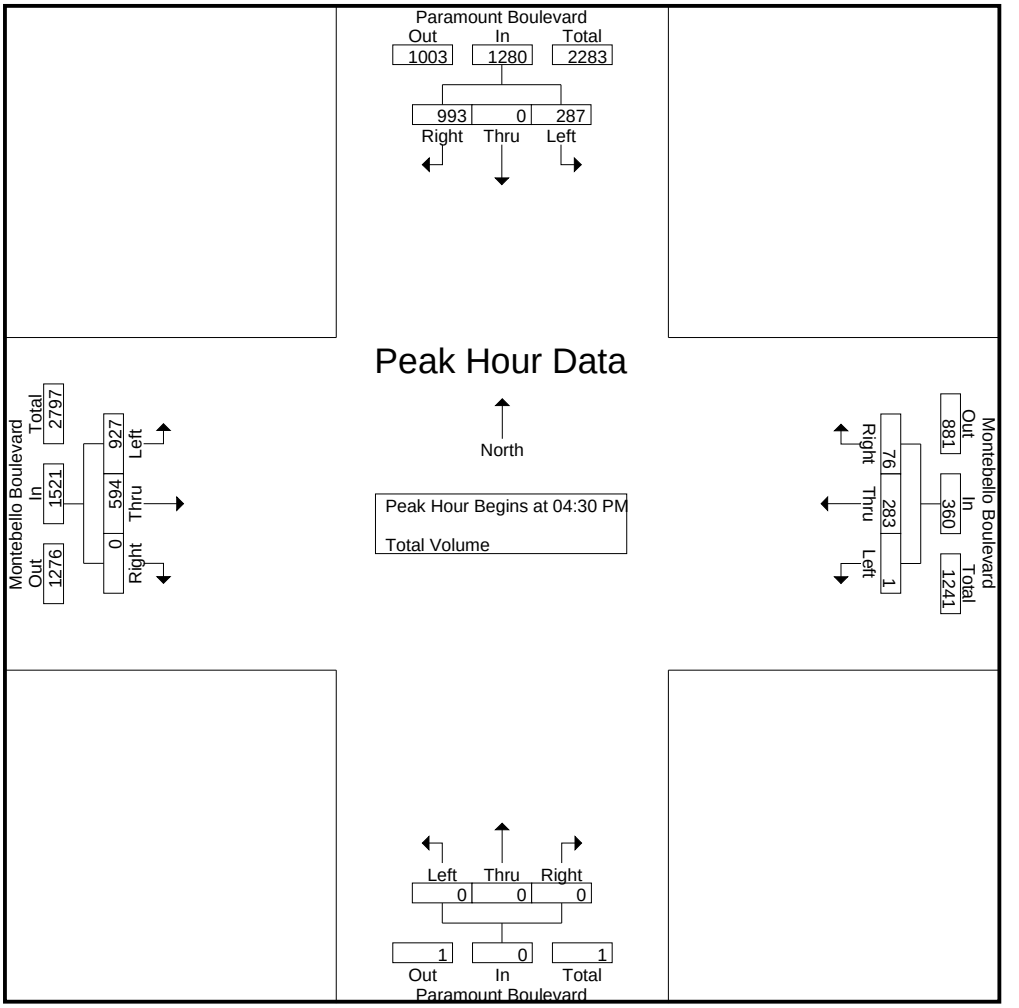
	Paramount Boulevard Southbound				Montebello Boulevard Westbound				Paramount Boulevard Northbound				Montebello Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	56	0	215	271	0	83	14	97	0	0	0	0	179	132	0	311	679
04:15 PM	67	0	268	335	1	73	26	100	0	0	0	0	192	129	0	321	756
04:30 PM	77	0	247	324	0	68	15	83	0	0	0	0	199	126	0	325	732
04:45 PM	74	0	250	324	1	70	11	82	0	0	0	0	244	138	0	382	788
Total	274	0	980	1254	2	294	66	362	0	0	0	0	814	525	0	1339	2955
05:00 PM	68	0	258	326	0	77	26	103	0	0	0	0	260	164	0	424	853
05:15 PM	68	0	238	306	0	68	24	92	0	0	0	0	224	166	0	390	788
05:30 PM	60	0	223	283	0	65	13	78	0	0	0	0	212	158	0	370	731
05:45 PM	68	0	263	331	0	53	19	72	0	0	0	0	202	134	0	336	739
Total	264	0	982	1246	0	263	82	345	0	0	0	0	898	622	0	1520	3111
Grand Total	538	0	1962	2500	2	557	148	707	0	0	0	0	1712	1147	0	2859	6066
Apprch %	21.5	0	78.5		0.3	78.8	20.9		0	0	0		59.9	40.1	0		
Total %	8.9	0	32.3	41.2	0	9.2	2.4	11.7	0	0	0	0	28.2	18.9	0	47.1	

	Paramount Boulevard Southbound				Montebello Boulevard Westbound				Paramount Boulevard Northbound				Montebello Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**77**	0	247	324	0	68	15	83	0	0	0	0	199	126	0	325	732
04:45 PM	74	0	250	324	**1**	70	11	82	0	0	0	0	244	138	0	382	788
05:00 PM	68	0	**258**	**326**	0	**77**	**26**	**103**	0	0	0	0	**260**	164	0	**424**	**853**
05:15 PM	68	0	238	306	0	68	24	92	0	0	0	0	224	**166**	0	390	788
Total Volume	287	0	993	1280	1	283	76	360	0	0	0	0	927	594	0	1521	3161
% App. Total	22.4	0	77.6		0.3	78.6	21.1		0	0	0		60.9	39.1	0		
PHF	.932	.000	.962	.982	.250	.919	.731	.874	.000	.000	.000	.000	.891	.895	.000	.897	.926

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Paramount Boulevard
E/W: Montebello Boulevard
Weather: Clear

File Name : 01_MTB_Para_Monte PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:00 PM				04:45 PM			
+0 mins.	67	0	**268**	**335**	**1**	73	**26**	100	0	0	0	0	244	138	0	382
+15 mins.	**77**	0	247	324	0	68	15	83	0	0	0	0	**260**	164	0	**424**
+30 mins.	74	0	250	324	1	70	11	82	0	0	0	0	224	**166**	0	390
+45 mins.	68	0	258	326	0	**77**	26	**103**	0	0	0	0	212	158	0	370
Total Volume	286	0	1023	1309	2	288	78	368	0	0	0	0	940	626	0	1566
% App. Total	21.8	0	78.2		0.5	78.3	21.2		0	0	0		60	40	0	
PHF	.929	.000	.954	.977	.500	.935	.750	.893	.000	.000	.000	.000	.904	.943	.000	.923

Location: Montebello
N/S: Paramount Boulevard
E/W: Montebello Boulevard

Date: 6/7/2023
Day: Wednesday

PEDESTRIANS

	North Leg Paramount Boulevard	East Leg Montebello Boulevard	South Leg Paramount Boulevard	West Leg Montebello Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	2	0	0	0	2
8:30 AM	1	0	0	0	1
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	6	0	0	0	6

	North Leg Paramount Boulevard	East Leg Montebello Boulevard	South Leg Paramount Boulevard	West Leg Montebello Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	2	0	0	0	2
4:15 PM	4	0	0	0	4
4:30 PM	5	0	0	0	5
4:45 PM	0	0	4	0	4
5:00 PM	3	0	0	0	3
5:15 PM	7	0	0	0	7
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	22	0	4	0	26

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Montebello
N/S: Paramount Boulevard
E/W: Montebello Boulevard

Date: 6/7/2023
Day: Wednesday

BICYCLES

	Southbound Paramount Boulevard			Westbound Montebello Boulevard			Northbound Paramount Boulevard			Eastbound Montebello Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	0	0	0	0	0	0	0	1	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	0	0	0	0	0	0	2	0	3

	Southbound Paramount Boulevard			Westbound Montebello Boulevard			Northbound Paramount Boulevard			Eastbound Montebello Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Beverly Boulevard
Weather: Clear

File Name : 02_MTB_Monte_Bev AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

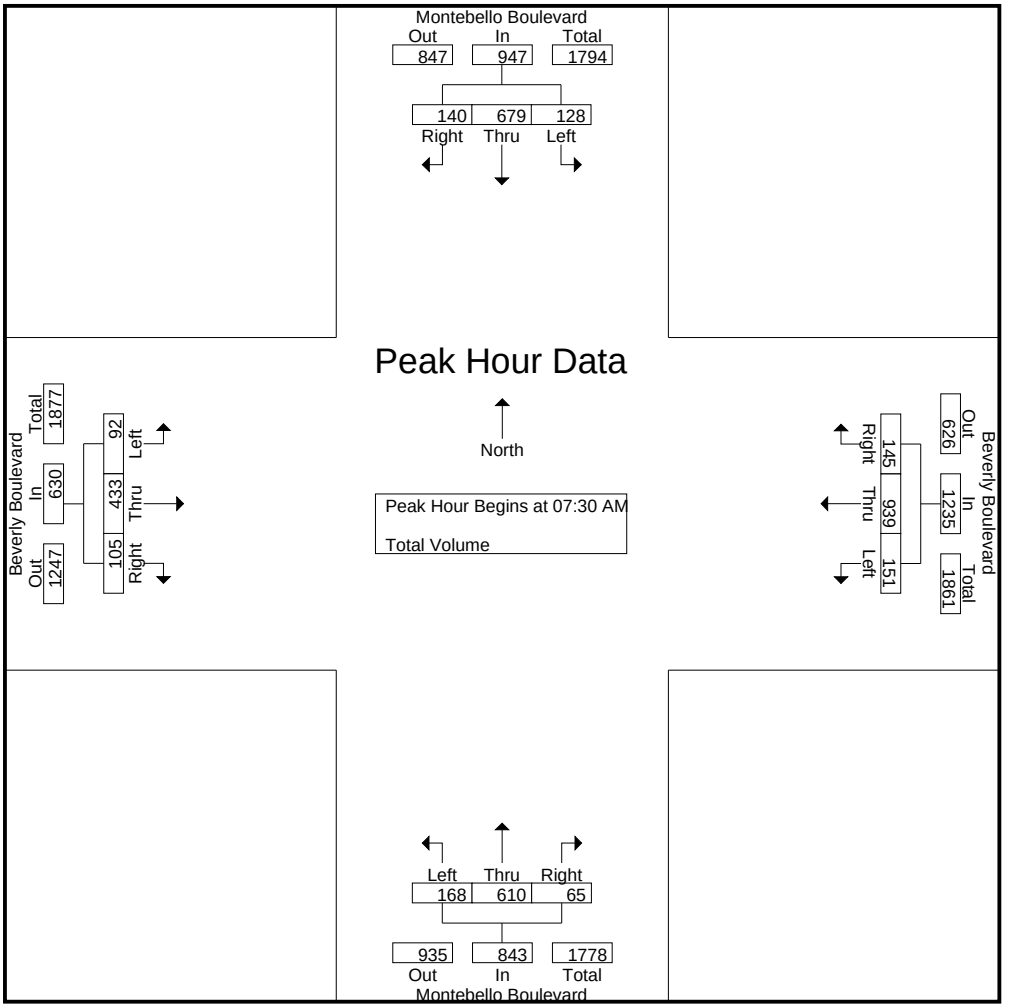
	Montebello Boulevard Southbound				Beverly Boulevard Westbound				Montebello Boulevard Northbound				Beverly Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	27	83	13	123	16	224	21	261	28	87	5	120	12	74	16	102	606
07:15 AM	37	111	14	162	41	217	26	284	48	131	9	188	15	79	15	109	743
07:30 AM	36	135	29	200	46	289	36	371	52	162	15	229	23	102	29	154	954
07:45 AM	26	205	31	262	42	225	30	297	34	198	17	249	27	113	22	162	970
Total	126	534	87	747	145	955	113	1213	162	578	46	786	77	368	82	527	3273
08:00 AM	35	191	41	267	36	247	44	327	38	131	18	187	19	100	28	147	928
08:15 AM	31	148	39	218	27	178	35	240	44	119	15	178	23	118	26	167	803
08:30 AM	41	134	28	203	35	210	32	277	32	112	20	164	30	121	30	181	825
08:45 AM	47	115	30	192	40	212	31	283	31	92	16	139	22	98	29	149	763
Total	154	588	138	880	138	847	142	1127	145	454	69	668	94	437	113	644	3319
Grand Total	280	1122	225	1627	283	1802	255	2340	307	1032	115	1454	171	805	195	1171	6592
Apprch %	17.2	69	13.8		12.1	77	10.9		21.1	71	7.9		14.6	68.7	16.7		
Total %	4.2	17	3.4	24.7	4.3	27.3	3.9	35.5	4.7	15.7	1.7	22.1	2.6	12.2	3	17.8	

	Montebello Boulevard Southbound				Beverly Boulevard Westbound				Montebello Boulevard Northbound				Beverly Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**36**	135	29	200	**46**	**289**	36	**371**	**52**	162	15	229	23	102	**29**	154	954
07:45 AM	26	**205**	31	262	42	225	30	297	34	**198**	17	**249**	**27**	113	22	162	**970**
08:00 AM	35	191	**41**	**267**	36	247	**44**	327	38	131	**18**	187	19	100	28	147	928
08:15 AM	31	148	39	218	27	178	35	240	44	119	15	178	23	**118**	26	**167**	803
Total Volume	128	679	140	947	151	939	145	1235	168	610	65	843	92	433	105	630	3655
% App. Total	13.5	71.7	14.8		12.2	76	11.7		19.9	72.4	7.7		14.6	68.7	16.7		
PHF	.889	.828	.854	.887	.821	.812	.824	.832	.808	.770	.903	.846	.852	.917	.905	.943	.942

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Beverly Boulevard
Weather: Clear

File Name : 02_MTB_Monte_Bev AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:15 AM				07:45 AM			
+0 mins.	26	**205**	31	262	41	217	26	284	48	131	9	188	27	113	22	162
+15 mins.	35	191	**41**	**267**	**46**	**289**	36	**371**	**52**	162	15	229	19	100	28	147
+30 mins.	31	148	39	218	42	225	30	297	34	**198**	17	**249**	23	118	26	167
+45 mins.	**41**	134	28	203	36	247	**44**	327	38	131	**18**	187	**30**	**121**	**30**	**181**
Total Volume	133	678	139	950	165	978	136	1279	172	622	59	853	99	452	106	657
% App. Total	14	71.4	14.6		12.9	76.5	10.6		20.2	72.9	6.9		15.1	68.8	16.1	
PHF	.811	.827	.848	.890	.897	.846	.773	.862	.827	.785	.819	.856	.825	.934	.883	.907

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Beverly Boulevard
Weather: Clear

File Name : 02_MTB_Monte_Bev PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

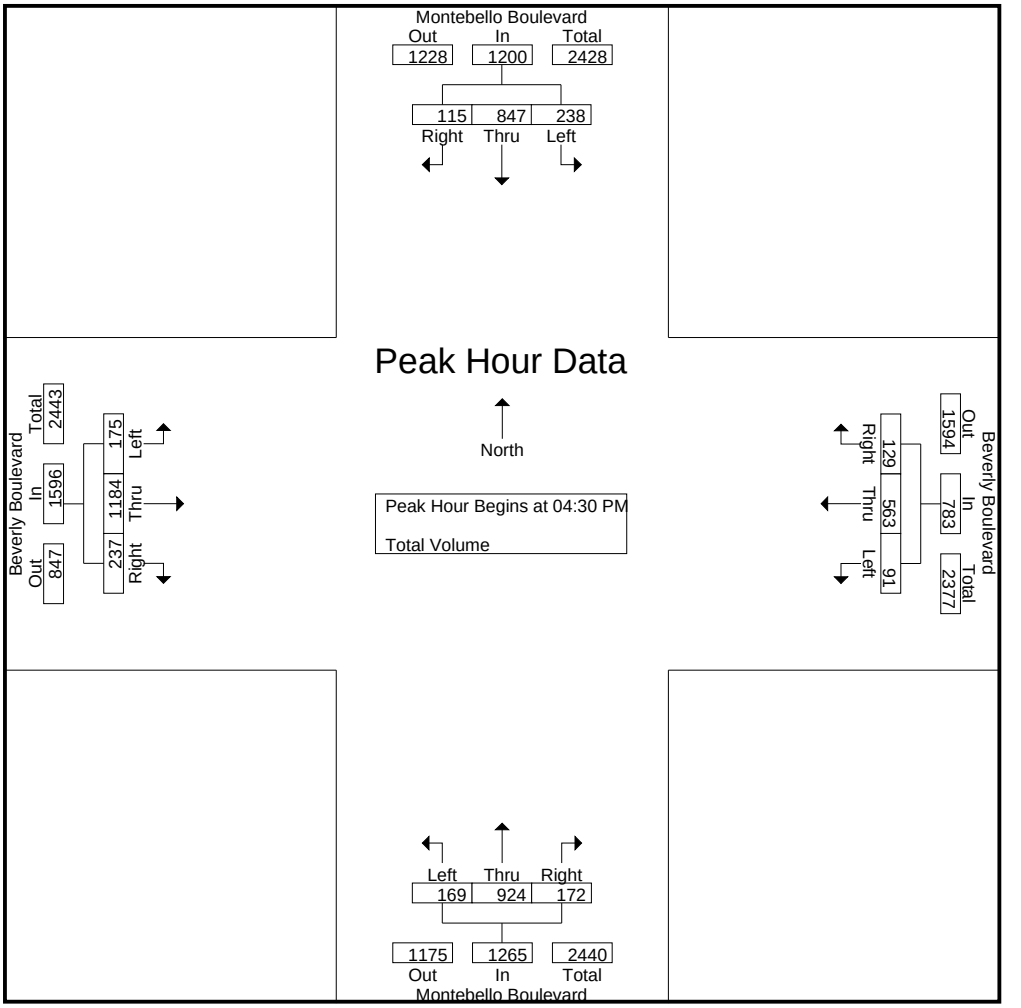
	Montebello Boulevard Southbound				Beverly Boulevard Westbound				Montebello Boulevard Northbound				Beverly Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	52	215	26	293	21	107	31	159	38	208	48	294	56	262	44	362	1108
04:15 PM	59	206	25	290	19	152	29	200	58	184	49	291	42	298	51	391	1172
04:30 PM	64	234	28	326	19	134	33	186	40	226	38	304	43	283	52	378	1194
04:45 PM	57	189	23	269	15	161	35	211	45	222	42	309	39	332	50	421	1210
Total	232	844	102	1178	74	554	128	756	181	840	177	1198	180	1175	197	1552	4684
05:00 PM	43	201	31	275	28	139	42	209	34	231	42	307	42	304	82	428	1219
05:15 PM	74	223	33	330	29	129	19	177	50	245	50	345	51	265	53	369	1221
05:30 PM	47	183	28	258	24	145	33	202	39	224	39	302	40	319	57	416	1178
05:45 PM	67	225	23	315	15	138	35	188	37	252	46	335	52	286	49	387	1225
Total	231	832	115	1178	96	551	129	776	160	952	177	1289	185	1174	241	1600	4843
Grand Total	463	1676	217	2356	170	1105	257	1532	341	1792	354	2487	365	2349	438	3152	9527
Apprch %	19.7	71.1	9.2		11.1	72.1	16.8		13.7	72.1	14.2		11.6	74.5	13.9		
Total %	4.9	17.6	2.3	24.7	1.8	11.6	2.7	16.1	3.6	18.8	3.7	26.1	3.8	24.7	4.6	33.1	

	Montebello Boulevard Southbound				Beverly Boulevard Westbound				Montebello Boulevard Northbound				Beverly Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	64	**234**	28	326	19	134	33	186	40	226	38	304	43	283	52	378	1194
04:45 PM	57	189	23	269	15	**161**	35	**211**	45	222	42	309	39	**332**	50	421	1210
05:00 PM	43	201	31	275	28	139	**42**	209	34	231	42	307	42	304	**82**	**428**	1219
05:15 PM	**74**	223	**33**	**330**	**29**	129	19	177	**50**	**245**	**50**	**345**	**51**	265	53	369	**1221**
Total Volume	238	847	115	1200	91	563	129	783	169	924	172	1265	175	1184	237	1596	4844
% App. Total	19.8	70.6	9.6		11.6	71.9	16.5		13.4	73	13.6		11	74.2	14.8		
PHF	.804	.905	.871	.909	.784	.874	.768	.928	.845	.943	.860	.917	.858	.892	.723	.932	.992

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Beverly Boulevard
Weather: Clear

File Name : 02_MTB_Monte_Bev PM
Site Code : 99923585
Start Date : 6/7/2023



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				05:00 PM				04:45 PM			
+0 mins.	64	**234**	28	326	19	152	29	200	34	231	42	307	39	**332**	50	421
+15 mins.	57	189	23	269	19	134	33	186	**50**	245	**50**	**345**	42	304	**82**	**428**
+30 mins.	43	201	31	275	15	**161**	35	**211**	39	224	39	302	**51**	265	53	369
+45 mins.	**74**	223	**33**	**330**	**28**	139	**42**	209	37	**252**	46	335	40	319	57	416
Total Volume	238	847	115	1200	81	586	139	806	160	952	177	1289	172	1220	242	1634
% App. Total	19.8	70.6	9.6		10	72.7	17.2		12.4	73.9	13.7		10.5	74.7	14.8	
PHF	.804	.905	.871	.909	.723	.910	.827	.955	.800	.944	.885	.934	.843	.919	.738	.954

Location: Montebello
N/S: Montebello Boulevard
E/W: Beverly Boulevard

Date: 6/7/2023
Day: Wednesday

PEDESTRIANS

	North Leg Montebello Boulevard	East Leg Beverly Boulevard	South Leg Montebello Boulevard	West Leg Beverly Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	5	6
7:15 AM	6	6	3	6	21
7:30 AM	1	1	2	1	5
7:45 AM	6	5	3	1	15
8:00 AM	6	7	2	2	17
8:15 AM	6	6	2	2	16
8:30 AM	5	2	2	2	11
8:45 AM	5	3	4	4	16
TOTAL VOLUMES:	35	30	19	23	107

	North Leg Montebello Boulevard	East Leg Beverly Boulevard	South Leg Montebello Boulevard	West Leg Beverly Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	3	1	3	2	9
4:15 PM	9	14	1	5	29
4:30 PM	6	4	0	2	12
4:45 PM	6	3	1	4	14
5:00 PM	7	6	2	3	18
5:15 PM	5	3	3	6	17
5:30 PM	4	6	1	3	14
5:45 PM	8	6	3	5	22
TOTAL VOLUMES:	48	43	14	30	135

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Montebello
N/S: Montebello Boulevard
E/W: Beverly Boulevard

Date: 6/7/2023
Day: Wednesday

BICYCLES

	Southbound Montebello Boulevard			Westbound Beverly Boulevard			Northbound Montebello Boulevard			Eastbound Beverly Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	1	0	0	1	0	0	0	2

	Southbound Montebello Boulevard			Westbound Beverly Boulevard			Northbound Montebello Boulevard			Eastbound Beverly Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	2	0	1	0	0	0	0	2	0	6
TOTAL VOLUMES:	0	1	0	2	1	1	0	0	0	0	2	0	7

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Whittier Boulevard
Weather: Clear

File Name : 03_MTB_Monte_Whit AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

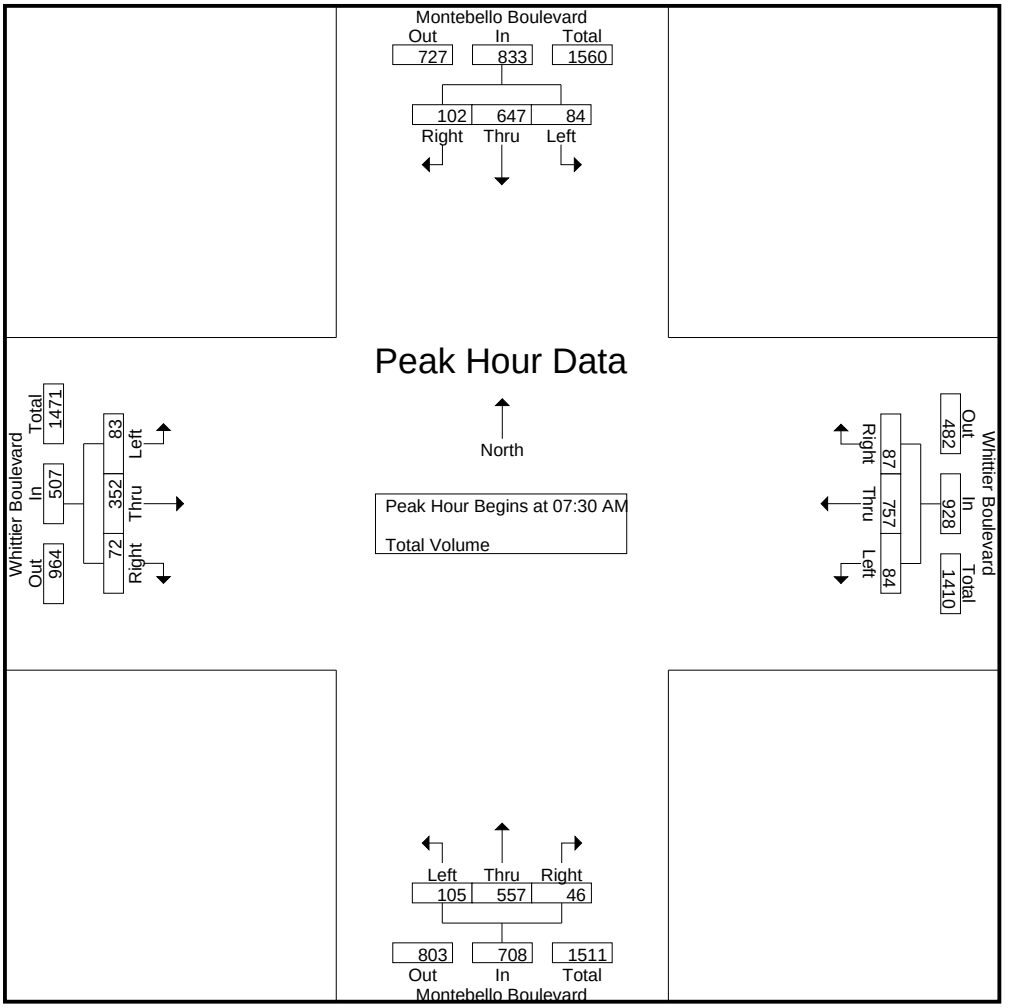
	Montebello Boulevard Southbound				Whittier Boulevard Westbound				Montebello Boulevard Northbound				Whittier Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	14	78	18	110	14	161	21	196	3	71	10	84	18	46	5	69	459
07:15 AM	8	129	21	158	10	185	24	219	8	127	14	149	10	52	6	68	594
07:30 AM	8	131	21	160	17	201	21	239	22	162	7	191	17	80	11	108	698
07:45 AM	14	170	24	208	24	191	21	236	18	179	12	209	25	93	15	133	786
Total	44	508	84	636	65	738	87	890	51	539	43	633	70	271	37	378	2537
08:00 AM	29	197	37	263	16	180	25	221	32	128	14	174	18	89	19	126	784
08:15 AM	33	149	20	202	27	185	20	232	33	88	13	134	23	90	27	140	708
08:30 AM	24	145	20	189	19	146	23	188	25	105	12	142	25	119	21	165	684
08:45 AM	23	131	29	183	29	120	15	164	13	109	13	135	29	97	12	138	620
Total	109	622	106	837	91	631	83	805	103	430	52	585	95	395	79	569	2796
Grand Total	153	1130	190	1473	156	1369	170	1695	154	969	95	1218	165	666	116	947	5333
Apprch %	10.4	76.7	12.9		9.2	80.8	10		12.6	79.6	7.8		17.4	70.3	12.2		
Total %	2.9	21.2	3.6	27.6	2.9	25.7	3.2	31.8	2.9	18.2	1.8	22.8	3.1	12.5	2.2	17.8	

	Montebello Boulevard Southbound				Whittier Boulevard Westbound				Montebello Boulevard Northbound				Whittier Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	131	21	160	17	**201**	21	**239**	22	162	7	191	17	80	11	108	698
07:45 AM	14	170	24	208	24	191	21	236	18	**179**	12	**209**	**25**	**93**	15	133	**786**
08:00 AM	29	**197**	**37**	**263**	16	180	**25**	221	32	128	**14**	174	18	89	19	126	784
08:15 AM	**33**	149	20	202	**27**	185	20	232	**33**	88	13	134	23	90	**27**	**140**	708
Total Volume	84	647	102	833	84	757	87	928	105	557	46	708	83	352	72	507	2976
% App. Total	10.1	77.7	12.2		9.1	81.6	9.4		14.8	78.7	6.5		16.4	69.4	14.2		
PHF	.636	.821	.689	.792	.778	.942	.870	.971	.795	.778	.821	.847	.830	.946	.667	.905	.947

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Whittier Boulevard
Weather: Clear

File Name : 03_MTB_Monte_Whit AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:15 AM				08:00 AM			
+0 mins.	14	170	24	208	17	**201**	21	**239**	8	127	**14**	149	18	89	19	126
+15 mins.	29	**197**	**37**	**263**	24	191	21	236	22	162	7	191	23	90	**27**	140
+30 mins.	**33**	149	20	202	16	180	**25**	221	18	**179**	12	**209**	25	**119**	21	**165**
+45 mins.	24	145	20	189	**27**	185	20	232	**32**	128	14	174	**29**	97	12	138
Total Volume	100	661	101	862	84	757	87	928	80	596	47	723	95	395	79	569
% App. Total	11.6	76.7	11.7		9.1	81.6	9.4		11.1	82.4	6.5		16.7	69.4	13.9	
PHF	.758	.839	.682	.819	.778	.942	.870	.971	.625	.832	.839	.865	.819	.830	.731	.862

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Whittier Boulevard
Weather: Clear

File Name : 03_MTB_Monte_Whit PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

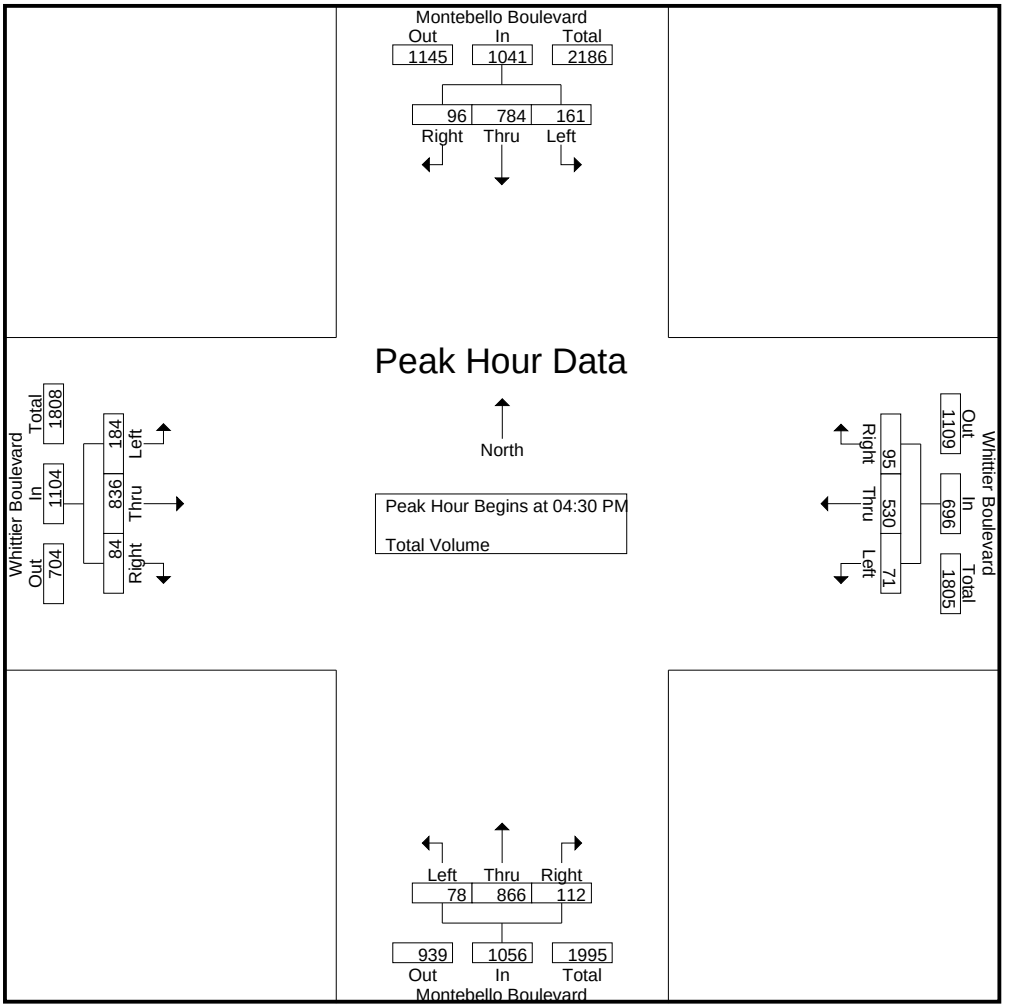
	Montebello Boulevard Southbound				Whittier Boulevard Westbound				Montebello Boulevard Northbound				Whittier Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	46	138	23	207	22	135	26	183	13	203	22	238	36	187	11	234	862
04:15 PM	34	196	19	249	26	125	20	171	22	218	36	276	45	156	10	211	907
04:30 PM	34	183	26	243	20	156	25	201	26	197	24	247	38	203	25	266	957
04:45 PM	30	203	27	260	10	137	26	173	18	231	30	279	42	198	22	262	974
Total	144	720	95	959	78	553	97	728	79	849	112	1040	161	744	68	973	3700
05:00 PM	47	186	25	258	23	98	20	141	17	204	25	246	50	213	17	280	925
05:15 PM	50	212	18	280	18	139	24	181	17	234	33	284	54	222	20	296	1041
05:30 PM	42	161	27	230	15	119	30	164	17	200	22	239	48	220	13	281	914
05:45 PM	39	174	29	242	23	127	27	177	12	255	27	294	46	189	23	258	971
Total	178	733	99	1010	79	483	101	663	63	893	107	1063	198	844	73	1115	3851
Grand Total	322	1453	194	1969	157	1036	198	1391	142	1742	219	2103	359	1588	141	2088	7551
Apprch %	16.4	73.8	9.9		11.3	74.5	14.2		6.8	82.8	10.4		17.2	76.1	6.8		
Total %	4.3	19.2	2.6	26.1	2.1	13.7	2.6	18.4	1.9	23.1	2.9	27.9	4.8	21	1.9	27.7	

	Montebello Boulevard Southbound				Whittier Boulevard Westbound				Montebello Boulevard Northbound				Whittier Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	34	183	26	243	20	**156**	25	**201**	**26**	197	24	247	38	203	**25**	266	957
04:45 PM	30	203	**27**	260	10	137	**26**	173	18	231	30	279	42	198	22	262	974
05:00 PM	47	186	25	258	**23**	98	20	141	17	204	25	246	50	213	17	280	925
05:15 PM	**50**	**212**	18	**280**	18	139	24	181	17	**234**	**33**	**284**	**54**	**222**	20	**296**	**1041**
Total Volume	161	784	96	1041	71	530	95	696	78	866	112	1056	184	836	84	1104	3897
% App. Total	15.5	75.3	9.2		10.2	76.1	13.6		7.4	82	10.6		16.7	75.7	7.6		
PHF	.805	.925	.889	.929	.772	.849	.913	.866	.750	.925	.848	.930	.852	.941	.840	.932	.936

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Montebello Boulevard
E/W: Whittier Boulevard
Weather: Clear

File Name : 03_MTB_Monte_Whit PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				05:00 PM				04:45 PM			
+0 mins.	34	183	26	243	22	135	**26**	183	**17**	204	25	246	42	198	**22**	262
+15 mins.	30	203	**27**	260	**26**	125	20	171	17	234	**33**	284	50	213	17	280
+30 mins.	47	186	25	258	20	**156**	25	**201**	17	200	22	239	**54**	**222**	20	**296**
+45 mins.	**50**	**212**	18	**280**	10	137	26	173	12	**255**	27	**294**	48	220	13	281
Total Volume	161	784	96	1041	78	553	97	728	63	893	107	1063	194	853	72	1119
% App. Total	15.5	75.3	9.2		10.7	76	13.3		5.9	84	10.1		17.3	76.2	6.4	
PHF	.805	.925	.889	.929	.750	.886	.933	.905	.926	.875	.811	.904	.898	.961	.818	.945

Location: Montebello
N/S: Montebello Boulevard
E/W: Whittier Boulevard

Date: 6/7/2023
Day: Wednesday

PEDESTRIANS

	North Leg Montebello Boulevard	East Leg Whittier Boulevard	South Leg Montebello Boulevard	West Leg Whittier Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	8	0	1	1	10
7:15 AM	4	2	0	0	6
7:30 AM	6	4	2	1	13
7:45 AM	7	4	0	1	12
8:00 AM	27	6	5	4	42
8:15 AM	14	6	3	1	24
8:30 AM	17	2	2	3	24
8:45 AM	4	4	3	2	13
TOTAL VOLUMES:	87	28	16	13	144

	North Leg Montebello Boulevard	East Leg Whittier Boulevard	South Leg Montebello Boulevard	West Leg Whittier Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	9	5	4	1	19
4:15 PM	17	12	8	4	41
4:30 PM	2	4	8	3	17
4:45 PM	8	4	3	6	21
5:00 PM	14	3	5	5	27
5:15 PM	8	6	8	11	33
5:30 PM	4	2	6	10	22
5:45 PM	5	7	6	4	22
TOTAL VOLUMES:	67	43	48	44	202

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Montebello
N/S: Montebello Boulevard
E/W: Whittier Boulevard

Date: 6/7/2023
Day: Wednesday

BICYCLES

	Southbound Montebello Boulevard			Westbound Whittier Boulevard			Northbound Montebello Boulevard			Eastbound Whittier Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound Montebello Boulevard			Westbound Whittier Boulevard			Northbound Montebello Boulevard			Eastbound Whittier Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	1	0	1	0	1	0	5

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Greenwood Avenue
E/W: Washington Boulevard
Weather: Clear

File Name : 04_MTB_Green_Wash AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

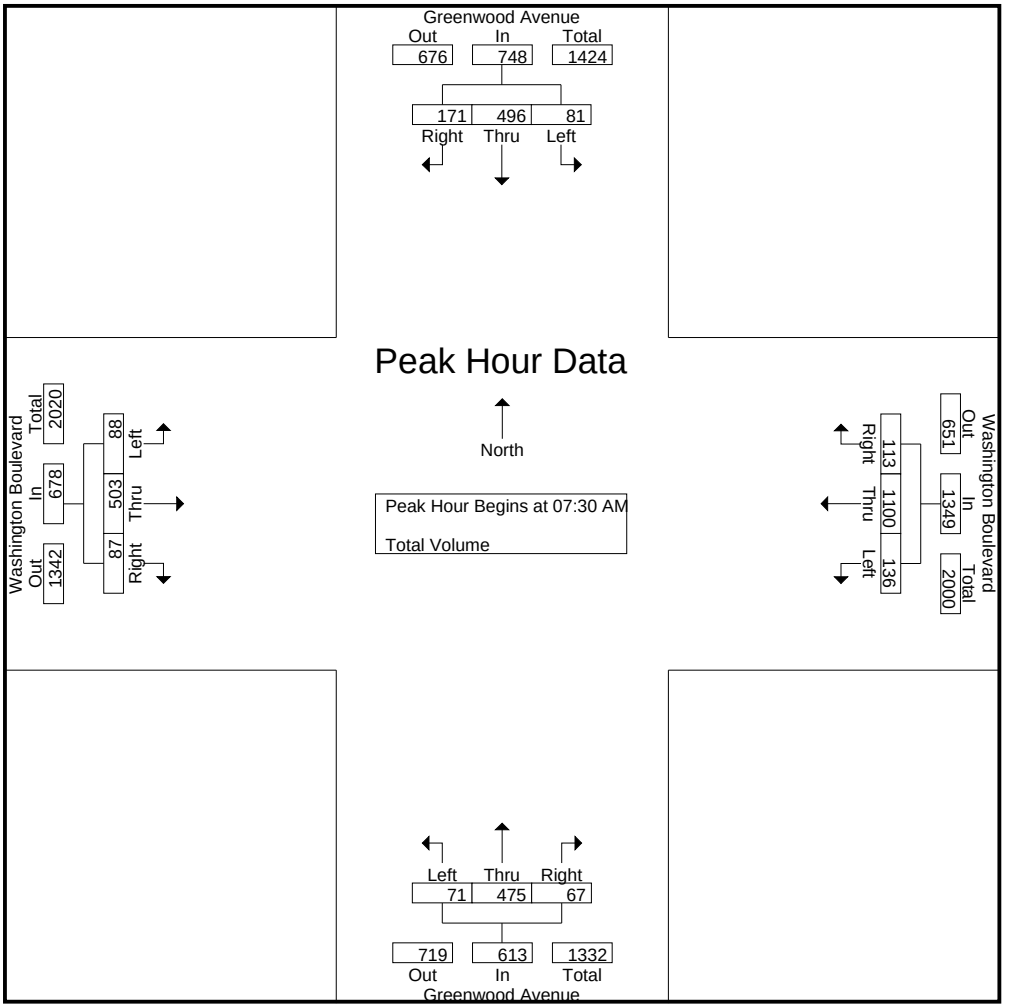
	Greenwood Avenue Southbound				Washington Boulevard Westbound				Greenwood Avenue Northbound				Washington Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	16	82	42	140	27	278	15	320	15	54	10	79	17	102	16	135	674
07:15 AM	16	90	44	150	27	311	16	354	17	83	16	116	19	97	18	134	754
07:30 AM	14	112	48	174	32	289	33	354	20	114	11	145	19	133	15	167	840
07:45 AM	19	121	40	180	37	244	30	311	18	153	18	189	33	124	22	179	859
Total	65	405	174	644	123	1122	94	1339	70	404	55	529	88	456	71	615	3127
08:00 AM	21	140	33	194	32	297	31	360	14	120	22	156	16	129	20	165	875
08:15 AM	27	123	50	200	35	270	19	324	19	88	16	123	20	117	30	167	814
08:30 AM	26	104	35	165	19	236	24	279	14	71	17	102	20	135	25	180	726
08:45 AM	21	91	24	136	21	194	13	228	20	71	12	103	20	147	22	189	656
Total	95	458	142	695	107	997	87	1191	67	350	67	484	76	528	97	701	3071
Grand Total	160	863	316	1339	230	2119	181	2530	137	754	122	1013	164	984	168	1316	6198
Apprch %	11.9	64.5	23.6		9.1	83.8	7.2		13.5	74.4	12		12.5	74.8	12.8		
Total %	2.6	13.9	5.1	21.6	3.7	34.2	2.9	40.8	2.2	12.2	2	16.3	2.6	15.9	2.7	21.2	

	Greenwood Avenue Southbound				Washington Boulevard Westbound				Greenwood Avenue Northbound				Washington Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	14	112	48	174	32	289	**33**	354	**20**	114	11	145	19	**133**	15	167	840
07:45 AM	19	121	40	180	**37**	244	30	311	18	**153**	18	**189**	**33**	124	22	**179**	859
08:00 AM	21	**140**	33	194	32	**297**	31	**360**	14	120	**22**	156	16	129	20	165	**875**
08:15 AM	**27**	123	**50**	**200**	35	270	19	324	19	88	16	123	20	117	**30**	167	814
Total Volume	81	496	171	748	136	1100	113	1349	71	475	67	613	88	503	87	678	3388
% App. Total	10.8	66.3	22.9		10.1	81.5	8.4		11.6	77.5	10.9		13	74.2	12.8		
PHF	.750	.886	.855	.935	.919	.926	.856	.937	.888	.776	.761	.811	.667	.945	.725	.947	.968

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Greenwood Avenue
E/W: Washington Boulevard
Weather: Clear

File Name : 04_MTB_Green_Wash AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:30 AM				08:00 AM			
+0 mins.	14	112	48	174	27	**311**	16	354	**20**	114	11	145	16	129	20	165
+15 mins.	19	121	40	180	32	289	**33**	354	18	**153**	18	**189**	**20**	117	**30**	167
+30 mins.	21	**140**	33	194	**37**	244	30	311	14	120	**22**	156	20	135	25	180
+45 mins.	**27**	123	**50**	**200**	32	297	31	**360**	19	88	16	123	20	**147**	22	**189**
Total Volume	81	496	171	748	128	1141	110	1379	71	475	67	613	76	528	97	701
% App. Total	10.8	66.3	22.9		9.3	82.7	8		11.6	77.5	10.9		10.8	75.3	13.8	
PHF	.750	.886	.855	.935	.865	.917	.833	.958	.888	.776	.761	.811	.950	.898	.808	.927

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Greenwood Avenue
E/W: Washington Boulevard
Weather: Clear

File Name : 04_MTB_Green_Wash PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

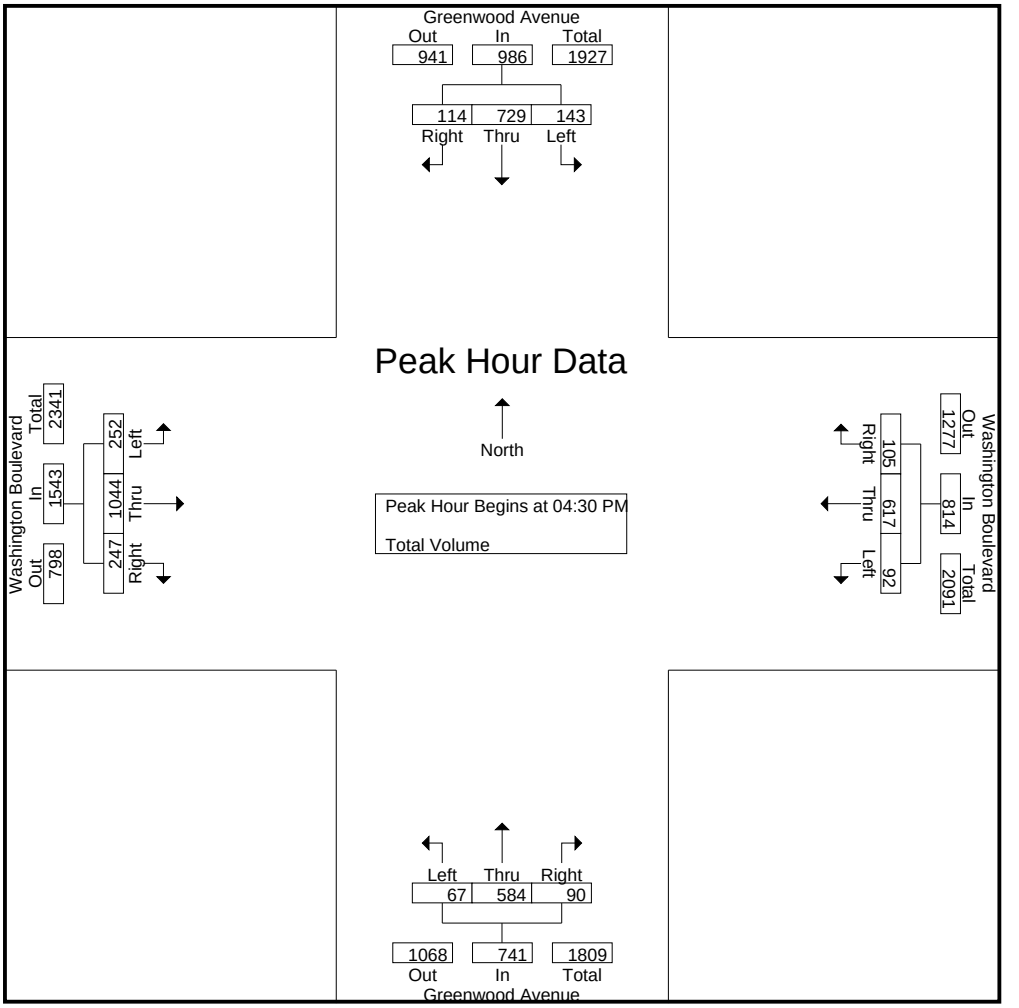
	Greenwood Avenue Southbound				Washington Boulevard Westbound				Greenwood Avenue Northbound				Washington Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	33	149	27	209	17	138	30	185	17	114	19	150	61	301	49	411	955
04:15 PM	37	158	20	215	18	151	21	190	16	115	16	147	63	253	60	376	928
04:30 PM	41	241	29	311	23	147	22	192	16	168	17	201	52	249	64	365	1069
04:45 PM	45	182	30	257	19	153	27	199	19	134	21	174	66	280	54	400	1030
Total	156	730	106	992	77	589	100	766	68	531	73	672	242	1083	227	1552	3982
05:00 PM	22	149	31	202	23	159	29	211	16	148	28	192	59	244	67	370	975
05:15 PM	35	157	24	216	27	158	27	212	16	134	24	174	75	271	62	408	1010
05:30 PM	38	206	38	282	14	127	28	169	12	152	12	176	65	251	82	398	1025
05:45 PM	43	162	23	228	18	140	27	185	15	138	18	171	67	226	89	382	966
Total	138	674	116	928	82	584	111	777	59	572	82	713	266	992	300	1558	3976
Grand Total	294	1404	222	1920	159	1173	211	1543	127	1103	155	1385	508	2075	527	3110	7958
Apprch %	15.3	73.1	11.6		10.3	76	13.7		9.2	79.6	11.2		16.3	66.7	16.9		
Total %	3.7	17.6	2.8	24.1	2	14.7	2.7	19.4	1.6	13.9	1.9	17.4	6.4	26.1	6.6	39.1	

	Greenwood Avenue Southbound				Washington Boulevard Westbound				Greenwood Avenue Northbound				Washington Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	41	**241**	29	**311**	23	147	22	192	16	**168**	17	**201**	52	249	64	365	**1069**
04:45 PM	**45**	182	30	257	19	153	27	199	**19**	134	21	174	66	**280**	54	400	1030
05:00 PM	22	149	**31**	202	23	**159**	**29**	211	16	148	**28**	192	59	244	**67**	370	975
05:15 PM	35	157	24	216	**27**	158	27	**212**	16	134	24	174	**75**	271	62	**408**	1010
Total Volume	143	729	114	986	92	617	105	814	67	584	90	741	252	1044	247	1543	4084
% App. Total	14.5	73.9	11.6		11.3	75.8	12.9		9	78.8	12.1		16.3	67.7	16		
PHF	.794	.756	.919	.793	.852	.970	.905	.960	.882	.869	.804	.922	.840	.932	.922	.945	.955

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Greenwood Avenue
E/W: Washington Boulevard
Weather: Clear

File Name : 04_MTB_Green_Wash PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:30 PM				04:45 PM			
+0 mins.	33	149	27	209	23	147	22	192	16	**168**	17	**201**	66	**280**	54	400
+15 mins.	37	158	20	215	19	153	27	199	**19**	134	21	174	59	244	67	370
+30 mins.	41	**241**	29	**311**	23	**159**	**29**	211	16	148	**28**	192	**75**	271	62	**408**
+45 mins.	**45**	182	**30**	257	**27**	158	27	**212**	16	134	24	174	65	251	**82**	398
Total Volume	156	730	106	992	92	617	105	814	67	584	90	741	265	1046	265	1576
% App. Total	15.7	73.6	10.7		11.3	75.8	12.9		9	78.8	12.1		16.8	66.4	16.8	
PHF	.867	.757	.883	.797	.852	.970	.905	.960	.882	.869	.804	.922	.883	.934	.808	.966

Location: Montebello
N/S: Greenwood Avenue
E/W: Washington Boulevard

Date: 6/7/2023
Day: Wednesday

PEDESTRIANS

	North Leg Greenwood Avenue	East Leg Washington Boulevard	South Leg Greenwood Avenue	West Leg Washington Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	2	1	3
7:15 AM	1	1	0	0	2
7:30 AM	5	3	4	4	16
7:45 AM	7	19	3	6	35
8:00 AM	1	15	2	2	20
8:15 AM	1	10	9	2	22
8:30 AM	3	0	0	4	7
8:45 AM	1	5	1	6	13
TOTAL VOLUMES:	19	53	21	25	118

	North Leg Greenwood Avenue	East Leg Washington Boulevard	South Leg Greenwood Avenue	West Leg Washington Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	4	3	4	12
4:15 PM	1	0	1	3	5
4:30 PM	0	1	1	0	2
4:45 PM	0	5	0	2	7
5:00 PM	2	5	1	2	10
5:15 PM	0	3	2	1	6
5:30 PM	2	3	1	3	9
5:45 PM	3	2	1	1	7
TOTAL VOLUMES:	9	23	10	16	58

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Montebello
N/S: Greenwood Avenue
E/W: Washington Boulevard

Date: 6/7/2023
Day: Wednesday

BICYCLES

	Southbound Greenwood Avenue			Westbound Washington Boulevard			Northbound Greenwood Avenue			Eastbound Washington Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

	Southbound Greenwood Avenue			Westbound Washington Boulevard			Northbound Greenwood Avenue			Eastbound Washington Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Garfield Avenue
E/W: Via Campo
Weather: Clear

File Name : 05_MTB_Gar_Via C AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

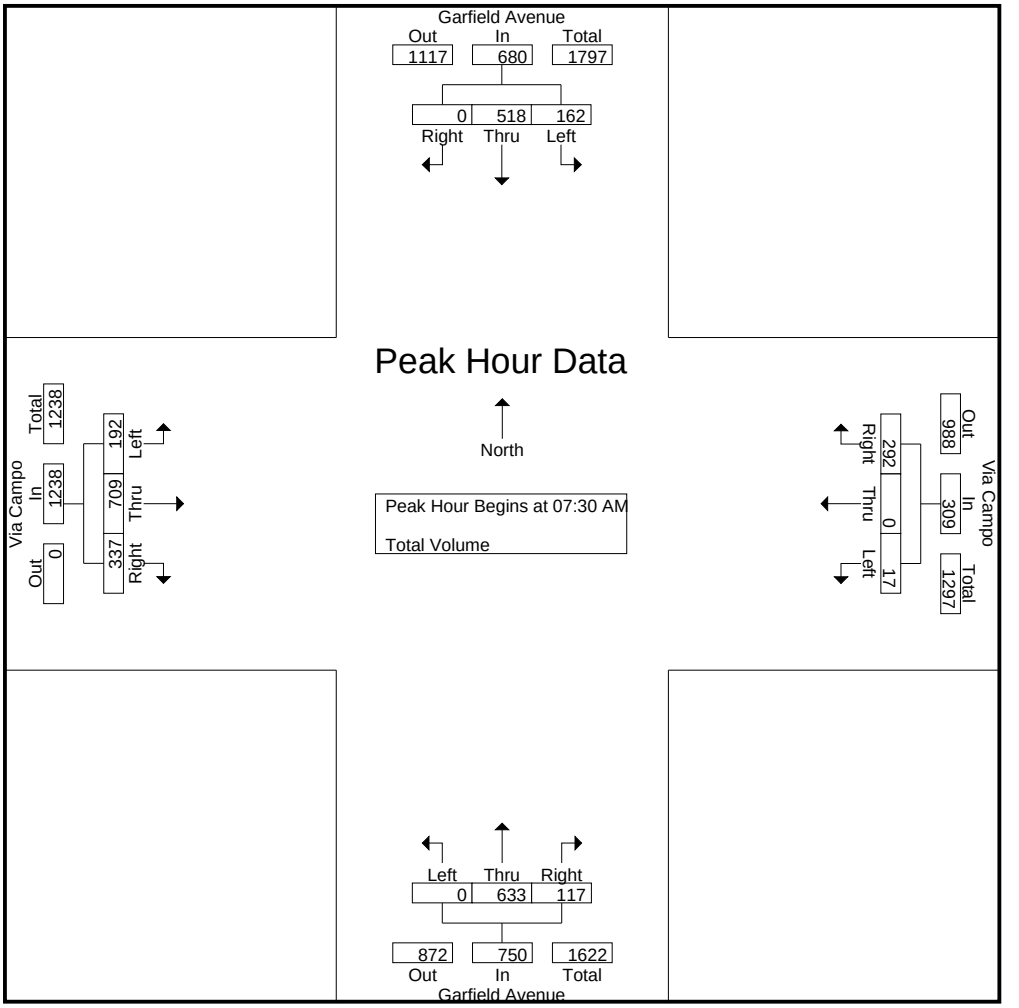
	Garfield Avenue Southbound				Via Campo Westbound				Garfield Avenue Northbound				Via Campo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	23	94	0	117	4	0	70	74	0	175	28	203	23	93	60	176	570
07:15 AM	24	104	0	128	2	0	79	81	0	165	38	203	35	153	72	260	672
07:30 AM	22	128	0	150	4	0	65	69	0	197	27	224	40	154	71	265	708
07:45 AM	35	114	0	149	6	0	91	97	0	132	33	165	56	178	113	347	758
Total	104	440	0	544	16	0	305	321	0	669	126	795	154	578	316	1048	2708
08:00 AM	53	122	0	175	0	0	73	73	0	154	21	175	37	179	85	301	724
08:15 AM	52	154	0	206	7	0	63	70	0	150	36	186	59	198	68	325	787
08:30 AM	51	118	0	169	3	0	43	46	0	152	37	189	37	135	84	256	660
08:45 AM	58	119	0	177	5	0	32	37	0	127	36	163	32	157	77	266	643
Total	214	513	0	727	15	0	211	226	0	583	130	713	165	669	314	1148	2814
Grand Total	318	953	0	1271	31	0	516	547	0	1252	256	1508	319	1247	630	2196	5522
Apprch %	25	75	0		5.7	0	94.3		0	83	17		14.5	56.8	28.7		
Total %	5.8	17.3	0	23	0.6	0	9.3	9.9	0	22.7	4.6	27.3	5.8	22.6	11.4	39.8	

	Garfield Avenue Southbound				Via Campo Westbound				Garfield Avenue Northbound				Via Campo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	22	128	0	150	4	0	65	69	0	**197**	27	**224**	40	154	71	265	708
07:45 AM	35	114	0	149	6	0	**91**	**97**	0	132	33	165	56	178	**113**	**347**	758
08:00 AM	**53**	122	0	175	0	0	73	73	0	154	21	175	37	179	85	301	724
08:15 AM	52	**154**	0	**206**	**7**	0	63	70	0	150	**36**	186	**59**	**198**	68	325	**787**
Total Volume	162	518	0	680	17	0	292	309	0	633	117	750	192	709	337	1238	2977
% App. Total	23.8	76.2	0		5.5	0	94.5		0	84.4	15.6		15.5	57.3	27.2		
PHF	.764	.841	.000	.825	.607	.000	.802	.796	.000	.803	.813	.837	.814	.895	.746	.892	.946

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Garfield Avenue
E/W: Via Campo
Weather: Clear

File Name : 05_MTB_Gar_Via C AM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	53	122	0	175	4	0	70	74	0	175	28	203	40	154	71	265
+15 mins.	52	**154**	0	**206**	2	0	79	81	0	165	**38**	203	56	178	**113**	**347**
+30 mins.	51	118	0	169	4	0	65	69	0	**197**	27	**224**	37	179	85	301
+45 mins.	**58**	119	0	177	**6**	0	**91**	**97**	0	132	33	165	**59**	**198**	68	325
Total Volume	214	513	0	727	16	0	305	321	0	669	126	795	192	709	337	1238
% App. Total	29.4	70.6	0		5	0	95		0	84.2	15.8		15.5	57.3	27.2	
PHF	.922	.833	.000	.882	.667	.000	.838	.827	.000	.849	.829	.887	.814	.895	.746	.892

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Garfield Avenue
E/W: Via Campo
Weather: Clear

File Name : 05_MTB_Gar_Via C PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 1

Groups Printed- Total Volume

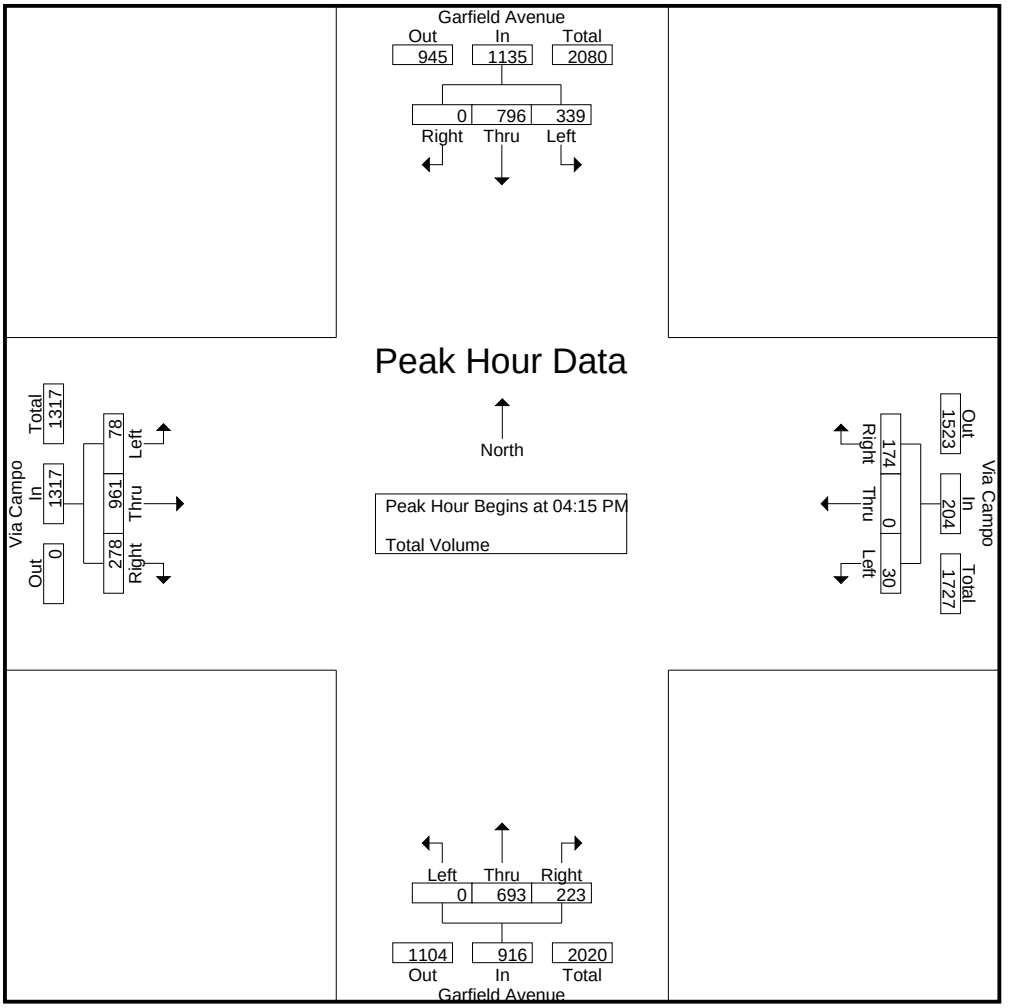
	Garfield Avenue Southbound				Via Campo Westbound				Garfield Avenue Northbound				Via Campo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	74	156	0	230	5	0	35	40	0	169	52	221	21	253	73	347	838
04:15 PM	74	247	0	321	6	0	43	49	0	165	55	220	22	219	83	324	914
04:30 PM	88	206	0	294	10	0	49	59	0	186	54	240	21	256	66	343	936
04:45 PM	102	171	0	273	4	0	38	42	0	144	52	196	19	234	56	309	820
Total	338	780	0	1118	25	0	165	190	0	664	213	877	83	962	278	1323	3508
05:00 PM	75	172	0	247	10	0	44	54	0	198	62	260	16	252	73	341	902
05:15 PM	92	248	0	340	7	0	43	50	0	144	41	185	20	214	58	292	867
05:30 PM	87	205	0	292	3	0	41	44	0	166	41	207	19	236	83	338	881
05:45 PM	91	184	0	275	3	0	39	42	0	173	36	209	24	241	60	325	851
Total	345	809	0	1154	23	0	167	190	0	681	180	861	79	943	274	1296	3501
Grand Total	683	1589	0	2272	48	0	332	380	0	1345	393	1738	162	1905	552	2619	7009
Apprch %	30.1	69.9	0		12.6	0	87.4		0	77.4	22.6		6.2	72.7	21.1		
Total %	9.7	22.7	0	32.4	0.7	0	4.7	5.4	0	19.2	5.6	24.8	2.3	27.2	7.9	37.4	

	Garfield Avenue Southbound				Via Campo Westbound				Garfield Avenue Northbound				Via Campo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	74	**247**	0	**321**	6	0	43	49	0	165	55	220	**22**	219	**83**	324	914
04:30 PM	88	206	0	294	**10**	0	**49**	**59**	0	186	54	240	21	**256**	66	**343**	**936**
04:45 PM	**102**	171	0	273	4	0	38	42	0	144	52	196	19	234	56	309	820
05:00 PM	75	172	0	247	10	0	44	54	0	**198**	**62**	**260**	16	252	73	341	902
Total Volume	339	796	0	1135	30	0	174	204	0	693	223	916	78	961	278	1317	3572
% App. Total	29.9	70.1	0		14.7	0	85.3		0	75.7	24.3		5.9	73	21.1		
PHF	.831	.806	.000	.884	.750	.000	.888	.864	.000	.875	.899	.881	.886	.938	.837	.960	.954

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Montebello
N/S: Garfield Avenue
E/W: Via Campo
Weather: Clear

File Name : 05_MTB_Gar_Via C PM
Site Code : 99923585
Start Date : 6/7/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	88	206	0	294	**10**	0	**49**	**59**	0	165	55	220	21	253	73	**347**
+15 mins.	**102**	171	0	273	4	0	38	42	0	186	54	240	**22**	219	**83**	324
+30 mins.	75	172	0	247	10	0	44	54	0	144	52	196	21	**256**	66	343
+45 mins.	92	**248**	0	**340**	7	0	43	50	0	**198**	**62**	**260**	19	234	56	309
Total Volume	357	797	0	1154	31	0	174	205	0	693	223	916	83	962	278	1323
% App. Total	30.9	69.1	0		15.1	0	84.9		0	75.7	24.3		6.3	72.7	21	
PHF	.875	.803	.000	.849	.775	.000	.888	.869	.000	.875	.899	.881	.943	.939	.837	.953

Location: Montebello
N/S: Garfield Avenue
E/W: Via Campo

Date: 6/7/2023
Day: Wednesday

PEDESTRIANS

	North Leg Garfield Avenue	East Leg Via Campo	South Leg Garfield Avenue	West Leg Via Campo	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	2	2	2	6
7:30 AM	0	0	0	1	1
7:45 AM	0	1	0	1	2
8:00 AM	0	2	1	2	5
8:15 AM	0	0	1	0	1
8:30 AM	0	1	1	0	2
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	6	6	6	18

	North Leg Garfield Avenue	East Leg Via Campo	South Leg Garfield Avenue	West Leg Via Campo	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	2	2	5
4:15 PM	0	3	5	0	8
4:30 PM	0	1	0	0	1
4:45 PM	0	1	3	1	5
5:00 PM	0	0	1	2	3
5:15 PM	0	0	2	0	2
5:30 PM	0	1	0	1	2
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	8	13	6	27

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Montebello
N/S: Garfield Avenue
E/W: Via Campo

Date: 6/7/2023
Day: Wednesday

BICYCLES

	Southbound Garfield Avenue			Westbound Via Campo			Northbound Garfield Avenue			Eastbound Via Campo			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Garfield Avenue			Westbound Via Campo			Northbound Garfield Avenue			Eastbound Via Campo			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	3	0	0	0	0	0	1	0	0	0	0	5

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Appendix C
Roadway ADT Worksheets

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Garfield Avenue
B/ Via Campo - Via Paseo
24 Hour Directional Volume Count

R1
Site Code: 999-23585

Start Time	6/7/23 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		43	213			50	187				
12:15		53	201			49	200				
12:30		50	232			33	247				
12:45		63	220	209	866	33	232	165	866	374	1732
01:00		33	220			31	204				
01:15		39	216			31	202				
01:30		28	190			24	250				
01:45		32	194	132	820	22	219	108	875	240	1695
02:00		21	218			16	234				
02:15		29	255			31	205				
02:30		22	216			32	210				
02:45		28	208	100	897	14	210	93	859	193	1756
03:00		33	210			22	212				
03:15		29	227			34	230				
03:30		41	223			35	232				
03:45		32	231	135	891	20	237	111	911	246	1802
04:00		60	237			26	236				
04:15		57	**256**			28	337				
04:30		81	**264**			55	283				
04:45		68	**256**	266	1013	69	231	178	1087	444	2100
05:00		101	**242**			51	**256**				
05:15		115	236			69	**313**				
05:30		137	230			88	**292**				
05:45		148	215	501	923	94	**249**	302	1110	803	2033
06:00		156	211			103	205				
06:15		183	215			111	225				
06:30		206	176			108	214				
06:45		**200**	173	745	775	144	202	466	846	1211	1621
07:00		**217**	190			146	191				
07:15		**220**	168			172	211				
07:30		**232**	142			220	163				
07:45		175	131	844	631	**228**	148	766	713	1610	1344
08:00		165	189			**225**	155				
08:15		253	158			**228**	153				
08:30		174	173			**221**	145				
08:45		183	150	775	670	192	128	866	581	1641	1251
09:00		158	138			171	161				
09:15		164	149			162	166				
09:30		162	120			174	149				
09:45		146	117	630	524	208	105	715	581	1345	1105
10:00		148	115			221	132				
10:15		178	111			158	119				
10:30		167	100			187	111				
10:45		189	78	682	404	154	95	720	457	1402	861
11:00		193	76			178	60				
11:15		181	54			204	72				
11:30		196	46			198	52				
11:45		196	50	766	226	206	62	786	246	1552	472
Total		5785	8640	5785	8640	5276	9132	5276	9132	11061	17772
Combined Total		14425		14425		14408		14408		28833	
AM Peak	-	06:45	-	-	-	07:45	-	-	-	-	-
Vol.	-	869	-	-	-	902	-	-	-	-	-
P.H.F.		0.936				0.989					
PM Peak	-	-	04:15	-	-	-	05:00	-	-	-	-
Vol.	-	-	1018	-	-	-	1110	-	-	-	-
P.H.F.			0.964				0.887				
Percentage		40.1%	59.9%			36.6%	63.4%				
ADT/AADT		ADT 28,833		AADT 28,833							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Beverly Boulevard
B/ Vail Avenue - Greenwood Avenue
24 Hour Directional Volume Count

R2
Site Code: 999-23585

Start Time	6/7/23 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		17	210			32	233				
12:15		20	244			34	219				
12:30		22	252			26	234				
12:45		17	250	76	956	27	224	119	910	195	1866
01:00		17	215			17	**257**				
01:15		17	236			12	**247**				
01:30		9	235			10	**232**				
01:45		6	354	49	1040	12	**227**	51	963	100	2003
02:00		12	314			10	214				
02:15		7	291			9	221				
02:30		7	293			9	212				
02:45		3	360	29	1258	10	214	38	861	67	2119
03:00		5	360			6	202				
03:15		11	385			8	198				
03:30		9	402			11	200				
03:45		8	398	33	1545	22	233	47	833	80	2378
04:00		14	398			21	181				
04:15		14	427			23	236				
04:30		16	**442**			37	231				
04:45		36	**456**	80	1723	56	232	137	880	217	2603
05:00		24	**420**			56	218				
05:15		34	**434**			79	235				
05:30		42	423			115	214				
05:45		46	423	146	1700	102	219	352	886	498	2586
06:00		49	443			146	230				
06:15		46	422			157	199				
06:30		87	363			209	186				
06:45		91	295	273	1523	265	188	777	803	1050	2326
07:00		98	285			256	176				
07:15		122	219			**294**	162				
07:30		163	194			**346**	175				
07:45		188	153	571	851	**299**	166	1195	679	1766	1530
08:00		171	172			**295**	171				
08:15		208	159			265	207				
08:30		191	165			258	178				
08:45		164	158	734	654	248	146	1066	702	1800	1356
09:00		161	166			190	170				
09:15		160	166			206	148				
09:30		168	163			164	162				
09:45		183	109	672	604	208	131	768	611	1440	1215
10:00		186	98			187	115				
10:15		206	75			184	103				
10:30		189	65			196	68				
10:45		203	66	784	304	192	88	759	374	1543	678
11:00		**163**	52			207	58				
11:15		**193**	60			188	55				
11:30		**241**	30			207	43				
11:45		**209**	39	806	181	202	42	804	198	1610	379
Total		4253	12339	4253	12339	6113	8700	6113	8700	10366	21039
Combined Total		16592		16592		14813		14813		31405	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	806	-	-	-	1234	-	-	-	-	-
P.H.F.		0.836				0.892					
PM Peak	-	-	04:30	-	-	-	01:00	-	-	-	-
Vol.	-	-	1752	-	-	-	963	-	-	-	-
P.H.F.			0.961				0.937				
Percentage		25.6%	74.4%			41.3%	58.7%				
ADT/AADT		ADT 31,405		AADT 31,405							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Whittier Boulevard
B/ Vail Avenue - Greenwood Avenue
24 Hour Directional Classification Count

R3
Site Code: 999-23585

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	2	83	15	0	2	0	0	0	0	0	0	0	0	102
01:00	0	46	8	0	0	0	0	0	0	0	0	0	0	54
02:00	0	47	7	0	3	0	0	0	0	0	0	0	0	57
03:00	0	44	5	0	2	0	0	0	0	0	0	0	0	51
04:00	0	68	9	1	1	0	0	0	1	0	0	0	0	80
05:00	0	114	19	3	2	0	0	0	1	0	0	0	0	139
06:00	0	149	43	4	5	0	0	1	1	0	0	0	0	203
07:00	4	326	48	2	5	0	0	1	1	0	0	0	**1**	388
08:00	7	**556**	78	6	9	3	**5**	**9**	1	1	0	**2**	0	**677**
09:00	3	445	62	5	9	**4**	2	3	**2**	0	**1**	1	0	537
10:00	**9**	546	**79**	5	11	2	2	5	1	1	1	1	0	663
11:00	5	508	77	**7**	**16**	3	4	4	2	**4**	0	0	0	630
12 PM	7	575	83	6	12	4	3	4	1	3	0	0	2	700
13:00	7	657	80	7	12	3	1	4	0	1	0	0	0	772
14:00	8	664	86	**10**	**15**	1	1	5	0	2	1	**2**	0	795
15:00	12	674	88	5	13	3	1	8	2	5	1	0	1	813
16:00	13	750	103	5	10	4	**6**	8	2	2	0	0	1	904
17:00	12	**779**	**111**	6	9	3	3	**9**	**3**	**7**	0	1	**4**	**947**
18:00	**14**	702	90	4	7	**5**	2	6	2	4	**3**	0	0	839
19:00	7	542	69	2	7	5	3	3	0	1	1	1	0	641
20:00	2	520	55	3	7	2	1	2	0	2	0	1	0	595
21:00	4	444	41	2	1	1	2	4	0	1	0	0	0	500
22:00	1	273	25	0	1	1	1	4	2	0	0	0	0	308
23:00	0	121	11	0	1	0	0	2	0	0	0	0	0	135
Total	117	9633	1292	83	160	44	37	82	22	34	8	9	9	11530
Percent	1.0%	83.5%	11.2%	0.7%	1.4%	0.4%	0.3%	0.7%	0.2%	0.3%	0.1%	0.1%	0.1%	
AM Peak	10:00	08:00	10:00	11:00	11:00	09:00	08:00	08:00	09:00	11:00	09:00	08:00	07:00	08:00
Vol.	9	556	79	7	16	4	5	9	2	4	1	2	1	677
PM Peak	18:00	17:00	17:00	14:00	14:00	18:00	16:00	17:00	17:00	17:00	18:00	14:00	17:00	17:00
Vol.	14	779	111	10	15	5	6	9	3	7	3	2	4	947
Grand Total	117	9633	1292	83	160	44	37	82	22	34	8	9	9	11530
Percent	1.0%	83.5%	11.2%	0.7%	1.4%	0.4%	0.3%	0.7%	0.2%	0.3%	0.1%	0.1%	0.1%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Whittier Boulevard
B/ Vail Avenue - Greenwood Avenue
24 Hour Directional Classification Count

R3
Site Code: 999-23585

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	94	6	0	1	0	0	0	0	0	0	0	0	101
01:00	0	67	10	0	0	0	0	0	2	0	0	0	0	79
02:00	0	41	4	0	0	0	0	0	0	0	0	0	0	45
03:00	0	55	10	1	2	0	0	0	2	0	0	0	0	70
04:00	0	75	20	1	1	0	0	0	1	0	0	0	0	98
05:00	4	169	40	5	8	2	2	4	0	0	0	0	0	234
06:00	1	387	63	3	8	3	0	8	0	2	**1**	0	0	476
07:00	**13**	635	**119**	**6**	9	5	**8**	**15**	**3**	**5**	0	**2**	0	820
08:00	9	**720**	89	6	12	**7**	2	11	3	3	0	2	0	**864**
09:00	6	466	65	3	12	3	1	3	1	0	0	0	**1**	561
10:00	7	463	99	6	**14**	3	3	7	0	1	1	1	0	605
11:00	6	551	84	3	11	1	1	6	2	3	0	1	1	670
12 PM	7	594	77	**10**	10	3	4	**10**	0	1	**1**	0	**1**	718
13:00	4	**631**	**100**	6	**11**	2	2	9	1	0	0	0	1	**767**
14:00	7	557	92	4	6	**5**	2	3	1	1	1	0	1	680
15:00	2	535	79	4	7	3	**5**	7	1	2	0	0	0	645
16:00	**8**	575	85	2	11	5	1	6	**2**	**6**	1	0	0	702
17:00	6	536	84	6	6	3	0	5	0	3	0	**1**	0	650
18:00	5	505	72	3	5	2	2	4	1	1	0	0	0	600
19:00	3	459	56	2	5	2	1	3	0	1	0	0	0	532
20:00	2	468	56	1	2	3	1	5	0	0	0	0	0	538
21:00	1	423	49	1	1	0	0	5	0	0	0	0	0	480
22:00	4	277	29	0	2	1	1	2	0	0	0	0	0	316
23:00	0	169	22	0	3	0	0	1	0	0	0	0	0	195
Total	95	9452	1410	73	147	53	36	114	20	29	5	7	5	11446
Percent	0.8%	82.6%	12.3%	0.6%	1.3%	0.5%	0.3%	1.0%	0.2%	0.3%	0.0%	0.1%	0.0%	
AM Peak	07:00	08:00	07:00	07:00	10:00	08:00	07:00	07:00	07:00	07:00	06:00	07:00	09:00	08:00
Vol.	13	720	119	6	14	7	8	15	3	5	1	2	1	864
PM Peak	16:00	13:00	13:00	12:00	13:00	14:00	15:00	12:00	16:00	16:00	12:00	17:00	12:00	13:00
Vol.	8	631	100	10	11	5	5	10	2	6	1	1	1	767
Grand Total	95	9452	1410	73	147	53	36	114	20	29	5	7	5	11446
Percent	0.8%	82.6%	12.3%	0.6%	1.3%	0.5%	0.3%	1.0%	0.2%	0.3%	0.0%	0.1%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Whittier Boulevard
B/ Vail Avenue - Greenwood Avenue
24 Hour Directional Classification Count

R3
Site Code: 999-23585

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	2	177	21	0	3	0	0	0	0	0	0	0	0	203
01:00	0	113	18	0	0	0	0	0	2	0	0	0	0	133
02:00	0	88	11	0	3	0	0	0	0	0	0	0	0	102
03:00	0	99	15	1	4	0	0	0	2	0	0	0	0	121
04:00	0	143	29	2	2	0	0	0	2	0	0	0	0	178
05:00	4	283	59	8	10	2	2	4	1	0	0	0	0	373
06:00	1	536	106	7	13	3	0	9	1	2	1	0	0	679
07:00	**17**	961	167	8	14	5	**8**	16	**4**	5	0	2	**1**	1208
08:00	16	**1276**	167	**12**	21	**10**	7	**20**	4	4	0	**4**	0	**1541**
09:00	9	911	127	8	21	7	3	6	3	0	1	1	1	1098
10:00	16	1009	**178**	11	25	5	5	12	1	2	**2**	2	0	1268
11:00	11	1059	161	10	**27**	4	5	10	4	**7**	0	1	1	1300
12 PM	14	1169	160	**16**	22	7	**7**	14	1	4	1	0	3	1418
13:00	11	1288	180	13	**23**	5	3	13	1	1	0	0	1	1539
14:00	15	1221	178	14	21	6	3	8	1	3	2	**2**	1	1475
15:00	14	1209	167	9	20	6	6	**15**	3	7	1	0	1	1458
16:00	**21**	**1325**	188	7	21	**9**	7	14	**4**	8	1	0	1	**1606**
17:00	18	1315	**195**	12	15	6	3	14	3	**10**	0	2	**4**	1597
18:00	19	1207	162	7	12	7	4	10	3	5	**3**	0	0	1439
19:00	10	1001	125	4	12	7	4	6	0	2	1	1	0	1173
20:00	4	988	111	4	9	5	2	7	0	2	0	1	0	1133
21:00	5	867	90	3	2	1	2	9	0	1	0	0	0	980
22:00	5	550	54	0	3	2	2	6	2	0	0	0	0	624
23:00	0	290	33	0	4	0	0	3	0	0	0	0	0	330
Total	212	19085	2702	156	307	97	73	196	42	63	13	16	14	22976
Percent	0.9%	83.1%	11.8%	0.7%	1.3%	0.4%	0.3%	0.9%	0.2%	0.3%	0.1%	0.1%	0.1%	
AM Peak	07:00	08:00	10:00	08:00	11:00	08:00	07:00	08:00	07:00	11:00	10:00	08:00	07:00	08:00
Vol.	17	1276	178	12	27	10	8	20	4	7	2	4	1	1541
PM Peak	16:00	16:00	17:00	12:00	13:00	16:00	12:00	15:00	16:00	17:00	18:00	14:00	17:00	16:00
Vol.	21	1325	195	16	23	9	7	15	4	10	3	2	4	1606
Grand Total	212	19085	2702	156	307	97	73	196	42	63	13	16	14	22976
Percent	0.9%	83.1%	11.8%	0.7%	1.3%	0.4%	0.3%	0.9%	0.2%	0.3%	0.1%	0.1%	0.1%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Wilcox Avenue
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count

R4
Site Code: 999-23585

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	46	3	0	3	0	0	0	0	0	0	0	0	52
01:00	0	32	1	0	0	0	0	0	0	0	0	0	0	33
02:00	0	36	6	0	0	0	0	0	0	0	0	0	0	42
03:00	0	35	4	0	0	0	0	0	0	0	0	0	0	39
04:00	0	40	9	0	4	0	0	0	0	0	0	0	0	53
05:00	1	98	24	1	6	1	0	0	0	0	0	0	0	131
06:00	0	131	25	1	3	1	0	0	**1**	0	0	0	0	162
07:00	0	271	53	3	2	**3**	0	0	0	0	0	0	0	332
08:00	2	**343**	**59**	3	4	1	0	0	1	0	0	0	0	**413**
09:00	1	237	35	**6**	**8**	0	**1**	0	1	0	0	0	0	289
10:00	**4**	258	38	1	5	0	1	0	1	0	0	0	0	308
11:00	4	256	35	3	7	1	0	0	1	0	0	0	0	307
12 PM	2	343	66	1	11	0	0	0	0	0	0	0	0	423
13:00	4	350	63	**6**	7	**3**	0	1	1	0	0	0	0	435
14:00	3	355	47	1	13	1	0	0	0	0	0	0	0	420
15:00	4	339	52	4	11	1	0	**2**	0	0	0	0	0	413
16:00	3	407	62	1	**14**	1	0	1	**2**	0	0	0	0	491
17:00	**5**	**430**	**67**	2	9	1	0	1	0	0	0	0	0	**515**
18:00	3	350	40	0	5	0	0	1	0	0	0	0	0	399
19:00	1	250	38	0	2	0	0	0	0	0	0	0	0	291
20:00	2	242	28	0	2	0	0	0	0	0	0	0	0	274
21:00	0	179	22	0	3	0	0	0	0	0	0	0	0	204
22:00	0	118	9	0	0	0	0	0	0	0	0	0	0	127
23:00	0	57	10	0	1	0	0	0	0	0	0	0	0	68
Total	39	5203	796	33	120	14	2	6	8	0	0	0	0	6221
Percent	0.6%	83.6%	12.8%	0.5%	1.9%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	08:00	08:00	09:00	09:00	07:00	09:00		06:00					08:00
Vol.	4	343	59	6	8	3	1		1					413
PM Peak	17:00	17:00	17:00	13:00	16:00	13:00		15:00	16:00					17:00
Vol.	5	430	67	6	14	3		2	2					515
Grand Total	39	5203	796	33	120	14	2	6	8	0	0	0	0	6221
Percent	0.6%	83.6%	12.8%	0.5%	1.9%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Wilcox Avenue
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count

R4
Site Code: 999-23585

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	30	4	0	0	0	0	1	0	0	0	0	0	35
01:00	0	15	2	0	0	0	0	0	0	0	0	0	0	17
02:00	0	17	2	0	0	0	0	0	0	0	0	0	0	19
03:00	0	21	1	0	0	0	0	0	0	0	0	0	0	22
04:00	2	31	7	0	0	1	0	0	0	0	0	0	0	41
05:00	0	84	12	0	2	1	0	0	0	0	0	0	0	99
06:00	2	136	24	1	2	**2**	0	**2**	0	0	0	0	0	169
07:00	0	248	**37**	1	5	1	0	0	0	0	0	0	0	292
08:00	1	**346**	36	**4**	6	0	0	0	**1**	0	0	0	0	**394**
09:00	1	224	29	1	**10**	1	0	0	0	0	0	0	0	266
10:00	2	260	35	4	10	1	0	0	0	0	0	0	0	312
11:00	**5**	266	26	1	4	2	0	0	1	0	0	0	0	305
12 PM	3	318	**49**	1	**10**	0	0	1	0	0	0	0	0	382
13:00	5	335	47	1	4	3	0	1	1	0	0	0	0	397
14:00	6	286	42	**5**	7	0	0	0	1	0	0	0	0	347
15:00	**7**	266	41	2	9	**4**	0	0	0	0	0	0	0	329
16:00	4	285	43	0	9	0	0	**3**	0	0	0	0	0	344
17:00	0	**378**	45	1	5	1	0	0	**2**	0	0	0	0	**432**
18:00	3	295	37	1	6	1	0	0	0	0	0	0	0	343
19:00	0	221	28	0	3	0	0	0	0	0	0	0	0	252
20:00	1	216	24	0	4	0	0	0	0	0	0	0	0	245
21:00	2	194	15	0	2	0	0	0	0	0	0	0	0	213
22:00	0	95	11	0	0	0	0	0	0	0	0	0	0	106
23:00	0	44	8	0	0	0	0	0	1	0	0	0	0	53
Total	44	4611	605	23	98	18	0	8	7	0	0	0	0	5414
Percent	0.8%	85.2%	11.2%	0.4%	1.8%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	07:00	08:00	09:00	06:00		06:00	08:00					08:00
Vol.	5	346	37	4	10	2		2	1					394
PM Peak	15:00	17:00	12:00	14:00	12:00	15:00		16:00	17:00					17:00
Vol.	7	378	49	5	10	4		3	2					432
Grand Total	44	4611	605	23	98	18	0	8	7	0	0	0	0	5414
Percent	0.8%	85.2%	11.2%	0.4%	1.8%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Wilcox Avenue
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count
Northbound, Southbound

R4
Site Code: 999-23585

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	76	7	0	3	0	0	1	0	0	0	0	0	87
01:00	0	47	3	0	0	0	0	0	0	0	0	0	0	50
02:00	0	53	8	0	0	0	0	0	0	0	0	0	0	61
03:00	0	56	5	0	0	0	0	0	0	0	0	0	0	61
04:00	2	71	16	0	4	1	0	0	0	0	0	0	0	94
05:00	1	182	36	1	8	2	0	0	0	0	0	0	0	230
06:00	2	267	49	2	5	3	0	**2**	1	0	0	0	0	331
07:00	0	519	90	4	7	**4**	0	0	0	0	0	0	0	624
08:00	3	**689**	**95**	**7**	10	1	0	0	**2**	0	0	0	0	**807**
09:00	2	461	64	7	**18**	1	**1**	0	1	0	0	0	0	555
10:00	6	518	73	5	15	1	1	0	1	0	0	0	0	620
11:00	**9**	522	61	4	11	3	0	0	2	0	0	0	0	612
12 PM	5	661	**115**	2	21	0	0	1	0	0	0	0	0	805
13:00	9	685	110	**7**	11	**6**	0	2	**2**	0	0	0	0	832
14:00	9	641	89	6	20	1	0	0	1	0	0	0	0	767
15:00	**11**	605	93	6	20	5	0	2	0	0	0	0	0	742
16:00	7	692	105	1	**23**	1	0	**4**	2	0	0	0	0	835
17:00	5	**808**	112	3	14	2	0	1	2	0	0	0	0	**947**
18:00	6	645	77	1	11	1	0	1	0	0	0	0	0	742
19:00	1	471	66	0	5	0	0	0	0	0	0	0	0	543
20:00	3	458	52	0	6	0	0	0	0	0	0	0	0	519
21:00	2	373	37	0	5	0	0	0	0	0	0	0	0	417
22:00	0	213	20	0	0	0	0	0	0	0	0	0	0	233
23:00	0	101	18	0	1	0	0	0	1	0	0	0	0	121
Total	83	9814	1401	56	218	32	2	14	15	0	0	0	0	11635
Percent	0.7%	84.3%	12.0%	0.5%	1.9%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	08:00	08:00	09:00	07:00	09:00	06:00	08:00					08:00
Vol.	9	689	95	7	18	4	1	2	2					807
PM Peak	15:00	17:00	12:00	13:00	16:00	13:00		16:00	13:00					17:00
Vol.	11	808	115	7	23	6		4	2					947
Grand Total	83	9814	1401	56	218	32	2	14	15	0	0	0	0	11635
Percent	0.7%	84.3%	12.0%	0.5%	1.9%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Mines Avenue
B/ Vail Avenue - Greenwood Avenue
24 Hour Directional Volume Count

R5
Site Code: 999-23585

Start Time	6/7/23 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		8	33			3	37				
12:15		7	33			2	30				
12:30		4	40			2	39				
12:45		2	35	21	141	2	31	9	137	30	278
01:00		4	42			2	**46**				
01:15		1	65			7	**56**				
01:30		3	46			5	**38**				
01:45		1	37	9	190	2	**45**	16	185	25	375
02:00		1	60			3	25				
02:15		3	54			2	42				
02:30		1	55			3	39				
02:45		5	49	10	218	0	32	8	138	18	356
03:00		1	59			2	23				
03:15		0	54			1	30				
03:30		1	50			5	14				
03:45		2	60	4	223	5	22	13	89	17	312
04:00		6	70			4	25				
04:15		5	71			7	29				
04:30		1	65			9	34				
04:45		2	73	14	279	17	21	37	109	51	388
05:00		6	62			14	26				
05:15		4	**91**			8	16				
05:30		11	**70**			29	19				
05:45		10	**85**	31	308	25	13	76	74	107	382
06:00		18	**71**			36	29				
06:15		13	63			26	26				
06:30		22	41			52	24				
06:45		21	30	74	205	42	26	156	105	230	310
07:00		12	31			45	16				
07:15		18	39			44	15				
07:30		18	20			44	11				
07:45		37	29	85	119	48	18	181	60	266	179
08:00		38	26			**70**	17				
08:15		**81**	18			**66**	17				
08:30		**117**	22			**86**	16				
08:45		**66**	15	302	81	**69**	17	291	67	593	148
09:00		**53**	17			43	12				
09:15		32	17			36	17				
09:30		42	26			45	4				
09:45		46	27	173	87	39	12	163	45	336	132
10:00		40	18			49	9				
10:15		49	21			36	11				
10:30		62	9			34	9				
10:45		41	13	192	61	30	9	149	38	341	99
11:00		30	6			26	4				
11:15		46	2			23	2				
11:30		29	5			27	5				
11:45		41	3	146	16	27	3	103	14	249	30
Total		1061	1928	1061	1928	1202	1061	1202	1061	2263	2989
Combined Total		2989		2989		2263		2263		5252	
AM Peak	-	08:15	-	-	-	08:00	-	-	-	-	-
Vol.	-	317	-	-	-	291	-	-	-	-	-
P.H.F.		0.677				0.846					
PM Peak	-	-	05:15	-	-	-	01:00	-	-	-	-
Vol.	-	-	317	-	-	-	185	-	-	-	-
P.H.F.			0.871				0.826				
Percentage		35.5%	64.5%			53.1%	46.9%				
ADT/AADT		ADT 5,252		AADT 5,252							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Washington Boulevard
B/ Vail Avenue - Greenwood Avenue
24 Hour Directional Volume Count

R6
Site Code: 999-23585

Start Time	6/7/23 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		53	214			45	**232**				
12:15		48	223			32	**240**				
12:30		51	236			41	**226**				
12:45		49	259	201	932	31	**243**	149	941	350	1873
01:00		40	263			28	209				
01:15		42	231			44	224				
01:30		41	241			41	237				
01:45		36	255	159	990	38	220	151	890	310	1880
02:00		18	285			38	234				
02:15		31	299			32	213				
02:30		32	301			36	230				
02:45		36	315	117	1200	50	196	156	873	273	2073
03:00		40	347			33	209				
03:15		44	322			43	190				
03:30		38	374			67	215				
03:45		51	**360**	173	1403	76	206	219	820	392	2223
04:00		36	**435**			44	205				
04:15		41	**355**			79	181				
04:30		59	**412**			93	212				
04:45		81	346	217	1548	118	197	334	795	551	2343
05:00		77	390			120	217				
05:15		77	394			176	195				
05:30		102	400			223	190				
05:45		129	375	385	1559	238	208	757	810	1142	2369
06:00		117	319			240	180				
06:15		119	339			255	176				
06:30		121	312			285	179				
06:45		139	308	496	1278	**334**	165	1114	700	1610	1978
07:00		153	229			**336**	144				
07:15		170	235			**340**	172				
07:30		179	145			**363**	129				
07:45		197	168	699	777	304	156	1343	601	2042	1378
08:00		178	133			310	138				
08:15		185	179			370	139				
08:30		191	157			291	147				
08:45		194	148	748	617	249	122	1220	546	1968	1163
09:00		175	129			263	125				
09:15		193	155			212	143				
09:30		163	130			228	120				
09:45		168	95	699	509	224	86	927	474	1626	983
10:00		198	95			202	110				
10:15		208	84			192	123				
10:30		186	116			211	108				
10:45		**220**	85	812	380	198	138	803	479	1615	859
11:00		**171**	87			182	90				
11:15		**213**	63			178	62				
11:30		**252**	54			209	43				
11:45		214	64	850	268	193	40	762	235	1612	503
Total		5556	11461	5556	11461	7935	8164	7935	8164	13491	19625
Combined Total		17017		17017		16099		16099		33116	
AM Peak	-	10:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	856	-	-	-	1373	-	-	-	-	-
P.H.F.		0.849				0.946					
PM Peak	-	-	03:45	-	-	-	12:00	-	-	-	-
Vol.	-	-	1562	-	-	-	941	-	-	-	-
P.H.F.			0.898				0.968				
Percentage		32.6%	67.4%			49.3%	50.7%				
ADT/AADT		ADT 33,116		AADT 33,116							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Greenwood Avenue
B/ Union Street - Oakwood Street
24 Hour Directional Volume Count

R7
Site Code: 999-23585

Start Time	6/7/23 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		30	144			33	159				
12:15		29	137			31	132				
12:30		34	139			21	188				
12:45		22	152	115	572	13	155	98	634	213	1206
01:00		21	146			14	178				
01:15		21	172			12	151				
01:30		24	173			13	144				
01:45		25	187	91	678	14	189	53	662	144	1340
02:00		14	139			11	183				
02:15		26	152			9	190				
02:30		17	172			19	198				
02:45		34	174	91	637	29	170	68	741	159	1378
03:00		20	178			35	233				
03:15		25	134			25	205				
03:30		30	200			34	236				
03:45		40	143	115	655	54	243	148	917	263	1572
04:00		19	142			47	268				
04:15		33	161			45	**295**				
04:30		29	**189**			78	**325**				
04:45		49	**167**	130	659	84	**331**	254	1219	384	1878
05:00		47	**183**			93	**305**				
05:15		39	**165**			82	261				
05:30		70	185			154	338				
05:45		99	163	255	696	133	292	462	1196	717	1892
06:00		84	146			127	252				
06:15		66	147			120	188				
06:30		73	116			139	136				
06:45		105	119	328	528	171	104	557	680	885	1208
07:00		97	98			155	88				
07:15		84	84			172	97				
07:30		98	88			**214**	77				
07:45		125	102	404	372	**180**	79	721	341	1125	713
08:00		135	82			**185**	67				
08:15		114	79			**187**	101				
08:30		107	80			138	77				
08:45		104	86	460	327	141	69	651	314	1111	641
09:00		118	98			128	72				
09:15		107	105			110	50				
09:30		102	82			122	58				
09:45		113	65	440	350	128	59	488	239	928	589
10:00		104	79			149	48				
10:15		98	72			121	52				
10:30		109	72			161	56				
10:45		**138**	70	449	293	125	52	556	208	1005	501
11:00		**116**	51			138	32				
11:15		**126**	47			129	44				
11:30		**118**	42			165	33				
11:45		137	51	497	191	135	39	567	148	1064	339
Total		3375	5958	3375	5958	4623	7299	4623	7299	7998	13257
Combined Total		9333		9333		11922		11922		21255	
AM Peak	-	10:45	-	-	-	07:30	-	-	-	-	-
Vol.	-	498	-	-	-	766	-	-	-	-	-
P.H.F.		0.902				0.895					
PM Peak	-	-	04:30	-	-	-	04:15	-	-	-	-
Vol.	-	-	704	-	-	-	1256	-	-	-	-
P.H.F.			0.931				0.949				
Percentage		36.2%	63.8%			38.8%	61.2%				
ADT/AADT		ADT 21,255		AADT 21,255							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Telegraph Road
W/ Greenwood Avenue
24 Hour Directional Volume Count

R8
Site Code: 999-23585

Start Time	6/7/23 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		17	149			35	186				
12:15		18	100			29	199				
12:30		20	106			30	233				
12:45		8	116	63	471	37	184	131	802	194	1273
01:00		9	130			29	160				
01:15		14	142			14	168				
01:30		9	173			18	224				
01:45		13	145	45	590	28	180	89	732	134	1322
02:00		8	150			21	192				
02:15		19	161			18	**202**				
02:30		10	196			25	**223**				
02:45		18	207	55	714	21	**238**	85	855	140	1569
03:00		20	198			41	**231**				
03:15		10	261			32	177				
03:30		17	247			39	242				
03:45		23	267	70	973	54	179	166	829	236	1802
04:00		15	234			54	233				
04:15		16	258			67	178				
04:30		18	**261**			79	187				
04:45		39	**250**	88	1003	103	168	303	766	391	1769
05:00		41	**280**			116	231				
05:15		32	**260**			141	197				
05:30		68	232			229	181				
05:45		82	251	223	1023	215	162	701	771	924	1794
06:00		50	249			263	166				
06:15		55	268			264	152				
06:30		76	270			265	138				
06:45		96	237	277	1024	310	125	1102	581	1379	1605
07:00		90	168			**339**	129				
07:15		79	130			**391**	105				
07:30		106	82			**395**	110				
07:45		103	75	378	455	**348**	104	1473	448	1851	903
08:00		118	62			327	73				
08:15		90	45			298	108				
08:30		102	64			268	105				
08:45		96	58	406	229	296	59	1189	345	1595	574
09:00		93	59			277	87				
09:15		**119**	56			242	61				
09:30		**99**	55			221	68				
09:45		**90**	26	401	196	202	69	942	285	1343	481
10:00		**125**	43			179	68				
10:15		96	41			219	59				
10:30		95	36			195	54				
10:45		101	24	417	144	183	55	776	236	1193	380
11:00		100	27			206	63				
11:15		97	31			209	62				
11:30		118	17			190	55				
11:45		105	18	420	93	195	43	800	223	1220	316
Total		2843	6915	2843	6915	7757	6873	7757	6873	10600	13788
Combined Total		9758		9758		14630		14630		24388	
AM Peak	-	09:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	433	-	-	-	1473	-	-	-	-	-
P.H.F.		0.866				0.932					
PM Peak	-	-	04:30	-	-	-	02:15	-	-	-	-
Vol.	-	-	1051	-	-	-	894	-	-	-	-
P.H.F.			0.938				0.939				
Percentage		29.1%	70.9%			53.0%	47.0%				
ADT/AADT		ADT 24,388		AADT 24,388							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Montebello Boulevard
B/ Avenida De La Merced - Liberty Avenue
24 Hour Directional Volume Count

R9
Site Code: 999-23585

Start Time	6/7/23 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		25	208			33	242				
12:15		22	221			21	235				
12:30		14	213			22	248				
12:45		16	230	77	872	25	235	101	960	178	1832
01:00		10	252			19	238				
01:15		6	292			16	231				
01:30		11	215			12	264				
01:45		7	253	34	1012	12	249	59	982	93	1994
02:00		22	281			10	232				
02:15		18	270			13	267				
02:30		24	299			17	250				
02:45		18	309	82	1159	18	274	58	1023	140	2182
03:00		19	281			18	274				
03:15		17	298			13	324				
03:30		50	301			28	**283**				
03:45		58	**335**	144	1215	33	**293**	92	1174	236	2389
04:00		53	**354**			28	**306**				
04:15		49	**360**			38	**341**				
04:30		76	**352**			56	280				
04:45		73	312	251	1378	86	276	208	1203	459	2581
05:00		80	340			72	236				
05:15		73	304			85	229				
05:30		126	257			96	210				
05:45		122	224	401	1125	124	198	377	873	778	1998
06:00		134	220			116	191				
06:15		217	194			141	194				
06:30		249	155			191	219				
06:45		212	176	812	745	237	185	685	789	1497	1534
07:00		227	158			200	209				
07:15		197	141			183	208				
07:30		183	133			194	194				
07:45		142	155	749	587	179	176	756	787	1505	1374
08:00		159	111			187	152				
08:15		141	136			143	158				
08:30		176	113			196	172				
08:45		143	107	619	467	218	107	744	589	1363	1056
09:00		156	94			171	114				
09:15		182	91			179	96				
09:30		179	69			189	93				
09:45		221	46	738	300	174	69	713	372	1451	672
10:00		204	64			188	59				
10:15		162	40			188	57				
10:30		186	28			200	53				
10:45		**250**	42	802	174	205	48	781	217	1583	391
11:00		**237**	36			**246**	53				
11:15		**251**	17			**235**	49				
11:30		**246**	29			**203**	37				
11:45		246	30	980	112	**233**	27	917	166	1897	278
Total		5689	9146	5689	9146	5491	9135	5491	9135	11180	18281
Combined Total		14835		14835		14626		14626		29461	
AM Peak	-	10:45	-	-	-	11:00	-	-	-	-	-
Vol.	-	984	-	-	-	917	-	-	-	-	-
P.H.F.		0.980				0.932					
PM Peak	-	-	03:45	-	-	-	03:30	-	-	-	-
Vol.	-	-	1401	-	-	-	1223	-	-	-	-
P.H.F.			0.973				0.897				
Percentage		38.3%	61.7%			37.5%	62.5%				
ADT/AADT		ADT 29,461		AADT 29,461							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Montebello Boulevard
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count

R10
Site Code: 999-23585

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	88	13	0	2	0	0	0	0	0	0	0	0	103
01:00	0	59	9	0	3	0	0	0	1	0	0	0	0	72
02:00	0	26	5	0	3	1	0	0	0	0	0	0	0	35
03:00	0	41	10	0	8	0	0	0	0	0	0	0	0	59
04:00	1	69	19	3	9	0	0	0	1	0	0	0	0	102
05:00	1	121	27	6	6	2	0	1	1	0	0	0	0	165
06:00	0	175	41	**8**	16	1	0	5	**3**	0	0	0	0	249
07:00	6	461	99	5	**29**	**4**	5	**17**	1	**3**	**1**	**1**	0	632
08:00	4	436	104	3	19	1	**6**	12	2	1	0	1	0	589
09:00	4	391	90	7	17	0	3	13	2	1	0	0	0	528
10:00	3	**494**	107	2	21	3	3	10	0	1	1	0	0	645
11:00	**8**	493	**116**	4	25	1	3	12	1	0	0	0	0	**663**
12 PM	7	599	117	**10**	20	1	3	19	0	5	0	0	**1**	782
13:00	11	567	110	4	30	2	4	17	0	2	0	0	0	747
14:00	15	595	128	4	22	3	2	13	1	3	0	0	0	786
15:00	10	592	124	2	34	6	7	22	2	**7**	1	**1**	1	809
16:00	16	714	127	3	30	**11**	4	20	**3**	7	**2**	1	0	938
17:00	**22**	788	**141**	5	**35**	5	**12**	**23**	0	3	0	1	1	1036
18:00	2	**1013**	74	1	10	1	0	1	1	0	0	0	0	**1103**
19:00	1	612	46	1	5	0	0	3	0	0	0	0	0	668
20:00	1	539	56	1	2	0	0	0	0	0	0	0	0	599
21:00	1	365	33	1	1	1	0	0	0	0	0	0	0	402
22:00	1	273	23	1	1	0	0	0	2	0	0	0	0	301
23:00	0	168	14	0	1	0	0	0	0	0	0	0	0	183
Total	114	9679	1633	71	349	43	52	188	21	33	5	5	3	12196
Percent	0.9%	79.4%	13.4%	0.6%	2.9%	0.4%	0.4%	1.5%	0.2%	0.3%	0.0%	0.0%	0.0%	
AM Peak	11:00	10:00	11:00	06:00	07:00	07:00	08:00	07:00	06:00	07:00	07:00	07:00		11:00
Vol.	8	494	116	8	29	4	6	17	3	3	1	1		663
PM Peak	17:00	18:00	17:00	12:00	17:00	16:00	17:00	17:00	16:00	15:00	16:00	15:00	12:00	18:00
Vol.	22	1013	141	10	35	11	12	23	3	7	2	1	1	1103
Grand Total	114	9679	1633	71	349	43	52	188	21	33	5	5	3	12196
Percent	0.9%	79.4%	13.4%	0.6%	2.9%	0.4%	0.4%	1.5%	0.2%	0.3%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Montebello Boulevard
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count

R10
Site Code: 999-23585

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	92	16	0	0	0	0	0	0	0	0	0	0	108
01:00	0	67	9	0	0	0	0	0	0	0	0	0	0	76
02:00	0	33	9	0	0	0	0	0	0	0	1	0	0	43
03:00	1	46	12	3	3	0	0	0	1	0	0	0	0	66
04:00	2	75	27	1	2	0	0	0	0	0	0	0	0	107
05:00	2	175	38	0	10	0	0	2	0	0	0	0	0	227
06:00	1	297	57	1	12	3	0	6	1	1	0	**1**	0	380
07:00	6	485	90	**7**	10	5	1	9	1	**4**	0	0	0	618
08:00	**9**	**619**	98	3	**17**	**6**	**4**	**15**	1	1	**2**	0	0	**775**
09:00	5	460	96	7	15	6	3	11	**3**	2	1	0	0	609
10:00	5	453	95	4	17	4	0	15	0	1	2	0	0	596
11:00	4	524	**100**	2	10	1	0	14	3	1	1	1	**1**	662
12 PM	7	577	116	5	18	3	4	16	0	1	0	0	0	747
13:00	5	544	114	6	18	4	3	14	0	2	0	0	0	710
14:00	7	636	92	7	23	3	3	14	**3**	2	**1**	0	**1**	792
15:00	7	569	125	**8**	**30**	4	**5**	11	0	4	0	0	1	764
16:00	**9**	720	115	1	21	6	4	9	1	2	0	0	0	888
17:00	9	**741**	**128**	4	23	**10**	1	**20**	1	**5**	0	0	0	**942**
18:00	1	737	71	2	3	1	0	2	0	0	0	0	0	817
19:00	1	653	57	3	5	0	0	1	0	0	0	0	0	720
20:00	1	528	54	4	0	0	0	0	0	0	0	0	0	587
21:00	0	446	35	6	2	0	0	0	0	0	0	0	0	489
22:00	0	281	25	1	3	0	0	0	0	0	0	0	0	310
23:00	0	164	11	0	1	0	0	0	0	0	0	0	0	176
Total	82	9922	1590	75	243	56	28	159	15	26	8	2	3	12209
Percent	0.7%	81.3%	13.0%	0.6%	2.0%	0.5%	0.2%	1.3%	0.1%	0.2%	0.1%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	07:00	08:00	08:00	08:00	08:00	09:00	07:00	08:00	06:00	11:00	08:00
Vol.	9	619	100	7	17	6	4	15	3	4	2	1	1	775
PM Peak	16:00	17:00	17:00	15:00	15:00	17:00	15:00	17:00	14:00	17:00	14:00		14:00	17:00
Vol.	9	741	128	8	30	10	5	20	3	5	1		1	942
Grand Total	82	9922	1590	75	243	56	28	159	15	26	8	2	3	12209
Percent	0.7%	81.3%	13.0%	0.6%	2.0%	0.5%	0.2%	1.3%	0.1%	0.2%	0.1%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Montebello Boulevard
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count
Northbound, Southbound

R10
Site Code: 999-23585

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	180	29	0	2	0	0	0	0	0	0	0	0	211
01:00	0	126	18	0	3	0	0	0	1	0	0	0	0	148
02:00	0	59	14	0	3	1	0	0	0	0	1	0	0	78
03:00	1	87	22	3	11	0	0	0	1	0	0	0	0	125
04:00	3	144	46	4	11	0	0	0	1	0	0	0	0	209
05:00	3	296	65	6	16	2	0	3	1	0	0	0	0	392
06:00	1	472	98	9	28	4	0	11	4	1	0	**1**	0	629
07:00	12	946	189	12	**39**	**9**	6	26	2	**7**	1	1	0	1250
08:00	**13**	**1055**	202	6	36	7	**10**	**27**	3	2	2	1	0	**1364**
09:00	9	851	186	**14**	32	6	6	24	**5**	3	1	0	0	1137
10:00	8	947	202	6	38	7	3	25	0	2	**3**	0	0	1241
11:00	12	1017	**216**	6	35	2	3	26	4	1	1	1	**1**	1325
12 PM	14	1176	233	**15**	38	4	7	35	0	6	0	0	1	1529
13:00	16	1111	224	10	48	6	7	31	0	4	0	0	0	1457
14:00	22	1231	220	11	45	6	5	27	**4**	5	1	0	1	1578
15:00	17	1161	249	10	**64**	10	12	33	2	**11**	1	**1**	**2**	1573
16:00	25	1434	242	4	51	**17**	8	29	4	9	**2**	1	0	1826
17:00	**31**	1529	**269**	9	58	15	**13**	**43**	1	8	0	1	1	**1978**
18:00	3	**1750**	145	3	13	2	0	3	1	0	0	0	0	1920
19:00	2	1265	103	4	10	0	0	4	0	0	0	0	0	1388
20:00	2	1067	110	5	2	0	0	0	0	0	0	0	0	1186
21:00	1	811	68	7	3	1	0	0	0	0	0	0	0	891
22:00	1	554	48	2	4	0	0	0	2	0	0	0	0	611
23:00	0	332	25	0	2	0	0	0	0	0	0	0	0	359
Total	196	19601	3223	146	592	99	80	347	36	59	13	7	6	24405
Percent	0.8%	80.3%	13.2%	0.6%	2.4%	0.4%	0.3%	1.4%	0.1%	0.2%	0.1%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	09:00	07:00	07:00	08:00	08:00	09:00	07:00	10:00	06:00	11:00	08:00
Vol.	13	1055	216	14	39	9	10	27	5	7	3	1	1	1364
PM Peak	17:00	18:00	17:00	12:00	15:00	16:00	17:00	17:00	14:00	15:00	16:00	15:00	15:00	17:00
Vol.	31	1750	269	15	64	17	13	43	4	11	2	1	2	1978
Grand Total	196	19601	3223	146	592	99	80	347	36	59	13	7	6	24405
Percent	0.8%	80.3%	13.2%	0.6%	2.4%	0.4%	0.3%	1.4%	0.1%	0.2%	0.1%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Montebello Boulevard
S/ Olympic Boulevard
24 Hour Directional Volume Count

R11
Site Code: 999-23585

Start Time	6/7/23 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		20	143			20	142				
12:15		13	117			18	147				
12:30		21	158			14	138				
12:45		9	141	63	559	21	135	73	562	136	1121
01:00		27	133			18	138				
01:15		22	142			11	125				
01:30		18	143			9	145				
01:45		19	156	86	574	15	152	53	560	139	1134
02:00		7	158			21	159				
02:15		8	156			10	134				
02:30		10	168			6	150				
02:45		7	199	32	681	13	150	50	593	82	1274
03:00		11	191			13	204				
03:15		9	169			11	145				
03:30		17	186			12	192				
03:45		12	190	49	736	29	181	65	722	114	1458
04:00		13	214			14	196				
04:15		18	229			16	187				
04:30		26	223			35	**252**				
04:45		28	185	85	851	43	**206**	108	841	193	1692
05:00		27	**242**			35	**191**				
05:15		25	**257**			45	**247**				
05:30		45	**232**			56	219				
05:45		45	**240**	142	971	92	187	228	844	370	1815
06:00		55	224			72	177				
06:15		15	157			30	141				
06:30		42	142			32	167				
06:45		55	131	167	654	108	74	242	559	409	1213
07:00		67	114			89	115				
07:15		123	115			108	102				
07:30		**154**	98			136	109				
07:45		**191**	72	535	399	**176**	109	509	435	1044	834
08:00		**157**	102			**187**	88				
08:15		**129**	81			**191**	99				
08:30		116	76			**164**	83				
08:45		122	85	524	344	115	103	657	373	1181	717
09:00		114	65			125	69				
09:15		76	84			88	92				
09:30		139	49			139	83				
09:45		104	53	433	251	131	62	483	306	916	557
10:00		126	50			122	66				
10:15		99	44			116	60				
10:30		128	52			118	52				
10:45		125	55	478	201	101	34	457	212	935	413
11:00		131	50			136	43				
11:15		123	29			116	30				
11:30		117	17			136	22				
11:45		138	26	509	122	136	21	524	116	1033	238
Total		3103	6343	3103	6343	3449	6123	3449	6123	6552	12466
Combined Total		9446		9446		9572		9572		19018	
AM Peak	-	07:30	-	-	-	07:45	-	-	-	-	-
Vol.	-	631	-	-	-	718	-	-	-	-	-
P.H.F.		0.826				0.940					
PM Peak	-	-	05:00	-	-	-	04:30	-	-	-	-
Vol.	-	-	971	-	-	-	896	-	-	-	-
P.H.F.			0.945				0.889				
Percentage		32.8%	67.2%			36.0%	64.0%				
ADT/AADT		ADT 19,018		AADT 19,018							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Whittier Boulevard
B/ Montebello Boulevard - Poplar Avenue
24 Hour Directional Volume Count

R12
Site Code: 999-23585

Start Time	6/7/23 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		26	156			45	153				
12:15		22	174			22	185				
12:30		21	191			26	153				
12:45		10	188	79	709	32	**177**	125	668	204	1377
01:00		17	188			27	**184**				
01:15		9	148			17	**164**				
01:30		10	168			30	**177**				
01:45		14	222	50	726	18	163	92	688	142	1414
02:00		14	203			13	148				
02:15		11	176			11	146				
02:30		12	193			10	163				
02:45		8	213	45	785	17	163	51	620	96	1405
03:00		8	205			15	163				
03:15		9	236			15	133				
03:30		22	233			15	160				
03:45		24	224	63	898	30	162	75	618	138	1516
04:00		15	224			22	171				
04:15		22	243			19	159				
04:30		27	214			23	182				
04:45		29	**276**	93	957	43	156	107	668	200	1625
05:00		36	**268**			47	151				
05:15		35	**259**			59	143				
05:30		58	**274**			73	167				
05:45		51	244	180	1045	88	173	267	634	447	1679
06:00		54	227			88	164				
06:15		60	232			119	134				
06:30		77	199			175	164				
06:45		59	203	250	861	159	147	541	609	791	1470
07:00		78	196			200	121				
07:15		77	150			**232**	116				
07:30		103	141			**227**	137				
07:45		112	144	370	631	**235**	129	894	503	1264	1134
08:00		133	125			**246**	124				
08:15		112	144			198	129				
08:30		146	137			199	126				
08:45		118	117	509	523	179	123	822	502	1331	1025
09:00		111	120			141	137				
09:15		112	127			158	118				
09:30		120	135			142	112				
09:45		122	82	465	464	146	85	587	452	1052	916
10:00		132	104			140	104				
10:15		131	71			126	83				
10:30		149	62			147	67				
10:45		145	64	557	301	135	74	548	328	1105	629
11:00		**143**	42			159	58				
11:15		**139**	38			143	49				
11:30		**155**	39			172	61				
11:45		**169**	34	606	153	159	39	633	207	1239	360
Total		3267	8053	3267	8053	4742	6497	4742	6497	8009	14550
Combined Total		11320		11320		11239		11239		22559	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	606	-	-	-	940	-	-	-	-	-
P.H.F.		0.896				0.955					
PM Peak	-	-	04:45	-	-	-	00:45	-	-	-	-
Vol.	-	-	1077	-	-	-	702	-	-	-	-
P.H.F.			0.976				0.954				
Percentage		28.9%	71.1%			42.2%	57.8%				
ADT/AADT		ADT 22,559		AADT 22,559							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Lincoln Avenue
N/ Avenida De La Merced
24 Hour Directional Volume Count

R13
Site Code: 999-23585

Start Time	6/7/23 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		5	55			6	42				
12:15		5	46			8	51				
12:30		0	65			8	41				
12:45		6	41	16	207	7	45	29	179	45	386
01:00		3	52			2	30				
01:15		1	47			5	44				
01:30		4	51			5	50				
01:45		5	40	13	190	4	52	16	176	29	366
02:00		5	60			2	32				
02:15		2	64			6	49				
02:30		2	55			2	51				
02:45		3	51	12	230	2	53	12	185	24	415
03:00		1	69			1	46				
03:15		2	87			5	60				
03:30		5	87			0	56				
03:45		3	86	11	329	2	68	8	230	19	559
04:00		4	131			2	73				
04:15		3	83			3	79				
04:30		9	**84**			4	84				
04:45		7	**109**	23	407	3	**87**	12	323	35	730
05:00		12	**111**			0	**104**				
05:15		13	**133**			1	**90**				
05:30		19	74			15	**97**				
05:45		14	76	58	394	18	73	34	364	92	758
06:00		33	93			17	65				
06:15		20	87			16	49				
06:30		37	61			18	59				
06:45		42	69	132	310	33	36	84	209	216	519
07:00		42	51			18	44				
07:15		53	43			38	61				
07:30		**78**	38			**69**	47				
07:45		**69**	32	242	164	**62**	30	187	182	429	346
08:00		**67**	35			**50**	38				
08:15		**60**	25			**43**	37				
08:30		49	20			54	30				
08:45		39	21	215	101	25	27	172	132	387	233
09:00		41	30			34	28				
09:15		41	19			30	26				
09:30		24	20			31	32				
09:45		27	13	133	82	35	21	130	107	263	189
10:00		34	23			25	20				
10:15		30	14			30	11				
10:30		41	14			22	28				
10:45		47	15	152	66	23	9	100	68	252	134
11:00		40	10			29	14				
11:15		39	6			34	16				
11:30		35	6			33	11				
11:45		57	9	171	31	40	5	136	46	307	77
Total		1178	2511	1178	2511	920	2201	920	2201	2098	4712
Combined Total		3689		3689		3121		3121		6810	
AM Peak	-	07:30	-	-	-	07:30	-	-	-	-	-
Vol.	-	274	-	-	-	224	-	-	-	-	-
P.H.F.		0.878				0.812					
PM Peak	-	-	04:30	-	-	-	04:45	-	-	-	-
Vol.	-	-	437	-	-	-	378	-	-	-	-
P.H.F.			0.821				0.909				
Percentage		31.9%	68.1%			29.5%	70.5%				
ADT/AADT		ADT 6,810		AADT 6,810							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Poplar Avenue
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count

R14
Site Code: 999-23585

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	15	6	0	0	0	0	0	0	0	0	0	0	21
01:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
02:00	0	7	3	0	0	0	0	0	0	0	0	0	0	10
03:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
04:00	**1**	16	6	0	1	0	0	0	0	0	0	0	0	24
05:00	0	18	6	0	1	0	0	0	0	0	0	0	0	25
06:00	0	37	15	0	3	0	0	0	0	0	0	0	0	55
07:00	0	**175**	**34**	**1**	**6**	**2**	0	0	0	0	0	0	0	**218**
08:00	0	123	24	0	3	2	0	0	0	0	0	0	0	152
09:00	0	127	18	0	2	0	0	0	0	0	0	0	0	147
10:00	0	55	16	0	0	0	0	0	0	0	0	0	0	71
11:00	0	70	16	1	3	0	0	0	0	0	0	0	0	90
12 PM	1	107	**28**	0	3	0	0	0	0	0	0	0	0	139
13:00	0	**121**	20	0	2	0	0	0	0	0	0	0	0	143
14:00	0	91	22	**3**	**7**	0	**1**	**1**	0	0	0	0	0	125
15:00	0	109	28	0	4	0	0	0	0	0	0	0	0	141
16:00	1	118	28	0	6	**1**	0	0	0	0	0	0	0	**154**
17:00	1	119	19	0	4	0	0	0	0	0	0	0	0	143
18:00	**2**	111	24	0	0	0	0	0	0	0	0	0	0	137
19:00	1	79	10	0	3	0	0	0	0	0	0	0	0	93
20:00	1	56	7	0	0	0	0	0	0	0	0	0	0	64
21:00	0	64	6	0	0	0	0	0	0	0	0	0	0	70
22:00	1	38	8	0	0	0	0	0	0	0	0	0	0	47
23:00	1	22	5	0	2	0	0	0	0	0	0	0	0	30
Total	10	1700	349	5	50	5	1	1	0	0	0	0	0	2121
Percent	0.5%	80.2%	16.5%	0.2%	2.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	04:00	07:00	07:00	07:00	07:00	07:00								07:00
Vol.	1	175	34	1	6	2								218
PM Peak	18:00	13:00	12:00	14:00	14:00	16:00	14:00	14:00						16:00
Vol.	2	121	28	3	7	1	1	1						154
Grand Total	10	1700	349	5	50	5	1	1	0	0	0	0	0	2121
Percent	0.5%	80.2%	16.5%	0.2%	2.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Poplar Avenue
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count

R14
Site Code: 999-23585

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	18	2	0	0	0	0	0	0	0	0	0	0	20
01:00	0	12	2	0	1	0	0	0	0	0	0	0	0	15
02:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8
03:00	1	11	1	0	0	0	0	0	0	0	0	0	0	13
04:00	0	13	4	0	1	0	0	0	0	0	0	0	0	18
05:00	**2**	19	11	0	1	0	0	0	0	0	0	0	0	33
06:00	0	47	10	0	1	0	0	0	0	0	0	0	0	58
07:00	2	122	24	0	2	0	0	**1**	0	0	0	0	0	151
08:00	1	**130**	**25**	0	2	0	0	0	0	0	0	0	0	**158**
09:00	0	89	20	0	**5**	0	0	0	0	0	0	0	0	114
10:00	0	58	17	**2**	2	0	0	0	0	0	0	0	0	79
11:00	0	118	21	0	0	0	0	0	0	0	0	0	0	139
12 PM	1	119	26	**4**	4	0	0	0	0	0	0	0	0	154
13:00	1	98	23	0	5	0	0	**1**	0	0	0	0	0	128
14:00	**2**	114	26	0	1	0	0	0	0	0	0	0	0	143
15:00	2	93	26	0	2	0	0	0	0	0	0	0	0	123
16:00	0	126	**36**	1	**6**	0	0	0	0	0	0	0	0	169
17:00	1	**136**	30	0	5	0	0	0	0	0	0	0	0	**172**
18:00	1	83	17	0	2	0	0	1	0	0	0	0	0	104
19:00	0	93	17	0	2	0	0	0	0	0	0	0	0	112
20:00	1	68	7	0	1	**1**	0	0	0	0	0	0	0	78
21:00	0	74	9	0	4	0	0	0	0	0	0	0	0	87
22:00	0	45	3	0	0	0	0	0	0	0	0	0	0	48
23:00	0	26	4	0	0	0	0	0	0	0	0	0	0	30
Total	15	1718	363	7	47	1	0	3	0	0	0	0	0	2154
Percent	0.7%	79.8%	16.9%	0.3%	2.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	05:00	08:00	08:00	10:00	09:00			07:00						08:00
Vol.	2	130	25	2	5			1						158
PM Peak	14:00	17:00	16:00	12:00	16:00	20:00		13:00						17:00
Vol.	2	136	36	4	6	1		1						172
Grand Total	15	1718	363	7	47	1	0	3	0	0	0	0	0	2154
Percent	0.7%	79.8%	16.9%	0.3%	2.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Montebello
Poplar Avenue
B/ Beverly Boulevard - Whittier Boulevard
24 Hour Directional Classification Count
Northbound, Southbound

R14
Site Code: 999-23585

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/07/23	0	33	8	0	0	0	0	0	0	0	0	0	0	41
01:00	0	24	2	0	1	0	0	0	0	0	0	0	0	27
02:00	0	13	5	0	0	0	0	0	0	0	0	0	0	18
03:00	1	21	1	0	0	0	0	0	0	0	0	0	0	23
04:00	1	29	10	0	2	0	0	0	0	0	0	0	0	42
05:00	**2**	37	17	0	2	0	0	0	0	0	0	0	0	58
06:00	0	84	25	0	4	0	0	0	0	0	0	0	0	113
07:00	2	**297**	**58**	1	**8**	**2**	0	**1**	0	0	0	0	0	**369**
08:00	1	253	49	0	5	2	0	0	0	0	0	0	0	310
09:00	0	216	38	0	7	0	0	0	0	0	0	0	0	261
10:00	0	113	33	**2**	2	0	0	0	0	0	0	0	0	150
11:00	0	188	37	1	3	0	0	0	0	0	0	0	0	229
12 PM	2	226	54	**4**	7	0	0	0	0	0	0	0	0	293
13:00	1	219	43	0	7	0	0	**1**	0	0	0	0	0	271
14:00	2	205	48	3	8	0	**1**	1	0	0	0	0	0	268
15:00	2	202	54	0	6	0	0	0	0	0	0	0	0	264
16:00	1	244	**64**	1	**12**	**1**	0	0	0	0	0	0	0	**323**
17:00	2	**255**	49	0	9	0	0	0	0	0	0	0	0	315
18:00	**3**	194	41	0	2	0	0	1	0	0	0	0	0	241
19:00	1	172	27	0	5	0	0	0	0	0	0	0	0	205
20:00	2	124	14	0	1	1	0	0	0	0	0	0	0	142
21:00	0	138	15	0	4	0	0	0	0	0	0	0	0	157
22:00	1	83	11	0	0	0	0	0	0	0	0	0	0	95
23:00	1	48	9	0	2	0	0	0	0	0	0	0	0	60
Total	25	3418	712	12	97	6	1	4	0	0	0	0	0	4275
Percent	0.6%	80.0%	16.7%	0.3%	2.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	05:00	07:00	07:00	10:00	07:00	07:00		07:00						07:00
Vol.	2	297	58	2	8	2		1						369
PM Peak	18:00	17:00	16:00	12:00	16:00	16:00	14:00	13:00						16:00
Vol.	3	255	64	4	12	1	1	1						323
Grand Total	25	3418	712	12	97	6	1	4	0	0	0	0	0	4275
Percent	0.6%	80.0%	16.7%	0.3%	2.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Appendix D
Signal Timing Worksheets

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 3

TYPE 170 PROGRAM

Intersection: MONTEBELLO BLVD. @ PARAMOUNT BLVD.
T.S. No.: 8149 (MTB)

Date Prepared: SMP 3-29-16 **By:** JSH
Date Implemented: 6-23-16 **By:** SP

PHASE TIMING		Keystrokes: F + Phase + Interval							
Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	0	7	7	0		7		0
Flashing Don't Walk	1	0	32	23	0		8		0
Minimum Green	2	9	10	11	10		10		1
Queue Maximum	3	0	25	0	20		25		0
Added Green/Actuation	4	0.0	0.0	0.0	0.0		0.0		0.0
Vehicle Extension	5	1.5	2.0	3.0	4.0		4.0		0.0
Maximum Gap	6	1.5	3.0	3.0	5.0		5.0		0.0
Minimum Gap	7	1.5	1.0	3.0	3.0		3.0		0.0
Max Extension 1 (Free)	8	30	50	40	50		50		0
Max Extension 2 (Coord)	9								
		OVLP A	OVLP B	OVLP C	OVLP D	OVLP E	OVLP F		
Ovlp Green Extension	A	0.0							
Ovlp Yellow Clearance	b	4.5							
Ovlp Red Clearance	C	1.0							
Reduce 0.1 Sec. Every...	d	0.0	1.5	0.0	1.5		1.5		0.0
Yellow Clearance	E	4.5	5.0	4.0	4.5		5.0		3.0
Red Clearance	F	1.0	1.0	2.0	1.0		1.0		0.0

Red Rest Delay	F-0-7	0
Green Rest Delay	F-0-8	0
Max Added Green	F-0-E	0
Red Revert	F-0-F	2.0

Remarks:
OL-A = Ø1 + Ø4
* DUAL PHASE DETECTOR-(1J3U) & (1J3L) ALSO CALLS Ø8

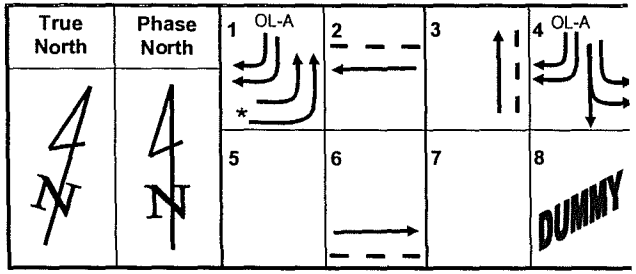
PREEMPTION		
Keystrokes: F + E + Function		
RxR Select (0, 1, 2)	1	0
RxR Track Clearance	0	1
RxR1 All Red	6.0	2
RxR2 Maximum (Minutes)		3
Free Time After Preempt		4
EV - A Delay		5
EV - A Clearance		6
EV - B Delay		7
EV - B Clearance		8
EV - C Delay		9
EV - C Clearance		A
EV - D Delay		b
EV - D Clearance		C
EV Maximum (Seconds)		d
EV Delay/Clearance Timer		E
RxR Delay/Clear/Mark Timer		F

EV AFTER RxR PREEMPTION		
EV Type Select	F-C-0	
Select : EV - A Enter 16 EV - B Enter 32 EV - C Enter 64 EV - D Enter 128		
Keystrokes: F + d + Function		
EV After RxR Delay		7
EV After RxR Clearance		8
EV After RxR Maximum		9

PREEMPTION PHASES									
Keystrokes: F + d + Function									
		1	2	3	4	5	6	7	8
EV- A	0								
EV- B	1								
EV- C	2								
EV- D	3								
RR Track Clear	4								
RR2 Ltd Service	5								
RR1 Exit Phase	6								

PHASE FUNCTION FLAGS									
Keystrokes: F + F + Function									
		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X	X	X		X		X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		
Minimum Vehicle Recall	3		X				X		
Pedestrian Recall + Rest in Walk	4						X		
Green Rest (Set Delay F-0-8)	5								
Red Rest (Set Delay F-0-7)	6								
Semi Traffic Actuated Mode	7								
Double Entry	8								
Maximum Vehicle Recall	9								
Restricted Phases	A								
Protected/Permissive Left Turn	b	X							
Barrier Recall	C								
First Phases After Start Up	d								
Yellow Start Up	E		X				X		
Overlap Yellow Start Up: →		A	b	C	d	E	F		
(Parents must be Yellow Start Up)	F								

LAG PHASE FLAGS		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X
PEDESTRIAN PHASES		1	2	3	4	5	6	7	8
2 Ped Load Switch	d-F-4		X						
4 Ped Load Switch	d-F-5			X					
6 Ped Load Switch	d-F-6						X		
8 Ped Load Switch	d-F-7								



DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

Intersection: MONTEBELLO BLVD. @ PARAMOUNT BLVD. **Date Prepared:** SMP 3-29-16 **By:** JSH

T.S. No.: 8149 (MTB) **Date Implemented:** 6-23-16 **By:** [illegible]

NOTE: Ensure ALL Blank Data Fields are set to ZERO or CLEARED.

App	Lanes	Description	File-Slot-Channel	Delay Code	Delay Seconds	Extended Call Code	Extended Call Seconds	Phase Flags Code	1	2	3	4	5	6	7	8	Attribute Flags Code	1	2	3	4	5	6	7	8
			I1U	d10		d30		db0									dd0								
			I1L																						
E	ALL	ADVANCE	2 I2U	d11		d31	2.0	db1		X							dd1								
			I2L	d12		d32		db2									dd2								
			I3U	d13		d33		db3									dd3								
			I3L	d14		d34		db4									dd4								
			I4U	d15		d35		db5									dd5								
			I4L																						
S	ALL	1ST VEHICLE (6'X25')*	3 I5U	d16	2	d36		db6			X						dd6								
			I5L																						
N	LT, 1	ADVANCE	4 I6U	d17		d37		db7				X					dd7								
			I6L	d18		d38		db8									dd8								
			I7U	d19		d39		db9									dd9								
			I7L	d1A		d3A		dbA									ddA								
N	LT	QUEUE (6'X50')*	4 I8U	d1b		d3b		dbb				X					ddb					X			
N	1	QUEUE (6'X50')*	4 I8L																						
N	RT-1, RT-2	6'X25' FRONT*	1 I9U	d1C	1	d3C		dbC	X							X	ddC								
N	RT-1, RT-2	6'X25' REAR*	1 I9L	d1d	255	d3d		dbd	X							X	ddd								
			J1U	d20		d40		dC0									dE0								
			J1L																						
W	1,2	ADVANCE	6 J2U	d21		d41		dC1						X			dE1								
			J2L	d22		d42		dC2									dE2								
W	LT-1	6'x50'*	1 J3U	d23		d43		dC3	X							X	dE3								
W	LT-2	6'x50'*	1 J3L	d24		d44		dC4	X							X	dE4								
W	1,2	QUEUE(15'x25')*	6 J4U	d25		d45	2.0	dC5						X			dE5					X			
			J4L																						
			J5U	d26		d46		dC6									dE6								
			J5L																						
E	LT	HOLDING(6'x50')*	2 J6U	d27		d47		dC7		X							dE7								
E	1	QUEUE(6'x25')*	2 J6L	d28		d48	2.0	dC8		X							dE8					X			
E	2	QUEUE(6'x25')*	2 J7U	d29		d49	2.0	dC9		X							dE9					X			
E	3	QUEUE(6'x25')*	2 J7L	d2A		d4A	2.0	dCA		X							dEA					X			
			J8U	d2b		d4b		dCb									dEb								
			J8L																						
			J9U	d2C		d4C		dCC									dEC								
			J9L	d2d		d4d		dCd									dEd								

Remarks: *INDICATES VIDEO DETECTION

DETECTOR ATTRIBUTES	
FLAG 1 - Red Lock	FLAG 5 - Queue Clearing
FLAG 2 - Red & Yellow Lock	FLAG 6 - Non-Counting
FLAG 3 - Yellow Disconnect	FLAG 7 - Special Delay Option
FLAG 4 - Red Calling	FLAG 8 - Special Delay Option

SPECIAL DETECTOR DELAY ASSIGNMENTS	Code	Phase 1	2	3	4	5	6	7	8
All options: Delay Timer resets during detector phase yellow.									
Special Delay Option 1 (Attribute Bit 7) - Bypasses delay while flagged phase(s) are timing.	d-d-E				X				
Special Delay Option 2 (Attribute Bit 8) - Bypasses delay while flagged phase(s) are timing.	d-d-F								

Special Delay Option 3 (Attribute Bits 7 & 8) - Bypasses delay when other phase in same quadrant IS NOT Green (1:2) (3:4) (5:6) (7:8).
Example: Phase 1 Detector delay will be overridden while Phase 2 Is Yellow or Red.

DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

Intersection: MONTEBELLO BLVD. @ PARAMOUNT BLVD. **T.S. No.:** 8149 (MTB)

System Limits:

Remote Master: **Date Prepared:** SMP 3-29-16 **By:** JSH

System No.: **Date Implemented:** 6-23-16 **By:** os

TIME OF DAY OPERATION SUMMARY			
	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1			
Offset 2			
Offset 3			
Free			
Special			

* Set Local Manual to 14 (Free) before setting or changing dial intervals or functions. Setting either of the manuals to zero will release that Manual.

Local Manual C-0-1
11 = Slave Mode
12 = Offset Timing Mode
14 = Free Operation
Observe Locations:
Calls d-F-C
Hold d-F-d
Ped Restrict d-F-E
Force Off d-F-F
Local Cycle Timer w/Field Calls C-0-b

SYNC PARAMETERS
d - 0 - d System Sync Width 2.0 Seconds
d - 0 - E Set Maximum Width 4.0 Seconds
d - 0 - F Set Minimum Width 1.0 Seconds

REMARKS:

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (In Seconds)			FUNCTION FLAGS												
					DIAL 1				DIAL 2				DIAL 3				
		Dial 1	Dial 2	Dial 3	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual * 14	0																0
Local Manual * 14	1																1
Master Dial	2																2
Local Dial	3																3
Offset Number	4																4
Time of Day Plan	5																5
Function 6	6																6
Current Table	7																7
Minimum Cycle	8																8
Maximum Cycle	9																9
Master Timer	A																A
Local Timer	b																b
System Timer	C																C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

Intersection: MONTEBELLO BLVD. @ PARAMOUNT BLVD. Date Prepared: SMP 3-29-16 By: JSH

T.S. No.: 8149 (MTB) Date Implemented: 6-23-16 By:

OVERLAP PHASE FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-A-A	X			X				
Overlap B	F-A-b								
Overlap C	F-A-C								
Overlap D	F-A-d								
Overlap E	F-A-E								
Overlap F	F-A-F								

OVERLAP GREEN OMIT PHASES

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-b-A								
Overlap B	F-b-b								
Overlap C	F-b-C								
Overlap D	F-b-d								
Overlap E	F-b-E								
Overlap F	F-b-F								

RAILROAD PREEMPT OVERLAP FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-C-A								
Overlap B	F-C-b								
Overlap C	F-C-C								
Overlap D	F-C-d								
Overlap E	F-C-E								
Overlap F	F-C-F								

EMERGENCY VEHICLE PREEMPT OVERLAP FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-d-A								
Overlap B	F-d-b								
Overlap C	F-d-C								
Overlap D	F-d-d								
Overlap E	F-d-E								
Overlap F	F-d-F								

LOAD SWITCH ASSIGNMENT

Ped A to Overlap A **	F-9-A	
Ped B to Overlap B **	F-9-b	
Send Overlap C Output to Phase	F-9-C	
Send Overlap D Output to Phase	F-9-d	
Send Overlap E Output to Phase	F-9-E	
Send Overlap F Output to Phase	F-9-F	

Overlap Notes
2-Color Overlaps (A-B) 3-Color Overlaps (C-F)

Unused Right Turn Overlap outputs may be assigned as additional Peds.

PED A uses J11U for Ped Push Button Input.
PED B uses J11L for Ped Push Button Input.

** Set Vehicle Phases for Ped A/B to time with.

USER FLAG OPTIONS Keystrokes: d + E + F			USER FLAG NOTES
True Maximum Extension	1		The True Maximum Extension flag does NOT allow a maxed out phase to extend.
EV Pedestrian Clearance NOT Protected	2		EV Clearance is NOT protected when this flag is set.
	3		Unused.
Mid-Block Pedestrian Crossing	4		Phases 2 & 6 Red Flash during Phase 4 Ped Protection.
Delay RR Track Clearance Phase Green	5		Delays Track Clearance until Overlaps time out.
Echo Remote Coordination Input to Output	6		SUB-MASTER OPERATION: Echo Slave Data to Master Output.
Enable Manual Control	7		Enables Manual Advance Operation. Requires MANUAL switch.
Delay EV Clearance Phase Green	8		Delays EV Clearance until Overlaps time out.

ASSOCIATED PHASE RECALL

A Locked Call is placed on the Flagged Phase when the Associated Recall Phase Is Green.

Flagged Phases →		1	2	3	4	5	6	7	8
Phase 1	F-C-1								
Phase 2	F-C-2								
Phase 3	F-C-3								
Phase 4	F-C-4								
Phase 5	F-C-5								
Phase 6	F-C-6								
Phase 7	F-C-7								
Phase 8	F-C-8								

PHASE / OVERLAP REASSIGNMENTS

Phases →		1	2	3	4	5	6	7	8
Phase Driveway Flash	F-A-0								
Phase Yellow Ranging *	F-A-1								
Overlaps →		A	B	C	D	E	F		
Overlap Driveway Flash	F-A-2								
Overlap Yellow Ranging *	F-A-3								
Ped 2 Load Switch Overlap	F-A-4								
Ped 4 Load Switch Overlap	F-A-5								
Ped 6 Load Switch Overlap	F-A-6								
Ped 8 Load Swltch Overlap	F-A-7								

Notes:
*Phase/Overlap Yellow Ranging - These Flags remove the minimum and maxlmum limits on the yellow settings.

Remarks:

DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

Intersection: MONTEBELLO BLVD. @ PARAMOUNT BLVD. Date Prepared: SMP 3-24-16 By: JSH

T.S. No.: 8149 (MTB) Date Implemented: 6-23-16 By: QC

TABLE 0 - DEFAULT			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
0-0	:								
0-1	:								
0-2	:								
0-3	:								
0-4	:								
0-5	:								
0-6	:								
0-7	:								
0-8	:								
0-9	:								
0-A	:								
0-b	:								
0-C	:								
0-d	:								
0-E	:								
0-F	:								

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

SLAVE MODE TABLE			s	m	t	w	t	f	s
Code	Hour : Min	Dial	1	2	3	4	5	6	7
5-0	:								
5-1	:								
5-2	:								
5-3	:								
5-4	:								
5-5	:								
5-6	:								
5-7	:								
5-8	:								
5-9	:								
5-A	:								
5-b	:								
5-C	:								
5-d	:								
5-E	:								
5-F	:								

TABLE 1			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
1-0	:								
1-1	:								
1-2	:								
1-3	:								
1-4	:								
1-5	:								
1-6	:								
1-7	:								
1-8	:								
1-9	:								
1-A	:								
1-b	:								
1-C	:								
1-d	:								
1-E	:								
1-F	:								

Plan = Plan Number

O/D	D1	D2	D3
01 =	1	2	3
02 =	4	5	6
03 =	7	8	9

Keys:
0 = No Days
8 = All Days
9 = Week Days

Plans:
A = Protected/Permissive Arrows (F-F-b) Disabled.
b = Slave Mode (4 Wire / 7 Wire Input)
C = Offset Timing Mode
d = T.O.D. Output (Detector Reset Line) "ON".
E = Function 6
F = Reset Plans A & d.

Table 6:
C = Continue the Floating Holiday by C (0-9) days.
N^{th} = The number of the occurrence in the month.
(1-5, 9 = Always the last occurrence in the month.)
i. e. Thanksgiving = 11/1/4 [table] flag Thursday continues one extra day.

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / C / N^{th}	Table	1	2	3	4	5	6	7
6-0	01 / 0 / 3	1		X					
6-1	02 / 0 / 3	1		X					
6-2	05 / 0 / 9	1		X					
6-3	09 / 0 / 1	1		X					
6-4	11 / 1 / 4	1					X		
6-5	/ /								
6-6	/ /								
6-7	/ /								
6-8	/ /								
6-9	/ /								
6-A	/ /								
6-b	/ /								
6-C	/ /								
6-d	/ /								
6-E	/ /								
6-F	/ /								

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
2-9	:								
2-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								
2-F	:								

TABLE 4			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
4-0	:								
4-1	:								
4-2	:								
4-3	:								
4-4	:								
4-5	:								
4-6	:								
4-7	:								
4-8	:								
4-9	:								
4-A	:								
4-b	:								
4-C	:								
4-d	:								
4-E	:								
4-F	:								

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
7-0	01 / 01	1		X	X	X	X	X	
7-1	01 / 02	1		X					
7-2	07 / 04	1		X	X	X	X	X	
7-3	07 / 05	1		X					
7-4	11 / 10	1						X	
7-5	11 / 11	1		X	X	X	X	X	
7-6	11 / 12	1		X					
7-7	12 / 24	1		X	X	X	X	X	
7-8	12 / 25	1		X	X	X	X	X	
7-9	12 / 26	1		X				X	
7-A	/								
7-b	/								
7-C	/								
7-d	/								
7-E	/								
7-F	/								

DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

Intersection: MONTEBELLO BLVD. @ PARAMOUNT BLVD. Date Prepared: SMP 3-24-16 By: JSH

T.S. No.: 8149 (MTB) Date Implemented: 6-23-16 By:

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
8-0	/								
8-1	/								
8-2	/								
8-3	/								
8-4	/								
8-5	/								
8-6	/								
8-7	/								
8-8	/								
8-9	/								
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
9-0	/								
9-1	/								
9-2	/								
9-3	/								
9-4	/								
9-5	/								
9-6	/								
9-7	/								
9-8	/								
9-9	/								
9-A	/								
9-b	/								
9-C	/								
9-d	/								
9-E	/								
9-F	/								

NOTES ON USING TABLES:
Starting from the base display [A/b], Table access is gained with two digit Table Code. Access is verified by the flashing of Call Light 9.

Five key presses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:
A-C = Clock Display
A-D = Date Display

d-0-0 = 1 Force Repoll of WWV Receiver
d-0-1 = Hour of Last Repoll
d-0-2 = Minute of Last Repoll
d-0-3 = Second of Last Repoll
d-0-4 = Month of Last Repoll
d-0-5 = Day of Last Repoll
d-0-6 = Year of Last Repoll

OBSERVE ONLY:
E-3-8 = Ring A Max Timer
E-4-8 = Ring B Max Timer
E-6-3 = 4 T.O.D. Output
E-6-3 = 5 Offset Timing Mode
E-6-3 = 6 Slave Mode
E-6-3 = 7 Maximum Extension 2 (Coord)
E-6-3 = 8 Arrows Disabled

F-0-0 = Phase / Dial Copy - Source
Phase (1-8) Dial (11-13)
F-0-1 = Phase / Dial Copy - Destination
Phase (1-8) Dial (11-13)
F-0-2 = Table/Dial Insert/Delete - Target
Table (0-9) Table (1=10) Dial (11-13)
F-0-3 = Table/Dial Insert/Delete - Interval
Insert 1-16 Delete 101-116
F-0-4 = Program Number
F-0-5 = Version Number

F-0-A = 1 Searches Annual Event Tables.
F-0-A = 071 Save Timing to Prom Module.
F-0-A = 170 Download Timing into 170.
F-0-A = 777 Reinitialization from NOVRAM.
F-0-A = 888 Reinitialization from EPROM.
F-0-A = 999 Clears All Tables and Loads Default Holiday Events.

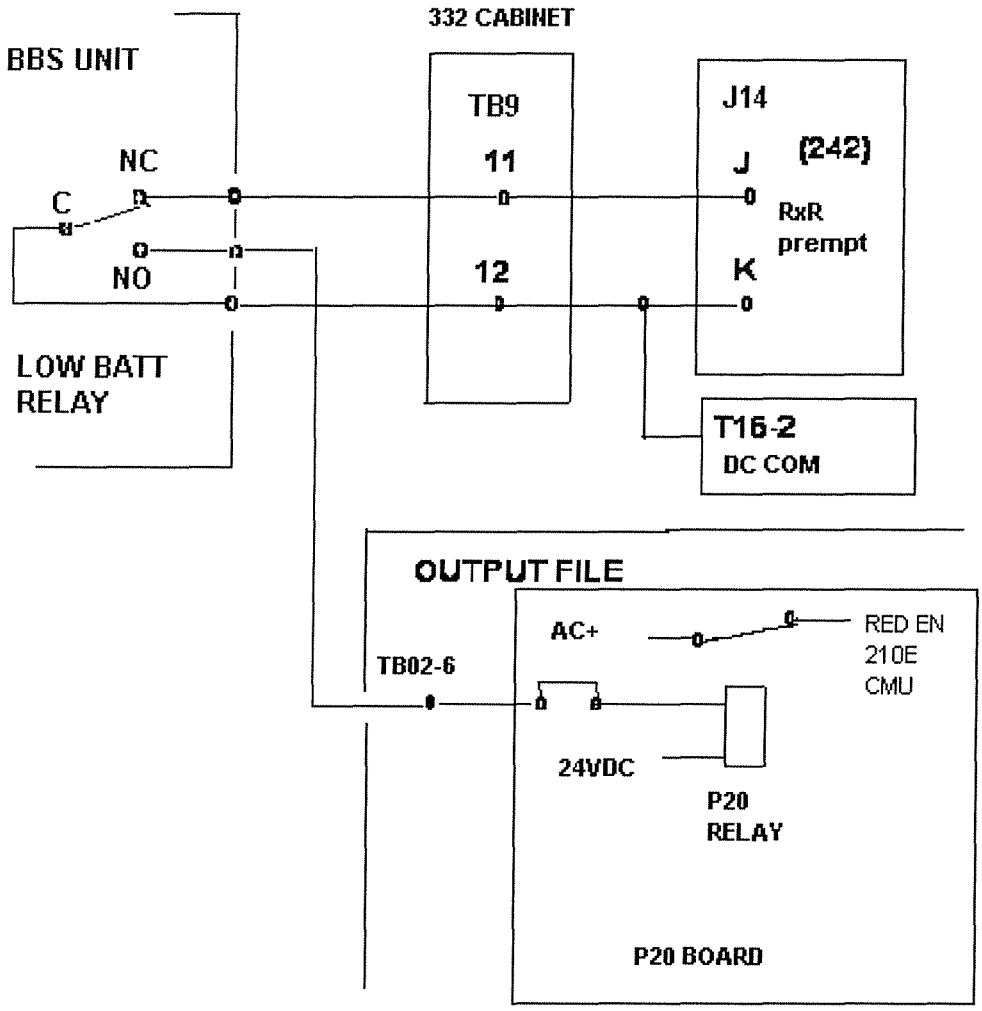
OFFSETS			
Keystrokes: F + 9 + CODE			
OFFSET 1	Dial 1	1	
	Dial 2	2	
	Dial 3	3	
OFFSET 2	Dial 1	4	
	Dial 2	5	
	Dial 3	6	
OFFSET 3	Dial 1	7	
	Dial 2	8	
	Dial 3	9	

COMMUNICATIONS ASSIGNMENTS		
Keystrokes: d + 0 + FUNCTION		
PORT 1	7	1
PORT 2	8	
PORT 3	9	
PORT 4	A	

0 = Off
1 = WWV Radio Receiver
2 = ML2 Protocol - Coord OUT Only
4 = ML2 Protocol - Coord IN & OUT
7 = ML2 Protocol - Coord IN Only
8 = Remote Monitoring (Future)
12 = Sends Time/Date String Out of Modem
17 = Receives Time/Date String from Modem

REMARKS:

A LOW BATTERY PREEMPT FOR BATTERY BACKUP SYSTEMS



In the controller, Railroad Preempt 1 will be enabled, with RR Red set to 6 sec.

In normal operation, railroad preempt will be false (low) and the CMU's Red Enable input will be true (AC+). The signal will run normally.

During a low battery state with loss of utility power, the low battery relay will pick, railroad preempt will be true and the CMU's Red Enable will be false (open). The signal will transition to a flashing red condition (RR 1).

When utility power returns, the signal will exit railroad preempt, that is will go "all-red" for 6 sec's, and return to normal operation.

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 1R NV - TIME - BASED
TYPE 170 PROGRAM

Revised on 7-30-15 (Semmo) per Micheal Ortega KAA STR ME

Intersection: BEVERLY BL. @ MONTEBELLO BL. **Date Requested:** 7-23-02 PD **By:** PFP

T.S. No.: MTB 8930 **SYSTEM COMPLETED** **Date:** _____ **By:** _____ **Date Completed:** _____ **By:** _____

PHASE TIMING

Keystrokes: F + Phase + Interval

Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	0	7	0	7	0	67	0	7
Flashing Don't Walk	1	0	18	0	15	0	19	0	17
Minimum Green	2	4	6	4	6	4	6	4	6
Queue Maximum	3	0	25	0	25	0	25	0	25
Added Green/Actuation	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Extension	5	2.5	4.0	0.2	4.0	2.5	2.0	0.2	4.0
Maximum Gap	6	2.5	5.0	0.2	5.0	2.5	3.0	0.2	5.0
Minimum Gap	7	2.5	3.0	0.2	3.0	2.5	1.0	0.2	3.0
Max Extension 1 (Free)	8	20	50	20	50	20	50	20	50
Max Extension 2 (Coord)	9	20	110	20	50	20	110	20	50
Offset 1	A	Dial 1 30	Dial 2	Dial 3					
Offset 2	b		56						
Offset 3	C			24					
Reduce 0.1 Sec. Every...	d	0.0	1.2	0.0	1.2	0.0	1.2	0.0	1.2
Yellow	E	3.0	~~4.0~~	3.0	4.0	3.0	~~4.0~~	3.0	~~4.0~~
Red Clearance	F	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~

Max Added Green	F-0-E	0
Red Revert	F-0-F	20

Remarks:

1.0 4.1 0.6 4.3 1.0 4.2 1.0 1.0

* LEADING GREEN ARROW

PREEMPTION

Keystrokes: F + E + Function

RR Select (0, 1, 2)		0
Track Clearance		1
RR Red		2
RR2 Maximum (Minutes)		3
EV- A Delay		4
EV- A Clearance		5
EV- B Delay		6
EV- B Clearance		7
EV- C Delay		8
EV- C Clearance		9
EV- D Delay	0	A
EV- D Clearance	30	b
EV Maximum (Seconds)	35	C
Delay Timer		d
Clearance Timer		E
Maximum Timer		F

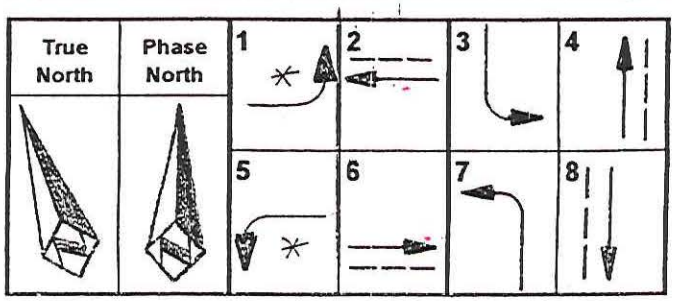
PHASE FUNCTION FLAGS

Keystrokes: F + F + Function

		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X	X	X	X	X	X	X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		X
Minimum Vehicle Recall	3								
Pedestrian Recall + Rest In Walk	4								
Pedestrian Phases	5		X		X		X		X
Rest in Red	6	X		X		X		X	
Semi Traffic Actuated Mode	7								
Double Entry	8								
Maximum Vehicle Recall	9								
Overlap A	A								
Overlap B	b								
Barrier Recall	C								
Rest In Green	d								
Yellow Start Up	E		X				X		
Protected / Permissive Left Turn	F	X				X			

LAG PHASE FLAGS

		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X



LACO-1R WWV DETECTOR ASSIGNMENTS

T.S.: MTB 8930 Intersection: BEVERLY BL. @ MONTEBELLO BL. Date Req: 10-1-96 By: SDB ODD

App	Lanes	Description	Phase File - Slot Channel	Delay Code	Delay Seconds	Extended Call Code	Extended Call Seconds	Remarks (Note: The four Programmable Detectors will default to normal phasing if not flagged.)	Yellow Disconnect Code	Yellow Disconnect Lite	Yellow Disconnect On	Queue Clearing Code	Queue Clearing Lite	Queue Clearing On
W	LT	Q-LENGTH	1I1U	d10	5	d30			dF4	1		dF8	1	
			1I1L											
E	1,2	ADVANCE	2I2U	d11		d31			dF4	2		dF8	2	
			2I2L	d12		d32			dF4	3		dF8	3	
			2I3U	d13		d33			dF4	4		dF8	4	
			2I3L	d14		d34			dF4	5		dF8	5	
E	1,2	QUEUE CL.	2I4U	d15		d35		Call Ø: 1 2 3 4 5 6 7 8 / dd8	dF4	6		dF8	6	X
			2I4L											
N	LT	6'X100'	3I5U	d16		d36			dF4	7		dF8	7	
			3I5L											
E	1	ADVANCE	4I6U	d17		d37			dF4	8		dF8	8	
S	2	ADVANCE	4I6L	d18	5	d38			dF5	1		dF9	1	
S	RT	QUEUE CL.	4I7U	d19	10	d39			dF5	2		dF9	2	X
S	RT	QUEUE CL.	4I7L	d1A	255	d3A			dF5	3		dF9	3	X
S	1,2	QUEUE CL.	4I8U	d1b		d3b		Call Ø: 1 2 3 4 5 6 7 8 / dd9	dF5	4		dF9	4	X
			4I8L											
			1I9U	d1C		d3C			dF5	5		dF9	5	
			3I9L	d1d		d3d			dF5	6		dF9	6	
W	LT	Q-LENGTH	5J1U	d20	5	d40			dF6	1		dFA	1	
			5J1L											
E	1,2	ADVANCE	6J2U	d21		d41	2.0		dF6	2		dFA	2	
			6J2L	d22		d42			dF6	3		dFA	3	
S	LT	HOLDING	6J3U	d23		d43			dF6	4	X	dFA	4	
E	LT	HOLDING	6J3L	d24		d44			dF6	5	X	dFA	5	
E	1,2	QUEUE CL.	6J4U	d25		d45		Call Ø: 1 2 3 4 5 6 7 8 / ddA	dF6	6		dFA	6	X
			6J4L											
S	LT	6'X100'	7J5U	d26		d46			dF6	7		dFA	7	
			7J5L											
N	1	ADVANCE	8J6U	d27		d47			dF6	8		dFA	8	
N	2	ADVANCE	8J6L	d28	5	d48			dF7	1		dFb	1	
N	RT	QUEUE CL.	8J7U	d29	10	d49			dF7	2		dFb	2	X
N	RT	QUEUE CL.	8J7L	d2A	255	d4A			dF7	3		dFb	3	X
N	1,2	QUEUE CL.	8J8U	d2b		d4b		Call Ø: 1 2 3 4 5 6 7 8 / ddb	dF7	4		dFb	4	X
			8J8L											
			5J9U	d2C		d4C			dF7	5		dFb	5	
			7J9L	d2d		d4d			dF7	6		dFb	6	

YELLOW DISCONNECT QUICK REFERENCE

Code	Call Lights 1	2	3	4	5	6	7	8
dF4								
dF5								
dF6				X	X			
dF7								

Remarks:

QUEUE CLEARING DETECTOR QUICK REFERENCE

Code	Call Lights 1	2	3	4	5	6	7	8
dF8						X		
dF9		X	X	X				
dFA						X		
dFb		X	X	X				

LACO - 1R WWV - TIME - BASED COORDINATION

T.S. No.: MTB 8390 Intersection: BEVERLY BL. @ MONTEBELLO BL.

System Limits: 3RD ST./WOODS AV/POMONA BL. TO ACACIA AV. ON BEVERLY BL. PARAMOUNT BL. TO BEVERLY BL. ON MONTEBELLO BL. PD KAA

Remote Master: WWV Date Requested: 2-6-03 PD By: SDD BPD

System No. : 45F & 46E Date Completed: By:

TIME OF DAY OPERATION SUMMARY

	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALL OTHER TIMES		
Offset 2		0600-0900 M-F	
Offset 3			1500-1900 M-F
Free	2200-0600 M-F / 2200-0800 S-S		
Special			

*Set Local Manual to 14 (free) before setting or changing dial intervals & functions. Setting either of the Manuals to 0 will release that Manual.

Offset Timing Mode:

A 12 at C-0-1 or by T.O.D. enables this mode and uses the Dial 3 Intervals and Functions.

Observe:

Call	d-F-C
Hold	d-F-d
Ped Restrict	d-F-E
Force - Off	d-F-F
Cycle with Field Calls	C-0-b
Master Sync Pulse Width	d-0-d

INTERCONNECT SELECT

d-0-0 [ ] 7 = Slave [√] 170 = Master

d-0-E Set Maximum Width 4.0 Seconds

d-0-F Set Minimum Width 1.0 Seconds

Remarks:

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (in seconds) Dial 1	Dial 2	Dial 3	FUNCTION FLAGS DIAL 1 Force Off	Hold	Ped Rstrict	Call	DIAL 2 Force Off	Hold	Ped Rstrict	Call	DIAL 3 / OFFSET TIMING Force Off	Hold	Ped Rstrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual*	0	90	100	100	2,6				2,6				2,6				0
Local Manual* 0	1	1	1	1	-,-				-,-				-,-				1
Master Dial	2	19	18	18	3,7				3,7				3,7				2
Current Dial	3	20	19	19	-,-				-,-				-,-				3
Offset Number	4	23	22	22			4,8				4,8				4,8		4
Time of Day Plan	5	36	35	35			4,8	2,6			4,8	2,6			4,8	2,6	5
Function 6 14	6	~~48~~ 47	~~47~~ 46	~~47~~ 46	4,8		-,-	2,6	4,8		-,-	2,6	4,8		-,-	2,6	6
Current Table	7	~~49~~ 48	~~48~~ 47	~~48~~ 47	-,-			2,6	-,-			2,6	-,-			2,6	7
Minimum Cycle 0	8	60	60	61	1,5			2,6	1,5			2,6	1,5			2,6	8
Maximum Cycle 255	9	61	61	62	-,-	2,6		-,-	-,-	2,6		-,-	-,-	2,6		-,-	9
Master Timer	A	64	74	74		2,6	2,6			2,6	2,6			2,6	2,6		A
Local Timer	b	67	82	86		-,-	2,6			-,-	2,6			-,-	2,6		b
New Offset	C	90	100	100			-,-				-,-				-,-		C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

LACO-1R WWV TIME BASE UNIT

CLOCK AND EVENT TABLE SHEET

INTERSECTION: BEVERLY BL. @ MONTEBELLO BL. REQUESTED DATE: 12-20-94 BY: PPP

TS No: MTB 8930 COMPLETED DATE: _____ BY: _____

CLOCK

CONTROL CODE A-C

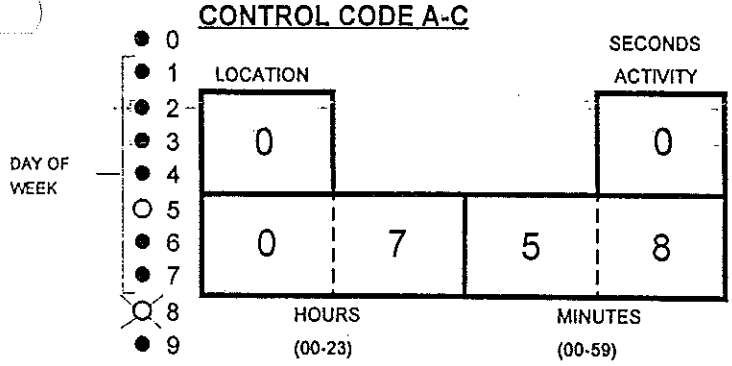


FIG. 1

CONTROL CODE A-D

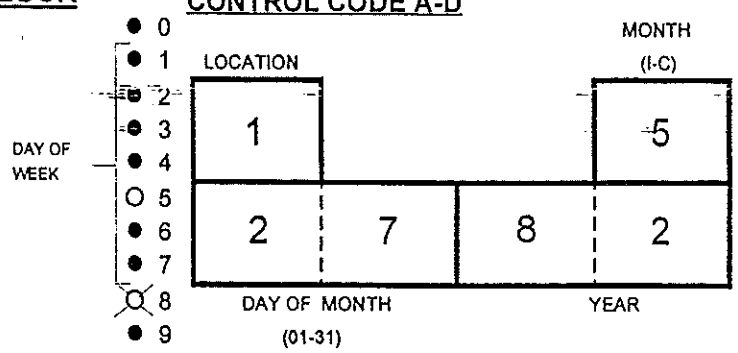


FIG. 2

ABOVE EXAMPLES

7:58 A.M. ON THURSDAY (FIG. 1)

MAY 27, 1982 (FIG. 2)

DAY OF WEEK

1	SUNDAY
2	MONDAY
3	TUESDAY
4	WEDNESDAY
5	THURSDAY
6	FRIDAY
7	SATURDAY

MONTH

1	JANUARY	7	JULY
2	FEBRUARY	8	AUGUST
3	MARCH	9	SEPTEMBER
4	APRIL	A	OCTOBER
5	MAY	B	NOVEMBER
6	JUNE	C	DECEMBER

DIRECTIONS

At control code A - C, key in hours and minutes, then key in 0 for seconds activity. Enter key E and turn on call light corresponding to day of the week. (NOTE: Seconds start at 0 seconds - for observation and correction use address D - 4 - F).)ontrol code A - D, key in the day of the month, year, and month, then enter key E.

EVENT TABLE

CONTROL CODE 9-3

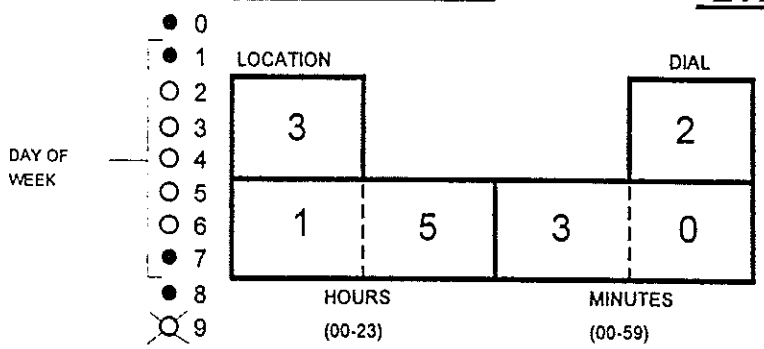


FIG. 3

ABOVE EXAMPLE

The example (FIG. 3), shows a time of day event at control code 9-3 with dial 2 to start at 3:30 P.M. each weekday from Monday through Friday.

DIRECTIONS

To set an event, key in 9 + the table location, key in hour, minute, and event, then enter key E. Set day(s) with call/active lights. To observe current event use address C - 0 - 5. (NOTE: These time of day events are local - not system events.)

REMARKS

FOR DIRECT INTERCONNECT ONLY. (D00=7)

			DAY AND LIGHT ←Set DAYusing call/active LIGHT→						
LOC. 9 + ↓	TIME	EVENT * DIAL	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

* DIAL 1 = 1, 2 = 2, 3 = 3, FREE = E, OFF = 0.
(NOTE: At C - 0 - 5, FREE = 14)
OFFSET TIMING = C T.O.D. FLASH = F

LACO-1R WWV - TIME - BASED EVENT TABLES

Intersection: Beverly Bl @ Monterello Bl Date Requested: 7-23-02 PD By: KAH

T.S. No.: MTS 8926 Date Completed: _____ By: _____

TABLE 0 - DEFAULT			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
0-0	00 : 00	E	X	X	X	X	X	X	X
0-1	06 : 00	5		X	X	X	X	X	
0-2	08 : 00	1	X						X
0-3	09 : 00	1		X	X	X	X	X	
0-4	15 : 00	9		X	X	X	X	X	
0-5	19 : 00	1		X	X	X	X	X	
0-6	22 : 00	E	X	X	X	X	X	X	X
0-7	:								
0-8	:								
0-9	:								
0-A	:								
0-b	:								
0-C	:								
0-d	:								
0-E	:								
0-F	:								

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
5-0	/								
5-1	/								
5-2	/								
5-3	/								
5-4	/								
5-5	/								
5-6	/								
5-7	/								
5-8	/								
5-9	/								
5-A	/								
5-b	/								
5-C	/								
5-d	/								
5-E	/								
5-F	/								

TABLE 1			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
1-0	:								
1-1	:								
1-2	:								
1-3	:								
1-4	:								
1-5	:								
1-6	:								
1-7	:								
1-8	:								
1-9	:								
1-A	:								
1-b	:								
1-C	:								
1-d	:								
1-E	:								
1-F	:								

Plan = Plan Number

	D1	D2	D3
O1 =	1	2	3
O2 =	4	5	6
O3 =	7	8	9

Plans:

A = Arrows On

d = Arrows Off

C = Offset Timing

E = Function 6

F = Flash

Keys:

0 = No Days

8 = All Days

9 = Weekdays

Table #4, N^{th} = The number of the occurence in the month (1-5). 99 = Always the last occurence in the month.

I.E. Thanksgiving = 11 / 04 [Table] and Thursday.

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
6-0	/								
6-1	/								
6-2	/								
6-3	/								
6-4	/								
6-5	/								
6-6	/								
6-7	/								
6-8	/								
6-9	/								
6-A	/								
6-b	/								
6-C	/								
6-d	/								
6-E	/								
6-F	/								

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
2-9	:								
2-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								
2-F	:								

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / N^{th}	Table	1	2	3	4	5	6	7
4-0	01 / 00			X					
4-1	02 / 03	1		X					
4-2	05 / 99	1		X					
4-3	09 / 01	1		X					
4-4	11 / 04	1					X		
4-5	/								
4-6	/								
4-7	/								
4-8	/								
4-9	/								
4-A	/								
4-b	/								
4-C	/								
4-d	/								
4-E	/								
4-F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
7-0	/								
7-1	/								
7-2	/								
7-3	/								
7-4	/								
7-5	/								
7-6	/								
7-7	/								
7-8	/								
7-9	/								
7-A	/								
7-b	/								
7-C	/								
7-d	/								
7-E	/								
7-F	/								

LACO-1R WWV-TIME-BASED ANNUAL TABLES

Intersection: Beverly Bl @ Montebello Bl Date Requested: 7-23-02 PD By: KM

T.S. No.: MTB 3930 Date Completed: _____ By: ____

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Flag	1	2	3	4	5	6	7
8-0	01 / 01	1		X	X	X	X	X	
8-1	01 / 02	1		X					
8-2	07 / 04	1		X	X	X	X	X	
8-3	07 / 05	1		X					
8-4	11 / 10	1						X	
8-5	11 / 11	1		X	X	X	X	X	
8-6	11 / 12	1		X					
8-7	12 / 24	1		X	X	X	X	X	
8-8	12 / 25	1		X	X	X	X	X	
8-9	12 / 26	1		X				X	
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

EXCEPTION TIMES			Table 8 Flags						
Code	Hour : Min	Plan	1	2	3	4	5	6	7
9-0	00:00	E	X						
9-1	04:00	1	X						
9-2	22:30	E	X						
9-3	:								
9-4	:								
9-5	:								
9-6	:								
9-7	:								
9-8	:								
9-9	:								
9-A	:								
9-b	:								
9-C	:								
9-d	:								
9-E	:								
9-F	:								

NOTES ON USING TABLES:

Starting from the base display [A/b], Table access is gained with a two digit Table Code. Access is verified by the flashing of both Call Light 9 and the Phase digit* of the display (* No Flash if Table # & Event # match).

Five keypresses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:

d-0-3 = 1 Search Tables
d-0-3 = 3 Repoll WWV Clock
d-A-F = 1 Repoll WWV Clock
d-0-3 = 071 Save Timing to Prom Module
d-0-3 = 170 Download Timing into 170
d-0-3 = 999 Clear All Tables
F-0-0 = Phase / Dial Copy - Source
F-0-1 = Phase / Dial Copy - Destination
F-0-4 = Program Number (66)
d-0-8,9,A = Mo,Day,Yr of Latest Revision
E-E-0-0 = Reinitialization

SPECIAL FUNCTION TABLE Keystrokes: F + d + Function		Phase Flags							
		1	2	3	4	5	6	7	8
(Green) Calling Phases	0								
(Green) Call To Phases	1								
(Yellow) Calling Phases	2								
(Yellow) Call To Phases	3								
Auxiliary Ovlp A Output	4								
Mid-Block Ped Crossing	5								
Driveway Flash	6								
Green Extension	7								
Sequential Ped	8								
Not Used	9								
EV- A Clearance Phases	A								
EV- B Clearance Phases	b								
EV- C Clearance Phases	C								
EV- D Clearance Phases	d			X				X	
Track Clearance Phases	E								
Limited Service Phases	F								

When Any Flagged Phase Is Green - - -

- - - Place A Locked Call To These Phases.

When Any Flagged Phase Is Yellow - - -

- - - Place A Locked Call To These Phases.

"Three Color Single Phase Overlap" Outputs On Auxiliary File - Slot 1

Ø4P Only. Ø2 & Ø6 Reds Flash During Ø4P Clearance

Flashes The Green Outputs Of The Selected Phases

Staggered Termination At Barrier Crossing

Allows Ø1, Ø3 or Ø5 Ped to output on the Ø8P Load Switch

OVERLAP GREEN OMIT	Keys	1	2	3	4	5	6	7	8
Green Omit for Overlap A	F - C - 4								
Green Omit for Overlap B	F - C - 5								
Green Omit for Overlap C	F - C - 6								
Green Omit for Overlap D	F - C - 7								

F-9-7		Coordination Free Time (Seconds) After Railroad Preempt
F-9-d		Green Rest Delay Time (Seconds)
d-0-1		RAILROAD ROUTINE SELECT: 0 = Normal Railroad 1 = Special Two Input Railroad Routine
d-0-2		MANUAL CONTROL: 0 = Not Enabled 1 = No Recalls 2 = Vehicle Recalls 3 = Vehicle and Ped Recalls

PHASE OMIT	Keys	1	2	3	4	5	6	7	8
Phase Omit (Observe Only)	d - d - 4								
Phase Omit for Dial 1	d - d - 5								
Phase Omit for Dial 2	d - d - 6								
Phase Omit for Dial 3	d - d - 7								

ADDITIONAL OVERLAPS	Keys	1	2	3	4	5	6	7	8
Aux File 2 Color Overlap C	d - d - C								
Aux File 2 Color Overlap D	d - d - d								
Ø7 Load Sw. 3 Color Ovrlp E	d - d - E								
Green Omit for Overlap E	d - d - F								

PHASE OMIT is active when Coordination CALL function is active *and* the OMIT flag is set.

Overlap E will not function if the Railroad Preempt has been selected.

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 1R[illegible]WV - TIME - BASED
TYPE 170 PROGRAM

Intersection: WHITTIER BOULEVARD @ MONTEBELLO BOULEVARD

Date Requested: 7-16-02 RW **By:** MS

T.S. No.: 8452

Date Completed: 10-9-02 **By:** L.C

PHASE TIMING

Keystrokes: F + Phase + Interval

Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0		7	0	7		7	0	7
Flashing Don't Walk	1		17	0	13		17	0	12
Minimum Green	2		6	4	6		6	4	6
Queue Maximum	3		25	0	25		25	0	25
Added Green/Actuation	4		0.0	0.0	0.0		0.0	0.0	0.0
Vehicle Extension	5		1.5	1.5	4.5		1.5	1.5	4.5
Maximum Gap	6		2.5	1.5	5.5		2.5	1.5	5.5
Minimum Gap	7		0.5	1.5	3.5		0.5	1.5	3.5
Max Extension 1 (Free)	8		50	20	50		50	20	50
Max Extension 2 (Coord)	9		110	20	110		110	20	110
Offset 1	A	Dial 1: 9	Dial 2: 43	Dial 3: 51					
Offset 2	b								
Offset 3	C								
Reduce 0.1 Sec. Every...	d		1.5	0.0	1.0		1.5	0.0	1.0
Yellow	E		4.0	3.0	4.0		4.0	3.0	4.0
Red Clearance	F		1.0	0.5	1.0		1.0	0.5	1.0

Max Added Green	F-0-E	0
Red Revert	F-0-F	2.0

Remarks:

PREEMPTION

Keystrokes: F + E + Function

RR Select (0, 1, 2)		0
Track Clearance		1
RR Red		2
RR2 Maximum (Minutes)		3
EV- A Delay		4
EV- A Clearance		5
EV- B Delay		6
EV- B Clearance		7
EV- C Delay		8
EV- C Clearance		9
EV- D Delay		A
EV- D Clearance		b
EV Maximum (Seconds)		C
Delay Timer		d
Clearance Timer		E
Maximum Timer		F

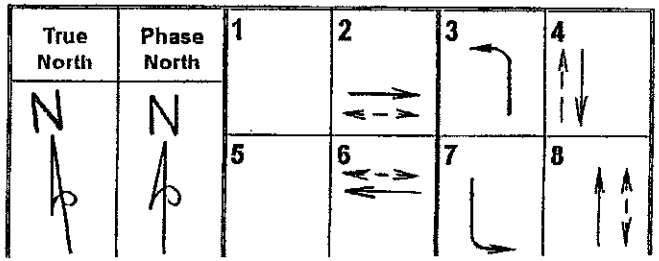
PHASE FUNCTION FLAGS

Keystrokes: F + F + Function

		1	2	3	4	5	6	7	8
Phases Permitted	0		X	X	X		X	X	X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		X
Minimum Vehicle Recall	3								
Pedestrian Recall + Rest In Walk	4								
Pedestrian Phases	5		X		X		X		X
Rest in Red	6								
Semi Traffic Actuated Mode	7								
Double Entry	8		X				X		
Maximum Vehicle Recall	9								
Overlap A	A								
Overlap B	b								
Barrier Recall	C				X				X
Rest In Green	d								
Yellow Start Up	E		X				X		
Protected / Permissive Left Turn	F								

LAG PHASE FLAGS

		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X



LACO-1R WWV DETECTOR ASSIGNMENTS

T.S.: 8452 Intersection: WHITTIER BOULEVARD @ MONTEBELLO BOULEVARD Date Req: 7-16-02 Rev By: M.S.

App	Lanes	Description	Phase File - Slot Channel	Delay Code	Delay Seconds	Extended Call Code	Extended Call Seconds	Remarks (Note: The four Programmable Detectors will default to normal phasing if not flagged.)	Yellow Disconnect Code	Yellow Disconnect Lite	Yellow Disconnect On	Queue Clearing Code	Queue Clearing Lite	Queue Clearing O
			1I1U	d10		d30			dF4	1		dF8	1	
			1I1L											
W	1	ADVANCE	2I2U	d11		d31	3.0		dF4	2		dF8	2	
W	2	ADVANCE	2I2L	d12		d32	3.0		dF4	3		dF8	3	
W	LT	HOLDING	2I3U	d13		d33			dF4	4		dF8	4	
			2I3L	d14		d34			dF4	5		dF8	5	
W	1	QUEUE, 2-6'X6'	2I4U	d15		d35	2.0	Call Ø 1 2 3 4 5 6 7 8	dF4	6		dF8	6	
W	2	QUEUE, 2-6'X6'	2I4L					dd8						
S	LT	4-6'X6'	3I5U	d16		d36			dF4	7		dF8	7	
			3I5L											
N	1	ADVANCE	4I6U	d17		d37			dF4	8		dF8	8	
N	2	ADVANCE	4I6L	d18		d38			dF5	1		dF9	1	
N	1	QUEUE, 2-6'X6'	4I7U	d19		d39	2.0		dF5	2		dF9	2	
N	2-1,2-2	QUEUE, 2-6'X6'	4I7L	d1A		d3A	2.0		dF5	3		dF9	3	
			4I8U	d1b		d3b		Call Ø 1 2 3 4 5 6 7 8	dF5	4		dF9	4	
			4I8L					dd9						
			1I9U	d1C		d3C			dF5	5		dF9	5	
			3I9L	d1d		d3d			dF5	6		dF9		
			5J1U	d20		d40			dF6	1		dFA	1	
			5J1L											
E	1	ADVANCE	6J2U	d21		d41	3.0		dF6	2		dFA	2	
E	2	ADVANCE	6J2L	d22		d42	3.0		dF6	3		dFA	3	
E	LT	HOLDING	6J3U	d23		d43			dF6	4		dFA	4	
			6J3L	d24		d44			dF6	5		dFA	5	
E	1	QUEUE, 2-6'X6'	6J4U	d25		d45	2.0	Call Ø 1 2 3 4 5 6 7 8	dF6	6		dFA	6	
E	2	QUEUE, 2-6'X6'	6J4L					ddA						
N	LT	4-6'X6'	7J5U	d26		d46			dF6	7		dFA	7	
			7J5L											
S	1	ADVANCE	8J6U	d27		d47			dF6	8		dFA	8	
S	2	ADVANCE	8J6L	d28		d48			dF7	1		dFb	1	
S	1	QUEUE, 2-6'X6'	8J7U	d29		d49	2.0		dF7	2		dFb	2	
S	2-1,2-2	QUEUE, 2-6'X6'	8J7L	d2A		d4A	2.0		dF7	3		dFb	3	
			8J8U	d2b		d4b		Call Ø 1 2 3 4 5 6 7 8	dF7	4		dFb	4	
			8J8L					ddb						
			5J9U	d2C		d4C			dF7	5		dFb	5	
			7J9L	d2d		d4d			dF7	6		dFb	6	

YELLOW DISCONNECT QUICK REFERENCE

	Call Lights							
Code	1	2	3	4	5	6	7	8
dF4								
dF5								

Remarks:

QUEUE CLEARING DETECTOR QUICK REFERENCE

	Call Lights						
Code	1	2	3	4	5	6	7
dF8						X	
dF9		X	X				

LACO - 1R WWV - TIME - BASED COORDINATION

F.S No.: 8452 **Intersection:** WHITTIER BOULEVARD @ MONTEBELLO BOULEVARD

m Limits: GARFIELD AV TO FIRST ST/BLUFF RD ON WHITTIER BLVD ; PARAMOUNT BLVD TO UNION ST ON MONTEBELLO BLVD

Remote Master: WWV **Date Requested:** 7-16-02 Rev **By:** MS

Date Completed: 10-9-02 **By:** L-C.

TIME OF DAY OPERATION SUMMARY

	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALL OTHER TIMES	0600 - 0900 M-F	1500 - 1900 M-F
Offset 2			
Offset 3			
Free	2100 - 0600 M-F , 2100 - 0900 S-S		
Special			

*Set Local Manual to 14 (free) before setting or changing dial intervals & functions. Setting either of the Manuals to 0 will release that Manual.

Offset Timing Mode:

A 12 at C-0-1 or by T.O.D. enables this mode and uses the Dial 3 Intervals and Functions.

Observe:

Call	d-F-C
Hold	d-F-d
Ped Restrict	d-F-E
Force - Off	d-F-F
Cycle with Field Calls	C-0-b
Master Sync Pulse Width	d-0-d

INTERCONNECT SELECT

d-0-0 [ ] 7 = Slave [✓] 170 = Master

d-0-E Set Maximum Width 4.0 Seconds

d-0-F Set Minimum Width 1.0 Seconds

Remarks:

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (in seconds) Dial 1	Dial 2	Dial 3	FUNCTION FLAGS DIAL 1 Force Off	Hold	Ped Rstrict	Call	DIAL 2 Force Off	Hold	Ped Rstrict	Call	DIAL 3 / OFFSET TIMING Force Off	Hold	Ped Rstrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual* 0	0	90	100	100	2,6				2,6				2,6				0
Local Manual* 0	1	1	1	1	-,-				-,-				-,-				1
Master Dial	2	15	15	15	3,7				3,7				3,7				2
Current Dial	3	16	16	16	-,-				-,-				-,-				3
Offset Number	4	26	35	34			4,8				4,8				4,8		4
Time of Day Plan	5	34	43	42		2,6	4,8			2,6	4,8			2,6	4,8		5
Function 6 14	6	46	55	54	4,8	2,6	-,-		4,8	2,6	-,-		4,8	2,6	-,-		6
Current Table	7	47	56	55	-,-	2,6			-,-	2,6			-,-	2,6			7
Minimum Cycle 0	8	66	76	76		2,6	2,6			2,6	2,6			2,6	2,6		8
Maximum Cycle 255	9	78	85	77		-,-	2,6			-,-	2,6			-,-	2,6		9
Master Timer	A	90	100	100			-,-				-,-				-,-		A
Local Timer	b																b
New Offset	C																C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

LACO-1R WWV TIME BASE UNIT

CLOCK AND EVENT TABLE SHEET

ERSECTION: WHITTIER BOULEVARD @ MONTEBELLO BOULEVARD REQUESTED DATE: 7-16-02 RW BY: MF

TS No: 8452 COMPLETED DATE: 10-9-02 BY:

CLOCK

CONTROL CODE A-C

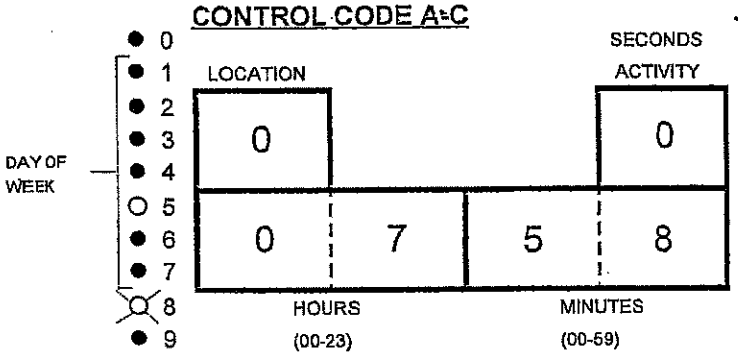


FIG. 1

CONTROL CODE A-D

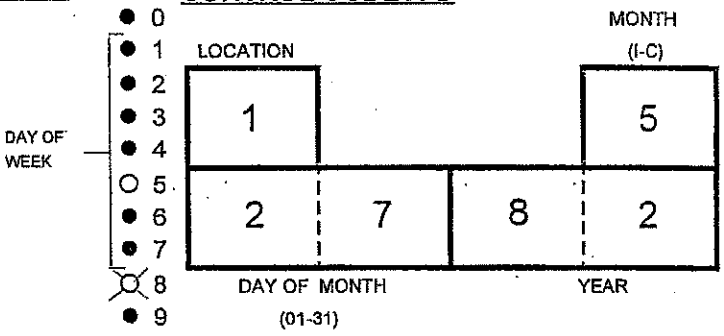


FIG. 2

ABOVE EXAMPLES

7:58 A.M. ON THURSDAY (FIG. 1)

MAY 27, 1982 (FIG. 2)

DAY OF WEEK

1	SUNDAY
2	MONDAY
3	TUESDAY
4	WEDNESDAY
5	THURSDAY
6	FRIDAY
7	SATURDAY

MONTH

1	JANUARY	7	JULY
2	FEBRUARY	8	AUGUST
3	MARCH	9	SEPTEMBER
4	APRIL	A	OCTOBER
5	MAY	B	NOVEMBER
6	JUNE	C	DECEMBER

DIRECTIONS

At control code A - C, key in hours and minutes, then key in 0 for seconds activity. Enter key E and turn on call # corresponding to day of the week. (NOTE: Seconds start at 0 seconds - for observation and correction use address D - 4 - 1). At control code A - D, key in the day of the month, year, and month, then enter key E.

EVENT TABLE

CONTROL CODE 9-3

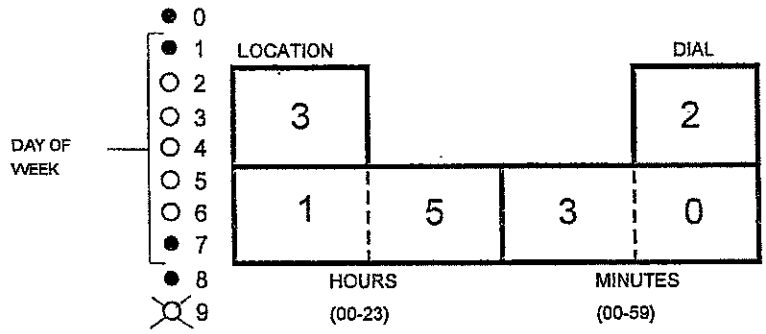


FIG. 3

ABOVE EXAMPLE

The example (FIG. 3), shows a time of day event at control code 9-3 with dial 2 to start at 3:30 P.M. each weekday from Monday through Friday.

DIRECTIONS

To set an event, key in 9 + the table location, key in hour, minute, and event, then enter key E. Set day(s) with call/active lights. To observe current event use address C - 0 - 5. (NOTE: These time of day events are local - not system events.)

REMARKS

FOR DIRECT INTERCONNECT ONLY. (D00=7)

			DAY AND LIGHT ←Set DAY using call/active LIGHT→						
LOC. 9 + ↓	TIME	EVENT * DIAL	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

* DIAL 1 = 1, 2 = 2, 3 = 3, FREE = E, OFF = 0. (NOTE: At C - 0 - 5, FREE = 14)

LACO-1R WWV - TIME - BASED EVENT TABLES

Intersection: WHITTIER BOULEVARD @ MONTEBELLO BOULEVARD Date Requested: 7-16-02 By: MS

T.S. No.: 8452 Date Completed: 10-9-02 By: L-C

TABLE 0 - DEFAULT			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
0-0	00:00	E	X	X	X	X	X	X	X
0-1	06:00	2		X	X	X	X	X	
0-2	09:00	1	X	X	X	X	X	X	X
0-3	15:00	3		X	X	X	X	X	
0-4	19:00	1		X	X	X	X	X	
0-5	21:00	E	X	X	X	X	X	X	X
0-6	:								
0-7	:								
0-8	:								
0-9	:								
0-A	:								
0-b	:								
0-C	:								
0-d	:								
0-E	:								
0-F	:								

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
5-0	/								
5-1	/								
5-2	/								
5-3	/								
5-4	/								
5-5	/								
5-6	/								
5-7	/								
5-8	/								
5-9	/								
5-A	/								
5-b	/								
5-C	/								
5-d	/								
5-E	/								
5-F	/								

TABLE 1			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
1-0	00:00	E		X	X	X	X	X	
1-1	09:00	1		X	X	X	X	X	
2	21:00	E		X	X	X	X	X	
1-3	:								
1-4	:								
1-5	:								
1-6	:								
1-7	:								
1-8	:								
1-9	:								
1-A	:								
1-b	:								
1-C	:								
1-d	:								
1-E	:								
1-F	:								

Plan = Plan Number

	D1	D2	D3
O1 =	1	2	3
O2 =	4	5	6
O3 =	7	8	9

Plans:

A = Arrows On
d = Arrows Off
C = Offset Timing
E = Function 6
F = Flash

Keys:

0 = No Days
8 = All Days
9 = Weekdays

Table #4, Nth = The number of the occurence in the month (1-5). 99 = Always the last occurence in the month.

I.E. Thanksgiving = 11 / 04 [Table] and Thursday.

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
6-0	/								
6-1	/								
6-2	/								
6-3	/								
6-4	/								
6-5	/								
6-6	/								
6-7	/								
6-8	/								
6-9	/								
6-A	/								
6-b	/								
6-C	/								
6-d	/								
6-E	/								
6-F	/								

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
[illegible]	:								
[illegible]-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / Nth	Table	1	2	3	4	5	6	7*
4-0	01 / 03	1		X					
4-1	02 / 03	1		X					
4-2	05 / 99	1		X					
4-3	09 / 01	1		X					
4-4	11 / 04	1					X		
4-5	/								
4-6	/								
4-7	/								
4-8	/								
4-9	/								
4-A	/								
4-b	/								
4-C	/								
4-d	/								
4-E	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
7-0	/								
7-1	/								
7-2	/								
7-3	/								
7-4	/								
7-5	/								
7-6	/								
7-7	/								
7-8	/								
7-9	/								
7-A	/								
7-b	/								
7-C	/								
7-d	/								

LACO-1R WWV-TIME-BASED ANNUAL TABLES

Intersection: WHITTIER BOULEVARD @ MONTEBELLO BOULEVARD Date Requested: 7-16-02 RW By: MS

T.S. No.: 8452 Date Completed: 10-9-02 By: LC

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Flag	1	2	3	4	5	6	7
8-0	01 / 01	1		X	X	X	X	X	
8-1	01 / 02	1		X					
8-2	07 / 04	1		X	X	X	X	X	
8-3	07 / 05	1		X					
8-4	11 / 10	1						X	
8-5	11 / 11	1		X	X	X	X	X	
8-6	11 / 12	1		X					
8-7	12 / 24	1		X	X	X	X	X	
8-8	12 / 25	1		X	X	X	X	X	
8-9	12 / 26	1		X				X	
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

EXCEPTION TIMES			Table 8 Flags						
Code	Hour : Min	Plan	1	2	3	4	5	6	7
9-0	00:00	E	X						
9-1	09:00	1	X						
9-2	21:00	E	X						
9-3	:								
9-4	:								
9-5	:								
9-6	:								
9-7	:								
9-8	:								
9-9	:								
9-A	:								
9-b	:								
9-C	:								
9-d	:								
9-E	:								
9-F	:								

NOTES ON USING TABLES:

Starting from the base display [A/b], Table access is gained with a two digit Table Code. Access is verified by the flashing of both Call Light 9 and the Phase digit* of the display (* No Flash if Table # & Event # match).

Five keypresses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:

d-0-3 = 1 Search Tables
d-0-3 = 3 Repoll WWV Clock
d-A-F = 1 Repoll WWV Clock
d-0-3 = 071 Save Timing to Prom Module
d-0-3 = 170 Download Timing into 170
d-0-3 = 999 Clear All Tables
F-0-0 = Phase / Dial Copy - Source
F-0-1 = Phase / Dial Copy - Destination
F-0-4 = Program Number (66)
d-0-8,9,A = Mo,Day,Yr of Latest Revision
E-E-0-0 = Reinitialization

SPECIAL FUNCTION TABLE Keystrokes: F + d + Function		Phase Flags							
		1	2	3	4	5	6	7	8
(Green) Calling Phases	0								
(Green) Call To Phases	1								
(Yellow) Calling Phases	2								
(Yellow) Call To Phases	3								
Auxiliary Ovlp A Output	4								
Mid-Block Ped Crossing	5								
Driveway Flash	6								
Green Extension	7								
Sequential Ped	8								
Not Used	9								
EV- A Clearance Phases	A								
EV- B Clearance Phases	b								
EV- C Clearance Phases	C								
EV- D Clearance Phases	d								
Track Clearance Phases	E								
Limited Service Phases	F								

When Any Flagged Phase Is Green - - -

- - - Place A Locked Call To These Phases.

When Any Flagged Phase Is Yellow - - -

- - - Place A Locked Call To These Phases.

"Three Color Single Phase Overlap" Outputs On Auxiliary File - Slot 1

Ø4P Only. Ø2 & Ø6 Reds Flash During Ø4P Clearance

Flashes The Green Outputs Of The Selected Phases

Staggered Termination At Barrier Crossing

Allows Ø1, Ø3 or Ø5 Ped to output on the Ø8P Load Switch

OVERLAP GREEN OMIT	Keys	1	2	3	4	5	6	7	8
Green Omit for Overlap A	F - C - 4								
Green Omit for Overlap B	F - C - 5								
Green Omit for Overlap C	F - C - 6								
Green Omit for Overlap D	F - C - 7								

F-9-7		Coordination Free Time (Seconds) After Railroad Preempt
F-9-d		Green Rest Delay Time (Seconds)
d-0-1		RAILROAD ROUTINE SELECT: 0 = Normal Railroad 1 = Special Two Input Railroad Routine
d-0-2		MANUAL CONTROL: 0 = Not Enabled 1 = No Recalls 2 = Vehicle Recalls 3 = Vehicle and Ped Recalls

PHASE OMIT	Keys	1	2	3	4	5	6	7	8
Phase Omit (Observe Only)	d - d - 4								
Phase Omit for Dial 1	d - d - 5								
Phase Omit for Dial 2	d - d - 6								
Phase Omit for Dial 3	d - d - 7								

ADDITIONAL OVERLAPS	Keys	1	2	3	4	5	6
Aux File 2 Color Overlap C	d - d - C						
Aux File 2 Color Overlap D	d - d - d						
Ø7 Load Sw. 3 Color Ovrlp E	d - d - E						
Green Omit for Overlap E	d - d - F						

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO - 3

TYPE 170 PROGRAM

Intersection: WASHINGTON BL. @ GREENWOOD AV.
T.S. No.: 1392 (MTB.)

Date Prepared: 6-1-06 NTS **By:** BMH
Date Implemented: 2-15-08 **By:** OP

PHASE TIMING		Keystrokes: F + Phase + Interval							
Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	0	10		10	0	10		10
Flashing Don't Walk	1	0	13		19	0	15		19
Minimum Green	2	4	6		6	4	6		6
Queue Maximum	3	0	30		25	0	30		25
Added Green/Actuation	4	0.0	0.0		0.0	0.0	0.0		0.0
Vehicle Extension	5	1.5	4.0		2.0	1.5	4.0		2.0
Maximum Gap	6	1.5	5.0		3.0	1.5	5.0		3.0
Minimum Gap	7	1.5	3.0		1.0	1.5	3.0		1.0
Max Extension 1 (Free)	8	20	50		50	20	50		50
Max Extension 2 (Coord)	9	20	110		50	20	110		50
		OVLP A	OVLP B	OVLP C	OVLP D	OVLP E	OVLP F		
Ovlp Green Extension	A								
Ovlp Yellow Clearance	b								
Ovlp Red Clearance	C								
Reduce 0.1 Sec. Every..	d	0.0	1.5		1.3	0.0	1.5		1.3
Yellow Clearance	E	~~3.0~~ 4.0	4.5		4.0	~~3.0~~ 4.0	4.5		4.0
Red Clearance	F	1.0	0.0		0.0	1.0	0.0		0.0

Red Rest Delay	F-0-7	0
Green Rest Delay	F-0-8	0
Max Added Green	F-0-E	0
Red Revert	F-0-F	2.0

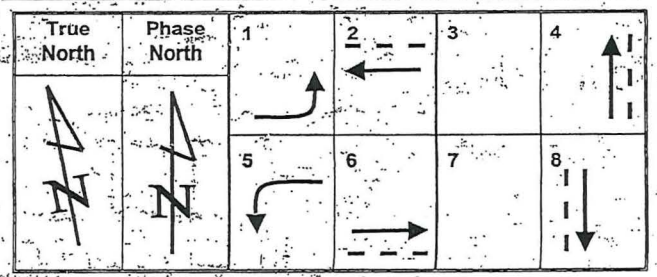
Remarks:
6-4-08 Changed ø1 & ø5 yellow From 3.0 to 4.0 per Sergt Powers Monkbelt PD. and Pat Lantz. Gerardo A.

PREEMPTION		
Keystrokes: F + E + Function		
RR Select (0, 1, 2)		0
RR Track Clearance		1
RR1 All Red		2
RR2 Maximum (Minutes)		3
Free Time After Preempt		4
EV- A Delay		5
EV- A Clearance		6
EV- B Delay		7
EV- B Clearance		8
EV- C Delay		9
EV- C Clearance		A
EV- D Delay		b
EV- D Clearance		C
EV Maximum (Seconds)		d
EV Delay/Clearance Timer		E
RR Delay/Clear/Mark Timer		F

PREEMPTION PHASES									
Keystrokes: F + d + Function									
		1	2	3	4	5	6	7	8
EV- A	0								
EV- B	1								
EV- C	2								
EV- D	3								
RR Track Clear	4								
RR2 Ltd Service	5								
RR1 Exit Phase	6								

PHASE FUNCTION FLAGS									
Keystrokes: F + F + Function									
		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X		X	X	X		X
Red Lock	1								
Red & Yellow Lock	2		X		X		X		X
Minimum Vehicle Recall	3								
Pedestrian Recall + Rest in Walk	4								
Green Rest (Set Delay F-0-8)	5								
Red Rest (Set Delay F-0-7)	6	X				X			
Semi Traffic Actuated Mode	7								
Double Entry	8				X				X
Maximum Vehicle Recall	9								
Restricted Phases	A								
Protected/Permissive Left Turn	b								
Barrier Recall	C								
First Phases After Start Up	d								
Yellow Start Up	E		X				X		
Overlap Yellow Start Up: →		A	b	C	d	E	F		
(Parents must be Yellow Start Up)	F								

LAG PHASE FLAGS		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X
PEDESTRIAN PHASES		1	2	3	4	5	6	7	8
2 Ped Load Switch	d-F-4		X						
4 Ped Load Switch	d-F-5				X				
6 Ped Load Switch	d-F-6						X		
8 Ped Load Switch	d-F-7								X



LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC AND LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 DETECTOR ASSIGNMENTS

Intersection: WASHINGTON BL. @ GREENWOOD AV. **Date Prepared:** 6-1-06 NTS **By:** BMH

T.S. No.: (MTB.) **Date Implemented:** 2-15-08 **By:** DP

NOTE: Ensure ALL Blank Data Fields are set to ZERO or CLEARED.			Detector Timing					Detector Assignments																		
			File-Slot-Channel	Delay		Extended Call		Phase Flags									Attribute Flags									
App	Lanes	Description		Code	Seconds	Code	Seconds	Code	1	2	3	4	5	6	7	8	Code	1	2	3	4	5	6	7	8
			I1U	d10		d30		db0									dd0								
			I1L																						
E	1, 2, 3	ADVANCE	2 I2U	d11		d31		db1		X							dd1								
			I2L	d12		d32		db2									dd2								
			I3U	d13		d33		db3									dd3								
			I3L	d14		d34		db4									dd4								
E	1, 2	QUEUE *	2 I4U	d15		d35	2.0	db5		X							dd5					X			
E	3	QUEUE *	2 I4L																						
E	LT	6' X 50' *	5 I5U	d16		d36		db6					X				dd6								
			I5L																						
S	1, 2	ADVANCE	4 I6U	d17		d37	2.0	db7				X					dd7								
			I6L	d18		d38		db8									dd8								
S	LT	HOLDING *	4 I7U	d19		d39		db9				X					dd9								
			I7L	d1A		d3A		dbA									ddA								
S	1, 2	QUEUE *	4 I8U	d1b		d3b	2.0	dbb				X					ddb					X			
S	RT	QUEUE *	4 I8L																						
			I9U	d1C		d3C		dbC									ddC								
			I9L	d1d		d3d		dbd									ddd								
			J1U	d20		d40		dC0									dE0								
			J1L																						
W	1, 2, 3	ADVANCE	6 J2U	d21		d41		dC1						X			dE1								
			J2L	d22		d42		dC2									dE2								
			J3U	d23		d43		dC3									dE3								
			J3L	d24		d44		dC4									dE4								
W	1, 2	QUEUE *	6 J4U	d25		d45	2.0	dC5						X			dE5					X			
W	3	QUEUE *	6 J4L																						
W	LT	6' X 50' *	1 J5U	d26		d46		dC6	X								dE6								
			J5L																						
N	1, 2	ADVANCE	8 J6U	d27		d47	2.0	dC7								X	dE7								
			J6L	d28		d48		dC8									dE8								
N	LT	HOLDING *	8 J7U	d29		d49		dC9								X	dE9								
			J7L	d2A		d4A		dCA									dEA								
N	1, 2	QUEUE *	8 J8U	d2b		d4b	2.0	dCb								X	dEb					X			
			J8L																						
			J9U	d2C		d4C		dCC									dEC								
			J9L	d2d		d4d		dCd									dEd								

Remarks:

DETECTOR ATTRIBUTES	
FLAG 1 - Red Lock	FLAG 5 - Queue Clearing
FLAG 2 - Red & Yellow Lock	FLAG 6 - Non-Counting
FLAG 3 - Yellow Disconnect	FLAG 7 - Special Delay Option
FLAG 4 - Red Calling	FLAG 8 - Special Delay Option

SPECIAL DETECTOR DELAY ASSIGNMENTS		Phase							
All options: Delay Timer resets during detector phase yellow.	Code	1	2	3	4	5	6	7	8
Special Delay Option 1 (Attribute Bit 7) - Bypasses delay while flagged phase(s) are timing.	d-d-E								
Special Delay Option 2 (Attribute Bit 8) - Bypasses delay while flagged phase(s) are timing.	d-d-F								

Special Delay Option 3 (Attribute Bits 7 & 8) - Bypasses delay when other phase in same quadrant IS NOT Green (1:2) (3:4) (5:6) (7:8).
Example: Phase 1 Detector delay will be overridden while Phase 2 is Yellow or Red.

S ANGELES COUNTY
PARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 COORDINATION

Intersection: WASHINGTON BL. @ GREENWOOD AV. **T.S. No.:** 1392 (MTB.)

System Limits: VAIL AV. TO GREENWOOD AV. (DIRECT I/C) & VAIL AV. TO CROSSWAY DR. (OVERALL)

Remote Master: WASHINGTON BL. TO VAIL AV. **Date Prepared:** 6-1-06 NTS **By:** BHH

System No.: _____ **Date Implemented:** 2-15-02 **By:** CS

TIME OF DAY OPERATION SUMMARY			
	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALL OTHER TIMES	0600-0830 M-F	1430-1830 M-F
Offset 2			
Offset 3			
Free	2200-0600 CONTINUOUS		
Special			

* Set Local Manual to 14 (Free) before setting or changing dial intervals or functions. Setting either of the manuals to zero will release that Manual.

Local Manual C-0-1
11 = Slave Mode
12 = Offset Timing Mode
14 = Free Operation
Observe Locations:
Calls d-F-C
Hold d-F-d
Ped Restrict d-F-E
Force Off d-F-F
Local Cycle Timer w/Field Calls C-0-b

SYNC PARAMETERS
d - 0 - d System Sync Width 2.0 Seconds
d - 0 - E Set Maximum Width 4.0 Seconds
d - 0 - F Set Minimum Width 1.0 Seconds

REMARKS:

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (In Seconds)			FUNCTION FLAGS												
					DIAL 1				DIAL 2				DIAL 3				
		Dial 1	Dial 2	Dial 3	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual * 0	0	85	100	100	2,6				2,6				2,6				0
Local Manual 0	1	1	1	1	-,-	2,6			-,-	2,6			-,-	2,6			1
Master Dial	2	6	6	6		-,-	4,8			-,-	4,8			-,-	4,8		2
Local Dial	3	23	23	23		2,6	4,8			2,6	4,8			2,6	4,8		3
Offset Number	4	35	35	35	4,8	2,6	-,-		4,8	2,6	-,-		4,8	2,6	-,-		4
Time of Day Plan	5	36	36	36	-,-	2,6			-,-	2,6			-,-	2,6			5
Function 6 14	6	49	56	56	1,5	2,6			1,5	2,6			1,5	2,6			6
Current Table	7	50	57	57	-,-	2,6			-,-	2,6			-,-	2,6			7
Minimum Cycle 0	8	60	62	75		2,6	6			-,-				2,6	6		8
Maximum Cycle 255	9	62	75	76		2,6	2,6				6			-,-	6		9
Master Timer	A	65	77	77		-,-	2,6				2,6				2,6		A
Local Timer	b	85	100	100			-,-				-,-				-,-		b
System Timer	C																C
Current Offset	d																d
ast Master Cycle	E																E
Last Local Cycle	F																F

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 SPECIAL FUNCTIONS

----------NOT USED ----------

Intersection: WASHINGTON BL. @ GREENWOOD AV.

Date Prepared: 6-1-06 NTS By: BMH

T.S. No.: (MTB.)

Date Implemented: 2-15-08 By: CP

OVERLAP PHASE FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-A-A								
Overlap B	F-A-b								
Overlap C	F-A-C								
Overlap D	F-A-d								
Overlap E	F-A-E								
Overlap F	F-A-F								

OVERLAP GREEN OMIT PHASES

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-b-A								
Overlap B	F-b-b								
Overlap C	F-b-C								
Overlap D	F-b-d								
Overlap E	F-b-E								
Overlap F	F-b-F								

RAILROAD PREEMPT OVERLAP FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-C-A								
Overlap B	F-C-b								
Overlap C	F-C-C								
Overlap D	F-C-d								
Overlap E	F-C-E								
Overlap F	F-C-F								

EMERGENCY VEHICLE PREEMPT OVERLAP FLAGS

Phases →		1	2	3	4	5	6	7	8
Overlap A	F-d-A								
Overlap B	F-d-b								
Overlap C	F-d-C								
Overlap D	F-d-d								
Overlap E	F-d-E								
Overlap F	F-d-F								

LOAD SWITCH ASSIGNMENT

Ped A to Overlap A **	F-9-A	
Ped B to Overlap B **	F-9-b	
Send Overlap C Output to Phase	F-9-C	
Send Overlap D Output to Phase	F-9-d	
Send Overlap E Output to Phase	F-9-E	
Send Overlap F Output to Phase	F-9-F	

Overlap Notes
2-Color Overlaps (A-B) 3-Color Overlaps (C-F)

Unused Right Turn Overlap outputs may be assigned as additional Peds.

PED A uses J11U for Ped Push Button Input.
PED B uses J11L for Ped Push Button Input.

** Set Vehicle Phases for Ped A/B to time with.

USER FLAG OPTIONS

Keystrokes: d + E + F

			USER FLAG NOTES
True Maximum Extension	1		The True Maximum Extension flag does NOT allow a maxed out phase to extend.
EV Pedestrian Clearance NOT Protected	2		EV Clearance is NOT protected when this flag is set.
	3		Unused.
Mid-Block Pedestrian Crossing	4		Phases 2 & 6 Red Flash during Phase 4 Ped Protection.
Delay RR Track Clearance Phase Green	5		Delays Track Clearance until Overlaps time out.
Echo Remote Coordination Input to Output	6		SUB-MASTER OPERATION: Echo Slave Data to Master Output.
Enable Manual Control	7		Enables Manual Advance Operation. Requires MANUAL switch.
Delay EV Clearance Phase Green	8		Delays EV Clearance until Overlaps time out.

ASSOCIATED PHASE RECALL

A Locked Call is placed on the Flagged Phase when the Associated Recall Phase is Green.

Flagged Phases →		1	2	3	4	5	6	7	8
Phase 1	F-C-1								
Phase 2	F-C-2								
Phase 3	F-C-3								
Phase 4	F-C-4								
Phase 5	F-C-5								
Phase 6	F-C-6								
Phase 7	F-C-7								
Phase 8	F-C-8								

PHASE / OVERLAP REASSIGNMENTS

Phases →		1	2	3	4	5	6	7	8
Phase Driveway Flash	F-A-0								
Phase Yellow Ranging *	F-A-1								
Overlaps →		**A**	**B**	**C**	**D**	**E**	**F**		
Overlap Driveway Flash	F-A-2								
Overlap Yellow Ranging *	F-A-3								
Ped 2 Load Switch Overlap	F-A-4								
Ped 4 Load Switch Overlap	F-A-5								
Ped 6 Load Switch Overlap	F-A-6								
Ped 8 Load Switch Overlap	F-A-7								

Notes:
*Phase/Overlap Yellow Ranging - These Flags remove the minimum and maximum limits on the yellow settings.

Remarks:

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 EVENT TABLES

Intersection: WASHINGTON BL. @ GREENWOOD AV. Date Prepared: 6-1-06 NTS By: BMH

T.S. No.: (MTB.) Date Implemented: 2-15-08 By: CP

TABLE 0 - DEFAULT			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
0-0	00 : 00	E	X	X	X	X	X	X	X
0-1	06 : 00	2		X	X	X	X	X	
0-2	06 : 00	1	X						X
0-3	08 : 30	1		X	X	X	X	X	
0-4	14 : 30	3		X	X	X	X	X	
0-5	18 : 30	1		X	X	X	X	X	
0-6	22 : 00	E	X	X	X	X	X	X	X
0-7	:								
0-8	:								
0-9	:								
0-A	:								
0-b	:								
0-C	:								
0-d	:								
0-E	:								
0-F	:								

TABLE 3			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

SLAVE MODE TABLE			s	m	t	w	t	f	s
Code	Hour : Min	Dial	1	2	3	4	5	6	7
5-0	:								
5-1	:								
5-2	:								
5-3	:								
5-4	:								
5-5	:								
5-6	:								
5-7	:								
5-8	:								
5-9	:								
5-A	:								
5-b	:								
5-C	:								
5-d	:								
5-E	:								
5-F	:								

TABLE 1			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
1-0	00 : 00	E		X	X	X	X	X	
1-1	06 : 00	1		X	X	X	X	X	
1-2	22 : 00	E		X	X	X	X	X	
1-3	:								
1-4	:								
1-5	:								
1-6	:								
1-7	:								
1-8	:								
1-9	:								
1-A	:								
1-b	:								
1-C	:								
1-d	:								
1-E	:								
1-F	:								

Plan = Plan Number

O/D	D1	D2	D3
01 =	1	2	3
02 =	4	5	6
03 =	7	8	9

Keys:
0 = No Days
8 = All Days
9 = Week Days

Plans:
A = Protected/Permissive Arrows (F-F-b) Disabled.
b = Slave Mode (4 Wire / 7 Wire Input)
C = Offset Timing Mode
d = T.O.D. Output (Detector Reset Line) "ON".
E = Function 6
F = Reset Plans A & d.

Table 6:
C = Continue the Floating Holiday by C (0-9) days.
N^{th} = The number of the occurrence in the month.
(1-5, 9 = Always the last occurrence in the month.)
i. e. Thanksgiving = 11/1/4 [table] flag Thursday continues one extra day.

FLOATING HOLIDAYS			s	m	t	w	t	f	s
Code	Month / C / N^{th}	Table	1	2	3	4	5	6	7
6-0	01 / 0 / 3	1		X					
6-1	02 / 0 / 3	1		X					
6-2	05 / 0 / 9	1		X					
6-3	09 / 0 / 1	1		X					
6-4	11 / 1 / 4	1					X		
6-5	/ /								
6-6	/ /								
6-7	/ /								
6-8	/ /								
6-9	/ /								
6-A	/ /								
6-b	/ /								
6-C	/ /								
6-d	/ /								
6-E	/ /								
6-F	/ /								

TABLE 2			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
2-9	:								
2-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								
2-F	:								

TABLE 4			s	m	t	w	t	f	s
Code	Hour : Min	Plan	1	2	3	4	5	6	7
4-0	:								
4-1	:								
4-2	:								
4-3	:								
4-4	:								
4-5	:								
4-6	:								
4-7	:								
4-8	:								
4-9	:								
4-A	:								
4-b	:								
4-C	:								
4-d	:								
4-E	:								
4-F	:								

EXCEPTION DAYS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
7-0	01 / 01	1		X	X	X	X	X	
7-1	01 / 02	1		X					
7-2	07 / 04	1		X	X	X	X	X	
7-3	07 / 05	1		X					
7-4	11 / 10	1						X	
7-5	11 / 11	1		X	X	X	X	X	
7-6	11 / 12	1		X					
7-7	12 / 24	1		X	X	X	X	X	
7-8	12 / 25	1		X	X	X	X	X	
7-9	12 / 26	1		X				X	
7-A	/								
7-b	/								
7-C	/								
7-d	/								
7-E	/								
7-F	/								

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC & LIGHTING DIVISION
TRAFFIC SIGNAL TIMING

LACO-3 ANNUAL TABLES

Intersection: WASHINGTON BL. @ GREENWOOD AV.

Date Prepared: 6-1-06 NTS By: BMH

T.S. No.: (MTB.)

Date Implemented: 2-15-08 By: CP

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
8-0	/								
8-1	/								
8-2	/								
8-3	/								
8-4	/								
8-5	/								
8-6	/								
8-7	/								
8-8	/								
8-9	/								
8-A	/								
8-b	/								
8-C	/								
8-d	/								
8-E	/								
8-F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
9-0	/								
9-1	/								
9-2	/								
9-3	/								
9-4	/								
9-5	/								
9-6	/								
9-7	/								
9-8	/								
9-9	/								
9-A	/								
9-b	/								
9-C	/								
9-d	/								
9-E	/								
9-F	/								

NOTES ON USING TABLES:
Starting from the base display [A/b], Table access is gained with two digit Table Code. Access is verified by the flashing of Call Light 9.

Five key presses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:
A-C = Clock Display
A-D = Date Display

d-0-0 = 1 Force Repoll of WWV Receiver
d-0-1 = Hour of Last Repoll
d-0-2 = Minute of Last Repoll
d-0-3 = Second of Last Repoll
d-0-4 = Month of Last Repoll
d-0-5 = Day of Last Repoll
d-0-6 = Year of Last Repoll

OBSERVE ONLY:
E-3-8 = Ring A Max Timer
E-4-8 = Ring B Max Timer
E-6-3 = 4 T.O.D. Output
E-6-3 = 5 Offset Timing Mode
E-6-3 = 6 Slave Mode
E-6-3 = 7 Maximum Extension 2 (Coord)
E-6-3 = 8 Arrows Disabled

F-0-0 = Phase / Dial Copy - Source Phase (1-8) Dial (11-13)
F-0-1 = Phase / Dial Copy - Destination Phase (1-8) Dial (11-13)
F-0-2 = Table/Dial Insert/Delete - Target Table (0-9) Table (1=10) Dial (11-13)
F-0-3 = Table/Dial Insert/Delete - Interval Insert 1-16 Delete 101-116
F-0-4 = Program Number
F-0-5 = Version Number

F-0-A = 1 Searches Annual Event Tables.
F-0-A = 071 Save Timing to Prom Module.
F-0-A = 170 Download Timing into 170.
F-0-A = 777 Reinitialization from NOVRAM.
F-0-A = 888 Reinitialization from EPROM.
F-0-A = 999 Clears All Tables and Loads Default Holiday Events.

OFFSETS			
Keystrokes: F + 9 + CODE			
OFFSET 1	Dial 1	1	48
	Dial 2	2	27
	Dial 3	3	23
OFFSET 2	Dial 1	4	
	Dial 2	5	
	Dial 3	6	
OFFSET 3	Dial 1	7	
	Dial 2	8	
	Dial 3	9	

COMMUNICATIONS ASSIGNMENTS		
Keystrokes: d + 0 + FUNCTION		
PORT 1	7	1
PORT 2	8	
PORT 3	9	
PORT 4	A	

0 = Off
1 = WWV Radio Receiver
2 = ML2 Protocol - Coord OUT Only
4 = ML2 Protocol - Coord IN & OUT
7 = ML2 Protocol - Coord IN Only
8 = Remote Monitoring (Future)
12 = Sends Time/Date String Out of Modem
17 = Receives Time/Date String from Modem

REMARKS:

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO - 3

TYPE 170 PROGRAM

Revised on 7/30/15 per Micheal Ortega (Siemens) checked 4/20/10

Intersection: Garfield Avenue @ Via Campo
T.S. No.: 9511 R-1 c/o MTB

Date Prepared: 4/5/2010 By: jth
Date Implemented: ____ By: ____

PHASE TIMING		Keystrokes: F + Phase + Interval							
Phase #		1	2	3	4	5	6	7	8
Minimum Walk	0	7	7		7				0
Flashing Don't Walk	1	8	14		22				0
Minimum Green	2	6	6		6				6
Queue Maximum	3	20	25		30				0
Added Green/Actuation	4	0.0	0.0		0.0				0.0
Vehicle Extension	5	4.0	4.0		4.0				3.0
Maximum Gap	6	5.0	5.0		5.0				3.0
Minimum Gap	7	3.0	3.0		3.0				3.0
Max Extension 1 (Free)	8	30	30		14				14
Max Extension 2 (Coord)	9	30	130		30				30
		OVLP A	OVLP B	OVLP C	OVLP D	OVLP E	OVLP F		
Ovlp Green Extension	A								
Ovlp Yellow Clearance	b	4.0	4.0						
Ovlp Red Clearance	C	0.5	0.5						
Reduce 0.1 Sec. Every...	d	1.5	1.5		1.5				0.0
Yellow Clearance	E	4.0	~~4.0~~ 4.3		~~4.0~~ 4.3			4.3	~~4.0~~ 4.3
Red Clearance	F	0.5	0.5		~~0.5~~ 0.7				~~0.5~~ 0.7
Red Rest Delay	F-0-7	0							
Green Rest Delay	F-0-8	0							
Max Added Green	F-0-E	0							
Red Revert	F-0-F	2.0							

Remarks:

* OL-A=Ø1
**OL-B=Ø2

PREEMPTION		
Keystrokes: F + E + Function		
RxR Select (0, 1, 2)		0
RxR Track Clearance		1
RxR1 All Red		2
RxR2 Maximum (Minutes)		3
Free Time After Preempt		4
EV - A Delay		5
EV - A Clearance		6
EV - B Delay		7
EV - B Clearance		8
EV - C Delay		9
EV - C Clearance		A
EV - D Delay		b
EV - D Clearance		C
EV Maximum (Seconds)		d
EV Delay/Clearance Timer		E
RxR Delay/Clear/Mark Timer		F
EV AFTER RxR PREEMPTION		
EV Type Select	F-C-0	
Select : EV - A Enter 16 EV - B Enter 32 EV - C Enter 64 EV - D Enter 128		
Keystrokes: F + d + Function		
EV After RxR Delay		7
EV After RxR Clearance		8
EV After RxR Maximum		9

PREEMPTION PHASES									
Keystrokes: F + d + Function									
		1	2	3	4	5	6	7	8
EV- A	0								
EV- B	1								
EV- C	2								
EV- D	3								
RR Track Clear	4								
RR2 Ltd Service	5								
RR1 Exit Phase	6								

PHASE FUNCTION FLAGS									
Keystrokes: F + F + Function									
		1	2	3	4	5	6	7	8
Phases Permitted	0	X	X		X				X
Red Lock	1								
Red & Yellow Lock	2	X	X						
Minimum Vehicle Recall	3								
Pedestrian Recall + Rest in Walk	4								
Green Rest (Set Delay F-0-8)	5	X							
Red Rest (Set Delay F-0-7)	6								
Semi Traffic Actuated Mode	7								
Double Entry	8				X				X
Maximum Vehicle Recall	9								
Restricted Phases	A								
Protected/Permissive Left Turn	b								
Barrier Recall	C								
First Phases After Start Up	d								
Yellow Start Up	E		X						
Overlap Yellow Start Up: →		A	b	C	d	E	F		
(Parents must be Yellow Start Up)	F		X						

LAG PHASE FLAGS		1	2	3	4	5	6	7	8
Lag Free	d-F-0		X		X		X		X
Lag Dial 1	d-F-1		X		X		X		X
Lag Dial 2	d-F-2		X		X		X		X
Lag Dial 3	d-F-3		X		X		X		X
PEDESTRIAN PHASES		1	2	3	4	5	6	7	8
2 Ped Load Switch	d-F-4		X						
4 Ped Load Switch	d-F-5				X				
6 Ped Load Switch	d-F-6								
8 Ped Load Switch	d-F-7	X							

True North	Phase North	1	2	3	4
~~47~~	~~47~~	5	6	7	8

NOT CLEAR

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 DETECTOR ASSIGNMENTS

Intersection: Garfield Avenue @ Via Campo **Date Prepared:** 4/5/10 **By:**

T.S. No.: 9511 R-1 c/o MTB **Date Implemented:** **By:**

NOTE: Ensure ALL Blank Data Fields are set to ZERO or CLEARED.			Detector Timing					Detector Assignments																	
			File-Slot-Channel	Delay		Extended Call		Phase Flags									Attribute Flags								
App	Lanes	Description		Code	Seconds	Code	Seconds	Code	1	2	3	4	5	6	7	8	Code	1	2	3	4	5	6	7	8
N	1	ADVANCE	1 I1U	d10		d30	2.0	db0	X								dd0								
			I1L																						
S	1	ADVANCE	I2U	d11		d31	2.0	db1		X							dd1								
S	2	ADVANCE	I2L	d12	5	d32	2.0	db2		X							dd2								
S	RT	FIRST VEH 6'X25'*	2 I3U	d13	10	d33		db3		X							dd3								
			I3L	d14		d34		db4									dd4								
S	1	QUEUE CL 6'X25'*	2 I4U	d15		d35	2.0	db5		X							dd5					X			
S	2,3	QUEUE CL 6'X25'*	2 I4L																						
			I5U	d16		d36		db6									dd6								
			I5L																						
W	1	ADVANCE	4 I6U	d17		d37	2.0	db7				X					dd7								
W	2	ADVANCE	4 I6L	d18		d38	2.0	db8				X					dd8								
W	1,2	QUEUE CL 6'X25'*	4 I7U	d19		d39	2.0	db9				X					dd9					X			
W	RT	FIRST VEH 6'X25'*	8 I7L	d1A	10	d3A		dbA								X	ddA								
W	LT	6'X50'*	8 I8U	d1b		d3b		dbb								X	ddb								
			I8L																						
N	2	ADVANCE	1 I9U	d1C		d3C	2.0	dbC	X								ddC								
			I9L	d1d		d3d		dbd									ddd								
			J1U	d20		d40		dC0									dE0								
			J1L																						
			J2U	d21		d41		dC1									dE1								
			J2L	d22		d42		dC2									dE2								
			J3U	d23		d43		dC3									dE3								
			J3L	d24		d44		dC4									dE4								
N	LT-1	QUEUE CL 6'X25'*	1 J4U	d25		d45	2.0	dC5	X								dE5					X			
N	LT-2/1,2	QUEUE CL 6'X25'*	1 J4L																						
			J5U	d26		d46		dC6									dE6								
			J5L																						
E	LT	6'X25'*	8 J6U	d27		d47		dC7								X	dE7								
E	RT	FIRST VEH 6'X25'*	8 J6L	d28	10	d48		dC8								X	dE8								
			J7U	d29		d49		dC9									dE9								
			J7L	d2A		d4A		dCA									dEA								
			J8U	d2b		d4b		dCb									dEb								
			J8L																						
			J9U	d2C		d4C		dCC									dEC								
			J9L	d2d		d4d		dCd									dEd								

Remarks: * = VIDEO DETECTION

DETECTOR ATTRIBUTES	
FLAG 1 - Red Lock	FLAG 5 - Queue Clearing
FLAG 2 - Red & Yellow Lock	FLAG 6 - Non-Counting
FLAG 3 - Yellow Disconnect	FLAG 7 - Special Delay Option
FLAG 4 - Red Calling	FLAG 8 - Special Delay Option

SPECIAL DETECTOR DELAY ASSIGNMENTS		Phase							
All options: Delay Timer resets during detector phase yellow.	Code	1	2	3	4	5	6	7	8
Special Delay Option 1 (Attribute Bit 7) - Bypasses delay while flagged phase(s) are timing.	d-d-E								
Special Delay Option 2 (Attribute Bit 8) - Bypasses delay while flagged phase(s) are timing.	d-d-F								

Special Delay Option 3 (Attribute Bits 7 & 8) - Bypasses delay when <u>other</u> phase in same quadrant IS NOT Green (1:2) (3:4) (5:6) (7:8).
Example: Phase 1 Detector delay will be overridden while Phase 2 is Yellow or Red.

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 COORDINATION

Intersection: Garfield Avenue @ Via Campo **T.S. No.:** 9511R-1of3MTB

System Limits: Pomona Boulevard to Via Campo

Remote Master: WWV **Date Prepared:** 4/5/10 **By:** jth

System No.: _____ **Date Implemented:** _____ **By:** _____

TIME OF DAY OPERATION SUMMARY			
	Dial 1	Dial 2	Dial 3 / Offset Timing
Offset 1	ALL OTHER TIMES	0600-0900 M-F	1600-1900 M-F
Offset 2			
Offset 3			
Free	2100-0600 M-F, 1930-0800 M-F		
Special			

· Set Local Manual to 14 (Free) before setting or changing dial intervals or functions. Setting either of the manuals to zero will release that Manual.

Local Manual C-0-1
11 = Slave Mode
12 = Offset Timing Mode
14 = Free Operation
Observe Locations:
Calls d-F-C
Hold d-F-d
Ped Restrict d-F-E
Force Off d-F-F
Local Cycle Timer w/Field Calls C-0-b

SYNC PARAMETERS
d - 0 - d System Sync Width 2.0 Seconds
d - 0 - E Set Maximum Width 4.0 Seconds
d - 0 - F Set Minimum Width 1.0 Seconds

REMARKS:

Keystrokes: C + Column + Row

Coordination Parameters		INTERVALS (In Seconds)			FUNCTION FLAGS DIAL 1				DIAL 2				DIAL 3				
		Dial 1	Dial 2	Dial 3	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	Force Off	Hold	Ped Restrict	Call	
0	Int	1	2	3	4	5	6	7	8	9	A	b	C	d	E	F	Int
System Manual * 0	0	90	120	120	2				2				2				0
Local Manual * 0	1	1	1	1	-				-				-				1
Master Dial	2	6	6	6			4				4				4		2
Local Dial	3	35	35	35	4,8		-		4,8		-		4,8		-		3
Offset Number	4	36	36	36	-,-				-,-				-,-				4
Time of Day Plan	5	47	47	49			1				1				1		5
Function 6 14	6	62	62	64	1		-		1		-		1		-		6
Current Table	7	63	63	65	-				-				-				7
Minimum Cycle 0	8	69	99	99			2				2				2		8
Maximum Cycle 255	9	90	120	120			-				-				-		9
Master Timer	A																A
Local Timer	b																b
System Timer	C																C
Current Offset	d																d
Last Master Cycle	E																E
Last Local Cycle	F																F

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 SPECIAL FUNCTIONS

Intersection: Garfield Avenue @ Via Campo Date Prepared: 4/5/10 By: jth

T.S. No.: 9511 R-1 c/o MTB Date Implemented: _____ By: _____

OVERLAP PHASE FLAGS

Phases ⟶		1	2	3	4	5	6	7	8
Overlap A	F-A-A	X							
Overlap B	F-A-b		X						
Overlap C	F-A-C								
Overlap D	F-A-d								
Overlap E	F-A-E								
Overlap F	F-A-F								

OVERLAP GREEN OMIT PHASES

Phases		1	2	3	4	5	6	7	8
Overlap A	F-b-A								
Overlap B	F-b-b								
Overlap C	F-b-C								
Overlap D	F-b-d								
Overlap E	F-b-E								
Overlap F	F-b-F								

RAILROAD PREEMPT OVERLAP FLAGS

Phases		1	2	3	4	5	6	7	8
Overlap A	F-C-A								
Overlap B	F-C-b								
Overlap C	F-C-C								
Overlap D	F-C-d								
Overlap E	F-C-E								
Overlap F	F-C-F								

EMERGENCY VEHICLE PREEMPT OVERLAP FLAGS

Phases ⟶		1	2	3	4	5	6	7	8
Overlap A	F-d-A								
Overlap B	F-d-b								
Overlap C	F-d-C								
Overlap D	F-d-d								
Overlap E	F-d-E								
Overlap F	F-d-F								

LOAD SWITCH ASSIGNMENT

Ped A to Overlap A **	F-9-A	
Ped B to Overlap B **	F-9-b	
Send Overlap C Output to Phase	F-9-C	
Send Overlap D Output to Phase	F-9-d	
Send Overlap E Output to Phase	F-9-E	
Send Overlap F Output to Phase	F-9-F	

Overlap Notes
2-Color Overlaps (A-B) 3-Color Overlaps (C-F)

Unused Right Turn Overlap outputs may be assigned as additional Peds.

PED A uses J11U for Ped Push Button Input.
PED B uses J11L for Ped Push Button Input.

** Set Vehicle Phases for Ped A/B to time with.

USER FLAG OPTIONS

Keystrokes: d + E + F

			USER FLAG NOTES
True Maximum Extension	1		The True Maximum Extension flag does NOT allow a maxed out phase to extend.
EV Pedestrian Clearance NOT Protected	2		EV Clearance is NOT protected when this flag is set.
	3		Unused.
Mid-Block Pedestrian Crossing	4		Phases 2 & 6 Red Flash during Phase 4 Ped Protection.
Delay RR Track Clearance Phase Green	5		Delays Track Clearance until Overlaps time out.
Echo Remote Coordination Input to Output	6		SUB-MASTER OPERATION: Echo Slave Data to Master Output.
Enable Manual Control	7		Enables Manual Advance Operation. Requires MANUAL switch.
Delay EV Clearance Phase Green	8		Delays EV Clearance until Overlaps time out.

ASSOCIATED PHASE RECALL

A Locked Call is placed on the Flagged Phase when the Associated Recall Phase is Green.

Flagged Phases		1	2	3	4	5	6	7	8
Phase 1	F-C-1								
Phase 2	F-C-2								
Phase 3	F-C-3								
Phase 4	F-C-4								
Phase 5	F-C-5								
Phase 6	F-C-6								
Phase 7	F-C-7								
Phase 8	F-C-8								

PHASE / OVERLAP REASSIGNMENTS

Phases		1	2	3	4	5	6	7	8
Phase Driveway Flash	F-A-0								
Phase Yellow Ranging *	F-A-1								
Overlaps ⟶		A	B	C	D	E	F		
Overlap Driveway Flash	F-A-2								
Overlap Yellow Ranging *	F-A-3								
Ped 2 Load Switch Overlap	F-A-4								
Ped 4 Load Switch Overlap	F-A-5								
Ped 6 Load Switch Overlap	F-A-6								
Ped 8 Load Switch Overlap	F-A-7								

Notes:
*Phase/Overlap Yellow Ranging - These Flags remove the minimum and maximum limits on the yellow settings.

Remarks:

AAE, Inc.
1858 E. Helm Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fa

LACO-3 EVENT TABLES

Intersection: Garfield Avenue @ Via Campo Date Prepared: 4/5/10 By: jth

T.S. No.: 9511 R-1 c/o MTB Date Implemented: By:

TABLE 0 - DEFAULT

Code	Hour : Min	Plan	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
0-0	00 : 00	E	X	X	X	X	X	X	X
0-1	06 : 00	2		X	X	X	X	X	
0-2	08 : 00	1	X						X
0-3	09 : 00	1		X	X	X	X	X	
0-4	16 : 00	3		X	X	X	X	X	
0-5	19 : 00	1		X	X	X	X	X	
0-6	21 : 00	E	X	X	X	X	X	X	X
0-7	:								
0-8	:								
0-9	:								
0-A	:								
0-b	:								
0-C	:								
0-d	:								
0-E	:								
0-F	:								

TABLE 3

Code	Hour : Min	Plan	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
3-0	:								
3-1	:								
3-2	:								
3-3	:								
3-4	:								
3-5	:								
3-6	:								
3-7	:								
3-8	:								
3-9	:								
3-A	:								
3-b	:								
3-C	:								
3-d	:								
3-E	:								
3-F	:								

SLAVE MODE TABLE

Code	Hour : Min	Dial	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
5-0	:								
5-1	:								
5-2	:								
5-3	:								
5-4	:								
5-5	:								
5-6	:								
5-7	:								
5-8	:								
5-9	:								
5-A	:								
5-b	:								
5-C	:								
5-d	:								
5-E	:								
5-F	:								

TABLE 1

Code	Hour : Min	Plan	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
1-0	00 : 00	E		X	X	X	X	X	
1-1	08 : 00	1		X	X	X	X	X	
1-2	21 : 00	E		X	X	X	X	X	
1-3	:								
1-4	:								
1-5	:								
1-6	:								
1-7	:								
1-8	:								
1-9	:								
1-A	:								
1-b	:								
1-C	:								
1-d	:								
1-E	:								
1-F	:								

Plan = Plan Number

O/D	D1	D2	D3
01 =	1	2	3
02 =	4	5	6
03 =	7	8	9

Keys:
0 = No Days
8 = All Days
9 = Week Days

Plans:
A = Protected/Permissive Arrows (F-F-b) Disabled.
b = Slave Mode (4 Wire / 7 Wire Input)
C = Offset Timing Mode
d = T.O.D. Output (Detector Reset Line) "ON".
E = Function 6
F = Reset Plans A & d.

Table 6:
C = Continue the Floating Holiday by C (0-9) days.
N^{th} = The number of the occurrence in the month.
(1-5, 9 = Always the last occurrence in the month.)
I. e. Thanksgiving = 11/1/4 [table] flag Thursday continues one extra day.

FLOATING HOLIDAYS

Code	Month / C / N^{th}	Table	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
6-0	01 / 0 / 3	1		X					
6-1	02 / 0 / 3	1		X					
6-2	05 / 0 / 9	1		X					
6-3	09 / 0 / 1	1		X					
6-4	11 / 1 / 4	1					X		
6-5	/ /								
6-6	/ /								
6-7	/ /								
6-8	/ /								
6-9	/ /								
6-A	/ /								
6-b	/ /								
6-C	/ /								
6-d	/ /								
6-E	/ /								
6-F	/ /								

TABLE 2

Code	Hour : Min	Plan	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
2-0	:								
2-1	:								
2-2	:								
2-3	:								
2-4	:								
2-5	:								
2-6	:								
2-7	:								
2-8	:								
2-9	:								
2-A	:								
2-b	:								
2-C	:								
2-d	:								
2-E	:								
2-F	:								

TABLE 4

Code	Hour : Min	Plan	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
4-0	:								
4-1	:								
4-2	:								
4-3	:								
4-4	:								
4-5	:								
4-6	:								
4-7	:								
4-8	:								
4-9	:								
4-A	:								
4-b	:								
4-C	:								
4-d	:								
4-E	:								
4-F	:								

EXCEPTION DAYS

Code	Month / Day	Table	s	m	t	w	t	f	s
			1	2	3	4	5	6	7
7-0	01 / 01	1		X	X	X	X	X	
7-1	01 / 02	1		X					
7-2	07 / 04	1		X	X	X	X	X	
7-3	07 / 05	1		X					
7-4	11 / 10	1						X	
7-5	11 / 11	1		X	X	X	X	X	
7-6	11 / 12	1		X					
7-7	12 / 24	1		X	X	X	X	X	
7-8	12 / 25	1		X	X	X	X	X	
7-9	12 / 26	1		X				X	
7-A	/								
7-b	/								
7-C	/								
7-d	/								
7-E	/								
7-F	/								

AAE, Inc.
1858 E. Heim Avenue, Suite 100
Orange, CA 92865
(714) 940-0100, (714) 940-0700-fax

LACO-3 ANNUAL TABLES

Intersection: Garfield Avenue @ Via Campo Date Prepared: 4/5/10 By: jth

T.S. No.: 9511 R-1 c/o MTB Date Implemented: By:

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
8-0	/								
8-1	/								
8-2	/								
8-3	/								
8-4	/								
8-5	/								
8-6	/								
8-7	/								
8-8	/								
8-9	/								
8-A	/								
8-b	/								
8-C	/								
REMARKS:									
8-E	/								
8-F	/								

ANNUAL EVENTS			s	m	t	w	t	f	s
Code	Month / Day	Table	1	2	3	4	5	6	7
9-0	/								
9-1	/								
9-2	/								
9-3	/								
9-4	/								
9-5	/								
9-6	/								
9-7	/								
9-8	/								
9-9	/								
9-A	/								
9-b	/								
9-C	/								
9-d	/								
9-E	/								
9-F	/								

NOTES ON USING TABLES:
Starting from the base display [A/b], Table access is gained with two digit Table Code. Access is verified by the flashing of Call Light 9.

Five key presses will be required followed by [E] to enter the data and open the flag mode. Day of Week flags can now be set.

ADDITIONAL KEY CODES:
A-C = Clock Display
A-D = Date Display

d-0-0 = 1 Force Repoll of WWV Receiver
d-0-1 = Hour of Last Repoll
d-0-2 = Minute of Last Repoll
d-0-3 = Second of Last Repoll
d-0-4 = Month of Last Repoll
d-0-5 = Day of Last Repoll
d-0-6 = Year of Last Repoll

OBSERVE ONLY:
E-3-8 = Ring A Max Timer
E-4-8 = Ring B Max Timer
E-6-3 = 4 T.O.D. Output
E-6-3 = 5 Offset Timing Mode
E-6-3 = 6 Slave Mode
E-6-3 = 7 Maximum Extension 2 (Coord)
E-6-3 = 8 Arrows Disabled

F-0-0 = Phase / Dial Copy - Source Phase (1-8) Dial (11-13)
F-0-1 = Phase / Dial Copy - Destination Phase (1-8) Dial (11-13)
F-0-2 = Table/Dial Insert/Delete - Target Table (0-9) Table (1=10) Dial (11-13)
F-0-3 = Table/Dial Insert/Delete - Interval Insert 1-16 Delete 101-116
F-0-4 = Program Number
F-0-5 = Version Number

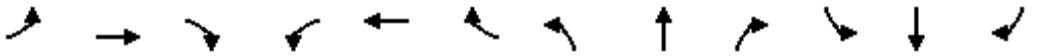
F-0-A = 1 Searches Annual Event Tables.
F-0-A = 071 Save Timing to Prom Module.
F-0-A = 170 Download Timing into 170.
F-0-A = 777 Reinitialization from NOVRAM.
F-0-A = 888 Reinitialization from EPROM.
F-0-A = 999 Clears All Tables and Loads Default Holiday Events.

OFFSETS			
Keystrokes: F + 9 + CODE			
OFFSET 1	Dial 1	1	87
	Dial 2	2	0
	Dial 3	3	0
OFFSET 2	Dial 1	4	
	Dial 2	5	
	Dial 3	6	
OFFSET 3	Dial 1	7	
	Dial 2	8	
	Dial 3	9	

COMMUNICATIONS ASSIGNMENTS		
Keystrokes: d + 0 + FUNCTION		
PORT 1	7	1
PORT 2	8	
PORT 3	9	
PORT 4	A	

0 = Off
1 = WWV Radio Receiver
2 = ML2 Protocol - Coord OUT Only
4 = ML2 Protocol - Coord IN & OUT
7 = ML2 Protocol - Coord IN Only
8 = Remote Monitoring (Future)
12 = Sends Time/Date String Out of Modem
17 = Receives Time/Date String from Modem

Appendix E
Existing Conditions LOS Worksheets



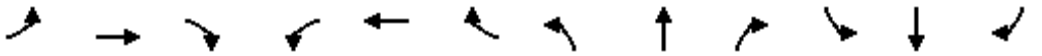
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	0	815	0	0	0	797	116	0	0	95	31
Future Volume (vph)	45	0	815	0	0	0	797	116	0	0	95	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5				5.5	6.0			6.0	6.0
Lane Util. Factor	0.95	0.95	0.88				0.97	0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1681	1681	2787				3433	3539			3539	1583
Flt Permitted	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)	1681	1681	2787				3433	3539			3539	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	51	0	916	0	0	0	896	130	0	0	107	35
RTOR Reduction (vph)	0	0	283	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	25	26	633	0	0	0	896	130	0	0	107	5
Confl. Peds. (#/hr)	5					5						
Confl. Bikes (#/hr)			1			1						
Turn Type	Split	NA	pt+ov				Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4	1 4	3	3		1	6		5	2	
Permitted Phases									6			2
Actuated Green, G (s)	12.7	12.7	48.2				30.0	45.5			10.0	10.0
Effective Green, g (s)	12.7	12.7	48.2				30.0	45.5			10.0	10.0
Actuated g/C Ratio	0.18	0.18	0.69				0.43	0.65			0.14	0.14
Clearance Time (s)	5.5	5.5					5.5	6.0			6.0	6.0
Vehicle Extension (s)	4.0	4.0					3.0	4.0			2.0	2.0
Lane Grp Cap (vph)	306	306	1927				1477	2310			507	227
v/s Ratio Prot	0.01	0.02	c0.23				c0.26	0.04			c0.03	
v/s Ratio Perm												0.00
v/c Ratio	0.08	0.08	0.33				0.61	0.06			0.21	0.02
Uniform Delay, d1	23.7	23.7	4.3				15.3	4.4			26.4	25.6
Progression Factor	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	0.2	0.1				0.7	0.0			0.1	0.0
Delay (s)	23.8	23.8	4.4				16.0	4.4			26.4	25.7
Level of Service	C	C	A				B	A			C	C
Approach Delay (s)		5.4			0.0			14.5			26.2	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	69.7	Sum of lost time (s)	23.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
2: Montebello Blvd & W Beverly Blvd

08/04/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	433	105	151	939	145	168	610	65	128	679	140
Future Volume (veh/h)	92	433	105	151	939	145	168	610	65	128	679	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	461	112	161	999	154	179	649	69	136	722	149
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	1391	612	452	1276	197	210	1223	129	165	840	366
Arrive On Green	0.05	0.39	0.39	0.07	0.41	0.41	0.12	0.26	0.26	0.09	0.24	0.24
Sat Flow, veh/h	1781	3554	1562	1781	3080	474	1781	4680	493	1781	3554	1547
Grp Volume(v), veh/h	98	461	112	161	576	577	179	470	248	136	722	149
Grp Sat Flow(s),veh/h/ln	1781	1777	1562	1781	1777	1777	1781	1702	1769	1781	1777	1547
Q Serve(g_s), s	3.3	9.1	4.7	5.3	28.1	28.2	9.9	11.8	12.0	7.5	19.5	8.1
Cycle Q Clear(g_c), s	3.3	9.1	4.7	5.3	28.1	28.2	9.9	11.8	12.0	7.5	19.5	8.1
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	225	1391	612	452	736	737	210	889	462	165	840	366
V/C Ratio(X)	0.44	0.33	0.18	0.36	0.78	0.78	0.85	0.53	0.54	0.82	0.86	0.41
Avail Cap(c_a), veh/h	281	1391	612	468	736	737	226	889	462	226	888	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	21.3	19.9	16.2	25.4	25.4	43.3	31.7	31.7	44.5	36.6	32.3
Incr Delay (d2), s/veh	1.0	0.6	0.7	0.4	8.1	8.2	22.8	0.8	1.6	11.7	8.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.7	1.7	2.1	12.7	12.7	5.5	4.8	5.2	3.8	9.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	21.9	20.6	16.5	33.5	33.5	66.1	32.5	33.3	56.2	45.2	33.3
LnGrp LOS	C	C	C	B	C	C	E	C	C	E	D	C
Approach Vol, veh/h		671			1314			897			1007	
Approach Delay, s/veh		21.7			31.4			39.4			44.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	46.7	13.3	31.0	11.2	44.4	15.8	28.5
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 4.9	4.0	* 5.3	4.0	* 4.9
Max Green Setting (Gmax), s	8.1	* 36	12.7	* 25	8.1	* 36	12.7	* 25
Max Q Clear Time (g_c+I1), s	5.3	30.2	9.5	14.0	7.3	11.1	11.9	21.5
Green Ext Time (p_c), s	0.0	4.0	0.0	4.3	0.0	2.0	0.0	2.0

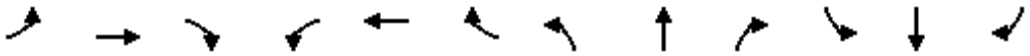
Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
3: Montebello Blvd & Whittier Blvd

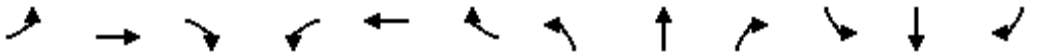
08/04/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	352	72	84	757	87	105	557	46	84	647	102
Future Volume (veh/h)	83	352	72	84	757	87	105	557	46	84	647	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	371	76	88	797	92	111	586	48	88	681	107
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	1176	238	112	1288	149	138	1071	468	112	879	138
Arrive On Green	0.06	0.40	0.40	0.06	0.40	0.40	0.08	0.30	0.30	0.06	0.29	0.29
Sat Flow, veh/h	1781	2921	591	1781	3194	369	1781	3554	1553	1781	3067	481
Grp Volume(v), veh/h	87	224	223	88	443	446	111	586	48	88	394	394
Grp Sat Flow(s),veh/h/ln	1781	1777	1735	1781	1777	1786	1781	1777	1553	1781	1777	1772
Q Serve(g_s), s	4.8	8.6	8.8	4.9	19.8	19.8	6.1	13.8	2.2	4.9	20.3	20.4
Cycle Q Clear(g_c), s	4.8	8.6	8.8	4.9	19.8	19.8	6.1	13.8	2.2	4.9	20.3	20.4
Prop In Lane	1.00		0.34	1.00		0.21	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	111	715	698	112	717	720	138	1071	468	112	509	508
V/C Ratio(X)	0.78	0.31	0.32	0.78	0.62	0.62	0.80	0.55	0.10	0.79	0.77	0.78
Avail Cap(c_a), veh/h	178	715	698	178	717	720	178	1297	567	178	649	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	20.4	20.5	46.2	23.7	23.7	45.4	29.2	25.2	46.2	32.7	32.7
Incr Delay (d2), s/veh	11.2	1.1	1.2	11.2	4.0	4.0	14.0	0.8	0.2	4.5	5.8	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.7	3.7	2.5	8.9	8.9	3.2	5.8	0.8	2.3	9.3	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	21.6	21.7	57.3	27.7	27.7	59.3	30.0	25.3	50.7	38.5	38.6
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	D	D
Approach Vol, veh/h		534			977			745			876	
Approach Delay, s/veh		27.5			30.4			34.0			39.8	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	45.3	11.3	33.7	9.7	45.3	9.8	35.1
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	10.0	26.5	10.0	36.5	10.0	26.5	10.0	36.5
Max Q Clear Time (g_c+I1), s	6.9	10.8	8.1	22.4	6.8	21.8	6.9	15.8
Green Ext Time (p_c), s	0.0	1.2	0.0	6.3	0.0	1.5	0.0	6.3

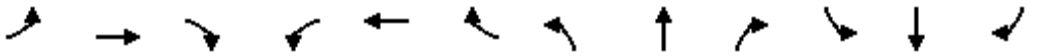
Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	503	87	136	1100	113	71	475	67	81	496	171
Future Volume (veh/h)	88	503	87	136	1100	113	71	475	67	81	496	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.95	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	519	90	140	1134	116	73	490	69	84	511	176
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	2075	353	170	2369	242	161	921	129	209	759	260
Arrive On Green	0.07	0.47	0.47	0.10	0.50	0.50	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	4385	745	1781	4701	481	746	3108	435	836	2561	876
Grp Volume(v), veh/h	91	400	209	140	821	429	73	279	280	84	353	334
Grp Sat Flow(s),veh/h/ln	1781	1702	1726	1781	1702	1778	746	1777	1766	836	1777	1661
Q Serve(g_s), s	5.0	7.0	7.2	7.7	15.8	15.8	9.6	13.1	13.3	9.3	17.5	17.7
Cycle Q Clear(g_c), s	5.0	7.0	7.2	7.7	15.8	15.8	27.2	13.1	13.3	22.6	17.5	17.7
Prop In Lane	1.00		0.43	1.00		0.27	1.00		0.25	1.00		0.53
Lane Grp Cap(c), veh/h	116	1611	817	170	1715	896	161	526	523	209	526	492
V/C Ratio(X)	0.79	0.25	0.26	0.82	0.48	0.48	0.45	0.53	0.54	0.40	0.67	0.68
Avail Cap(c_a), veh/h	267	1611	817	267	1715	896	168	542	539	216	542	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	15.7	15.8	44.4	16.2	16.2	43.0	29.4	29.4	38.9	30.9	31.0
Incr Delay (d2), s/veh	4.4	0.4	0.8	5.7	1.0	1.8	0.7	0.4	0.5	0.5	2.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.6	2.8	3.6	5.9	6.4	1.7	5.4	5.5	1.9	7.5	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	16.1	16.5	50.0	17.2	18.1	43.7	29.8	29.9	39.4	33.4	33.8
LnGrp LOS	D	B	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		700			1390			632			771	
Approach Delay, s/veh		20.7			20.8			31.5			34.2	
Approach LOS		C			C			C			C	

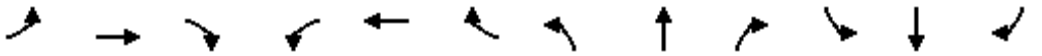
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	54.9		33.6	14.6	51.8		33.6				
Change Period (Y+Rc), s	5.0	4.5		4.0	5.0	4.5		4.0				
Max Green Setting (Gmax), s	15.0	41.0		30.5	15.0	41.0		30.5				
Max Q Clear Time (g_c+I1), s	7.0	17.8		29.2	9.7	9.2		24.6				
Green Ext Time (p_c), s	0.0	11.8		0.4	0.0	5.8		1.7				

Intersection Summary			
HCM 6th Ctrl Delay		25.7	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	709	337	17	0	292	0	633	117	162	518	0
Future Volume (vph)	192	709	337	17	0	292	0	633	117	162	518	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Lane Util. Factor	1.00	0.91		1.00		1.00		0.91	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4817		1769		1583		5085	1556	1610	3385	
Flt Permitted	0.95	1.00		0.14		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4817		253		1583		5085	1556	1610	3385	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	202	746	355	18	0	307	0	666	123	171	545	0
RTOR Reduction (vph)	0	63	0	0	0	65	0	0	84	0	0	0
Lane Group Flow (vph)	202	1038	0	18	0	242	0	666	39	154	562	0
Confl. Peds. (#/hr)			2	2			4		3	3		4
Turn Type	Perm	NA		Perm		pm+ov		NA	Perm	Split	NA	
Protected Phases		4				1		2		1	1	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	40.1	40.1		40.1		67.7		37.8	37.8	27.6	27.6	
Effective Green, g (s)	40.1	40.1		40.1		67.7		37.8	37.8	27.6	27.6	
Actuated g/C Ratio	0.33	0.33		0.33		0.56		0.31	0.31	0.23	0.23	
Clearance Time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Vehicle Extension (s)	4.0	4.0		3.0		4.0		4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	591	1609		84		893		1601	490	370	778	
v/s Ratio Prot		c0.22				0.06		c0.13		0.10	c0.17	
v/s Ratio Perm	0.11			0.07		0.09			0.02			
v/c Ratio	0.34	0.64		0.21		0.27		0.42	0.08	0.42	0.72	
Uniform Delay, d1	30.0	33.9		28.7		13.5		32.4	28.9	39.3	42.7	
Progression Factor	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	1.0		1.3		0.2		0.8	0.3	1.0	3.6	
Delay (s)	30.5	34.9		29.9		13.7		33.2	29.2	40.4	46.2	
Level of Service	C	C		C		B		C	C	D	D	
Approach Delay (s)		34.2			14.6			32.6			45.0	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



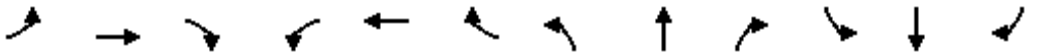
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	0	993	0	0	0	927	594	0	1	283	76
Future Volume (vph)	287	0	993	0	0	0	927	594	0	1	283	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5				5.5	6.0		4.5	6.0	6.0
Lane Util. Factor	0.95	0.95	0.88				0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00				1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1681	2787				3433	3539		1770	3539	1583
Flt Permitted	0.95	0.95	1.00				0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1681	2787				3433	3539		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	312	0	1079	0	0	0	1008	646	0	1	308	83
RTOR Reduction (vph)	0	0	336	0	0	0	0	0	0	0	0	68
Lane Group Flow (vph)	156	156	743	0	0	0	1008	646	0	1	308	15
Confl. Peds. (#/hr)	15		4	4		15						
Confl. Bikes (#/hr)			1			1						
Turn Type	Split	NA	pt+ov				Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4	1 4	3	3		1	6		5	2	
Permitted Phases									6			2
Actuated Green, G (s)	25.8	25.8	61.8				30.5	47.2		0.8	16.5	16.5
Effective Green, g (s)	25.8	25.8	61.8				30.5	47.2		0.8	16.5	16.5
Actuated g/C Ratio	0.29	0.29	0.69				0.34	0.53		0.01	0.18	0.18
Clearance Time (s)	5.5	5.5					5.5	6.0		4.5	6.0	6.0
Vehicle Extension (s)	4.0	4.0					1.5	4.0		4.0	2.0	2.0
Lane Grp Cap (vph)	482	482	1918				1165	1860		15	650	290
v/s Ratio Prot	0.09	0.09	c0.27				c0.29	0.18		0.00	c0.09	
v/s Ratio Perm												0.01
v/c Ratio	0.32	0.32	0.39				0.87	0.35		0.07	0.47	0.05
Uniform Delay, d1	25.1	25.1	6.0				27.7	12.4		44.1	32.8	30.2
Progression Factor	1.00	1.00	1.00				1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.5	0.0				6.7	0.2		2.6	0.2	0.0
Delay (s)	25.7	25.7	6.0				34.4	12.5		46.7	33.0	30.2
Level of Service	C	C	A				C	B		D	C	C
Approach Delay (s)		10.4			0.0			25.9			32.4	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	23.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
2: Montebello Blvd & W Beverly Blvd

08/04/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	1184	237	91	563	129	169	924	172	238	847	115
Future Volume (veh/h)	175	1184	237	91	563	129	169	924	172	238	847	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	177	1196	239	92	569	130	171	933	174	240	856	116
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	369	1415	620	192	1050	239	202	1054	196	226	918	402
Arrive On Green	0.08	0.40	0.40	0.05	0.37	0.37	0.11	0.24	0.24	0.13	0.26	0.26
Sat Flow, veh/h	1781	3554	1556	1781	2863	652	1781	4311	801	1781	3554	1556
Grp Volume(v), veh/h	177	1196	239	92	352	347	171	736	371	240	856	116
Grp Sat Flow(s),veh/h/ln	1781	1777	1556	1781	1777	1738	1781	1702	1707	1781	1777	1556
Q Serve(g_s), s	6.0	30.5	10.9	3.2	15.7	15.8	9.4	20.8	21.0	12.7	23.5	6.0
Cycle Q Clear(g_c), s	6.0	30.5	10.9	3.2	15.7	15.8	9.4	20.8	21.0	12.7	23.5	6.0
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	369	1415	620	192	652	637	202	833	418	226	918	402
V/C Ratio(X)	0.48	0.85	0.39	0.48	0.54	0.54	0.85	0.88	0.89	1.06	0.93	0.29
Avail Cap(c_a), veh/h	390	1415	620	269	652	637	226	851	427	226	918	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	27.3	21.4	23.0	25.0	25.0	43.5	36.4	36.5	43.7	36.2	29.7
Incr Delay (d2), s/veh	0.7	6.4	1.8	1.4	3.2	3.3	21.0	11.0	20.1	76.8	16.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	13.3	4.1	1.3	6.9	6.8	5.2	9.6	10.7	10.2	11.8	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	33.7	23.2	24.4	28.2	28.4	64.4	47.4	56.5	120.5	52.3	30.3
LnGrp LOS	B	C	C	C	C	C	E	D	E	F	D	C
Approach Vol, veh/h		1612			791			1278			1212	
Approach Delay, s/veh		30.5			27.8			52.4			63.7	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	42.0	16.7	29.4	8.8	45.1	15.3	30.7
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 4.9	4.0	* 5.3	4.0	* 4.9
Max Green Setting (Gmax), s	9.1	* 35	12.7	* 25	9.1	* 35	12.7	* 25
Max Q Clear Time (g_c+I1), s	8.0	17.8	14.7	23.0	5.2	32.5	11.4	25.5
Green Ext Time (p_c), s	0.0	5.3	0.0	1.5	0.0	1.5	0.0	0.0

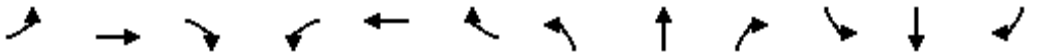
Intersection Summary	
HCM 6th Ctrl Delay	44.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
3: Montebello Blvd & Whittier Blvd

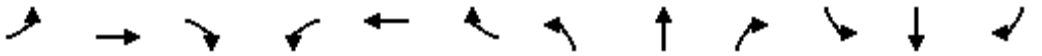
08/04/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	836	84	71	530	95	78	866	112	161	784	96
Future Volume (veh/h)	184	836	84	71	530	95	78	866	112	161	784	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	889	89	76	564	101	83	921	119	171	834	102
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1155	116	98	930	166	106	1135	495	178	1144	140
Arrive On Green	0.10	0.36	0.36	0.05	0.31	0.31	0.06	0.32	0.32	0.10	0.36	0.36
Sat Flow, veh/h	1781	3248	325	1781	2996	535	1781	3554	1548	1781	3179	389
Grp Volume(v), veh/h	196	486	492	76	334	331	83	921	119	171	466	470
Grp Sat Flow(s),veh/h/ln	1781	1777	1796	1781	1777	1754	1781	1777	1548	1781	1777	1791
Q Serve(g_s), s	10.0	24.3	24.3	4.2	15.9	16.1	4.6	23.8	5.7	9.6	22.8	22.8
Cycle Q Clear(g_c), s	10.0	24.3	24.3	4.2	15.9	16.1	4.6	23.8	5.7	9.6	22.8	22.8
Prop In Lane	1.00		0.18	1.00		0.30	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	178	632	639	98	552	545	106	1135	495	178	640	645
V/C Ratio(X)	1.10	0.77	0.77	0.78	0.60	0.61	0.78	0.81	0.24	0.96	0.73	0.73
Avail Cap(c_a), veh/h	178	632	639	178	552	545	178	1262	549	178	640	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	28.6	28.6	46.6	29.3	29.3	46.4	31.3	25.1	44.8	27.8	27.8
Incr Delay (d2), s/veh	96.8	8.8	8.7	12.3	4.9	5.0	4.7	4.3	0.4	55.2	4.8	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	11.6	11.7	2.2	7.4	7.4	2.1	10.5	2.1	6.9	10.1	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	141.8	37.4	37.3	58.9	34.1	34.3	51.1	35.5	25.5	100.0	32.6	32.5
LnGrp LOS	F	D	D	E	C	C	D	D	C	F	C	C
Approach Vol, veh/h		1174			741			1123			1107	
Approach Delay, s/veh		54.8			36.7			35.6			43.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	40.6	9.5	41.0	13.5	36.0	13.5	37.0
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	10.0	27.5	10.0	35.5	10.0	27.5	10.0	35.5
Max Q Clear Time (g_c+I1), s	6.2	26.3	6.6	24.8	12.0	18.1	11.6	25.8
Green Ext Time (p_c), s	0.0	0.5	0.0	6.1	0.0	1.6	0.0	6.1

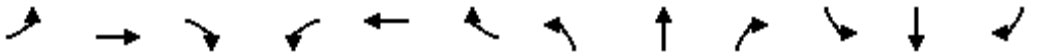
Intersection Summary	
HCM 6th Ctrl Delay	43.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	1044	247	92	617	105	67	584	90	143	729	114
Future Volume (veh/h)	252	1044	247	92	617	105	67	584	90	143	729	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	265	1099	260	97	649	111	71	615	95	151	767	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	2024	479	123	1780	301	118	939	145	169	937	147
Arrive On Green	0.16	0.49	0.49	0.07	0.41	0.41	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	4121	975	1781	4396	742	625	3079	475	737	3072	481
Grp Volume(v), veh/h	265	908	451	97	501	259	71	354	356	151	444	443
Grp Sat Flow(s),veh/h/ln	1781	1702	1692	1781	1702	1734	625	1777	1777	737	1777	1776
Q Serve(g_s), s	14.8	18.5	18.5	5.4	10.3	10.5	7.4	17.3	17.4	13.1	23.1	23.1
Cycle Q Clear(g_c), s	14.8	18.5	18.5	5.4	10.3	10.5	30.5	17.3	17.4	30.5	23.1	23.1
Prop In Lane	1.00		0.58	1.00		0.43	1.00		0.27	1.00		0.27
Lane Grp Cap(c), veh/h	276	1671	831	123	1379	702	118	542	542	169	542	542
V/C Ratio(X)	0.96	0.54	0.54	0.79	0.36	0.37	0.60	0.65	0.66	0.90	0.82	0.82
Avail Cap(c_a), veh/h	276	1671	831	276	1379	702	118	542	542	169	542	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	17.7	17.7	45.8	20.8	20.8	47.6	30.2	30.2	45.8	32.2	32.2
Incr Delay (d2), s/veh	42.8	1.3	2.5	4.2	0.7	1.5	5.9	2.2	2.3	40.0	9.0	9.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	7.0	7.2	2.5	4.0	4.3	1.9	7.4	7.4	5.6	10.8	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.8	18.9	20.2	50.0	21.5	22.3	53.5	32.4	32.5	85.8	41.2	41.2
LnGrp LOS	F	B	C	D	C	C	D	C	C	F	D	D
Approach Vol, veh/h		1624			857			781			1038	
Approach Delay, s/veh		30.0			25.0			34.4			47.7	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.5	45.0		34.5	11.9	53.6		34.5				
Change Period (Y+Rc), s	5.0	4.5		4.0	5.0	4.5		4.0				
Max Green Setting (Gmax), s	15.5	40.5		30.5	15.5	40.5		30.5				
Max Q Clear Time (g_c+I1), s	16.8	12.5		32.5	7.4	20.5		32.5				
Green Ext Time (p_c), s	0.0	7.2		0.0	0.0	11.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									



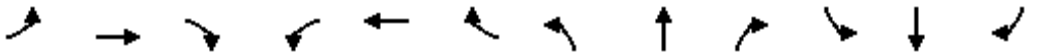
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	961	278	30	0	174	0	693	223	339	796	0
Future Volume (vph)	78	961	278	30	0	174	0	693	223	339	796	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Lane Util. Factor	1.00	0.91		1.00		1.00		0.91	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	0.99		1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4889		1768		1583		5085	1551	1610	3383	
Flt Permitted	0.95	1.00		0.11		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4889		198		1583		5085	1551	1610	3383	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	82	1012	293	32	0	183	0	729	235	357	838	0
RTOR Reduction (vph)	0	36	0	0	0	40	0	0	45	0	0	0
Lane Group Flow (vph)	82	1269	0	32	0	143	0	729	190	321	874	0
Confl. Peds. (#/hr)			9	9			3		5	5		3
Confl. Bikes (#/hr)												1
Turn Type	Perm	NA		Perm		pm+ov		NA	Perm	Split	NA	
Protected Phases		4				1		2		1	1	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	46.4	46.4		46.4		76.8		28.7	28.7	30.4	30.4	
Effective Green, g (s)	46.4	46.4		46.4		76.8		28.7	28.7	30.4	30.4	
Actuated g/C Ratio	0.39	0.39		0.39		0.64		0.24	0.24	0.25	0.25	
Clearance Time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Vehicle Extension (s)	4.0	4.0		3.0		4.0		4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	684	1890		76		1013		1216	370	407	857	
v/s Ratio Prot		c0.26				0.04		c0.14		0.20	c0.26	
v/s Ratio Perm	0.05			0.16		0.05			0.12			
v/c Ratio	0.12	0.67		0.42		0.14		0.60	0.51	0.79	1.02	
Uniform Delay, d1	23.7	30.5		27.0		8.5		40.5	39.6	41.8	44.8	
Progression Factor	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.0		3.7		0.1		2.2	5.0	10.3	35.8	
Delay (s)	23.8	31.5		30.7		8.6		42.7	44.6	52.1	80.6	
Level of Service	C	C		C		A		D	D	D	F	
Approach Delay (s)		31.1			11.9			43.2			73.0	
Approach LOS		C			B			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix F

Year 2045 General Plan Update Conditions LOS Worksheets



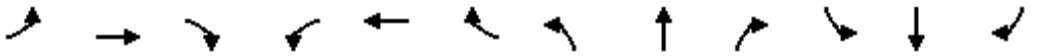
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	0	930	0	0	0	939	135	0	0	117	37
Future Volume (vph)	49	0	930	0	0	0	939	135	0	0	117	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5				5.5	6.0			6.0	6.0
Lane Util. Factor	0.95	0.95	0.88				0.97	0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1681	1681	2787				3433	3539			3539	1583
Flt Permitted	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)	1681	1681	2787				3433	3539			3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	0	979	0	0	0	988	142	0	0	123	39
RTOR Reduction (vph)	0	0	300	0	0	0	0	0	0	0	0	33
Lane Group Flow (vph)	26	26	679	0	0	0	988	142	0	0	123	6
Confl. Peds. (#/hr)	5					5						
Confl. Bikes (#/hr)			1			1						
Turn Type	Split	NA	pt+ov				Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4	1 4	3	3		1	6		5	2	
Permitted Phases									6			2
Actuated Green, G (s)	13.5	13.5	49.0				30.0	45.6			10.1	10.1
Effective Green, g (s)	13.5	13.5	49.0				30.0	45.6			10.1	10.1
Actuated g/C Ratio	0.19	0.19	0.69				0.42	0.65			0.14	0.14
Clearance Time (s)	5.5	5.5					5.5	6.0			6.0	6.0
Vehicle Extension (s)	4.0	4.0					3.0	4.0			2.0	2.0
Lane Grp Cap (vph)	321	321	1934				1458	2285			506	226
v/s Ratio Prot	0.02	0.02	c0.24				c0.29	0.04			c0.03	
v/s Ratio Perm												0.00
v/c Ratio	0.08	0.08	0.35				0.68	0.06			0.24	0.02
Uniform Delay, d1	23.5	23.5	4.4				16.4	4.6			26.9	26.0
Progression Factor	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	0.1	0.1	0.1				1.3	0.0			0.1	0.0
Delay (s)	23.6	23.6	4.5				17.7	4.6			26.9	26.0
Level of Service	C	C	A				B	A			C	C
Approach Delay (s)		5.4			0.0			16.0			26.7	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	23.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
2: Montebello Blvd & W Beverly Blvd

08/29/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	433	105	151	939	145	168	630	65	128	743	140
Future Volume (veh/h)	92	433	105	151	939	145	168	630	65	128	743	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	456	111	159	988	153	177	663	68	135	782	147
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1368	601	448	1255	194	208	1262	128	164	868	378
Arrive On Green	0.05	0.38	0.38	0.07	0.41	0.41	0.12	0.27	0.27	0.09	0.24	0.24
Sat Flow, veh/h	1781	3554	1562	1781	3077	476	1781	4699	477	1781	3554	1548
Grp Volume(v), veh/h	97	456	111	159	570	571	177	479	252	135	782	147
Grp Sat Flow(s),veh/h/ln	1781	1777	1562	1781	1777	1777	1781	1702	1772	1781	1777	1548
Q Serve(g_s), s	3.3	9.1	4.7	5.3	28.0	28.0	9.7	12.0	12.2	7.4	21.3	7.9
Cycle Q Clear(g_c), s	3.3	9.1	4.7	5.3	28.0	28.0	9.7	12.0	12.2	7.4	21.3	7.9
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	223	1368	601	448	725	725	208	914	476	164	868	378
V/C Ratio(X)	0.44	0.33	0.18	0.35	0.79	0.79	0.85	0.52	0.53	0.82	0.90	0.39
Avail Cap(c_a), veh/h	279	1368	601	464	725	725	226	914	476	226	888	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	21.7	20.4	16.5	25.8	25.8	43.3	31.1	31.2	44.6	36.6	31.6
Incr Delay (d2), s/veh	1.0	0.7	0.7	0.4	8.4	8.5	22.4	0.7	1.5	11.4	12.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.7	1.8	2.1	12.7	12.7	5.5	4.8	5.2	3.7	10.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	22.4	21.0	16.9	34.2	34.3	65.7	31.9	32.7	55.9	49.0	32.5
LnGrp LOS	C	C	C	B	C	C	E	C	C	E	D	C
Approach Vol, veh/h		664			1300			908			1064	
Approach Delay, s/veh		22.1			32.1			38.7			47.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	46.1	13.2	31.7	11.2	43.8	15.7	29.3
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 4.9	4.0	* 5.3	4.0	* 4.9
Max Green Setting (Gmax), s	8.1	* 36	12.7	* 25	8.1	* 36	12.7	* 25
Max Q Clear Time (g_c+I1), s	5.3	30.0	9.4	14.2	7.3	11.1	11.7	23.3
Green Ext Time (p_c), s	0.0	4.1	0.0	4.3	0.0	2.0	0.0	1.1

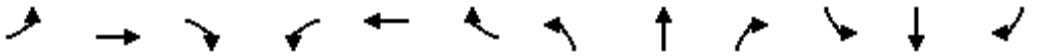
Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
3: Montebello Blvd & Whittier Blvd

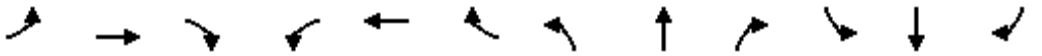
08/29/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	352	75	84	757	87	105	617	46	84	673	102
Future Volume (veh/h)	83	352	75	84	757	87	105	617	46	84	673	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	371	79	88	797	92	111	649	48	88	708	107
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	1147	241	112	1266	146	138	1095	479	112	905	137
Arrive On Green	0.06	0.40	0.40	0.06	0.40	0.40	0.08	0.31	0.31	0.06	0.29	0.29
Sat Flow, veh/h	1781	2898	609	1781	3194	369	1781	3554	1554	1781	3086	466
Grp Volume(v), veh/h	87	226	224	88	443	446	111	649	48	88	407	408
Grp Sat Flow(s),veh/h/ln	1781	1777	1730	1781	1777	1785	1781	1777	1554	1781	1777	1775
Q Serve(g_s), s	4.8	8.8	9.0	4.9	20.1	20.1	6.1	15.5	2.2	4.9	21.0	21.1
Cycle Q Clear(g_c), s	4.8	8.8	9.0	4.9	20.1	20.1	6.1	15.5	2.2	4.9	21.0	21.1
Prop In Lane	1.00		0.35	1.00		0.21	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	111	703	685	112	704	708	138	1095	479	112	521	521
V/C Ratio(X)	0.78	0.32	0.33	0.78	0.63	0.63	0.80	0.59	0.10	0.79	0.78	0.78
Avail Cap(c_a), veh/h	178	703	685	178	704	708	178	1297	567	178	649	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	20.9	21.0	46.2	24.3	24.3	45.4	29.3	24.7	46.2	32.4	32.4
Incr Delay (d2), s/veh	11.2	1.2	1.3	11.2	4.2	4.2	14.0	0.9	0.2	4.5	6.2	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.8	3.8	2.5	9.0	9.1	3.2	6.5	0.8	2.3	9.6	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	22.1	22.3	57.3	28.5	28.5	59.3	30.2	24.8	50.7	38.6	38.6
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	D	D
Approach Vol, veh/h		537			977			808			903	
Approach Delay, s/veh		27.9			31.1			33.8			39.8	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	44.6	11.3	34.3	9.7	44.6	9.8	35.8
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	10.0	26.5	10.0	36.5	10.0	26.5	10.0	36.5
Max Q Clear Time (g_c+I1), s	6.9	11.0	8.1	23.1	6.8	22.1	6.9	17.5
Green Ext Time (p_c), s	0.0	1.2	0.0	6.3	0.0	1.4	0.0	6.7

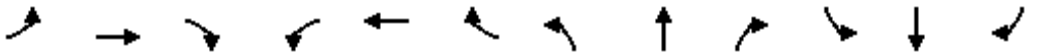
Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	503	87	136	1100	115	77	621	67	81	577	176
Future Volume (veh/h)	88	503	87	136	1100	115	77	621	67	81	577	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.95	0.99		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	93	529	92	143	1158	121	81	654	71	85	607	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	2027	346	173	2315	242	138	981	106	164	808	246
Arrive On Green	0.07	0.46	0.46	0.10	0.49	0.49	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	4382	747	1781	4690	490	679	3216	349	721	2650	806
Grp Volume(v), veh/h	93	409	212	143	840	439	81	361	364	85	406	386
Grp Sat Flow(s),veh/h/ln	1781	1702	1725	1781	1702	1776	679	1777	1788	721	1777	1679
Q Serve(g_s), s	5.1	7.3	7.5	7.9	16.6	16.6	9.8	17.7	17.8	11.7	20.6	20.7
Cycle Q Clear(g_c), s	5.1	7.3	7.5	7.9	16.6	16.6	30.5	17.7	17.8	29.4	20.6	20.7
Prop In Lane	1.00		0.43	1.00		0.28	1.00		0.19	1.00		0.48
Lane Grp Cap(c), veh/h	118	1575	798	173	1680	877	138	542	545	164	542	512
V/C Ratio(X)	0.79	0.26	0.27	0.82	0.50	0.50	0.59	0.67	0.67	0.52	0.75	0.75
Avail Cap(c_a), veh/h	267	1575	798	267	1680	877	138	542	545	164	542	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	16.4	16.5	44.3	17.0	17.0	46.0	30.3	30.3	43.2	31.3	31.3
Incr Delay (d2), s/veh	4.3	0.4	0.8	6.5	1.1	2.0	4.2	2.5	2.5	1.4	5.1	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.8	3.0	3.7	6.2	6.7	2.1	7.6	7.7	2.1	9.2	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	16.8	17.3	50.8	18.1	19.1	50.2	32.8	32.9	44.5	36.5	36.9
LnGrp LOS	D	B	B	D	B	B	D	C	C	D	D	D
Approach Vol, veh/h		714			1422			806			877	
Approach Delay, s/veh		21.3			21.7			34.6			37.4	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.6	53.9		34.5	14.7	50.8		34.5				
Change Period (Y+Rc), s	5.0	4.5		4.0	5.0	4.5		4.0				
Max Green Setting (Gmax), s	15.0	41.0		30.5	15.0	41.0		30.5				
Max Q Clear Time (g_c+I1), s	7.1	18.6		32.5	9.9	9.5		31.4				
Green Ext Time (p_c), s	0.0	11.9		0.0	0.0	5.9		0.0				

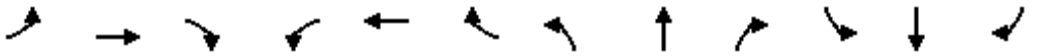
Intersection Summary												
HCM 6th Ctrl Delay			28.0									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	709	354	17	0	292	0	643	117	162	519	0
Future Volume (vph)	202	709	354	17	0	292	0	643	117	162	519	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Lane Util. Factor	1.00	0.91		1.00		1.00		0.91	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4808		1769		1583		5085	1556	1610	3385	
Flt Permitted	0.95	1.00		0.13		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4808		247		1583		5085	1556	1610	3385	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	213	746	373	18	0	307	0	677	123	171	546	0
RTOR Reduction (vph)	0	66	0	0	0	63	0	0	85	0	0	0
Lane Group Flow (vph)	213	1053	0	18	0	244	0	677	38	154	563	0
Confl. Peds. (#/hr)			2	2			4		3	3		4
Turn Type	Perm	NA		Perm		pm+ov		NA	Perm	Split	NA	
Protected Phases		4				1		2		1	1	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	40.7	40.7		40.7		68.2		37.3	37.3	27.5	27.5	
Effective Green, g (s)	40.7	40.7		40.7		68.2		37.3	37.3	27.5	27.5	
Actuated g/C Ratio	0.34	0.34		0.34		0.57		0.31	0.31	0.23	0.23	
Clearance Time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Vehicle Extension (s)	4.0	4.0		3.0		4.0		4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	600	1630		83		899		1580	483	368	775	
v/s Ratio Prot		c0.22				0.06		c0.13		0.10	c0.17	
v/s Ratio Perm	0.12			0.07		0.09			0.02			
v/c Ratio	0.35	0.65		0.22		0.27		0.43	0.08	0.42	0.73	
Uniform Delay, d1	29.8	33.6		28.3		13.2		32.9	29.2	39.4	42.8	
Progression Factor	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	1.0		1.3		0.2		0.9	0.3	1.1	3.6	
Delay (s)	30.3	34.5		29.6		13.4		33.7	29.5	40.5	46.4	
Level of Service	C	C		C		B		C	C	D	D	
Approach Delay (s)		33.9			14.3			33.1			45.1	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



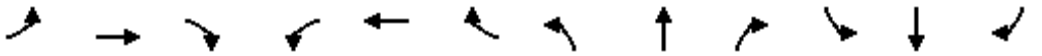
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	333	0	1126	0	0	0	1096	691	0	1	364	101
Future Volume (vph)	333	0	1126	0	0	0	1096	691	0	1	364	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5				5.5	6.0		4.5	6.0	6.0
Lane Util. Factor	0.95	0.95	0.88				0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00				1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1681	2787				3433	3539		1770	3539	1583
Flt Permitted	0.95	0.95	1.00				0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1681	2787				3433	3539		1770	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	351	0	1185	0	0	0	1154	727	0	1	383	106
RTOR Reduction (vph)	0	0	315	0	0	0	0	0	0	0	0	85
Lane Group Flow (vph)	175	176	870	0	0	0	1154	727	0	1	383	21
Confl. Peds. (#/hr)	15		4	4		15						
Confl. Bikes (#/hr)			1			1						
Turn Type	Split	NA	pt+ov				Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4	1 4	3	3		1	6		5	2	
Permitted Phases									6			2
Actuated Green, G (s)	31.1	31.1	67.2				30.6	49.9		0.8	19.1	19.1
Effective Green, g (s)	31.1	31.1	67.2				30.6	49.9		0.8	19.1	19.1
Actuated g/C Ratio	0.32	0.32	0.69				0.31	0.51		0.01	0.20	0.20
Clearance Time (s)	5.5	5.5					5.5	6.0		4.5	6.0	6.0
Vehicle Extension (s)	4.0	4.0					1.5	4.0		4.0	2.0	2.0
Lane Grp Cap (vph)	534	534	1914				1074	1805		14	691	309
v/s Ratio Prot	0.10	0.10	c0.31				c0.34	0.21		0.00	c0.11	
v/s Ratio Perm												0.01
v/c Ratio	0.33	0.33	0.45				1.07	0.40		0.07	0.55	0.07
Uniform Delay, d1	25.4	25.4	7.0				33.6	14.8		48.1	35.5	32.1
Progression Factor	1.00	1.00	1.00				1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.5	0.1				49.8	0.2		2.9	0.5	0.0
Delay (s)	25.9	25.9	7.0				83.4	15.0		51.1	36.1	32.1
Level of Service	C	C	A				F	B		D	D	C
Approach Delay (s)		11.3			0.0			56.9			35.2	
Approach LOS		B			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	36.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	97.8	Sum of lost time (s)	23.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
2: Montebello Blvd & W Beverly Blvd

08/29/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	1184	237	91	563	129	169	950	172	238	945	115
Future Volume (veh/h)	175	1184	237	91	563	129	169	950	172	238	945	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	184	1246	249	96	593	136	178	1000	181	251	995	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	358	1391	609	184	1027	235	209	1080	195	226	920	403
Arrive On Green	0.08	0.39	0.39	0.05	0.36	0.36	0.12	0.25	0.25	0.13	0.26	0.26
Sat Flow, veh/h	1781	3554	1556	1781	2860	654	1781	4333	782	1781	3554	1556
Grp Volume(v), veh/h	184	1246	249	96	368	361	178	785	396	251	995	121
Grp Sat Flow(s),veh/h/ln	1781	1777	1556	1781	1777	1737	1781	1702	1711	1781	1777	1556
Q Serve(g_s), s	6.3	32.9	11.6	3.4	16.7	16.8	9.8	22.5	22.6	12.7	25.9	6.3
Cycle Q Clear(g_c), s	6.3	32.9	11.6	3.4	16.7	16.8	9.8	22.5	22.6	12.7	25.9	6.3
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	358	1391	609	184	638	624	209	848	426	226	920	403
V/C Ratio(X)	0.51	0.90	0.41	0.52	0.58	0.58	0.85	0.93	0.93	1.11	1.08	0.30
Avail Cap(c_a), veh/h	372	1391	609	256	638	624	226	851	428	226	920	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	28.5	22.0	24.2	25.9	25.9	43.3	36.6	36.7	43.7	37.1	29.8
Incr Delay (d2), s/veh	0.9	9.3	2.0	1.7	3.8	3.9	22.6	16.0	26.8	92.3	54.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	14.8	4.4	1.4	7.4	7.3	5.5	10.8	12.2	11.2	17.6	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	37.8	24.1	25.9	29.7	29.8	65.9	52.6	63.5	136.0	91.2	30.4
LnGrp LOS	B	D	C	C	C	C	E	D	E	F	F	C
Approach Vol, veh/h		1679			825			1359			1367	
Approach Delay, s/veh		33.8			29.3			57.5			94.0	
Approach LOS		C			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	41.2	16.7	29.8	9.0	44.5	15.7	30.8
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 4.9	4.0	* 5.3	4.0	* 4.9
Max Green Setting (Gmax), s	9.1	* 35	12.7	* 25	9.1	* 35	12.7	* 25
Max Q Clear Time (g_c+I1), s	8.3	18.8	14.7	24.6	5.4	34.9	11.8	27.9
Green Ext Time (p_c), s	0.0	5.4	0.0	0.3	0.0	0.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	55.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

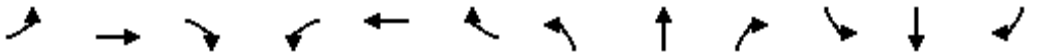
HCM 6th Signalized Intersection Summary
3: Montebello Blvd & Whittier Blvd

08/29/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	836	84	71	530	95	78	917	112	161	795	96
Future Volume (veh/h)	184	836	84	71	530	95	78	917	112	161	795	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	194	880	88	75	558	100	82	965	118	169	837	101
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1131	113	97	906	162	105	1164	507	178	1174	142
Arrive On Green	0.10	0.35	0.35	0.05	0.30	0.30	0.06	0.33	0.33	0.10	0.37	0.37
Sat Flow, veh/h	1781	3248	325	1781	2996	535	1781	3554	1549	1781	3184	384
Grp Volume(v), veh/h	194	481	487	75	330	328	82	965	118	169	467	471
Grp Sat Flow(s),veh/h/ln	1781	1777	1796	1781	1777	1753	1781	1777	1549	1781	1777	1792
Q Serve(g_s), s	10.0	24.2	24.2	4.2	15.9	16.0	4.5	25.1	5.5	9.4	22.5	22.5
Cycle Q Clear(g_c), s	10.0	24.2	24.2	4.2	15.9	16.0	4.5	25.1	5.5	9.4	22.5	22.5
Prop In Lane	1.00		0.18	1.00		0.30	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	178	619	626	97	538	531	105	1164	507	178	655	660
V/C Ratio(X)	1.09	0.78	0.78	0.78	0.61	0.62	0.78	0.83	0.23	0.95	0.71	0.71
Avail Cap(c_a), veh/h	178	619	626	178	538	531	178	1262	550	178	655	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	29.1	29.1	46.7	29.9	29.9	46.4	31.1	24.5	44.7	27.0	27.0
Incr Delay (d2), s/veh	93.2	9.3	9.2	12.4	5.2	5.3	4.7	5.0	0.4	52.0	4.2	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	11.6	11.8	2.2	7.5	7.4	2.1	11.1	2.0	6.7	9.9	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	138.2	38.4	38.3	59.1	35.0	35.2	51.1	36.0	24.9	96.8	31.3	31.2
LnGrp LOS	F	D	D	E	D	D	D	D	C	F	C	C
Approach Vol, veh/h		1162			733			1165			1107	
Approach Delay, s/veh		55.1			37.6			36.0			41.3	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	39.8	9.4	41.9	13.5	35.3	13.5	37.7
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	10.0	27.5	10.0	35.5	10.0	27.5	10.0	35.5
Max Q Clear Time (g_c+I1), s	6.2	26.2	6.5	24.5	12.0	18.0	11.4	27.1
Green Ext Time (p_c), s	0.0	0.5	0.0	6.2	0.0	1.6	0.0	5.7

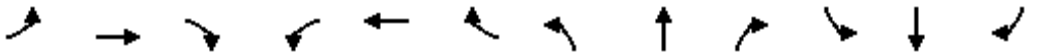
Intersection Summary	
HCM 6th Ctrl Delay	43.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	1044	247	92	617	112	67	721	90	144	839	114
Future Volume (veh/h)	252	1044	247	92	617	112	67	721	90	144	839	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	265	1099	260	97	649	118	71	759	95	152	883	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	2024	479	123	1762	316	90	968	121	128	957	130
Arrive On Green	0.16	0.49	0.49	0.07	0.41	0.41	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	4121	975	1781	4351	780	561	3172	397	645	3137	426
Grp Volume(v), veh/h	265	908	451	97	506	261	71	425	429	152	500	503
Grp Sat Flow(s),veh/h/ln	1781	1702	1692	1781	1702	1727	561	1777	1792	645	1777	1787
Q Serve(g_s), s	14.8	18.5	18.5	5.4	10.4	10.6	3.3	21.9	21.9	8.6	27.2	27.2
Cycle Q Clear(g_c), s	14.8	18.5	18.5	5.4	10.4	10.6	30.5	21.9	21.9	30.5	27.2	27.2
Prop In Lane	1.00		0.58	1.00		0.45	1.00		0.22	1.00		0.24
Lane Grp Cap(c), veh/h	276	1671	831	123	1379	699	90	542	547	128	542	545
V/C Ratio(X)	0.96	0.54	0.54	0.79	0.37	0.37	0.79	0.78	0.78	1.19	0.92	0.92
Avail Cap(c_a), veh/h	276	1671	831	276	1379	699	90	542	547	128	542	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	17.7	17.7	45.8	20.8	20.9	49.6	31.7	31.8	48.1	33.6	33.6
Incr Delay (d2), s/veh	42.8	1.3	2.5	4.2	0.8	1.5	33.0	6.8	6.8	139.9	21.2	21.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	7.0	7.2	2.5	4.1	4.3	2.6	9.9	10.0	8.1	14.3	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.8	18.9	20.2	50.0	21.5	22.4	82.5	38.5	38.5	188.0	54.8	54.7
LnGrp LOS	F	B	C	D	C	C	F	D	D	F	D	D
Approach Vol, veh/h		1624			864			925			1155	
Approach Delay, s/veh		30.0			25.0			41.9			72.3	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.5	45.0		34.5	11.9	53.6		34.5				
Change Period (Y+Rc), s	5.0	4.5		4.0	5.0	4.5		4.0				
Max Green Setting (Gmax), s	15.5	40.5		30.5	15.5	40.5		30.5				
Max Q Clear Time (g_c+I1), s	16.8	12.6		32.5	7.4	20.5		32.5				
Green Ext Time (p_c), s	0.0	7.3		0.0	0.0	11.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			42.2									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	961	289	30	0	174	0	729	223	339	811	0
Future Volume (vph)	85	961	289	30	0	174	0	729	223	339	811	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Lane Util. Factor	1.00	0.91		1.00		1.00		0.91	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	0.99		1.00		1.00		1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4883		1768		1583		5085	1551	1610	3383	
Flt Permitted	0.95	1.00		0.11		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4883		196		1583		5085	1551	1610	3383	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	1012	304	32	0	183	0	767	235	357	854	0
RTOR Reduction (vph)	0	37	0	0	0	37	0	0	44	0	0	0
Lane Group Flow (vph)	89	1279	0	32	0	146	0	767	191	321	890	0
Confl. Peds. (#/hr)			9	9			3		5	5		3
Confl. Bikes (#/hr)												1
Turn Type	Perm	NA		Perm		pm+ov		NA	Perm	Split	NA	
Protected Phases		4				1		2		1	1	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	46.8	46.8		46.8		75.5		30.0	30.0	28.7	28.7	
Effective Green, g (s)	46.8	46.8		46.8		75.5		30.0	30.0	28.7	28.7	
Actuated g/C Ratio	0.39	0.39		0.39		0.63		0.25	0.25	0.24	0.24	
Clearance Time (s)	5.0	5.0		5.0		4.5		5.0	5.0	4.5	4.5	
Vehicle Extension (s)	4.0	4.0		3.0		4.0		4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	690	1904		76		995		1271	387	385	809	
v/s Ratio Prot		c0.26				0.04		c0.15		0.20	c0.26	
v/s Ratio Perm	0.05			0.16		0.06			0.12			
v/c Ratio	0.13	0.67		0.42		0.15		0.60	0.49	0.83	1.10	
Uniform Delay, d1	23.5	30.3		26.7		9.1		39.7	38.5	43.4	45.6	
Progression Factor	1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.0		3.7		0.1		2.1	4.4	14.9	62.6	
Delay (s)	23.6	31.3		30.4		9.2		41.9	42.9	58.3	108.3	
Level of Service	C	C		C		A		D	D	E	F	
Approach Delay (s)		30.8			12.4			42.1			95.0	
Approach LOS		C			B			D			F	

Intersection Summary			
HCM 2000 Control Delay	53.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group